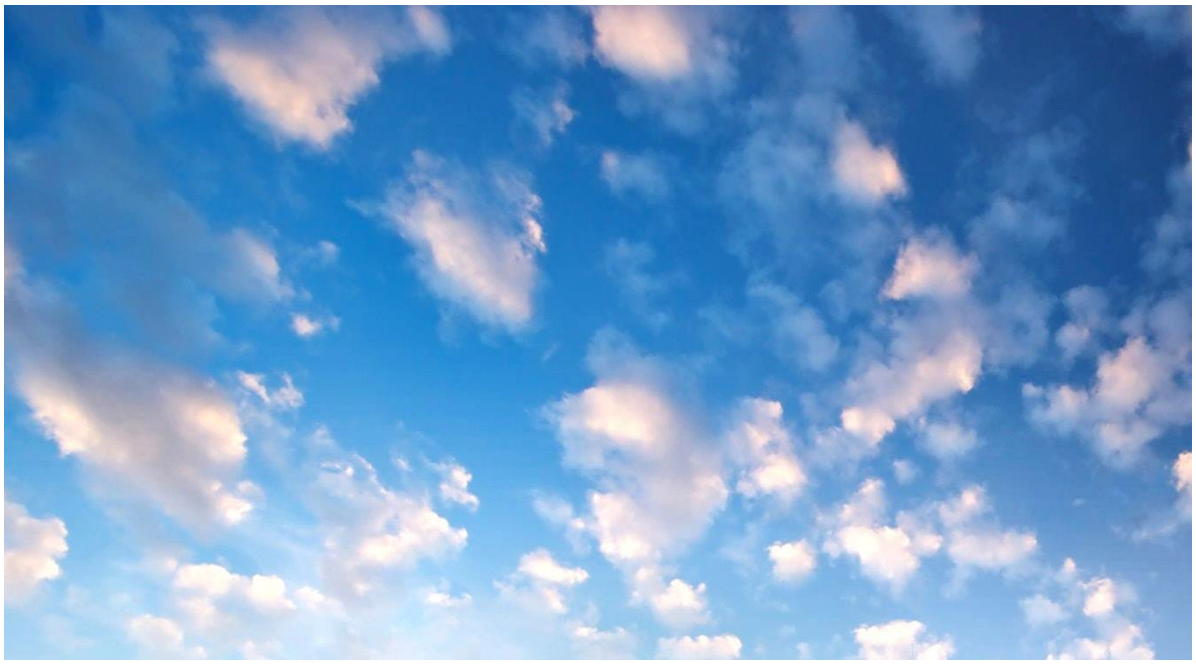


# 777 North Front Street Project

## Air Quality and Greenhouse Gas Study

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# 1 Project Description

## 1.1 Introduction

This study analyzes the potential air quality and greenhouse gas (GHG) impacts of the proposed mixed-use project (Project) located at 777 North Front Street, on the corner of North Front Street and West Burbank Boulevard in the City of Burbank, California. This report has been prepared by Rincon Consultants, Inc., under contract to the City of Burbank, in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the proposed Project's air quality and GHG impacts related to both temporary construction activity and long-term operation of the project. Traffic projections used in emissions estimates are based on the Traffic Impact Study prepared by Fehr and Peers dated March 2019. The traffic study is included as Appendix J of the DEIR. In addition, the analysis included in the air quality section of this report relies in part on the 777 North Front Street Mixed Use Development Project Health Risk Assessment (HRA) Completed by Air Quality Dynamics in June 2017. The HRA is included as Appendix C of the DEIR.

## 1.2 Project Summary

### 1.2.1 Project Background

The Project site encompasses approximately eight acres. The site is an irregularly-shaped parcel and is currently occupied predominately by concrete slabs and an abandoned section of old Front Street. The Project site is generally bounded by Old Front Street and the Interstate 5 Golden State Freeway (I-5) to the northeast, Magnolia Boulevard to the southeast, N. Front Street to the southwest, and Burbank Boulevard to the northwest. The Project site is primarily surrounded by industrial uses to the west and southwest across North Front Street, including the United Water Services treatment facility located approximately 150 feet to the southwest. Commercial development, including Burbank Town Center, restaurants, and other retail uses, are located to the northeast across Burbank Boulevard, east across the I-5 freeway and south across East Magnolia Boulevard. Existing site conditions are shown in Figure 1.

### 1.2.2 Proposed Project

The Project would involve clearing and excavation of the site and construction of three buildings: two residential buildings and one building for a hotel. The residential component of the Project would include construction of one 279,162 square-foot, seven-story building containing 252 units and one 346,644 square-foot, eight-story building containing 321 units for a total of 573 residential units. In addition, a total of 1,206 parking spaces would be provided for tenants of both residential buildings. The Project would also include 106,400 square feet of open space, including courtyards, a pool deck, transit public plaza, and private balconies. Approximately 87,050 square feet would be common open space, a minimum of approximately 15 percent of which would be landscaped. Associated residential common areas and amenities constructed may include, but would not limited to a rooftop terrace, business center/internet café, coffee bar, demonstration kitchen, billiards room, resident lounge, fitness center with indoor exercise studio, resort-style pools with cabanas,

Jacuzzis, public plaza and bike trail access, pet grooming station, pet park, concierge services, and bike storage. Residential courtyards and balconies would be located within the interior sides of the buildings.

The hotel component of the Project would include construction of one 212,250 square-foot, seven-story building at the southeastern end of the Project site containing 307 hotel rooms and ancillary uses and 327 associated parking spaces. Associated hotel amenities may include, but would not be limited to 1,800 sf of restaurant space, café, bar, pool terrace, fitness center, meeting rooms, and lounge. The hotel's ancillary commercial uses would include accessory retail and restaurant uses on the ground floor. In addition, a 1,067-square foot retail gallery would be provided on Front Street near the intersection of Burbank Boulevard, which would have four total parking spaces. Additional ancillary uses would include public and private recreational spaces consisting of courtyards, residential balconies, and sky terraces at both parking structure roof levels. The Project would include a transit publicly accessible plaza area on the City-owned property on the southern portion of the site. The plaza would be approximately 27,800 square feet and comprises four main zones: 1) the western portion of the plaza will include an open (synthetic) lawn area with informal terrace seating for multi-purpose activities; 2) a hardscape courtyard with benches and shade trees will be located in the central zone where the access stair to the Magnolia Boulevard Bridge is located; 3) at the east of the plaza, there will be a zone for fitness and a zone for children's playground for public use; and 4) along the northern perimeter (where the Project Site adjoins the Interstate 5 Freeway), there will be earth mounds to provide a sound buffer and screening with clusters of tall evergreen trees.

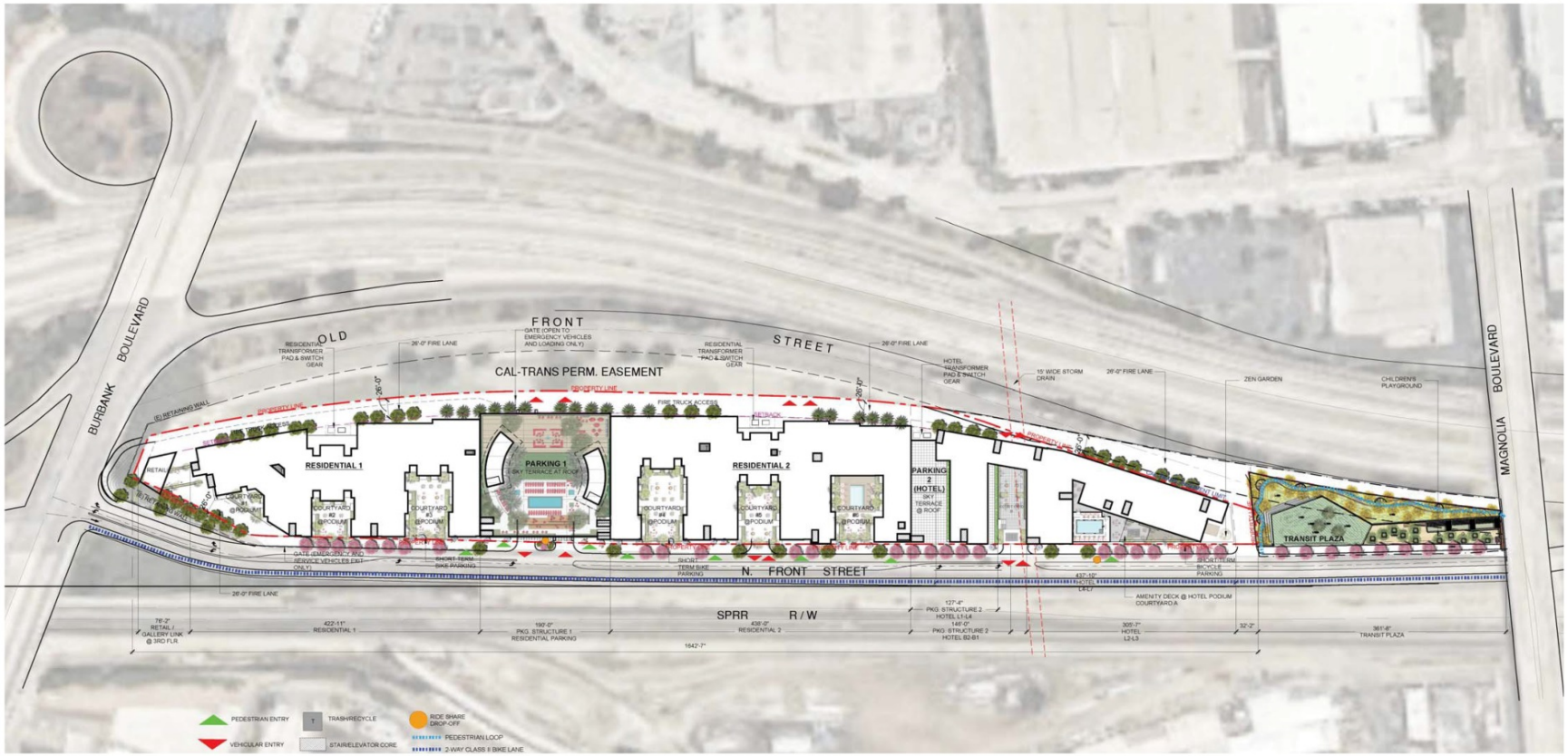
See Figure 1 for existing conditions and configuration of the site and Figure 2 for a visual overlay of the site plans on the existing site.

**Figure 1 Existing Site Conditions**




*Imagery provided by Microsoft Bing and its licensors © 2018.*

## Figure 2 Site Plan Overlay




*Source: LaTerra SELECT BURBANK, May 2018*

# 2 Air Quality

## 2.1 Background

### 2.1.1 Local Climate and Meteorology

The Project site is in the South Coast Air Basin (Basin or SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego County line to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, as well as the San Gorgonio Pass area in Riverside County. The regional climate in the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality in the Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles and other modes of transportation, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

### 2.1.2 Air Quality Regulation

The Federal and State governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent under the California EPA. County-level Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) provide local management of air quality. The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs/AQMDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide, including the SCAB.

The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), $PM_{10}$, $PM_{2.5}$, and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards (CAAQS) for these and other pollutants, some of which are more stringent than the Federal standards.

The South Coast Air Quality Management District (SCAQMD or District) is the designated air quality control agency for the Basin. The Basin is designated a nonattainment area for the federal and State one-hour and eight-hour ozone standards, the State $PM_{10}$ standards, the federal 24-hour $PM_{2.5}$ standard, and the State and federal annual $PM_{2.5}$ standard. The Basin is in attainment of all other federal and State standards. Table 1 lists the current Federal and State standards for regulated pollutants.

**Table 1 Federal and State Ambient Air Quality Standards**

| Pollutant | Averaging Time | Federal Primary Standards | California Standard |
|---|---|---|---|
| Ozone | 1-Hour | – | 0.09 ppm |
| | 8-Hour | 0.070 ppm | 0.070 ppm |
| Carbon Monoxide | 8-Hour | 9.0 ppm | 9.0 ppm |
| | 1-Hour | 35.0 ppm | 20.0 ppm |
| Nitrogen Dioxide | Annual | 0.053 ppm | 0.030 ppm |
| | 1-Hour | 0.100 ppm | 0.18 ppm |
| Sulfur Dioxide | Annual | 0.03 ppm | – |
| | 24-Hour | 0.14 ppm | 0.04 ppm |
| | 1-Hour | 0.075 ppm | 0.25 ppm |
| $PM_{10}$ | Annual | – | 20 $\mu g/m^3$ |
| | 24-Hour | 150 $\mu g/m^3$ | 50 $\mu g/m^3$ |
| $PM_{25}$ | Annual | 12 $\mu g/m^3$ | 12 $\mu g/m^3$ |
| | 24-Hour | 35 $\mu g/m^3$ | – |
| Lead | 30-Day Average | – | 1.5 $\mu g/m^3$ |
| | 3-Month Average | 0.15 $\mu g/m^3$ | – |

ppm = parts per million;
$\mu g/m^3$ = micrograms per cubic meter
Source: CARB 2016

Characteristics of ozone, CO, $NO_2$, and suspended particulate matter are described below.

## Ozone

Ozone ($O_3$) is produced by a photochemical reaction (i.e., triggered by sunlight) between nitrogen oxides ($NO_X$) and reactive organic gases (ROG).[1] $NO_X$ is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because $O_3$ requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans

[1] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to $O_3$ include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

### Carbon Monoxide

CO is a colorless, odorless, poisonous gas that is found in high concentrations only near fuel combustion equipment and other sources of CO. The primary source of CO is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

### Nitrogen Dioxide

$NO_2$ is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form $NO_2$, creating the mixture of NO and $NO_2$ commonly called $NO_X$. Nitrogen dioxide is an acute irritant. A relationship between $NO_2$ and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 ppm may occur. $NO_2$ absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of $PM_{10}$ and acid rain.

### Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are $PM_{10}$ (which measures no more than 10 microns in diameter) and $PM_{2.5}$, (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and $PM_{2.5}$ can be different. Major man-made sources of $PM_{10}$ are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

## 2.1.3 Current Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the Basin. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The monitoring station located closest to the Project site is the Los Angeles-North Main Street station approximately 9.5 miles southeast of the Project site. Table 2 indicates the number of days that each of the standards has been exceeded at that station.

**Table 2 Ambient Air Quality at the Monitoring Station**

| Pollutant | 2015 | 2016 | 2017 |
|---|---|---|---|
| 8 Hour Ozone (ppm), 8-Hr Maximum | 0.074 | 0.078 | 0.086 |
| Number of Days of State exceedances (>0.070) | 6 | 4 | 14 |
| Number of days of Federal exceedances (>0.070) | 6 | 4 | 14 |
| Ozone (ppm), Worst Hour | 0.104 | 0.103 | 0.116 |
| Number of days of State exceedances (>0.09 ppm) | 2 | 2 | 6 |
| Number of days of Federal exceedances (>0.124 ppm) | 0 | 0 | 0 |
| Nitrogen Dioxide (ppm) – Worst Hour | 0.0791 | 0.0647 | 0.0806 |
| Number of days of State exceedances (>0.18 ppm) | 0 | 0 | 0 |
| Number of days of Federal exceedances (0.10 ppm) | 0 | 0 | 0 |
| Particulate Matter 10 microns, $\mu g/m^3$, Worst 24 Hours | 73.0 | 64.0 | 64.6 |
| Number of days above Federal standard (>150 $\mu g/m^3$) | 0 | 0 | 0 |
| Number of days of State exceedances (>50 $\mu g/m^3$) | 30 | 21 | 40 |
| Particulate Matter <2.5 microns, $\mu g/m^3$, Worst 24 Hours | 56.4 | 44.3 | 54.9 |
| Number of days above Federal standard (>35 $\mu g/m^3$) | 7 | 2 | 6 |

Note: As of March 15, 2019, 2018 data is not yet available.
Source: CARB 2018

As shown in Table 2, the eight-hour ozone concentration exceeded both State and federal standards on six days in 2015, four days in 2016, and 14 days in 2017. The ozone concentration exceeded State one-hour standards on two days in both 2015 and 2016, as well as six days in 2017. The $PM_{2.5}$ concentration exceeded standards on seven days in 2015, two days in 2016, and six days in 2017. No exceedances of federal standards for $NO_2$ or $PM_{10}$ have occurred at the monitoring station in the last three years; however, the State $PM_{10}$ standard was exceeded 30 times in 2015, 21 times in 2016, and 40 times in 2017.

## Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The 2016 AQMP, adopted on March 3, 2017, incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new Federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015.

The 2016 AQMP addresses several State and Federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and updated meteorological air quality models (SCAQMD 2017). This Plan builds upon the approaches taken in the 2012 AQMP for the attainment of Federal PM and ozone standards, and highlights the significant amount of reductions to be achieved. It emphasizes the

need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the Federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The Plan also includes attainment demonstrations of the new federal 8-hour ozone standard and vehicle miles travelled (VMT) emissions offsets, as per recent U.S. EPA requirements.

### Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools, hospitals, and residences.

The Project site is primarily surrounded by industrial and commercial uses that are not considered sensitive receptors likely to be affected by air pollutant emissions associated with the Project. The nearest sensitive receptors are single family residences along Scott Road approximately 0.2 mile northeast of the Project site. The next closest receptors include Burbank High School approximately 0.3 mile northeast of the Project site, and the Hilton Burbank hotel approximately 0.4 mile southeast of the Project site. Additional residential uses are also located 0.4 miles to the west of the Project site.

## 2.2 Impact Analysis

### 2.2.1 Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993) as well as additional guidance published by SCAQMD. The handbook includes thresholds for emissions associated with both construction and operation of the Project.

Project construction would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, cranes, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as during building construction. It is assumed that all construction equipment used would be diesel-powered. The Project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod uses project-specific information, including the Project's land uses, square footages for different uses (e.g., residential, hotel, parking, etc.), and location, to estimate a project's construction and operational emissions from new development. Construction emissions include emissions generated by construction equipment, such as backhoes and bulldozers operating on the Project site, as well as emissions generated by off-site vehicle trips associated with construction, such as hauling trips and worker travel to and from the Project site. Operational emissions include mobile source emissions (i.e., vehicle emissions), energy emissions (primarily natural gas combustion), and area source emissions (emissions generated by landscape maintenance equipment, consumer products, and architectural coatings).

Project emissions were modeled based on a 8.09-acre site with development of two mixed-use residential buildings with 573 residential units, a 1,537 space parking structure, 1,067 square feet

(sf) of retail uses, a hotel with 307 rooms with a 1,800 sf high turn-over restaurant, café/bar, swimming pool, fitness center, and a 27,800 square-foot transit plaza. Construction of the Project is expected to take approximately 61 months (starting in the beginning of September 2019 and going through the end of September 2025), with full operation assumed to begin in 2026, the first full year after the end of construction. Construction would involve site preparation, grading, excavation, building construction, paving and architectural coating. Demolition was not included as a construction phase as the Project site is currently vacant and does not contain any existing development. However, the existing concrete pad covering the site would be removed and either ground up and used onsite where applicable or exported from the site. Based on applicant provided information, total grading of the Project site, including removal of the concrete pad, would result in approximately 90,000 cubic yards (cy) of cut that would be exported from the site.[2] Additionally, it was assumed that grading would occur over the entire Project site due to excavation activities required to construct the proposed subterranean parking.

Operational emissions were also estimated using CalEEMod. Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by motor vehicle trips to and from the Project site associated with the Project's uses. Land use trip generation rates provided in the Institute of Transportation Engineers (ITE) Trip Generation 10th Edition Manual were used to estimate potential emissions from vehicle traffic at the Project site. Emissions attributed to energy use include natural gas consumption for space and water heating, as well as electricity. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating.

### 2.2.2 Regional Thresholds

To determine whether a project would have a significant impact to air quality, Appendix G of the CEQA Guidelines questions whether a project would:

1) Conflict with or obstruct implementation of the applicable air quality plan;
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
4) Expose sensitive receptors to substantial pollutant concentrations; and
5) Create objectionable odors affecting a substantial number of people.

The SCAQMD recommends the following quantitative regional significance thresholds for temporary construction activities and long-term project operation within the Basin:

[2] Based on applicant provided information, it was assumed that the material would be hauled to the Kettleman Landfill, approximately 170 miles from the project site.

| Construction Thresholds | Operational Thresholds |
|---|---|
| 75 pounds per day of ROG | 55 pounds per day of ROG |
| 100 pounds per day of $NO_X$ | 55 pounds per day of $NO_X$ |
| 550 pounds per day of CO | 550 pounds per day of CO |
| 150 pounds per day of $SO_X$ | 150 pounds per day of $SO_X$ |
| 150 pounds per day of $PM_{10}$ | 150 pounds per day of $PM_{10}$ |
| 55 pounds per day of $PM_{2.5}$ | 55 pounds per day of $PM_{2.5}$ |

### 2.2.3 Localized Significance Thresholds

In addition to regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable Federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, and distance to the sensitive receptor. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for $NO_X$, CO, $PM_{10}$, and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (SCAQMD 2003). As such, LSTs for operational emissions do not apply to onsite development, as the majority of emissions would be generated by cars on the roadways.

LSTs have been developed for emissions in construction areas up to five acres in size. The SCAQMD provides lookup tables for project sites that measure one, two, or five acres. The Project involves an 8.09-acre disturbance area. As it is unlikely that more than five acres of the site would be under construction on any given day, LSTs for a five-acre project site were used to provide a more conservative estimate. Because the Project site is located in SRA 7, LSTs for construction in SRA 7 are shown in Table 3. LSTs are provided for receptors at a distance of 82 to 1,640 feet (at 25, 50, 100, 200, and 500 meters) from the Project site boundary. As discussed in the setting above, the closest sensitive receptors are single-family residences located approximately 900 feet (275 meters) northwest of the Project site. A receptor distance of 200 meters (656 feet) was used to provide a more conservative analysis.

**Table 3 SCAQMD LSTs for Construction (SRA-7)**

| Pollutant | Allowable Emissions from a 5-acre Site in SRA-7 for a Receptor 656 Feet Away |
|---|---|
| Gradual conversion of $NO_X$ to $NO_2$ | 194 |
| CO | 4,119 |
| $PM_{10}$ | 84 |
| $PM_{2.5}$ | 28 |

Source: SCAQMD 2008

### 2.2.4 Regulatory Requirements and Project Design Features

The Project would comply with all applicable regulatory standards. In particular, the Project would comply with 2016 CALGreen Code, in addition to SCAQMD Rules 403 and 1113, and all other applicable provisions of the SCAQMD. Rules 403 and 1113 were added as mitigation in CalEEMod, as discussed below. CALGreen standards include indoor water usage reduction, regulation of outdoor water usage, and construction waste reduction.

The grading phase involves the greatest amount of heavy equipment and the greatest generation of fugitive dust. For the purposes of construction emissions modeling, it was assumed that the Project would comply with the SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the Basin. Therefore, the following conditions that would be required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod for the site preparation and grading phases of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved onsite roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day.
3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. **Street Sweeping.** Construction contractors should sweep all onsite driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

The architectural coating phase involves the greatest release of ROG. The emissions modeling for the proposed Project also includes the use of low-VOC paint (50 grams per liter (g/L) for non-flat coatings) as required by SCAQMD Rule 1113.

In addition, the following Project design features (PDF) are proposed with regard to air quality emissions:

## Project Design Features

### *Air Quality PDF 1 – CAL Green Building Standards Code*

The Project shall incorporate the requirements of the CAL Green Building Standards Code. The Project shall be provided with minimum Tier 1 or LEED Gold certification. The Green Building Plan shall be submitted to the Chief Building Official for review.

### *Air Quality PDF 2 – Energy Star Appliances*

Developer shall install Energy Star or equivalent appliances or equivalent energy-efficient appliance models in new residential units, which shall include a standard-size refrigerator in each unit. Installation of Energy Star or equivalent appliances shall be demonstrated to the satisfaction of the CDD Director prior to issuance of certificate of occupancy.

### *Air Quality PDF 3 – Air Quality Control Measures*

1. Prior to issuance of any building permits for any phase, the Developer shall incorporate the following as project design features in each phase of the project:
    a. Prior to any building permit (for each phase), the Developer shall install, operate, and maintain an HVAC system that utilizes high-efficiency filters with Minimum Efficiency Reporting Value (MERV) 15 minimum or higher for the residential units.
        i. Developer may prepare and submit an air quality engineering study (for a unit-by-unit analysis) related to the MERV filtration system(s) that must be incorporated into the Project. Individual units may be provided a MERV 13, MERV 14 or MERV 15 (but not less than MERV 13) filtration system depending on the recommendations of the air quality study (i.e., depending on proximity to freeway and exposure levels); developer shall pay for 3$^{rd}$ party air quality expert to review submitted air quality engineering study
        ii. If the Developer elects to not prepare and submit an air quality engineering study (for a unit-by-unit analysis), then a minimum of MERV 15 shall be required for every residential unit in each building/phase.
        iii. HVAC systems with the specified MERV filter ratings are required elements of the Project design, and must be incorporated at the time of original construction.
    b. Locate the air intakes for the residential units as far from the freeway as practicable. Precise location will be ascertained and reviewed during Plan Check prior to issuance of any building permit for each phase.
    c. Provide a written notice to all new residents and tenants that disclose the potential risk from living in close proximity to a freeway, and that opening unit windows may reduce the effectiveness of the air filtration system and increases their individual exposure.
    d. Plant vegetation between residential receptors and the freeway (e.g., rear yard setback areas for each phase).

2. Prior to the issuance of any Grading Permit, the City Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the

following measures would reduce the short-term fugitive dust impacts on nearby sensitive receptors.

a. Prohibit truck idling in excess of five minutes, on-site and off-site;
b. All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the Project site to prevent excessive amounts of dust;
c. Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
d. Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
e. All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
f. Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
g. Gravel bed trackout aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes;
h. On-site and unpaved-road vehicle speed shall be limited to 15 miles per hour;
i. All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized;
j. Visible dust beyond the property line which emanates from the Project shall be prevented to the maximum extent feasible;
k. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
l. Reroute construction trucks away from congested streets or sensitive receptor areas;
m. Track-out devices shall be used at all construction site access points;
n. All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;
o. Sweep streets at the end of the day with SCAQMD Rule 1186 and 1186.1 compliant sweepers if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water);
p. Re-route construction trucks away from congested streets or sensitive receptor areas;
q. The Project proponent shall survey and document the proposed Project's construction areas and identify all construction areas that are served by electricity. Onsite electricity, rather than temporary power generators, shall be used in all construction areas that are demonstrated to be served by electricity.

### 2.2.5 Local Regulations

The City of Burbank 2035 General Plan Air Quality and Climate Change Element contains the following goals and related policies specific to air quality:

**Goal 1**: **Reduction of Air Pollution.**

**Policy 1.1.** Coordinate air quality planning efforts with local, regional, state, and federal agencies, and evaluate the air quality effects of proposed plans and development projects.

**Policy 1.2**. Seek to attain or exceed the more stringent of federal or state ambient air quality standards for each criteria air pollutant.

**Policy 1.3**. Continue to participate in the Cities for Climate Protection Program, South Coast Air Quality Management District's (SCAQMD's) Flag Program, SCAQMD's Transportation Programs (i.e., Rule 2202, Employee Rideshare Program), and applicable state and federal air quality and climate change programs.

**Policy 1.4**. Cooperate with the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and the SCAQMD to measure air quality at emission sources (including transportation corridors), and enforce the provisions of the Clean Air Act, as well as state and regional policies and established standards for air quality.

**Policy 1.5**. Require projects that generate potentially significant levels of air pollutants, such as landfill operations or large construction projects, to incorporate best available air quality and greenhouse gas mitigation in project design.

**Policy 1.6**. Require measures to control air pollutant emissions at construction sites and during soil- disturbing or dust-generating activities (i.e., tilling, landscaping) for projects requiring such activities.

**Policy 1.9**. Encourage the use of zero-emission vehicles, low emission vehicles, bicycles, non-motorized vehicles, and car-sharing programs. Consider requiring sufficient convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.

**Policy 1.12**. Provide public information describing air quality standards, health effects, and efforts that residents and businesses can make to improve regional air quality. Encourage businesses and residents to participate in SCAQMD's public education programs.

**Goal 2. Sensitive Receptors**

**Policy 2.2.** Separate sensitive uses such as residences, schools, parks, and day care facilities from sources of air pollution and toxic chemicals. Provide proper site planning and design features to buffer and protect when physical separation of these uses is not feasible.

**Policy 2.3**. Require businesses that cause air pollution to provide pollution control measures.

**Policy 2.4**. Reduce the effects of air pollution, poor ambient air quality, and urban heat island effect with increased tree planting in public and private spaces.

**Policy 2.5.** Require the use of recommendations from the California Air Resources Board's Air Quality and Land Use Handbook to guide decisions regarding location of sensitive land uses.

### 2.2.6 Construction Impacts

Based on the CalEEMod results for the proposed Project, Table 4 summarizes the estimated maximum daily emissions of pollutants during the construction period with compliance of the requirements described above for Rules 403 and 1113, but without any additional mitigation.

**Table 4 Estimated Construction Emissions**

| | Maximum Emissions[1] (lbs/day) | | | | |
|---|---|---|---|---|---|
| **Construction Year** | **ROG** | **$NO_x$** | **CO** | **$PM_{10}$** | **$PM_{2.5}$** |
| 2019 Maximum | 1.0 | 19.1 | 23.8 | 9.3 | 5.5 |
| 2020 Maximum | 5.4 | 129.2 | 55.4 | 13.8 | 5.4 |
| 2021 Maximum | 5.0 | 36.5 | 52.3 | 11.0 | 3.7 |
| 2022 Maximum | 4.8 | 35.3 | 49.7 | 11.0 | 3.7 |
| 2023 Maximum | 13.8 | 32.3 | 53.7 | 12.9 | 4.2 |
| 2024 Maximum | 13.6 | 32.0 | 51.5 | 12.9 | 4.2 |
| 2025 Maximum | 14.0 | 43.0 | 67.1 | 13.6 | 4.9 |
| **Maximum** | **14.0** | **129.2** | **67.1** | **13.6** | **5.5** |
| SCAQMD Regional Thresholds | 75 | 100 | 550 | 150 | 55 |
| **Threshold Exceeded?** | **No** | **Yes** | **No** | **No** | **No** |
| **Maximum Onsite** | **8.7** | **19.1** | **23.0** | **9.1** | **5.4** |
| SCAQMD LSTs Thresholds[2] | N/A | 194 | 4,119 | 84 | 28 |
| **Threshold Exceeded?** | **No** | **No** | **No** | **No** | **No** |

Notes: All calculations were made using CalEEMod. See Appendix A for calculations. Site Preparation, Grading, Paving, Building Construction, and Architectural Coating totals include worker trips, soil export hauling trips, construction vehicle emissions and fugitive dust. Emission data is pulled from "mitigated" results that include compliance with regulations and project design features that will be included in the project.

[1] Grading phases incorporate anticipated emissions reductions, which are required by SCAQMD Rule 403 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions, which are required by Rule 1113.

[2] LSTs are for a 5-acre project in SRA-7 within a distance of 200 feet from the site boundary.

As shown above, emissions of CO, $PM_{10}$, $PM_{2.5}$, and ROG would not exceed SCAQMD regional or LST thresholds, assuming adherence to the conditions listed above required by SCAQMD Rule 403 and SCAQMD Rule 1113. However, maximum daily $NO_x$ emissions generated during Project construction would be approximately 129 lbs/day during construction in 2020, which would exceed SCAQMD thresholds. Therefore, mitigation would be required to reduce maximum daily $NO_x$ emissions to below threshold levels.

## Mitigation Measure

Temporary impacts associated with construction-related $NO_x$ emissions would be reduced through implementation of the following mitigation measure.

### *AQ-1 High Efficiency Truck Engines*

All haul trucks used during construction would be required to have engine model years between 2010 and 2018. This would ensure that all truck engines have a higher average total fuel efficiency.

### Significance After Mitigation

Mitigation Measure AQ-1 requires the use of hauling trucks with engines having higher average total fuel efficiency. Using engine emission factors provided on the CARB EMFAC Web Database, use of recent engine models would result in fewer emissions per mile traveled when transporting exported soil, therefore yielding lower daily $NO_X$ emissions. Using heavy duty truck engines with model years 2010 through 2018 would reduce maximum daily $NO_X$ emissions associated with hauling by approximately 56.8 lbs/day during the worst day from 114.3 lbs/day to 57.5 lbs/day, based on the calculation included in Appendix D. The combined maximum daily construction emissions on the worst day for offsite emissions sources, including hauling, and onsite sources would be 72.4 lbs/day of $NO_X$, which would be below the threshold of 100 lbs/day of $NO_X$. Because implementation of Mitigation Measure AQ-1 would reduce $NO_x$ emissions to be below SCAQMD thresholds, residual impacts would be less than significant.

## 2.2.7 Long-Term Regional Impacts

### AQMP Consistency

A project may be inconsistent with the AQMP if it would generate a considerable increase in regional air quality violations and affect the region's attainment of air quality standards, or if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP incorporates local city general plans and the Southern California Association of Government's (SCAG) 2016 RTP socioeconomic forecast projections of regional population, housing and employment growth.

The proposed Project involves the construction of a mixed-use residential development which would cause a direct increase in the City's population. The proposed Project would also involve development of a hotel, which would not directly increase the City's population as the purpose of this facility is to temporarily house visitors and would not generate permanent residents. However, operation of the hotel would require hiring employees. Although staff would likely come from the existing labor force, it is possible that all staff members would be newly generated employees, which would contribute to the City's regional employment growth. According to data provided to the City by the California Department of Finance (DOF), the current population of the city is 107,149, and the average household size is 2.5 persons (DOF 2018). As a result, development of 573 residential units would generate approximately 1,433 new residents (573 dwelling units x 2.5 residents/dwelling unit). According to the SCAG Employment Density Study Summary, hotels in Los Angeles County have an average of 51.91 employees per acre of floor area and commercial developments have an average of one employee per 424 square feet of floor area (SCAG 2001). Based on these averages, the hotel would generate about 244 employees and the gallery would generate about three employees. The total estimated number of employees associated with the proposed Project is therefore 247. It is assumed that not all employees would become new residents of Burbank (they may, for example, already live in the City or live outside of the City after they are hired). According to SCAG's 2016 RTP/SCS, the City's population is forecasted to increase to approximately 118,700 by 2040, which is an increase of 13,667 persons from the current population (SCAG 2016). The addition of 1,433 residents in the Project area would constitute about 11 percent of the City's total projected population growth. For employment within the City, SCAG's 2017 Local Profiles Report for the City of Burbank estimated the City's total jobs to be 112,656 in 2015, and estimates an increase to 145,000 jobs in 2040 in their 2016 RTP/SCS forecasts. Thus, employment is expected to increase by approximately 29 percent (32,344 employees) between 2015 and 2040

(SCAG 2017). The possible addition of 247 new employees would comprise approximately one percent of this increase. Therefore, employment growth generated by the proposed Project would be within the SCAG 2016 employment growth forecasts. Because the proposed Project would not directly generate substantial population growth, and possible employment growth would be within SCAG regional growth projections, the proposed Project would not conflict with the AQMP.

## Operational Air Pollutant Emissions

Table 5 summarizes the proposed Project's operational emissions. The majority of project-related operational emissions would be due to vehicle trips to and from the Project site. As shown in the table, project-generated emissions would not exceed SCAQMD recommended thresholds for ROG, $NO_X$, CO, $SO_X$, $PM_{10}$, or $PM_{2.5}$.

**Table 5 Estimated Operational Emissions**

| | Estimated Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| **Emissions Source** | **ROG** | **$NO_x$** | **CO** | **$SO_x$** | **$PM_{10}$** | **$PM_{2.5}$** |
| Area | 20.4 | 0.5 | 47.4 | <0.1 | 0.3 | 0.3 |
| Energy | 0.3 | 3.1 | 1.9 | <0.1 | 0.2 | 0.2 |
| Mobile | 8.3 | 38.5 | 102.9 | 0.4 | 40.7 | 11.1 |
| Project Total | 29.1 | 42.1 | 152.2 | 0.4 | 41.2 | 11.6 |
| SCAQMD Thresholds | 55 | 55 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | **No** | **No** | **No** | **No** | **No** | **No** |

See Appendix A for CalEEMod computer model output. Note: Numbers may not add due to rounding.

## Local Carbon Monoxide Concentration

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

According to traffic volumes in the *Traffic Impact Study* prepared by F&P for the closest intersection to the Project site, the daily traffic count for the Front Street/Burbank Boulevard intersection is approximately 51,180 vehicles. The Project would add approximately 3,460 daily trips to this intersection, resulting in approximately54,640 daily vehicles (F&P 2018). Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Thus, even though there would be more vehicle trips under the Project than under existing conditions, project-generated local mobile-source CO emissions would not result in

or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO.

In addition, the Bay Area Air Quality Management District (BAAQMD) has established a screening threshold. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). The trips generated by the Project would be well below the threshold and would not cause the intersection to host 100,000 vehicles per day. Localized air quality impacts related to CO hot spots would therefore be less than significant.

## Odors

The CARB *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies land uses associated with odor complaints. The proposed Project would primarily involve development of two mixed-use residential buildings, a parking structure, a hotel, along with associated open space and landscaping. None of these uses are identified as land uses associated with odor complaints by SCAQMD; therefore, the Project would not generate objectionable odors affecting a substantial number of people.

## Toxic Air Contaminants (TACs)

The greatest potential for toxic air contaminants (TAC) emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately 30 months, the Project would not result in a long-term (i.e., 70-year) source of TAC emissions. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period (54 out of 840 months), construction TAC emissions would result in a less-than-significant impact.

In *California Building Industry Association v Bay Area Air Quality Management District*, the California Supreme Court held that CEQA generally does not require a lead agency to consider the impacts of the existing environment on the future residents or users of a project (S213478, December 17, 2015). An exception to this general rule is a project that may exacerbate a condition in the existing environment. For such a situation, the lead agency is required to analyze the impact of that exacerbated condition on future residents and users of a project as well as other impacted individuals or resources. For example, a development project could exacerbate hazards relating to wildfire by providing additional fuel and ignition sources, resulting in potential impacts to future residents of the project, existing residents, or resources. Thus, the significance determination with respect to toxic air contaminants focuses on whether the project would exacerbate environmental conditions in a manner that would increase the potential to expose people or resources to environmental impacts. Because the Project is a mixed-use residential and retail development, project operation would not generate toxic air contaminants, nor would the Project substantially increase diesel particulates in the area because it would not attract substantial diesel traffic to the Project site, like an industrial warehouse or rest area would. Furthermore, as indicated in Impact AQ-2, emissions of CO, $PM_{10}$, $PM_{2.5}$, $NO_X$, and ROG would not exceed SCAQMD's regional thresholds or LSTs during Project construction; therefore, the Project would not exacerbate environmental

conditions in a manner that would increase the potential to expose sensitive receptors to environmental impacts.

Air Quality Dynamics prepared a HRA to assess the impact of pollutants on future individuals residing at the Project site (June 2017, Appendix C of the DEIR). The HRA analyzed the possible health effects to future site residents and guests associated with diesel particulate emissions from the adjacent I-5 freeway (see Appendix C of the DEIR). Health risks were quantified for each floor (seven and eight in total). For chronic, annual, and 24-hour exposures, concentration estimates for residential receptors are considered static whereby exposures are assumed to be continuous based upon the averaging time under consideration. For patrons residing at the proposed hotel development, occupancy including extended stay would be limited in duration whereby the 24-hour exposure estimate would apply. Short duration exposures (i.e., one- and eight-hour) apply to all common areas such as a pool and related residential/guest amenities since it is reasonable to assume that an individual could be present for periods of one to eight hours. Reduction of particulate impacts would be accomplished by reducing pollutant concentrations within the building structures. By restricting the rate of infiltration, exposures can be controlled to reduce particulate concentrations below SCAQMD's standards.

### *Carcinogenic Risks*

To represent residential exposures, the assessment employs the USEPA's guidance to develop viable dose estimates based on reasonable maximum exposures (RME). Specifically, activity patterns for population mobility recommended by the USEPA and presented in the *Exposure Factors Handbook* were utilized. As a result, lifetime risk values for residents were adjusted to account for an exposure duration of 350 days per year for 30 years (i.e., 95th percentile). A 9-year exposure duration was additionally assessed to identify risk estimates associated with the average time individuals are reported to reside at a given residence. These values are consistent with CEQA, which considers the evaluation of environmental effects of proposed projects in a manner that reflects both reasonable and feasible assumptions. For body weight and inhalation, the assessment employed average adult values of 70 kilograms and 20 cubic meters per day, respectively.

and show the maximum predicted residential carcinogenic risk estimates for Residential 1 (the seven-story building) and Residential 2 (the eight-story building). As shown in Table 6 and Table 7, floor levels two through six for Residential 1 and floor levels three through seven for Residential 2 occupancies exceed the standard of one in one hundred thousand (1.0e-5).

**Table 6 Maximum Residential 1 Receptor/Carcinogenic Risk**

| | Exposure Scenario | |
|---|---|---|
| **Floor Level** | **30 Year** | **9 Year** |
| 2 | 2.6e-05 | 7.9e-06 |
| 3 | 2.4e-05 | 7.3e-06 |
| 4 | 2.1e-05 | 6.2e-06 |
| 5 | 1.6e-05 | 4.8e-06 |
| 6 | 1.2e-05 | 3.5e-06 |
| 7 | 7.9e-06 | 2.5e-06 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 7 Maximum Residential 2 Receptor/Carcinogenic Risk**

| | Exposure Scenario | |
|---|---|---|
| Floor Level | 30 Year | 9 Year |
| 3 | 2.6e-05 | 7.7e-06 |
| 4 | 2.3e-05 | 6.9e-06 |
| 5 | 1.9e-05 | 5.8e-06 |
| 6 | 1.5e-05 | 4.4e-06 |
| 7 | 1.1e-05 | 3.2e-06 |
| 8 | 7.6e-06 | 2.3e-06 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

### *Non-carcinogenic Hazards*

The HRA included an evaluation of the potential non-cancer effects of contaminant exposures using the hazard index approach. For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all 30-and 9-year exposure scenarios (see Appendix C of the DEIR). For acute exposures, the hazard indices for each respective averaging time did not equal or exceed one.

### *Criteria Pollutant Exposures*

As discussed above, the State of California has strict ambient air quality standards for various pollutants. Pollutant emissions are considered to have a significant effect on the environment if they result in concentrations that create either a violation of an ambient air quality standard, contribute to an existing air quality violation, or expose sensitive receptors to substantive pollutant concentrations. For $PM_{10}$ emissions, background concentrations representative of the project area exceed the California Ambient Air Quality Standards (CAAQS) for the 24-hour and annual averaging times. As a result, a significant impact is achieved when pollutant concentrations produce a measurable change over existing background levels. Although background concentrations exceed the CAAQS annual averaging time for fine particulates, no measurable change criteria currently exists. As a result, the SCAQMD standard of 2.5 $\mu g/m^3$ for the 24-hour averaging time is used to assess $PM_{10}$ and $PM_{2.5}$ impacts. Table 8 through Table 10 present the maximum predicted concentrations for each identified occupancy and floor level that exceed the particulate significance thresholds.

**Table 8 Maximum Residential 1 Receptor/$PM_{10}$ and $PM_{2.5}$**

| | Pollutant/Averaging Time | | |
|---|---|---|---|
| Floor Level | $PM_{10}$ 24-Hour | $PM_{10}$ Annual | $PM_{2.5}$ 24-Hour |
| 2 | 11.04772 | 7.31759 | 3.58444 |
| 3 | 10.72527 | 6.84941 | 3.48039 |
| 4 | 10.21925 | 5.99178 | 3.31664 |
| 5 | 9.03814 | 4.60786 | 2.93522 |
| 6 | 7.44507 | 3.23152 | – |
| 7 | 5.82255 | 2.17110 | – |

Note: Concentrations are expressed in micrograms per cubic meter ($(\mu g/m^3)$).
Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 9 Maximum Residential 2 Receptor/$PM_{10}$ and $PM_{2.5}$**

| | Pollutant/Averaging Time | | |
|---|---|---|---|
| Floor Level | $PM_{10}$ 24-Hour | $PM_{10}$ Annual | $PM_{2.5}$ 24-Hour |
| 3 | 13.73535 | 9.09714 | 4.43438 |
| 4 | 13.09213 | 8.12667 | 4.22698 |
| 5 | 12.05673 | 6.46282 | 3.89339 |
| 6 | 9.96575 | 4.48692 | 3.21970 |
| 7 | 7.63241 | 2.95801 | – |
| 8 | 5.73936 | 1.97103 | – |

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).
Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 10 Maximum Hotel Receptor/$PM_{10}$ and $PM_{2.5}$**

| | Pollutant/Averaging Time | |
|---|---|---|
| Floor Level | $PM_{10}$ 24-Hour | $PM_{2.5}$ 24-Hour |
| 3 | 11.07841 | 3.56131 |
| 4 | 8.42067 | 2.70927 |
| 5 | 6.09354 | – |
| 6 | 4.46443 | – |
| 7 | 3.39506 | – |
| 8 | 2.67803 | – |

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³). Concentration estimates with receptor heights commensurate with succeeding floor levels will produce lower risk estimates.
Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

Background concentrations for CO (one-hour and eight-hour averaging times) and $NO_2$ (one-hour averaging time) are below current air quality standards. As such, significance is achieved when pollutant concentrations add to existing levels and create an exceedance of the CAAQS. The maximum modeled one-hour concentration for CO of 0.31186 parts per million (ppm) (357.13906 µg/$m^3$) when added to an existing background concentration of 3.0 ppm, will not cause an exceedance of the CAAQS of 20 ppm. For the 8-hour averaging time, the maximum predicted concentrations of 0.18520 ppm, (212.09453 µg/$m^3$) for the residential and 0.16951 ppm, (194.12644 µg/$m^3$) for the hotel occupancy when added to an existing background level of 3.0 ppm, does not cause an exceedance of the CAAQS of 9 ppm.

For $NO_2$, the maximum one-hour concentration of 0.05433 ppm (102.22127 µg/$m^3$) was predicted. This concentration, when added to a background concentration of 0.0795 ppm, will not cause an exceedance of the CAAQS of 0.18 ppm.

In conclusion, carcinogenic risks estimates for the 30 year exposure scenario exceed the level posing no significant risk for Residential 1 and Residential 2 receptors located on floor levels two through six and three through seven, respectively. For the nine year exposure scenario, the level posing no significant risk was not exceeded for any receptor location.

For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all 30 year and nine year exposure scenarios. For short duration exposures,

the hazard indices for the identified averaging times did not exceed unity. Therefore, non-carcinogenic hazards were predicted to be within acceptable limits.

## Project Design Feature

Impacts associated with chronic, annual and/or 24-hour particulate exposures from diesel exhaust and the re-entrainment of paved roadway dust would be reduced through implementation of PDF AQ-3 (see Section 2.2.4 above for the full text). Short duration exposures associated with both toxic and criteria pollutants are below identified significance thresholds. As such, no impacts are anticipated to individuals who reside at the Project site, access common areas, utilize outdoor residential/hotel amenities, and frequent the adjoining community park.

**Table 11 Particulate Filter Efficiencies/Residential 1**

| Floor Level | MERV Rating |
|---|---|
| 2 | ≥14 |
| 3 | ≥14 |
| 4 | ≥14 |
| 5 | ≥13 |
| 6 | ≥11 |
| 7 | ≥8 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 12 Particulate Filter Efficiencies/Residential 2**

| Floor Level | MERV Rating |
|---|---|
| 3 | ≥14 |
| 4 | ≥14 |
| 5 | ≥14 |
| 6 | ≥13 |
| 7 | ≥11 |
| 8 | ≥8 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 13 Particulate Filter Efficiencies/Hotel**

| Floor Level | MERV Rating |
|---|---|
| 3 | ≥10 |
| 4 | ≥9 |
| 5 | ≥8 |
| 6 | ≥7 |
| 7 | ≥6 |
| 8 | ≥5 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

Table 14 through Table 18 present the carcinogenic risk and particulate concentration reductions associated with the incorporation of the identified MERV filtration efficiencies. For carcinogenic risks, gaseous emissions are not controlled with the above referenced MERV filtration. Therefore, organic gases are considered uncontrolled and weighted against the diesel concentration estimates to produce an overall risk estimate for a given occupancy.

### Table 14 Maximum Residential 1 Receptor/Carcinogenic Risk with MERV Filter

| Floor Level | Exposure Scenario 30 Year |
|---|---|
| 2 | 1.0e-05 |
| 3 | 9.3e-06 |
| 4 | 8.0e-06 |
| 5 | 9.5e-06 |
| 6 | 9.9e-06 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

### Table 15 Maximum Residential 2 Receptor/Carcinogenic Risk with MERV Filter

| Floor Level | Exposure Scenario 30 Year |
|---|---|
| 3 | 1.0e-05 |
| 4 | 9.2e-06 |
| 5 | 7.6e-06 |
| 6 | 8.7e-06 |
| 7 | 8.9e-06 |

Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

### Table 16 Maximum Residential 1 Receptor/PM10 and PM2.5 with MERV Filter

| | Pollutant/Averaging Time | | |
|---|---|---|---|
| Floor Level | $PM_{10}$ 24 Hour | $PM_{10}$ Annual | MERV Rating |
| 2 | 0.55236 | 0.36588 | 0.35844 |
| 3 | 0.53626 | 0.34247 | 0.34804 |
| 4 | 0.51096 | 0.29959 | 0.33166 |
| 5 | 0.90381 | 0.46079 | 0.44028 |
| 6 | 1.11676 | 0.48473 | – |
| 7 | 1.74677 | 0.65133 | – |

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).
Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 17 Maximum Residential 2 Receptor/$PM_{10}$ and $PM_{2.5}$ with MERV Filter**

| | Pollutant/Averaging Time | | |
|---|---|---|---|
| Floor Level | $PM_{10}$ 24 Hour | $PM_{10}$ Annual | MERV Rating |
| 3 | 0.68677 | 0.45486 | 0.44344 |
| 4 | 0.65461 | 0.40633 | 0.42270 |
| 5 | 0.60284 | 0.32314 | 0.38934 |
| 6 | 0.99658 | 0.44869 | 0.48296 |
| 7 | 1.14486 | 0.44370 | – |
| 8 | 1.72181 | 0.59131 | – |

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).
Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

**Table 18 Maximum Hotel Receptor/$PM_{10}$ and $PM_{2.5}$ with MERV Filter**

| Floor Level | $PM_{10}$ 24 Hour | $PM_{2.5}$ 24 Hour |
|---|---|---|
| 3 | 2.21568 | 1.78066 |
| 4 | 2.10517 | 1.76103 |
| 5 | 1.82806 | – |
| 6 | 2.23222 | – |
| 7 | 2.20679 | – |
| 8 | 2.14242 | – |

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).
Source: Air Quality Dynamics, 2017, See Appendix C of the DEIR

## Significance After Mitigation

The implementation of the PDF above would further reduce particulate matter generated by the operation of the proposed Project and impacts would be less than significant.

# 3 Greenhouse Gases

## 3.1 Background

This section analyzes greenhouse gas (GHG) emissions associated with the Project and potential impacts related to climate change.

### 3.1.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2014), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2014).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHG). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxides ($N_2O$), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$). Water vapor is excluded from the list of GHG because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

Both natural processes and human activities emit GHGs. $CO_2$and $CH_4$ are emitted in the greatest quantities from human activities. Emissions of $CO_2$are largely by-products of fossil fuel combustion, whereas $CH_4$ results from off-gassing associated with agricultural practices and landfills. Observations of $CO_2$ concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in $CH_4$ and $N_2O$ concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than $CO_2$, include fluorinated gases and $SF_6$ (CalEPA 2006). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHG absorb different

amounts of heat, a common reference gas ($CO_2$) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" ($CO_2e$), and is the amount of a GHG emitted multiplied by its GWP. $CO_2$ has a 100-year GWP of one. By contrast, $CH_4$ has a GWP of 25, meaning its global warming effect is 25 times greater than $CO_2$ on a molecule per molecule basis (IPCC 2007). The United States Environmental Protection Agency (USEPA) began regulating GHG emissions under the Clean Air Act. Specifically, the Clean Air Act regulates carbon dioxide, methane, nitrous oxide, and fluorinated gases[3] USEPA 2017a). The IPCC outlines multiple methods of calculating GWPs; therefore, the USEPA presents the GWPs in a range, as outlined below (USEPA 2017a):

- Carbon dioxide ($CO_2$) – 1
- Methane ($CH_4$) – 28 – 36
- Nitrous oxide ($N_2O$) – 265 - 298
- Fluorinated gases –thousands or tens of thousands, depending

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

### 3.1.2 Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHG were approximately 46,000 million metric tons (MMT, or gigatonne) of $CO_2e$ in 2010 (IPCC 2014). $CO_2$ emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, $CO_2$ was the most abundant accounting for 76 percent of total 2010 emissions. $CH_4$ emissions accounted for 16 percent of the 2010 total, while $N_2O$ and fluorinated gases account for 6 and 2 percent, respectively (IPCC 2014).

Total U.S. GHG emissions were 6,586.7 million metric tons (MMT or gigatonne) $CO_2e$ in 2015 (U.S. EPA 2017b). Total U.S. emissions have increased by 3.5 percent since 1990; emissions decreased by 2.3 percent from 2014 to 2015 (USEPA 2017b). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector; (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors; and (3) a slight decrease in electricity demand (USEPA 2017b). Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of $CO_2$ emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of $CO_2$ emissions, respectively (USEPA 2017b).

Based on the CARB California Greenhouse Gas Inventory for 2000-2015, California produced 440.4 MMT $CO_2e$ in 2015 (CARB 2017a). The largest single source of GHG in California is transportation, contributing 39 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions, contributing 23 percent of the state's GHG emissions (CARB 2017a). California emissions are due in part to its large size and large population compared to other

[3] Chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$) are considered fluorinated gases.

states. However, the mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. The CARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT $CO_2e$ (CARB 2017b). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

### 3.1.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air, land, and water temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT, and surface temperatures, have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014).

According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include decreased snow pack, sea level rise, and increase in extreme heat days per year, high ground-level $O_3$ days, large forest fires, and drought (CalEPA 2010). Below is a summary of some of the potential impacts that could be experienced in California as a result of climate change.

#### Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in many areas of California. Climate change may increase the concentration of ground-level $O_3$, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC 2009).

#### Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

## Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (DWR 2008; CCCC 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

## Agriculture

California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher $CO_2$ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

## Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on the local and global levels. Increasing concentrations of GHGs are likely to accelerate the rate and severity of climate change impacts. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) during the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

### *Existing/Baseline Project Site Greenhouse Gas Emissions*

The Project site is vacant and does not generate substantial GHG emissions. Therefore, this GHG analysis conservatively assumed the baseline emissions to be zero and focused on potential impacts from construction and operations of the proposed Project.

## 3.1.4 Regulatory Setting

The following regulations address both climate change and GHG emissions.

### Federal Regulations

The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate tail pipe emissions from motor-vehicles under the federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons of $CO_2e$ per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons of $CO_2e$ per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 tons of $CO_2e$ per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons of $CO_2e$ per year.

On July 3, 2012, the U.S. EPA issued a Final Rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

### California Regulations

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective

reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions.

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015, the governor issued EO B-30-15 calling for a new target of 40 percent below 1990 levels by 2030.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT of $CO_2e$. The Scoping Plan was approved by ARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan. Implementation activities are ongoing and ARB is currently the process of updating the Scoping Plan.

In May 2014, ARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2017c).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The

adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

ARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the RTP. On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In April 2011, the governor signed SB 2X, requiring California to generate 33 percent of its electricity from renewable energy by 2020.

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO2e by 2030 and two MT CO2e by 2050 (CARB 2017 ). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

Adopted on October 7, 2015, SB 350 supports the reduction of GHG emissions from the electricity sector through a number of measures, including requiring electricity providers to achieve a 50 percent renewables portfolio standard by 2030, a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030.

Adopted in September 2016, SB 1383 requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40% below 2013 levels
- Hydrofluorocarbons – 40% below 2013 levels
- Anthropogenic black carbon – 50% below 2013 levels

The bill also requires CalRecycle, in consultation with the State board, to adopt regulations that achieve specified targets for reducing organic waste in landfills. For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

## California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

## Regional Regulations

As discussed above, SB 375 requires MPOs to prepare an RTP/SCS that will achieve regional emission reductions through sustainable transportation and growth strategies. On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. Most recently, SCAG adopted the 2016-2040 RTP/SCS on April 7, 2016. It includes a number of strategies and objectives to encourage transit-oriented and infill development and use of alternative transportation to minimize vehicle use.

## Local Regulations

The City of Burbank adopted the Burbank 2035 Greenhouse Gas Reduction Plan (GGRP) in 2013. Guided by the framework set forth in the City's 2035 General Plan, the GGRP implements Goal 3 and associated Policies 3.1 and 3.2. Policy 3.1 establishes the target for Burbank to reduce communitywide greenhouse gas emissions by at least 15% from current levels by 2020, and Policy 3.2 establishes the goal to reduce emissions by at least 30% from current levels by 2035. This target and goal are consistent with statewide efforts established in the Scoping Plan to reduce statewide GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050 (City of Burbank 2013).

Based on the 2010 jurisdictional emissions inventory and projections for the City provided in the GGRP, the 2020 communitywide emissions reduction target is 1,430,120 MT of $CO_2e$/year. Reductions from current statewide policies would contribute emissions reductions of 368,670 MT of $CO_2e$/year. Therefore, local actions must address an emissions gap of 61,109 MT of $CO_2e$/year by 2020. To achieve the 2035 communitywide emissions reduction goal of 1,177,746 MT of $CO_2e$/year the City would require reductions of 949,754 MT of $CO_2e$/year. Reductions achieved from statewide policies would contribute 494,944 MT of $CO_2e$/year and local actions would be needed to achieve the remaining emissions gap of 454,810 MT of $CO_2e$/year by 2035.

As discussed in Section 2, *Air Quality*, the Burbank 2035 General Plan provides goals and policies related to greenhouse gas reductions in the Air Quality and Climate Change Element. The specific goals and policies include the following:

**Goal 3: Reduction of Greenhouse Gas Emissions**

**Policy 3.1:** Develop and adopt a binding, enforceable reduction target and mitigation measures and actions to reduce communitywide greenhouse gas emissions within Burbank by at least 15% from current levels by 2020.

**Policy 3.2:** Establish a goal and strategies to reduce communitywide greenhouse gas emissions by at least 30% from current levels by 2035.

**Policy 3.3:** Continue to participate in the Cities for Climate Protection program and applicable state and federal climate change programs.

**Policy 3.4:** Reduce greenhouse gas emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio.

**Policy 3.5:** Submit an annual report on implementation of the Greenhouse Gas Reduction Plan, in conjunction with the annual report to the City Council regarding implementation of Burbank2035.

**Policy 3.6:** Reduce greenhouse gas emissions by encouraging the retrofit of older, energy inefficient buildings.

**Policy 3.8:** Transition all economic sectors, new development, and existing infrastructure and development to low- or zero-carbon energy sources. Encourage implementation and provide incentives for low- or zero-carbon energy sources.

**Goal 4: Climate Change**

**Policy 4.1:** Evaluate the potential effects of climate change on Burbank's human and natural systems and prepare strategies that allow the City to appropriately respond.

**Policy 4.2:** Consult with state resource and emergency management agencies regarding updates to climate change science and development of adaptation priorities.

## 3.2 Impact Analysis

### 3.2.1 Significance Thresholds

Based on Appendix G of the State CEQA Guidelines, impacts related to GHG emissions from the project would be significant if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (AEP 2017).

In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010.

- **Tier 1**. If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.
- **Tier 2**. Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines Section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.
- **Tier 3**. Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 metric tons (MT) of $CO_2e$ per year for mixed use projects.
- **Tier 4**. Establishes a service population efficiency threshold to determine significance. The Working Group has provided a recommendation of 4.1 MT of $CO_2e$ per year for plans based on statewide service population.

The SCAQMD has not adopted GHG emissions thresholds that apply to land use projects where the SCAQMD is not the lead agency. Additionally, the City of Burbank has not adopted quantitative GHG emissions thresholds. However, the City has adopted a qualified local GHG reduction plan (the GGRP) that establishes GHG emissions targets for 2020 and 2035 and is consistent with CEQA Section 15183.5(b). Therefore, the Project's GHG-related impacts would be considered less than significant if the Project would be consistent with the City's GGRP (Tier 2).

### 3.2.2 Project Impacts

#### Consistency Evaluation

As mentioned under *Local Regulations*, the City of Burbank has developed a Greenhouse Gas Reduction Plan (GGRP) in addition to the Air Quality and Climate Change Element included in the City's General Plan. There are a number GGRP and General Plan policies that were established to reduce the citywide levels of GHG over time, which were summarized under Local Regulations above. The General Plan has a specific policy (Policy 3.4) that's aimed to reduce GHG emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio. The Project would be consistent with this policy as it is an infill development, located near existing transit, and would include water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping that uses recycled water. The Project is also consistent with applicable GGRP policies, as outlined in Table 19. Additionally, the design and implementation of the Project would comply with applicable State policies to reduce GHG emissions associated with energy use, including the Renewable Portfolio Standard and Title 24 of the California Building Code that would reduce anticipated emissions associated with the proposed Project. The Project would be conditioned to comply with these existing requirements. For example, in accordance with the 2016 California Green Building

Standards Code, the Project would include a schedule of plumbing fixtures and fixture fittings that would reduce the overall use of potable water within the building by at least 20 percent. The reduction would be based on the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code.

Furthermore, the Project would involve a residential development in an urbanized area that is served by public transit. Specifically, two commuter rail line and 10 bus lines currently serve the Project area. The Project would be served by the Metrolink commuter rail, Los Angeles County Metropolitan Transportation Authority (Metro) bus lines, Burbank Bus lines, and Glendale Beelines. The Project would also be located within 0.3 miles of Chandler Boulevard that has a bike path and within 0.4 miles of Victory Boulevard, which has a bike lane. The Project's proximity to these bicycle facilities would encourage the use of active transportation. Therefore, the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with the objectives of SCAG's RTP/SCS as well as other applicable plans and policies.

### Table 19 Project Consistency with Applicable GGRP Measures

| Measure | Project Consistency |
|---|---|
| **Mandatory Measures** | |
| **E-1.1 Energy Efficiency in New Construction**<br>The City will require new commercial project to be constructed to Title 24 Tier 1 levels (e.g., exceed current efficiency standards by 15 percent). | **Consistent**<br>The Project would be constructed in a manner that would provide consistency with Title 24 Tier 1 levels. Additionally, the design and development of residential uses included in the Project would comply with CALGreen Building Standards, which includes measures to reduce emissions and energy consumption. The Project would also comply with SCAQMD Rule 1113 that limits ROGs from building architectural coatings to 50 g/ L. |
| **E-1.7 Building Shade Trees**<br>BWP will continue to administer the Made in Shade Program. The City will also revise the Zoning Ordinance to require the planning of two building shade trees per parcel to accompany each new single-family residential unit. The City will update its Street Tree Plan and Urban Forestry program, with a focus on identifying streets that currently lack street trees, parking lots that could accommodate additional shade trees, and locations for new tree plantings in City parks and open space. | **Consistent**<br>Although the Project would not include single-family residential units, the Project involves the development of internal courtyards, expanded sidewalks, and a publicly accessible plaza that would include a mix of amenities such as landscaping, seating, and new shade trees. The Project also involves the creation of earth mounds and the use of sound walls to provide a sound buffer as well as the incorporation of evergreen trees where physically feasible to act as a screen and reduce the heat island effect. |
| **E-2.1 Renewable Energy Requirements**<br>The City will require new single-family residential homes to include a 1.8 kWh solar voltaic system, and will require new multi-family and commercial construction to provide 10% of the buildings modeled energy use from renewable sources (e.g., solar PV, geothermal heat pumps).<br>The City will require installation of solar water heaters in all new residential construction, to the fullest extent possible. The City will also require pre-wiring and pre-plumbing on new construction for residential solar PV and solar water heaters to provide for easier and less costly future installation. | **Consistent**<br>The Project would include renewable energy via roof-top solar panels, use of the Green Building Code, pre-wiring for solar and electric vehicles and the payment of applicable development impact and aid in construction fees to the City's public utilities. Collectively these efforts will ensure compliance with the City's long-term goals of moving toward the use of alternative fuels. |

| Measure | Project Consistency |
|---|---|
| **E-2.1 Transportation Management Organization Expansion**<br>The City will work with the TMO to expand the geographic reach of its programs and the extent of services it currently provides; first expanding into the Golden State and Empire areas (by 2020), and then expanding citywide at a later date. In each case, the City will require that all new businesses with 25 or more employees located within the TMP boundary become TMO members and fulfill reporting requirements. | **Consistent**<br>The Project applicant would be a participant in the TMO and will fulfill the associated reporting requirements. Additionally, the Project would promote trip reduction measures through the following:<br>▪ A total of 73 bicycle parking spaces for residences and the hotel (57 residential and 16 hotel).<br>▪ Direct sidewalk access from street to project building.<br>▪ Safe bicycle access from the street to bicycle parking facilities. |
| **SW-1.1 Food Scrap and Compostable Paper Diversion Ordinance**<br>The City will adopt a food scraps and compostable paper diversion ordinance, requiring all food waste and compostable paper to be diverted from the waste stream to composting facilities. As part of this ordinance, the City will update its yard waste collection program to allow customers to include food scraps and compostable paper in their yard waste bins. | **Consistent**<br>The Project would be required to comply with all applicable City ordinances, including those specific to diverting food scraps and compostable paper. |
| **SW-1.2: Yard Waste Diversion Ordinance**<br>The City will adopt an ordinance banning disposal of yard waste in trash bins. Multi-family residential and non-residential properties that are not currently served by the City's solid waste collection program would need to contract with a yard waste collection service provider. | **Consistent**<br>The Project would be required to comply with all applicable City ordinances, including those specific to diverting yard waste. |
| **Voluntary Measures** | |
| **E-1.3 ENERGY STAR Appliances**<br>The City will encourage voluntary community participation to install ENERGY STAR appliances or other energy-efficient appliance models in both new and existing residential units. | **Consistent**<br>The Project would include ENERGY STAR or similarly rated appliances in new residential units in order to maximize all appliances energy efficiency. |

As outlined in the above paragraph and Table 19, the Project would be consistent with the local GGRP policies related to GHG emission reduction and mitigation is not required. Due to consistency with the applicable GHG reduction plan, City's General Plan, and the SCAG RTP/SCS, Project impacts would be less than significant under the with SCAQMD's draft tiered approach.

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# Appendix A

CalEEMod Output and Air Quality Calculations

# La Terra Mixed Use Project

**Los Angeles-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Enclosed Parking with Elevator | 1,537.00 | Space | 0.00 | 614,800.00 | 0 |
| Other Asphalt Surfaces | 27.80 | 1000sqft | 0.64 | 27,800.00 | 0 |
| City Park | 0.30 | Acre | 0.00 | 13,068.00 | 0 |
| High Turnover (Sit Down Restaurant) | 1.80 | 1000sqft | 0.00 | 1,800.00 | 0 |
| Hotel | 307.00 | Room | 0.00 | 212,350.00 | 0 |
| Apartments Mid Rise | 573.00 | Dwelling Unit | 7.45 | 645,806.00 | 1639 |
| Strip Mall | 1.07 | 1000sqft | 0.00 | 1,070.00 | 0 |
| Recreational Swimming Pool | 0.80 | 1000sqft | 0.00 | 800.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2026 |
| **Utility Company** | Burbank Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 1096.12 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

La Terra Mixed Use Project - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use - Applicant provided information from site plan

Construction Phase - Applicant provided construction schedule

Grading - Exporting 90,000 CY of total material (concrete and dirt) and grading entire 8.09 site

Trips and VMT - 3750 roundtrips w/ 24 CY truck and 190 miles to Kettleman landfill

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Woodstoves - SCAQMD Rule 445

Construction Off-road Equipment Mitigation - SCAQMD Rule 401 and CARB in-use off-road regulation

Water Mitigation - project applicant proposed to use water efficnet irrigation

Fleet Mix -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
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| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
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| tblConstructionPhase | NumDays | 230.00 | 1,435.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 10.00 | 87.00 |
| tblConstructionPhase | PhaseEndDate | 11/20/2020 | 9/30/2025 |
| tblConstructionPhase | PhaseEndDate | 9/25/2020 | 9/30/2025 |
| tblConstructionPhase | PhaseEndDate | 11/8/2019 | 3/31/2020 |
| tblConstructionPhase | PhaseEndDate | 10/23/2020 | 9/26/2025 |
| tblConstructionPhase | PhaseEndDate | 10/11/2019 | 12/31/2019 |
| tblConstructionPhase | PhaseStartDate | 10/24/2020 | 1/2/2023 |
| tblConstructionPhase | PhaseStartDate | 11/9/2019 | 4/1/2020 |
| tblConstructionPhase | PhaseStartDate | 10/12/2019 | 1/1/2020 |
| tblConstructionPhase | PhaseStartDate | 9/26/2020 | 6/30/2025 |
| tblConstructionPhase | PhaseStartDate | 9/28/2019 | 9/2/2019 |

| | | | |
|---|---|---|---|
| tblEnergyUse | LightingElect | 741.44 | 185.36 |
| tblEnergyUse | LightingElect | 1.75 | 0.44 |
| tblEnergyUse | LightingElect | 7.87 | 1.97 |
| tblEnergyUse | LightingElect | 2.14 | 0.54 |
| tblEnergyUse | LightingElect | 6.26 | 1.57 |
| tblFireplaces | FireplaceDayYear | 25.00 | 0.00 |
| tblFireplaces | FireplaceHourDay | 3.00 | 0.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 487.05 | 0.00 |
| tblFireplaces | NumberNoFireplace | 57.30 | 0.00 |
| tblFireplaces | NumberWood | 28.65 | 0.00 |
| tblGrading | AcresOfGrading | 32.50 | 8.09 |
| tblGrading | AcresOfGrading | 0.00 | 8.09 |
| tblGrading | MaterialExported | 0.00 | 90,000.00 |
| tblLandUse | LandUseSquareFeet | 445,764.00 | 212,350.00 |
| tblLandUse | LandUseSquareFeet | 573,000.00 | 645,806.00 |
| tblLandUse | LotAcreage | 13.83 | 0.00 |
| tblLandUse | LotAcreage | 0.30 | 0.00 |
| tblLandUse | LotAcreage | 0.04 | 0.00 |
| tblLandUse | LotAcreage | 10.23 | 0.00 |
| tblLandUse | LotAcreage | 15.08 | 7.45 |
| tblLandUse | LotAcreage | 0.02 | 0.00 |
| tblLandUse | LotAcreage | 0.02 | 0.00 |
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| tblSolidWaste | SolidWasteGenerationRate | 0.03 | 0.02 |
| tblSolidWaste | SolidWasteGenerationRate | 21.42 | 16.07 |
| tblSolidWaste | SolidWasteGenerationRate | 168.08 | 126.06 |

| | | | |
|---|---|---|---|
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| tblSolidWaste | SolidWasteGenerationRate | 1.12 | 0.84 |
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| tblTripsAndVMT | HaulingTripNumber | 11,250.00 | 3,750.00 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | ST_TR | 9.10 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | SU_TR | 13.60 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.85 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 91.99 |
| tblVehicleTrips | WD_TR | 8.17 | 7.44 |
| tblVehicleTrips | WD_TR | 33.82 | 0.00 |
| tblVehicleTrips | WD_TR | 44.32 | 30.96 |
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| tblWater | IndoorWaterUseRate | 546,360.68 | 437,088.50 |
| tblWater | IndoorWaterUseRate | 7,787,598.39 | 6,230,079.00 |
| tblWater | IndoorWaterUseRate | 79,257.60 | 63,406.08 |
| tblWaterMitigation | Evapotranspiration | 52.031579 | 59.196676 |
| tblWoodstoves | NumberCatalytic | 28.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 28.65 | 0.00 |
| tblWoodstoves | WoodstoveDayYear | 25.00 | 0.00 |
| tblWoodstoves | WoodstoveWoodMass | 999.60 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2019 | 4.4347 | 45.6459 | 22.8595 | 0.0401 | 18.3661 | 2.3921 | 20.7582 | 9.9947 | 2.2007 | 12.1954 | 0.0000 | 3,972.0364 | 3,972.0364 | 1.1987 | 0.0000 | 4,002.0049 |
| 2020 | 6.8592 | 140.7472 | 54.3579 | 0.4111 | 16.0508 | 1.7580 | 17.8088 | 6.0157 | 1.6351 | 7.6508 | 0.0000 | 44,205.6072 | 44,205.6072 | 3.3322 | 0.0000 | 44,288.9108 |
| 2021 | 6.2663 | 39.7381 | 50.9900 | 0.1618 | 10.0134 | 1.0708 | 11.0842 | 2.6853 | 1.0061 | 3.6913 | 0.0000 | 16,360.0486 | 16,360.0486 | 1.2139 | 0.0000 | 16,390.3959 |
| 2022 | 5.8060 | 36.6943 | 48.2069 | 0.1584 | 10.0135 | 0.9137 | 10.9272 | 2.6853 | 0.8589 | 3.5442 | 0.0000 | 16,019.0233 | 16,019.0233 | 1.1736 | 0.0000 | 16,048.3626 |
| 2023 | 14.8310 | 32.4054 | 52.0230 | 0.1723 | 11.7572 | 0.8674 | 12.6246 | 3.1477 | 0.8190 | 3.9668 | 0.0000 | 17,393.5180 | 17,393.5180 | 1.1636 | 0.0000 | 17,422.6075 |
| 2024 | 14.5063 | 31.1091 | 49.7863 | 0.1692 | 11.7572 | 0.7696 | 12.5269 | 3.1478 | 0.7262 | 3.8740 | 0.0000 | 17,084.6219 | 17,084.6219 | 1.1345 | 0.0000 | 17,112.9839 |
| 2025 | 15.2014 | 38.3631 | 62.6084 | 0.1896 | 11.9249 | 1.0923 | 13.0172 | 3.1922 | 1.0205 | 4.2128 | 0.0000 | 19,053.8623 | 19,053.8623 | 1.8236 | 0.0000 | 19,099.4526 |
| **Maximum** | **15.2014** | **140.7472** | **62.6084** | **0.4111** | **18.3661** | **2.3921** | **20.7582** | **9.9947** | **2.2007** | **12.1954** | **0.0000** | **44,205.6072** | **44,205.6072** | **3.3322** | **0.0000** | **44,288.9108** |

## 2.1 Overall Construction (Maximum Daily Emission)

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2019 | 1.0308 | 19.1388 | 23.7565 | 0.0401 | 8.3754 | 0.9479 | 9.3233 | 4.5270 | 0.9478 | 5.4747 | 0.0000 | 3,972.0364 | 3,972.0364 | 1.1987 | 0.0000 | 4,002.0049 |
| 2020 | 5.4133 | 129.2010 | 55.3832 | 0.4111 | 12.5799 | 1.2401 | 13.8200 | 4.1742 | 1.2191 | 5.3932 | 0.0000 | 44,205.6072 | 44,205.6072 | 3.3322 | 0.0000 | 44,288.9108 |
| 2021 | 5.0393 | 36.5321 | 52.2886 | 0.1618 | 10.0134 | 1.0157 | 11.0291 | 2.6853 | 1.0083 | 3.6936 | 0.0000 | 16,360.0486 | 16,360.0486 | 1.2139 | 0.0000 | 16,390.3958 |
| 2022 | 4.7737 | 35.3047 | 49.7173 | 0.1584 | 10.0135 | 1.0083 | 11.0217 | 2.6853 | 1.0013 | 3.6866 | 0.0000 | 16,019.0233 | 16,019.0233 | 1.1736 | 0.0000 | 16,048.3626 |
| 2023 | 13.8000 | 32.3005 | 53.6741 | 0.1723 | 11.7572 | 1.0955 | 12.8527 | 3.1477 | 1.0884 | 4.2362 | 0.0000 | 17,393.5180 | 17,393.5180 | 1.1636 | 0.0000 | 17,422.6075 |
| 2024 | 13.5873 | 32.0296 | 51.5155 | 0.1692 | 11.7572 | 1.0940 | 12.8513 | 3.1478 | 1.0871 | 4.2348 | 0.0000 | 17,084.6219 | 17,084.6219 | 1.1345 | 0.0000 | 17,112.9839 |
| 2025 | 14.0423 | 43.0446 | 67.1385 | 0.1896 | 11.9249 | 1.7026 | 13.6276 | 3.1922 | 1.6957 | 4.8879 | 0.0000 | 19,053.8623 | 19,053.8623 | 1.8236 | 0.0000 | 19,099.4526 |
| **Maximum** | **14.0423** | **129.2010** | **67.1385** | **0.4111** | **12.5799** | **1.7026** | **13.8200** | **4.5270** | **1.6957** | **5.4747** | **0.0000** | **44,205.6072** | **44,205.6072** | **3.3322** | **0.0000** | **44,288.9108** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **15.05** | **10.19** | **-3.71** | **0.00** | **14.98** | **8.57** | **14.40** | **23.68** | **2.65** | **19.24** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |
| Energy | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |
| Mobile | 8.3191 | 38.5090 | 102.8760 | 0.4252 | 40.3599 | 0.3271 | 40.6869 | 10.7979 | 0.3037 | 11.1015 | | 43,444.3271 | 43,444.3271 | 2.0341 | | 43,495.1787 |
| **Total** | **29.0826** | **42.1228** | **152.2144** | **0.4467** | **40.3599** | **0.8307** | **41.1905** | **10.7979** | **0.8073** | **11.6052** | **0.0000** | **47,333.1692** | **47,333.1692** | **2.1895** | **0.0697** | **47,408.6865** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |
| Energy | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |
| Mobile | 8.3191 | 38.5090 | 102.8760 | 0.4252 | 40.3599 | 0.3271 | 40.6869 | 10.7979 | 0.3037 | 11.1015 | | 43,444.3271 | 43,444.3271 | 2.0341 | | 43,495.1787 |
| **Total** | **29.0826** | **42.1228** | **152.2144** | **0.4467** | **40.3599** | **0.8307** | **41.1905** | **10.7979** | **0.8073** | **11.6052** | **0.0000** | **47,333.1692** | **47,333.1692** | **2.1895** | **0.0697** | **47,408.6865** |

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

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Site Preparation | Site Preparation | 9/2/2019 | 12/31/2019 | 5 | 87 | |
| 2 | Grading | Grading | 1/1/2020 | 3/31/2020 | 5 | 65 | |
| 3 | Building Construction | Building Construction | 4/1/2020 | 9/30/2025 | 5 | 1435 | |
| 4 | Paving | Paving | 6/30/2025 | 9/26/2025 | 5 | 65 | |
| 5 | Architectural Coating | Architectural Coating | 1/2/2023 | 9/30/2025 | 5 | 717 | |

**Acres of Grading (Site Preparation Phase): 8.09**

**Acres of Grading (Grading Phase): 8.09**

**Acres of Paving: 0.64**

**Residential Indoor: 1,307,757; Residential Outdoor: 435,919; Non-Residential Indoor: 322,830; Non-Residential Outdoor: 107,610; Striped Parking Area: 38,556 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 3,750.00 | 14.70 | 6.90 | 190.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 779.00 | 204.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 156.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

### 3.2 Site Preparation - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.1649 | 0.0000 | 18.1649 | 9.9413 | 0.0000 | 9.9413 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.3350 | 45.5727 | 22.0630 | 0.0380 | | 2.3904 | 2.3904 | | 2.1991 | 2.1991 | | 3,766.4529 | 3,766.4529 | 1.1917 | | 3,796.2445 |
| **Total** | **4.3350** | **45.5727** | **22.0630** | **0.0380** | **18.1649** | **2.3904** | **20.5552** | **9.9413** | **2.1991** | **12.1405** | | **3,766.4529** | **3,766.4529** | **1.1917** | | **3,796.2445** |

## 3.2 Site Preparation - 2019

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0997 | 0.0732 | 0.7965 | 2.0700e-003 | 0.2012 | 1.7300e-003 | 0.2029 | 0.0534 | 1.6000e-003 | 0.0550 | | 205.5836 | 205.5836 | 7.0700e-003 | | 205.7604 |
| **Total** | **0.0997** | **0.0732** | **0.7965** | **2.0700e-003** | **0.2012** | **1.7300e-003** | **0.2029** | **0.0534** | **1.6000e-003** | **0.0550** | | **205.5836** | **205.5836** | **7.0700e-003** | | **205.7604** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.1742 | 0.0000 | 8.1742 | 4.4736 | 0.0000 | 4.4736 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9312 | 19.0656 | 22.9600 | 0.0380 | | 0.9462 | 0.9462 | | 0.9462 | 0.9462 | 0.0000 | 3,766.4529 | 3,766.4529 | 1.1917 | | 3,796.2445 |
| **Total** | **0.9312** | **19.0656** | **22.9600** | **0.0380** | **8.1742** | **0.9462** | **9.1204** | **4.4736** | **0.9462** | **5.4198** | **0.0000** | **3,766.4529** | **3,766.4529** | **1.1917** | | **3,796.2445** |

## 3.2 Site Preparation - 2019

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0997 | 0.0732 | 0.7965 | 2.0700e-003 | 0.2012 | 1.7300e-003 | 0.2029 | 0.0534 | 1.6000e-003 | 0.0550 | | 205.5836 | 205.5836 | 7.0700e-003 | | 205.7604 |
| **Total** | **0.0997** | **0.0732** | **0.7965** | **2.0700e-003** | **0.2012** | **1.7300e-003** | **0.2029** | **0.0534** | **1.6000e-003** | **0.0550** | | **205.5836** | **205.5836** | **7.0700e-003** | | **205.7604** |

## 3.3 Grading - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.3107 | 0.0000 | 6.3107 | 3.3482 | 0.0000 | 3.3482 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4288 | 26.3859 | 16.0530 | 0.0297 | | 1.2734 | 1.2734 | | 1.1716 | 1.1716 | | 2,872.4851 | 2,872.4851 | 0.9290 | | 2,895.7106 |
| **Total** | **2.4288** | **26.3859** | **16.0530** | **0.0297** | **6.3107** | **1.2734** | **7.5841** | **3.3482** | **1.1716** | **4.5197** | | **2,872.4851** | **2,872.4851** | **0.9290** | | **2,895.7106** |

## 3.3 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.9700 | 114.3069 | 29.0847 | 0.3797 | 9.5725 | 0.4831 | 10.0556 | 2.6230 | 0.4622 | 3.0853 | | 41,167.0090 | 41,167.0090 | 2.3979 | | 41,226.9562 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |
| **Total** | **4.0466** | **114.3613** | **29.6862** | **0.3814** | **9.7401** | **0.4845** | **10.2247** | **2.6675** | **0.4635** | **3.1310** | | **41,333.1221** | **41,333.1221** | **2.4031** | | **41,393.2001** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.8398 | 0.0000 | 2.8398 | 1.5067 | 0.0000 | 1.5067 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.7263 | 14.8397 | 18.9906 | 0.0297 | | 0.7555 | 0.7555 | | 0.7555 | 0.7555 | 0.0000 | 2,872.4851 | 2,872.4851 | 0.9290 | | 2,895.7106 |
| **Total** | **0.7263** | **14.8397** | **18.9906** | **0.0297** | **2.8398** | **0.7555** | **3.5953** | **1.5067** | **0.7555** | **2.2622** | **0.0000** | **2,872.4851** | **2,872.4851** | **0.9290** | | **2,895.7106** |

## 3.3 Grading - 2020

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.9700 | 114.3069 | 29.0847 | 0.3797 | 9.5725 | 0.4831 | 10.0556 | 2.6230 | 0.4622 | 3.0853 | | 41,167.0090 | 41,167.0090 | 2.3979 | | 41,226.9562 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |
| **Total** | **4.0466** | **114.3613** | **29.6862** | **0.3814** | **9.7401** | **0.4845** | **10.2247** | **2.6675** | **0.4635** | **3.1310** | | **41,333.1221** | **41,333.1221** | **2.4031** | | **41,393.2001** |

## 3.4 Building Construction - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| **Total** | **2.1198** | **19.1860** | **16.8485** | **0.0269** | | **1.1171** | **1.1171** | | **1.0503** | **1.0503** | | **2,553.0631** | **2,553.0631** | **0.6229** | | **2,568.6345** |

## 3.4 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.7585 | 21.6955 | 6.2706 | 0.0515 | 1.3060 | 0.1038 | 1.4098 | 0.3760 | 0.0993 | 0.4753 | | 5,496.7609 | 5,496.7609 | 0.3676 | | 5,505.9500 |
| Worker | 3.9809 | 2.8237 | 31.2387 | 0.0866 | 8.7074 | 0.0728 | 8.7802 | 2.3092 | 0.0671 | 2.3763 | | 8,626.8048 | 8,626.8048 | 0.2719 | | 8,633.6026 |
| **Total** | **4.7394** | **24.5192** | **37.5094** | **0.1381** | **10.0134** | **0.1766** | **10.1899** | **2.6853** | **0.1663** | **2.8516** | | **14,123.5657** | **14,123.5657** | **0.6395** | | **14,139.5526** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,553.0631** | **2,553.0631** | **0.6229** | | **2,568.6345** |

## 3.4 Building Construction - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.7585 | 21.6955 | 6.2706 | 0.0515 | 1.3060 | 0.1038 | 1.4098 | 0.3760 | 0.0993 | 0.4753 | | 5,496.7609 | 5,496.7609 | 0.3676 | | 5,505.9500 |
| Worker | 3.9809 | 2.8237 | 31.2387 | 0.0866 | 8.7074 | 0.0728 | 8.7802 | 2.3092 | 0.0671 | 2.3763 | | 8,626.8048 | 8,626.8048 | 0.2719 | | 8,633.6026 |
| **Total** | **4.7394** | **24.5192** | **37.5094** | **0.1381** | **10.0134** | **0.1766** | **10.1899** | **2.6853** | **0.1663** | **2.8516** | | **14,123.5657** | **14,123.5657** | **0.6395** | | **14,139.5526** |

## 3.4 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## 3.4 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.6510 | 19.7653 | 5.7277 | 0.0510 | 1.3060 | 0.0418 | 1.3478 | 0.3760 | 0.0400 | 0.4160 | | 5,453.8487 | 5,453.8487 | 0.3521 | | 5,462.6508 |
| Worker | 3.7144 | 2.5407 | 28.6871 | 0.0838 | 8.7074 | 0.0704 | 8.7777 | 2.3092 | 0.0648 | 2.3741 | | 8,352.8360 | 8,352.8360 | 0.2458 | | 8,358.9808 |
| **Total** | **4.3654** | **22.3060** | **34.4148** | **0.1349** | **10.0134** | **0.1122** | **10.1256** | **2.6853** | **0.1048** | **2.7901** | | **13,806.6847** | **13,806.6847** | **0.5979** | | **13,821.6316** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## 3.4 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.6510 | 19.7653 | 5.7277 | 0.0510 | 1.3060 | 0.0418 | 1.3478 | 0.3760 | 0.0400 | 0.4160 | | 5,453.8487 | 5,453.8487 | 0.3521 | | 5,462.6508 |
| Worker | 3.7144 | 2.5407 | 28.6871 | 0.0838 | 8.7074 | 0.0704 | 8.7777 | 2.3092 | 0.0648 | 2.3741 | | 8,352.8360 | 8,352.8360 | 0.2458 | | 8,358.9808 |
| **Total** | **4.3654** | **22.3060** | **34.4148** | **0.1349** | **10.0134** | **0.1122** | **10.1256** | **2.6853** | **0.1048** | **2.7901** | | **13,806.6847** | **13,806.6847** | **0.5979** | | **13,821.6316** |

## 3.4 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.7062 | 15.6156 | 16.3634 | 0.0269 | | 0.8090 | 0.8090 | | 0.7612 | 0.7612 | | 2,554.3336 | 2,554.3336 | 0.6120 | | 2,569.6322 |
| **Total** | **1.7062** | **15.6156** | **16.3634** | **0.0269** | | **0.8090** | **0.8090** | | **0.7612** | **0.7612** | | **2,554.3336** | **2,554.3336** | **0.6120** | | **2,569.6322** |

## 3.4 Building Construction - 2022

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.6111 | 18.7842 | 5.4217 | 0.0506 | 1.3061 | 0.0366 | 1.3426 | 0.3760 | 0.0350 | 0.4110 | | 5,405.3937 | 5,405.3937 | 0.3397 | | 5,413.8865 |
| Worker | 3.4887 | 2.2945 | 26.4218 | 0.0809 | 8.7074 | 0.0682 | 8.7756 | 2.3092 | 0.0628 | 2.3720 | | 8,059.2961 | 8,059.2961 | 0.2219 | | 8,064.8439 |
| **Total** | **4.0998** | **21.0787** | **31.8435** | **0.1314** | **10.0135** | **0.1047** | **10.1182** | **2.6853** | **0.0978** | **2.7830** | | **13,464.6898** | **13,464.6898** | **0.5616** | | **13,478.7304** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,554.3336 | 2,554.3336 | 0.6120 | | 2,569.6322 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,554.3336** | **2,554.3336** | **0.6120** | | **2,569.6322** |

## 3.4 Building Construction - 2022

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.6111 | 18.7842 | 5.4217 | 0.0506 | 1.3061 | 0.0366 | 1.3426 | 0.3760 | 0.0350 | 0.4110 | | 5,405.3937 | 5,405.3937 | 0.3397 | | 5,413.8865 |
| Worker | 3.4887 | 2.2945 | 26.4218 | 0.0809 | 8.7074 | 0.0682 | 8.7756 | 2.3092 | 0.0628 | 2.3720 | | 8,059.2961 | 8,059.2961 | 0.2219 | | 8,064.8439 |
| **Total** | **4.0998** | **21.0787** | **31.8435** | **0.1314** | **10.0135** | **0.1047** | **10.1182** | **2.6853** | **0.0978** | **2.7830** | | **13,464.6898** | **13,464.6898** | **0.5616** | | **13,478.7304** |

## 3.4 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.5728 | 14.3849 | 16.2440 | 0.0269 | | 0.6997 | 0.6997 | | 0.6584 | 0.6584 | | 2,555.2099 | 2,555.2099 | 0.6079 | | 2,570.4061 |
| **Total** | **1.5728** | **14.3849** | **16.2440** | **0.0269** | | **0.6997** | **0.6997** | | **0.6584** | **0.6584** | | **2,555.2099** | **2,555.2099** | **0.6079** | | **2,570.4061** |

## 3.4 Building Construction - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4540 | 14.2267 | 4.8177 | 0.0489 | 1.3061 | 0.0174 | 1.3235 | 0.3761 | 0.0166 | 0.3927 | | 5,237.5227 | 5,237.5227 | 0.2991 | | 5,244.9993 |
| Worker | 3.2867 | 2.0752 | 24.2866 | 0.0779 | 8.7074 | 0.0662 | 8.7736 | 2.3092 | 0.0610 | 2.3702 | | 7,764.4533 | 7,764.4533 | 0.1998 | | 7,769.4487 |
| **Total** | **3.7407** | **16.3019** | **29.1043** | **0.1268** | **10.0135** | **0.0836** | **10.0971** | **2.6853** | **0.0776** | **2.7629** | | **13,001.9760** | **13,001.9760** | **0.4989** | | **13,014.4479** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,555.2099 | 2,555.2099 | 0.6079 | | 2,570.4061 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,555.2099** | **2,555.2099** | **0.6079** | | **2,570.4061** |

## 3.4 Building Construction - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4540 | 14.2267 | 4.8177 | 0.0489 | 1.3061 | 0.0174 | 1.3235 | 0.3761 | 0.0166 | 0.3927 | | 5,237.5227 | 5,237.5227 | 0.2991 | | 5,244.9993 |
| Worker | 3.2867 | 2.0752 | 24.2866 | 0.0779 | 8.7074 | 0.0662 | 8.7736 | 2.3092 | 0.0610 | 2.3702 | | 7,764.4533 | 7,764.4533 | 0.1998 | | 7,769.4487 |
| **Total** | **3.7407** | **16.3019** | **29.1043** | **0.1268** | **10.0135** | **0.0836** | **10.0971** | **2.6853** | **0.0776** | **2.7629** | | **13,001.9760** | **13,001.9760** | **0.4989** | | **13,014.4479** |

## 3.4 Building Construction - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.4716 | 13.4438 | 16.1668 | 0.0270 | | 0.6133 | 0.6133 | | 0.5769 | 0.5769 | | 2,555.6989 | 2,555.6989 | 0.6044 | | 2,570.8077 |
| **Total** | **1.4716** | **13.4438** | **16.1668** | **0.0270** | | **0.6133** | **0.6133** | | **0.5769** | **0.5769** | | **2,555.6989** | **2,555.6989** | **0.6044** | | **2,570.8077** |

## 3.4 Building Construction - 2024

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4428 | 14.1756 | 4.6716 | 0.0487 | 1.3061 | 0.0171 | 1.3232 | 0.3761 | 0.0163 | 0.3924 | | 5,217.2097 | 5,217.2097 | 0.2945 | | 5,224.5729 |
| Worker | 3.1189 | 1.8920 | 22.6099 | 0.0755 | 8.7074 | 0.0653 | 8.7727 | 2.3092 | 0.0601 | 2.3693 | | 7,523.6114 | 7,523.6114 | 0.1831 | | 7,528.1886 |
| **Total** | **3.5617** | **16.0677** | **27.2815** | **0.1241** | **10.0135** | **0.0823** | **10.0958** | **2.6853** | **0.0764** | **2.7617** | | **12,740.8211** | **12,740.8211** | **0.4776** | | **12,752.7615** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0270 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,555.6989 | 2,555.6989 | 0.6044 | | 2,570.8077 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0270** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,555.6989** | **2,555.6989** | **0.6044** | | **2,570.8077** |

## 3.4 Building Construction - 2024

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4428 | 14.1756 | 4.6716 | 0.0487 | 1.3061 | 0.0171 | 1.3232 | 0.3761 | 0.0163 | 0.3924 | | 5,217.2097 | 5,217.2097 | 0.2945 | | 5,224.5729 |
| Worker | 3.1189 | 1.8920 | 22.6099 | 0.0755 | 8.7074 | 0.0653 | 8.7727 | 2.3092 | 0.0601 | 2.3693 | | 7,523.6114 | 7,523.6114 | 0.1831 | | 7,528.1886 |
| **Total** | **3.5617** | **16.0677** | **27.2815** | **0.1241** | **10.0135** | **0.0823** | **10.0958** | **2.6853** | **0.0764** | **2.7617** | | **12,740.8211** | **12,740.8211** | **0.4776** | | **12,752.7615** |

## 3.4 Building Construction - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3674 | 12.4697 | 16.0847 | 0.0270 | | 0.5276 | 0.5276 | | 0.4963 | 0.4963 | | 2,556.4744 | 2,556.4744 | 0.6010 | | 2,571.4981 |
| **Total** | **1.3674** | **12.4697** | **16.0847** | **0.0270** | | **0.5276** | **0.5276** | | **0.4963** | **0.4963** | | **2,556.4744** | **2,556.4744** | **0.6010** | | **2,571.4981** |

## 3.4 Building Construction - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4315 | 14.0556 | 4.5523 | 0.0484 | 1.3062 | 0.0167 | 1.3229 | 0.3761 | 0.0160 | 0.3921 | | 5,189.2347 | 5,189.2347 | 0.2901 | | 5,196.4872 |
| Worker | 2.9708 | 1.7307 | 20.9791 | 0.0725 | 8.7074 | 0.0639 | 8.7713 | 2.3092 | 0.0588 | 2.3681 | | 7,232.3672 | 7,232.3672 | 0.1669 | | 7,236.5391 |
| **Total** | **3.4024** | **15.7864** | **25.5315** | **0.1209** | **10.0135** | **0.0806** | **10.0942** | **2.6853** | **0.0748** | **2.7601** | | **12,421.6019** | **12,421.6019** | **0.4570** | | **12,433.0263** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0270 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,556.4744 | 2,556.4744 | 0.6010 | | 2,571.4981 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0270** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,556.4744** | **2,556.4744** | **0.6010** | | **2,571.4981** |

## 3.4 Building Construction - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4315 | 14.0556 | 4.5523 | 0.0484 | 1.3062 | 0.0167 | 1.3229 | 0.3761 | 0.0160 | 0.3921 | | 5,189.2347 | 5,189.2347 | 0.2901 | | 5,196.4872 |
| Worker | 2.9708 | 1.7307 | 20.9791 | 0.0725 | 8.7074 | 0.0639 | 8.7713 | 2.3092 | 0.0588 | 2.3681 | | 7,232.3672 | 7,232.3672 | 0.1669 | | 7,236.5391 |
| **Total** | **3.4024** | **15.7864** | **25.5315** | **0.1209** | **10.0135** | **0.0806** | **10.0942** | **2.6853** | **0.0748** | **2.7601** | | **12,421.6019** | **12,421.6019** | **0.4570** | | **12,433.0263** |

## 3.5 Paving - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.9152 | 8.5816 | 14.5780 | 0.0228 | | 0.4185 | 0.4185 | | 0.3850 | 0.3850 | | 2,206.7452 | 2,206.7452 | 0.7137 | | 2,224.5878 |
| Paving | 0.0258 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.9410** | **8.5816** | **14.5780** | **0.0228** | | **0.4185** | **0.4185** | | **0.3850** | **0.3850** | | **2,206.7452** | **2,206.7452** | **0.7137** | | **2,224.5878** |

## 3.5 Paving - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0572 | 0.0333 | 0.4040 | 1.4000e-003 | 0.1677 | 1.2300e-003 | 0.1689 | 0.0445 | 1.1300e-003 | 0.0456 | | 139.2625 | 139.2625 | 3.2100e-003 | | 139.3429 |
| **Total** | **0.0572** | **0.0333** | **0.4040** | **1.4000e-003** | **0.1677** | **1.2300e-003** | **0.1689** | **0.0445** | **1.1300e-003** | **0.0456** | | **139.2625** | **139.2625** | **3.2100e-003** | | **139.3429** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.5609 | 11.2952 | 17.2957 | 0.0228 | | 0.6093 | 0.6093 | | 0.6093 | 0.6093 | 0.0000 | 2,206.7452 | 2,206.7452 | 0.7137 | | 2,224.5878 |
| Paving | 0.0258 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.5867** | **11.2952** | **17.2957** | **0.0228** | | **0.6093** | **0.6093** | | **0.6093** | **0.6093** | **0.0000** | **2,206.7452** | **2,206.7452** | **0.7137** | | **2,224.5878** |

## 3.5 Paving - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0572 | 0.0333 | 0.4040 | 1.4000e-003 | 0.1677 | 1.2300e-003 | 0.1689 | 0.0445 | 1.1300e-003 | 0.0456 | | 139.2625 | 139.2625 | 3.2100e-003 | | 139.3429 |
| **Total** | **0.0572** | **0.0333** | **0.4040** | **1.4000e-003** | **0.1677** | **1.2300e-003** | **0.1689** | **0.0445** | **1.1300e-003** | **0.0456** | | **139.2625** | **139.2625** | **3.2100e-003** | | **139.3429** |

## 3.6 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| **Total** | **8.8594** | **1.3030** | **1.8111** | **2.9700e-003** | | **0.0708** | **0.0708** | | **0.0708** | **0.0708** | | **281.4481** | **281.4481** | **0.0168** | | **281.8690** |

## 3.6 Architectural Coating - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6582 | 0.4156 | 4.8636 | 0.0156 | 1.7437 | 0.0133 | 1.7570 | 0.4624 | 0.0122 | 0.4747 | | 1,554.8841 | 1,554.8841 | 0.0400 | | 1,555.8845 |
| **Total** | **0.6582** | **0.4156** | **4.8636** | **0.0156** | **1.7437** | **0.0133** | **1.7570** | **0.4624** | **0.0122** | **0.4747** | | **1,554.8841** | **1,554.8841** | **0.0400** | | **1,555.8845** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0594 | 1.3570 | 1.8324 | 2.9700e-003 | | 0.0951 | 0.0951 | | 0.0951 | 0.0951 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| **Total** | **8.7272** | **1.3570** | **1.8324** | **2.9700e-003** | | **0.0951** | **0.0951** | | **0.0951** | **0.0951** | **0.0000** | **281.4481** | **281.4481** | **0.0168** | | **281.8690** |

## 3.6 Architectural Coating - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6582 | 0.4156 | 4.8636 | 0.0156 | 1.7437 | 0.0133 | 1.7570 | 0.4624 | 0.0122 | 0.4747 | | 1,554.8841 | 1,554.8841 | 0.0400 | | 1,555.8845 |
| **Total** | **0.6582** | **0.4156** | **4.8636** | **0.0156** | **1.7437** | **0.0133** | **1.7570** | **0.4624** | **0.0122** | **0.4747** | | **1,554.8841** | **1,554.8841** | **0.0400** | | **1,555.8845** |

## 3.6 Architectural Coating - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1808 | 1.2188 | 1.8101 | 2.9700e-003 | | 0.0609 | 0.0609 | | 0.0609 | 0.0609 | | 281.4481 | 281.4481 | 0.0159 | | 281.8443 |
| **Total** | **8.8485** | **1.2188** | **1.8101** | **2.9700e-003** | | **0.0609** | **0.0609** | | **0.0609** | **0.0609** | | **281.4481** | **281.4481** | **0.0159** | | **281.8443** |

## 3.6 Architectural Coating - 2024

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6246 | 0.3789 | 4.5278 | 0.0151 | 1.7437 | 0.0131 | 1.7568 | 0.4624 | 0.0120 | 0.4745 | | 1,506.6539 | 1,506.6539 | 0.0367 | | 1,507.5705 |
| **Total** | **0.6246** | **0.3789** | **4.5278** | **0.0151** | **1.7437** | **0.0131** | **1.7568** | **0.4624** | **0.0120** | **0.4745** | | **1,506.6539** | **1,506.6539** | **0.0367** | | **1,507.5705** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0594 | 1.3570 | 1.8324 | 2.9700e-003 | | 0.0951 | 0.0951 | | 0.0951 | 0.0951 | 0.0000 | 281.4481 | 281.4481 | 0.0159 | | 281.8443 |
| **Total** | **8.7272** | **1.3570** | **1.8324** | **2.9700e-003** | | **0.0951** | **0.0951** | | **0.0951** | **0.0951** | **0.0000** | **281.4481** | **281.4481** | **0.0159** | | **281.8443** |

## 3.6 Architectural Coating - 2024

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6246 | 0.3789 | 4.5278 | 0.0151 | 1.7437 | 0.0131 | 1.7568 | 0.4624 | 0.0120 | 0.4745 | | 1,506.6539 | 1,506.6539 | 0.0367 | | 1,507.5705 |
| **Total** | **0.6246** | **0.3789** | **4.5278** | **0.0151** | **1.7437** | **0.0131** | **1.7568** | **0.4624** | **0.0120** | **0.4745** | | **1,506.6539** | **1,506.6539** | **0.0367** | | **1,507.5705** |

## 3.6 Architectural Coating - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1709 | 1.1455 | 1.8091 | 2.9700e-003 | | 0.0515 | 0.0515 | | 0.0515 | 0.0515 | | 281.4481 | 281.4481 | 0.0154 | | 281.8319 |
| **Total** | **8.8386** | **1.1455** | **1.8091** | **2.9700e-003** | | **0.0515** | **0.0515** | | **0.0515** | **0.0515** | | **281.4481** | **281.4481** | **0.0154** | | **281.8319** |

## 3.6 Architectural Coating - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5949 | 0.3466 | 4.2012 | 0.0145 | 1.7437 | 0.0128 | 1.7565 | 0.4624 | 0.0118 | 0.4742 | | 1,448.3303 | 1,448.3303 | 0.0334 | | 1,449.1657 |
| **Total** | **0.5949** | **0.3466** | **4.2012** | **0.0145** | **1.7437** | **0.0128** | **1.7565** | **0.4624** | **0.0118** | **0.4742** | | **1,448.3303** | **1,448.3303** | **0.0334** | | **1,449.1657** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0594 | 1.3570 | 1.8324 | 2.9700e-003 | | 0.0951 | 0.0951 | | 0.0951 | 0.0951 | 0.0000 | 281.4481 | 281.4481 | 0.0154 | | 281.8319 |
| **Total** | **8.7272** | **1.3570** | **1.8324** | **2.9700e-003** | | **0.0951** | **0.0951** | | **0.0951** | **0.0951** | **0.0000** | **281.4481** | **281.4481** | **0.0154** | | **281.8319** |

### 3.6 Architectural Coating - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5949 | 0.3466 | 4.2012 | 0.0145 | 1.7437 | 0.0128 | 1.7565 | 0.4624 | 0.0118 | 0.4742 | | 1,448.3303 | 1,448.3303 | 0.0334 | | 1,449.1657 |
| **Total** | **0.5949** | **0.3466** | **4.2012** | **0.0145** | **1.7437** | **0.0128** | **1.7565** | **0.4624** | **0.0118** | **0.4742** | | **1,448.3303** | **1,448.3303** | **0.0334** | | **1,449.1657** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 8.3191 | 38.5090 | 102.8760 | 0.4252 | 40.3599 | 0.3271 | 40.6869 | 10.7979 | 0.3037 | 11.1015 | | 43,444.3271 | 43,444.3271 | 2.0341 | | 43,495.1787 |
| Unmitigated | 8.3191 | 38.5090 | 102.8760 | 0.4252 | 40.3599 | 0.3271 | 40.6869 | 10.7979 | 0.3037 | 11.1015 | | 43,444.3271 | 43,444.3271 | 2.0341 | | 43,495.1787 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,779.05 | 3,661.47 | 3357.78 | 10,209,718 | 10,209,718 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 165.58 | 285.07 | 237.31 | 262,888 | 262,888 |
| Hotel | 2,284.08 | 2,514.33 | 1826.65 | 5,372,764 | 5,372,764 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 33.13 | 44.98 | 21.86 | 63,188 | 63,188 |
| Total | 5,261.84 | 6,505.85 | 5,443.60 | 15,908,557 | 15,908,557 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| City Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Hotel | 16.60 | 8.40 | 6.90 | 19.40 | 61.60 | 19.00 | 58 | 38 | 4 |
| Other Asphalt Surfaces | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Recreational Swimming Pool | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 52 | 39 | 9 |
| Strip Mall | 16.60 | 8.40 | 6.90 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| City Park | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Enclosed Parking with Elevator | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| High Turnover (Sit Down Restaurant) | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Hotel | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Other Asphalt Surfaces | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Recreational Swimming Pool | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Strip Mall | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

La Terra Mixed Use Project - Los Angeles-South Coast County, Winter

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |
| NaturalGas Unmitigated | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 17234.2 | 0.1859 | 1.5883 | 0.6759 | 0.0101 | | 0.1284 | 0.1284 | | 0.1284 | 0.1284 | | 2,027.5575 | 2,027.5575 | 0.0389 | 0.0372 | 2,039.6063 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1137.99 | 0.0123 | 0.1116 | 0.0937 | 6.7000e-004 | | 8.4800e-003 | 8.4800e-003 | | 8.4800e-003 | 8.4800e-003 | | 133.8817 | 133.8817 | 2.5700e-003 | 2.4500e-003 | 134.6773 |
| Hotel | 13951.1 | 0.1505 | 1.3678 | 1.1489 | 8.2100e-003 | | 0.1040 | 0.1040 | | 0.1040 | 0.1040 | | 1,641.3064 | 1,641.3064 | 0.0315 | 0.0301 | 1,651.0598 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 4.80767 | 5.0000e-005 | 4.7000e-004 | 4.0000e-004 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.5656 | 0.5656 | 1.0000e-005 | 1.0000e-005 | 0.5690 |
| **Total** | | **0.3486** | **3.0681** | **1.9189** | **0.0190** | | **0.2409** | **0.2409** | | **0.2409** | **0.2409** | | **3,803.3112** | **3,803.3112** | **0.0729** | **0.0697** | **3,825.9124** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 17.2342 | 0.1859 | 1.5883 | 0.6759 | 0.0101 | | 0.1284 | 0.1284 | | 0.1284 | 0.1284 | | 2,027.5575 | 2,027.5575 | 0.0389 | 0.0372 | 2,039.6063 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.13799 | 0.0123 | 0.1116 | 0.0937 | 6.7000e-004 | | 8.4800e-003 | 8.4800e-003 | | 8.4800e-003 | 8.4800e-003 | | 133.8817 | 133.8817 | 2.5700e-003 | 2.4500e-003 | 134.6773 |
| Hotel | 13.9511 | 0.1505 | 1.3678 | 1.1489 | 8.2100e-003 | | 0.1040 | 0.1040 | | 0.1040 | 0.1040 | | 1,641.3064 | 1,641.3064 | 0.0315 | 0.0301 | 1,651.0598 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.00480767 | 5.0000e-005 | 4.7000e-004 | 4.0000e-004 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.5656 | 0.5656 | 1.0000e-005 | 1.0000e-005 | 0.5690 |
| **Total** | | **0.3486** | **3.0681** | **1.9189** | **0.0190** | | **0.2409** | **0.2409** | | **0.2409** | **0.2409** | | **3,803.3112** | **3,803.3112** | **0.0729** | **0.0697** | **3,825.9124** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |
| Unmitigated | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 1.7027 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 17.2766 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.4356 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | | 85.5310 | 85.5310 | 0.0826 | | 87.5955 |
| **Total** | **20.4149** | **0.5458** | **47.4195** | **2.5100e-003** | | **0.2627** | **0.2627** | | **0.2627** | **0.2627** | **0.0000** | **85.5310** | **85.5310** | **0.0826** | **0.0000** | **87.5955** |

### 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 1.7027 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 17.2766 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.4356 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | | 85.5310 | 85.5310 | 0.0826 | | 87.5955 |
| **Total** | **20.4149** | **0.5458** | **47.4195** | **2.5100e-003** | | **0.2627** | **0.2627** | | **0.2627** | **0.2627** | **0.0000** | **85.5310** | **85.5310** | **0.0826** | **0.0000** | **87.5955** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# La Terra Mixed Use Project

**Los Angeles-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Enclosed Parking with Elevator | 1,537.00 | Space | 0.00 | 614,800.00 | 0 |
| Other Asphalt Surfaces | 27.80 | 1000sqft | 0.64 | 27,800.00 | 0 |
| City Park | 0.30 | Acre | 0.00 | 13,068.00 | 0 |
| High Turnover (Sit Down Restaurant) | 1.80 | 1000sqft | 0.00 | 1,800.00 | 0 |
| Hotel | 307.00 | Room | 0.00 | 212,350.00 | 0 |
| Apartments Mid Rise | 573.00 | Dwelling Unit | 7.45 | 645,806.00 | 1639 |
| Strip Mall | 1.07 | 1000sqft | 0.00 | 1,070.00 | 0 |
| Recreational Swimming Pool | 0.80 | 1000sqft | 0.00 | 800.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2026 |
| **Utility Company** | Burbank Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 1096.12 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

La Terra Mixed Use Project - Los Angeles-South Coast County, Summer

Project Characteristics -

Land Use - Applicant provided information from site plan

Construction Phase - Applicant provided construction schedule

Grading - Exporting 90,000 CY of total material (concrete and dirt) and grading entire 8.09 site

Trips and VMT - 3750 roundtrips w/ 24 CY truck and 190 miles to Kettleman landfill

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Woodstoves - SCAQMD Rule 445

Construction Off-road Equipment Mitigation - SCAQMD Rule 401 and CARB in-use off-road regulation

Water Mitigation - project applicant proposed to use water efficnet irrigation

Fleet Mix -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstructionPhase | NumDays | 20.00 | 717.00 |
| tblConstructionPhase | NumDays | 230.00 | 1,435.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 10.00 | 87.00 |
| tblConstructionPhase | PhaseEndDate | 11/20/2020 | 9/30/2025 |
| tblConstructionPhase | PhaseEndDate | 9/25/2020 | 9/30/2025 |
| tblConstructionPhase | PhaseEndDate | 11/8/2019 | 3/31/2020 |
| tblConstructionPhase | PhaseEndDate | 10/23/2020 | 9/26/2025 |
| tblConstructionPhase | PhaseEndDate | 10/11/2019 | 12/31/2019 |
| tblConstructionPhase | PhaseStartDate | 10/24/2020 | 1/2/2023 |
| tblConstructionPhase | PhaseStartDate | 11/9/2019 | 4/1/2020 |
| tblConstructionPhase | PhaseStartDate | 10/12/2019 | 1/1/2020 |
| tblConstructionPhase | PhaseStartDate | 9/26/2020 | 6/30/2025 |
| tblConstructionPhase | PhaseStartDate | 9/28/2019 | 9/2/2019 |

| | | | |
|---|---|---|---|
| tblEnergyUse | LightingElect | 741.44 | 185.36 |
| tblEnergyUse | LightingElect | 1.75 | 0.44 |
| tblEnergyUse | LightingElect | 7.87 | 1.97 |
| tblEnergyUse | LightingElect | 2.14 | 0.54 |
| tblEnergyUse | LightingElect | 6.26 | 1.57 |
| tblFireplaces | FireplaceDayYear | 25.00 | 0.00 |
| tblFireplaces | FireplaceHourDay | 3.00 | 0.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 487.05 | 0.00 |
| tblFireplaces | NumberNoFireplace | 57.30 | 0.00 |
| tblFireplaces | NumberWood | 28.65 | 0.00 |
| tblGrading | AcresOfGrading | 32.50 | 8.09 |
| tblGrading | AcresOfGrading | 0.00 | 8.09 |
| tblGrading | MaterialExported | 0.00 | 90,000.00 |
| tblLandUse | LandUseSquareFeet | 445,764.00 | 212,350.00 |
| tblLandUse | LandUseSquareFeet | 573,000.00 | 645,806.00 |
| tblLandUse | LotAcreage | 13.83 | 0.00 |
| tblLandUse | LotAcreage | 0.30 | 0.00 |
| tblLandUse | LotAcreage | 0.04 | 0.00 |
| tblLandUse | LotAcreage | 10.23 | 0.00 |
| tblLandUse | LotAcreage | 15.08 | 7.45 |
| tblLandUse | LotAcreage | 0.02 | 0.00 |
| tblLandUse | LotAcreage | 0.02 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 263.58 | 197.69 |
| tblSolidWaste | SolidWasteGenerationRate | 0.03 | 0.02 |
| tblSolidWaste | SolidWasteGenerationRate | 21.42 | 16.07 |
| tblSolidWaste | SolidWasteGenerationRate | 168.08 | 126.06 |

| | | | |
|---|---|---|---|
| tblSolidWaste | SolidWasteGenerationRate | 4.56 | 3.42 |
| tblSolidWaste | SolidWasteGenerationRate | 1.12 | 0.84 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 190.00 |
| tblTripsAndVMT | HaulingTripNumber | 11,250.00 | 3,750.00 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | ST_TR | 9.10 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | SU_TR | 13.60 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.85 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 91.99 |
| tblVehicleTrips | WD_TR | 8.17 | 7.44 |
| tblVehicleTrips | WD_TR | 33.82 | 0.00 |
| tblVehicleTrips | WD_TR | 44.32 | 30.96 |
| tblWater | IndoorWaterUseRate | 37,333,256.68 | 2,986,605.00 |
| tblWater | IndoorWaterUseRate | 546,360.68 | 437,088.50 |
| tblWater | IndoorWaterUseRate | 7,787,598.39 | 6,230,079.00 |
| tblWater | IndoorWaterUseRate | 79,257.60 | 63,406.08 |
| tblWaterMitigation | Evapotranspiration | 52.031579 | 59.196676 |
| tblWoodstoves | NumberCatalytic | 28.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 28.65 | 0.00 |
| tblWoodstoves | WoodstoveDayYear | 25.00 | 0.00 |
| tblWoodstoves | WoodstoveWoodMass | 999.60 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2019 | 4.4249 | 45.6388 | 22.9309 | 0.0402 | 18.3661 | 2.3921 | 20.7582 | 9.9947 | 2.2007 | 12.1954 | 0.0000 | 3,984.7844 | 3,984.7844 | 1.1992 | 0.0000 | 4,014.7635 |
| 2020 | 6.4572 | 136.8606 | 56.6422 | 0.4120 | 16.0508 | 1.7572 | 17.8080 | 6.0157 | 1.6343 | 7.6500 | 0.0000 | 44,300.9366 | 44,300.9366 | 3.3214 | 0.0000 | 44,383.9704 |
| 2021 | 5.8602 | 39.5336 | 53.1292 | 0.1684 | 10.0134 | 1.0695 | 11.0829 | 2.6853 | 1.0048 | 3.6901 | 0.0000 | 17,031.9459 | 17,031.9459 | 1.2078 | 0.0000 | 17,062.1398 |
| 2022 | 5.4161 | 36.5243 | 50.2103 | 0.1648 | 10.0135 | 0.9126 | 10.9260 | 2.6853 | 0.8578 | 3.5431 | 0.0000 | 16,672.0147 | 16,672.0147 | 1.1672 | 0.0000 | 16,701.1939 |
| 2023 | 14.3894 | 32.2308 | 54.4765 | 0.1795 | 11.7572 | 0.8665 | 12.6237 | 3.1477 | 0.8182 | 3.9659 | 0.0000 | 18,117.1761 | 18,117.1761 | 1.1630 | 0.0000 | 18,146.2514 |
| 2024 | 14.0765 | 30.9528 | 52.0951 | 0.1761 | 11.7572 | 0.7689 | 12.5261 | 3.1478 | 0.7255 | 3.8733 | 0.0000 | 17,789.1019 | 17,789.1019 | 1.1334 | 0.0000 | 17,817.4366 |
| 2025 | 14.7753 | 38.2217 | 64.7997 | 0.1964 | 11.9249 | 1.0916 | 13.0165 | 3.1922 | 1.0199 | 4.2121 | 0.0000 | 19,743.3687 | 19,743.3687 | 1.8221 | 0.0000 | 19,788.9219 |
| **Maximum** | **14.7753** | **136.8606** | **64.7997** | **0.4120** | **18.3661** | **2.3921** | **20.7582** | **9.9947** | **2.2007** | **12.1954** | **0.0000** | **44,300.9366** | **44,300.9366** | **3.3214** | **0.0000** | **44,383.9704** |

## 2.1 Overall Construction (Maximum Daily Emission)

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2019 | 1.0211 | 19.1317 | 23.8279 | 0.0402 | 8.3754 | 0.9479 | 9.3233 | 4.5270 | 0.9478 | 5.4747 | 0.0000 | 3,984.7844 | 3,984.7844 | 1.1992 | 0.0000 | 4,014.7635 |
| 2020 | 4.9844 | 125.3145 | 57.6675 | 0.4120 | 12.5799 | 1.2393 | 13.8192 | 4.1742 | 1.2183 | 5.3925 | 0.0000 | 44,300.9366 | 44,300.9366 | 3.3214 | 0.0000 | 44,383.9704 |
| 2021 | 4.6332 | 36.3275 | 54.4277 | 0.1684 | 10.0134 | 1.0144 | 11.0278 | 2.6853 | 1.0071 | 3.6924 | 0.0000 | 17,031.9459 | 17,031.9459 | 1.2078 | 0.0000 | 17,062.1398 |
| 2022 | 4.3837 | 35.1347 | 51.7207 | 0.1648 | 10.0135 | 1.0071 | 11.0206 | 2.6853 | 1.0002 | 3.6855 | 0.0000 | 16,672.0147 | 16,672.0147 | 1.1672 | 0.0000 | 16,701.1939 |
| 2023 | 13.3583 | 32.1260 | 56.1276 | 0.1795 | 11.7572 | 1.0946 | 12.8518 | 3.1477 | 1.0876 | 4.2353 | 0.0000 | 18,117.1761 | 18,117.1761 | 1.1630 | 0.0000 | 18,146.2514 |
| 2024 | 13.1575 | 31.8733 | 53.8244 | 0.1761 | 11.7572 | 1.0933 | 12.8505 | 3.1478 | 1.0863 | 4.2341 | 0.0000 | 17,789.1019 | 17,789.1019 | 1.1334 | 0.0000 | 17,817.4366 |
| 2025 | 13.6161 | 42.9032 | 69.3297 | 0.1964 | 11.9249 | 1.7020 | 13.6269 | 3.1922 | 1.6951 | 4.8873 | 0.0000 | 19,743.3687 | 19,743.3687 | 1.8221 | 0.0000 | 19,788.9219 |
| **Maximum** | **13.6161** | **125.3145** | **69.3297** | **0.4120** | **12.5799** | **1.7020** | **13.8192** | **4.5270** | **1.6951** | **5.4747** | **0.0000** | **44,300.9366** | **44,300.9366** | **3.3214** | **0.0000** | **44,383.9704** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **15.67** | **10.32** | **-3.57** | **0.00** | **14.98** | **8.58** | **14.40** | **23.68** | **2.65** | **19.24** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |
| Energy | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |
| Mobile | 8.5949 | 37.8313 | 108.1177 | 0.4466 | 40.3599 | 0.3258 | 40.6856 | 10.7979 | 0.3024 | 11.1003 | | 45,605.8524 | 45,605.8524 | 2.0310 | | 45,656.6277 |
| **Total** | **29.3584** | **41.4451** | **157.4560** | **0.4681** | **40.3599** | **0.8294** | **41.1893** | **10.7979** | **0.8061** | **11.6039** | **0.0000** | **49,494.6946** | **49,494.6946** | **2.1865** | **0.0697** | **49,570.1356** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |
| Energy | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |
| Mobile | 8.5949 | 37.8313 | 108.1177 | 0.4466 | 40.3599 | 0.3258 | 40.6856 | 10.7979 | 0.3024 | 11.1003 | | 45,605.8524 | 45,605.8524 | 2.0310 | | 45,656.6277 |
| **Total** | **29.3584** | **41.4451** | **157.4560** | **0.4681** | **40.3599** | **0.8294** | **41.1893** | **10.7979** | **0.8061** | **11.6039** | **0.0000** | **49,494.6946** | **49,494.6946** | **2.1865** | **0.0697** | **49,570.1356** |

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

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Site Preparation | Site Preparation | 9/2/2019 | 12/31/2019 | 5 | 87 | |
| 2 | Grading | Grading | 1/1/2020 | 3/31/2020 | 5 | 65 | |
| 3 | Building Construction | Building Construction | 4/1/2020 | 9/30/2025 | 5 | 1435 | |
| 4 | Paving | Paving | 6/30/2025 | 9/26/2025 | 5 | 65 | |
| 5 | Architectural Coating | Architectural Coating | 1/2/2023 | 9/30/2025 | 5 | 717 | |

**Acres of Grading (Site Preparation Phase): 8.09**

**Acres of Grading (Grading Phase): 8.09**

**Acres of Paving: 0.64**

**Residential Indoor: 1,307,757; Residential Outdoor: 435,919; Non-Residential Indoor: 322,830; Non-Residential Outdoor: 107,610; Striped Parking Area: 38,556 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 3,750.00 | 14.70 | 6.90 | 190.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 779.00 | 204.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 156.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

### 3.2 Site Preparation - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.1649 | 0.0000 | 18.1649 | 9.9413 | 0.0000 | 9.9413 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.3350 | 45.5727 | 22.0630 | 0.0380 | | 2.3904 | 2.3904 | | 2.1991 | 2.1991 | | 3,766.4529 | 3,766.4529 | 1.1917 | | 3,796.2445 |
| **Total** | **4.3350** | **45.5727** | **22.0630** | **0.0380** | **18.1649** | **2.3904** | **20.5552** | **9.9413** | **2.1991** | **12.1405** | | **3,766.4529** | **3,766.4529** | **1.1917** | | **3,796.2445** |

## 3.2 Site Preparation - 2019

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0899 | 0.0661 | 0.8679 | 2.1900e-003 | 0.2012 | 1.7300e-003 | 0.2029 | 0.0534 | 1.6000e-003 | 0.0550 | | 218.3315 | 218.3315 | 7.5000e-003 | | 218.5190 |
| **Total** | **0.0899** | **0.0661** | **0.8679** | **2.1900e-003** | **0.2012** | **1.7300e-003** | **0.2029** | **0.0534** | **1.6000e-003** | **0.0550** | | **218.3315** | **218.3315** | **7.5000e-003** | | **218.5190** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.1742 | 0.0000 | 8.1742 | 4.4736 | 0.0000 | 4.4736 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9312 | 19.0656 | 22.9600 | 0.0380 | | 0.9462 | 0.9462 | | 0.9462 | 0.9462 | 0.0000 | 3,766.4529 | 3,766.4529 | 1.1917 | | 3,796.2445 |
| **Total** | **0.9312** | **19.0656** | **22.9600** | **0.0380** | **8.1742** | **0.9462** | **9.1204** | **4.4736** | **0.9462** | **5.4198** | **0.0000** | **3,766.4529** | **3,766.4529** | **1.1917** | | **3,796.2445** |

## 3.2 Site Preparation - 2019

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0899 | 0.0661 | 0.8679 | 2.1900e-003 | 0.2012 | 1.7300e-003 | 0.2029 | 0.0534 | 1.6000e-003 | 0.0550 | | 218.3315 | 218.3315 | 7.5000e-003 | | 218.5190 |
| **Total** | **0.0899** | **0.0661** | **0.8679** | **2.1900e-003** | **0.2012** | **1.7300e-003** | **0.2029** | **0.0534** | **1.6000e-003** | **0.0550** | | **218.3315** | **218.3315** | **7.5000e-003** | | **218.5190** |

## 3.3 Grading - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.3107 | 0.0000 | 6.3107 | 3.3482 | 0.0000 | 3.3482 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4288 | 26.3859 | 16.0530 | 0.0297 | | 1.2734 | 1.2734 | | 1.1716 | 1.1716 | | 2,872.4851 | 2,872.4851 | 0.9290 | | 2,895.7106 |
| **Total** | **2.4288** | **26.3859** | **16.0530** | **0.0297** | **6.3107** | **1.2734** | **7.5841** | **3.3482** | **1.1716** | **4.5197** | | **2,872.4851** | **2,872.4851** | **0.9290** | | **2,895.7106** |

## 3.3 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.9593 | 110.4256 | 29.0350 | 0.3805 | 9.5725 | 0.4823 | 10.0548 | 2.6230 | 0.4615 | 3.0845 | | 41,252.0345 | 41,252.0345 | 2.3868 | | 41,311.7038 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |
| **Total** | **4.0284** | **110.4748** | **29.6918** | **0.3823** | **9.7401** | **0.4837** | **10.2239** | **2.6675** | **0.4627** | **3.1302** | | **41,428.4514** | **41,428.4514** | **2.3923** | | **41,488.2598** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.8398 | 0.0000 | 2.8398 | 1.5067 | 0.0000 | 1.5067 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.7263 | 14.8397 | 18.9906 | 0.0297 | | 0.7555 | 0.7555 | | 0.7555 | 0.7555 | 0.0000 | 2,872.4851 | 2,872.4851 | 0.9290 | | 2,895.7106 |
| **Total** | **0.7263** | **14.8397** | **18.9906** | **0.0297** | **2.8398** | **0.7555** | **3.5953** | **1.5067** | **0.7555** | **2.2622** | **0.0000** | **2,872.4851** | **2,872.4851** | **0.9290** | | **2,895.7106** |

## 3.3 Grading - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.9593 | 110.4256 | 29.0350 | 0.3805 | 9.5725 | 0.4823 | 10.0548 | 2.6230 | 0.4615 | 3.0845 | | 41,252.0345 | 41,252.0345 | 2.3868 | | 41,311.7038 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |
| **Total** | **4.0284** | **110.4748** | **29.6918** | **0.3823** | **9.7401** | **0.4837** | **10.2239** | **2.6675** | **0.4627** | **3.1302** | | **41,428.4514** | **41,428.4514** | **2.3923** | | **41,488.2598** |

## 3.4 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| **Total** | **2.1198** | **19.1860** | **16.8485** | **0.0269** | | **1.1171** | **1.1171** | | **1.0503** | **1.0503** | | **2,553.0631** | **2,553.0631** | **0.6229** | | **2,568.6345** |

## 3.4 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.7256 | 21.7000 | 5.6856 | 0.0529 | 1.3060 | 0.1021 | 1.4081 | 0.3760 | 0.0977 | 0.4737 | | 5,651.3038 | 5,651.3038 | 0.3449 | | 5,659.9253 |
| Worker | 3.5850 | 2.5504 | 34.1081 | 0.0920 | 8.7074 | 0.0728 | 8.7802 | 2.3092 | 0.0671 | 2.3763 | | 9,161.9193 | 9,161.9193 | 0.2889 | | 9,169.1407 |
| **Total** | **4.3105** | **24.2504** | **39.7937** | **0.1449** | **10.0134** | **0.1749** | **10.1883** | **2.6853** | **0.1648** | **2.8500** | | **14,813.2231** | **14,813.2231** | **0.6337** | | **14,829.0660** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,553.0631** | **2,553.0631** | **0.6229** | | **2,568.6345** |

## 3.4 Building Construction - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.7256 | 21.7000 | 5.6856 | 0.0529 | 1.3060 | 0.1021 | 1.4081 | 0.3760 | 0.0977 | 0.4737 | | 5,651.3038 | 5,651.3038 | 0.3449 | | 5,659.9253 |
| Worker | 3.5850 | 2.5504 | 34.1081 | 0.0920 | 8.7074 | 0.0728 | 8.7802 | 2.3092 | 0.0671 | 2.3763 | | 9,161.9193 | 9,161.9193 | 0.2889 | | 9,169.1407 |
| **Total** | **4.3105** | **24.2504** | **39.7937** | **0.1449** | **10.0134** | **0.1749** | **10.1883** | **2.6853** | **0.1648** | **2.8500** | | **14,813.2231** | **14,813.2231** | **0.6337** | | **14,829.0660** |

## 3.4 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## 3.4 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.6201 | 19.8063 | 5.1779 | 0.0525 | 1.3060 | 0.0405 | 1.3465 | 0.3760 | 0.0387 | 0.4148 | | 5,607.5649 | 5,607.5649 | 0.3304 | | 5,615.8238 |
| Worker | 3.3392 | 2.2952 | 31.3761 | 0.0891 | 8.7074 | 0.0704 | 8.7777 | 2.3092 | 0.0648 | 2.3741 | | 8,871.0172 | 8,871.0172 | 0.2614 | | 8,877.5518 |
| **Total** | **3.9593** | **22.1015** | **36.5540** | **0.1415** | **10.0134** | **0.1109** | **10.1243** | **2.6853** | **0.1035** | **2.7888** | | **14,478.5820** | **14,478.5820** | **0.5917** | | **14,493.3756** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## 3.4 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.6201 | 19.8063 | 5.1779 | 0.0525 | 1.3060 | 0.0405 | 1.3465 | 0.3760 | 0.0387 | 0.4148 | | 5,607.5649 | 5,607.5649 | 0.3304 | | 5,615.8238 |
| Worker | 3.3392 | 2.2952 | 31.3761 | 0.0891 | 8.7074 | 0.0704 | 8.7777 | 2.3092 | 0.0648 | 2.3741 | | 8,871.0172 | 8,871.0172 | 0.2614 | | 8,877.5518 |
| **Total** | **3.9593** | **22.1015** | **36.5540** | **0.1415** | **10.0134** | **0.1109** | **10.1243** | **2.6853** | **0.1035** | **2.7888** | | **14,478.5820** | **14,478.5820** | **0.5917** | | **14,493.3756** |

## 3.4 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.7062 | 15.6156 | 16.3634 | 0.0269 | | 0.8090 | 0.8090 | | 0.7612 | 0.7612 | | 2,554.3336 | 2,554.3336 | 0.6120 | | 2,569.6322 |
| **Total** | **1.7062** | **15.6156** | **16.3634** | **0.0269** | | **0.8090** | **0.8090** | | **0.7612** | **0.7612** | | **2,554.3336** | **2,554.3336** | **0.6120** | | **2,569.6322** |

## 3.4 Building Construction - 2022

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.5820 | 18.8354 | 4.8991 | 0.0520 | 1.3061 | 0.0354 | 1.3415 | 0.3760 | 0.0339 | 0.4099 | | 5,558.7121 | 5,558.7121 | 0.3190 | | 5,566.6870 |
| Worker | 3.1279 | 2.0733 | 28.9478 | 0.0859 | 8.7074 | 0.0682 | 8.7756 | 2.3092 | 0.0628 | 2.3720 | | 8,558.9690 | 8,558.9690 | 0.2362 | | 8,564.8747 |
| **Total** | **3.7098** | **20.9086** | **33.8469** | **0.1379** | **10.0135** | **0.1036** | **10.1170** | **2.6853** | **0.0966** | **2.7819** | | **14,117.6811** | **14,117.6811** | **0.5552** | | **14,131.5617** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,554.3336 | 2,554.3336 | 0.6120 | | 2,569.6322 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,554.3336** | **2,554.3336** | **0.6120** | | **2,569.6322** |

## 3.4 Building Construction - 2022

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.5820 | 18.8354 | 4.8991 | 0.0520 | 1.3061 | 0.0354 | 1.3415 | 0.3760 | 0.0339 | 0.4099 | | 5,558.7121 | 5,558.7121 | 0.3190 | | 5,566.6870 |
| Worker | 3.1279 | 2.0733 | 28.9478 | 0.0859 | 8.7074 | 0.0682 | 8.7756 | 2.3092 | 0.0628 | 2.3720 | | 8,558.9690 | 8,558.9690 | 0.2362 | | 8,564.8747 |
| **Total** | **3.7098** | **20.9086** | **33.8469** | **0.1379** | **10.0135** | **0.1036** | **10.1170** | **2.6853** | **0.0966** | **2.7819** | | **14,117.6811** | **14,117.6811** | **0.5552** | | **14,131.5617** |

## 3.4 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.5728 | 14.3849 | 16.2440 | 0.0269 | | 0.6997 | 0.6997 | | 0.6584 | 0.6584 | | 2,555.2099 | 2,555.2099 | 0.6079 | | 2,570.4061 |
| **Total** | **1.5728** | **14.3849** | **16.2440** | **0.0269** | | **0.6997** | **0.6997** | | **0.6584** | **0.6584** | | **2,555.2099** | **2,555.2099** | **0.6079** | | **2,570.4061** |

## 3.4 Building Construction - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4318 | 14.2916 | 4.4244 | 0.0503 | 1.3061 | 0.0165 | 1.3226 | 0.3761 | 0.0158 | 0.3918 | | 5,383.7115 | 5,383.7115 | 0.2827 | | 5,390.7785 |
| Worker | 2.9373 | 1.8758 | 26.6584 | 0.0827 | 8.7074 | 0.0662 | 8.7736 | 2.3092 | 0.0610 | 2.3702 | | 8,245.5747 | 8,245.5747 | 0.2130 | | 8,250.8995 |
| **Total** | **3.3691** | **16.1673** | **31.0829** | **0.1330** | **10.0135** | **0.0827** | **10.0962** | **2.6853** | **0.0768** | **2.7621** | | **13,629.2862** | **13,629.2862** | **0.4957** | | **13,641.6781** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0269 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,555.2099 | 2,555.2099 | 0.6079 | | 2,570.4061 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0269** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,555.2099** | **2,555.2099** | **0.6079** | | **2,570.4061** |

## 3.4 Building Construction - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4318 | 14.2916 | 4.4244 | 0.0503 | 1.3061 | 0.0165 | 1.3226 | 0.3761 | 0.0158 | 0.3918 | | 5,383.7115 | 5,383.7115 | 0.2827 | | 5,390.7785 |
| Worker | 2.9373 | 1.8758 | 26.6584 | 0.0827 | 8.7074 | 0.0662 | 8.7736 | 2.3092 | 0.0610 | 2.3702 | | 8,245.5747 | 8,245.5747 | 0.2130 | | 8,250.8995 |
| **Total** | **3.3691** | **16.1673** | **31.0829** | **0.1330** | **10.0135** | **0.0827** | **10.0962** | **2.6853** | **0.0768** | **2.7621** | | **13,629.2862** | **13,629.2862** | **0.4957** | | **13,641.6781** |

## 3.4 Building Construction - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.4716 | 13.4438 | 16.1668 | 0.0270 | | 0.6133 | 0.6133 | | 0.5769 | 0.5769 | | 2,555.6989 | 2,555.6989 | 0.6044 | | 2,570.8077 |
| **Total** | **1.4716** | **13.4438** | **16.1668** | **0.0270** | | **0.6133** | **0.6133** | | **0.5769** | **0.5769** | | **2,555.6989** | **2,555.6989** | **0.6044** | | **2,570.8077** |

## 3.4 Building Construction - 2024

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4214 | 14.2371 | 4.2897 | 0.0500 | 1.3061 | 0.0163 | 1.3224 | 0.3761 | 0.0156 | 0.3917 | | 5,361.8632 | 5,361.8632 | 0.2787 | | 5,368.8295 |
| Worker | 2.7786 | 1.7106 | 24.8518 | 0.0802 | 8.7074 | 0.0653 | 8.7727 | 2.3092 | 0.0601 | 2.3693 | | 7,990.0337 | 7,990.0337 | 0.1954 | | 7,994.9188 |
| **Total** | **3.2000** | **15.9477** | **29.1414** | **0.1302** | **10.0135** | **0.0816** | **10.0951** | **2.6853** | **0.0757** | **2.7610** | | **13,351.8969** | **13,351.8969** | **0.4741** | | **13,363.7483** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0270 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,555.6989 | 2,555.6989 | 0.6044 | | 2,570.8077 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0270** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,555.6989** | **2,555.6989** | **0.6044** | | **2,570.8077** |

## 3.4 Building Construction - 2024

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4214 | 14.2371 | 4.2897 | 0.0500 | 1.3061 | 0.0163 | 1.3224 | 0.3761 | 0.0156 | 0.3917 | | 5,361.8632 | 5,361.8632 | 0.2787 | | 5,368.8295 |
| Worker | 2.7786 | 1.7106 | 24.8518 | 0.0802 | 8.7074 | 0.0653 | 8.7727 | 2.3092 | 0.0601 | 2.3693 | | 7,990.0337 | 7,990.0337 | 0.1954 | | 7,994.9188 |
| **Total** | **3.2000** | **15.9477** | **29.1414** | **0.1302** | **10.0135** | **0.0816** | **10.0951** | **2.6853** | **0.0757** | **2.7610** | | **13,351.8969** | **13,351.8969** | **0.4741** | | **13,363.7483** |

## 3.4 Building Construction - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3674 | 12.4697 | 16.0847 | 0.0270 | | 0.5276 | 0.5276 | | 0.4963 | 0.4963 | | 2,556.4744 | 2,556.4744 | 0.6010 | | 2,571.4981 |
| **Total** | **1.3674** | **12.4697** | **16.0847** | **0.0270** | | **0.5276** | **0.5276** | | **0.4963** | **0.4963** | | **2,556.4744** | **2,556.4744** | **0.6010** | | **2,571.4981** |

## 3.4 Building Construction - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4108 | 14.1162 | 4.1795 | 0.0497 | 1.3062 | 0.0161 | 1.3222 | 0.3761 | 0.0153 | 0.3914 | | 5,332.3189 | 5,332.3189 | 0.2747 | | 5,339.1875 |
| Worker | 2.6384 | 1.5652 | 23.0817 | 0.0770 | 8.7074 | 0.0639 | 8.7713 | 2.3092 | 0.0588 | 2.3681 | | 7,680.4334 | 7,680.4334 | 0.1783 | | 7,684.8897 |
| **Total** | **3.0492** | **15.6814** | **27.2612** | **0.1267** | **10.0135** | **0.0800** | **10.0935** | **2.6853** | **0.0742** | **2.7595** | | **13,012.7524** | **13,012.7524** | **0.4530** | | **13,024.0772** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6739 | 14.2261 | 17.8738 | 0.0270 | | 0.9036 | 0.9036 | | 0.9036 | 0.9036 | 0.0000 | 2,556.4744 | 2,556.4744 | 0.6010 | | 2,571.4981 |
| **Total** | **0.6739** | **14.2261** | **17.8738** | **0.0270** | | **0.9036** | **0.9036** | | **0.9036** | **0.9036** | **0.0000** | **2,556.4744** | **2,556.4744** | **0.6010** | | **2,571.4981** |

## 3.4 Building Construction - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.4108 | 14.1162 | 4.1795 | 0.0497 | 1.3062 | 0.0161 | 1.3222 | 0.3761 | 0.0153 | 0.3914 | | 5,332.3189 | 5,332.3189 | 0.2747 | | 5,339.1875 |
| Worker | 2.6384 | 1.5652 | 23.0817 | 0.0770 | 8.7074 | 0.0639 | 8.7713 | 2.3092 | 0.0588 | 2.3681 | | 7,680.4334 | 7,680.4334 | 0.1783 | | 7,684.8897 |
| **Total** | **3.0492** | **15.6814** | **27.2612** | **0.1267** | **10.0135** | **0.0800** | **10.0935** | **2.6853** | **0.0742** | **2.7595** | | **13,012.7524** | **13,012.7524** | **0.4530** | | **13,024.0772** |

## 3.5 Paving - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.9152 | 8.5816 | 14.5780 | 0.0228 | | 0.4185 | 0.4185 | | 0.3850 | 0.3850 | | 2,206.7452 | 2,206.7452 | 0.7137 | | 2,224.5878 |
| Paving | 0.0258 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.9410** | **8.5816** | **14.5780** | **0.0228** | | **0.4185** | **0.4185** | | **0.3850** | **0.3850** | | **2,206.7452** | **2,206.7452** | **0.7137** | | **2,224.5878** |

## 3.5 Paving - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0508 | 0.0301 | 0.4445 | 1.4800e-003 | 0.1677 | 1.2300e-003 | 0.1689 | 0.0445 | 1.1300e-003 | 0.0456 | | 147.8903 | 147.8903 | 3.4300e-003 | | 147.9761 |
| **Total** | **0.0508** | **0.0301** | **0.4445** | **1.4800e-003** | **0.1677** | **1.2300e-003** | **0.1689** | **0.0445** | **1.1300e-003** | **0.0456** | | **147.8903** | **147.8903** | **3.4300e-003** | | **147.9761** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.5609 | 11.2952 | 17.2957 | 0.0228 | | 0.6093 | 0.6093 | | 0.6093 | 0.6093 | 0.0000 | 2,206.7452 | 2,206.7452 | 0.7137 | | 2,224.5878 |
| Paving | 0.0258 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.5867** | **11.2952** | **17.2957** | **0.0228** | | **0.6093** | **0.6093** | | **0.6093** | **0.6093** | **0.0000** | **2,206.7452** | **2,206.7452** | **0.7137** | | **2,224.5878** |

## 3.5 Paving - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0508 | 0.0301 | 0.4445 | 1.4800e-003 | 0.1677 | 1.2300e-003 | 0.1689 | 0.0445 | 1.1300e-003 | 0.0456 | | 147.8903 | 147.8903 | 3.4300e-003 | | 147.9761 |
| **Total** | **0.0508** | **0.0301** | **0.4445** | **1.4800e-003** | **0.1677** | **1.2300e-003** | **0.1689** | **0.0445** | **1.1300e-003** | **0.0456** | | **147.8903** | **147.8903** | **3.4300e-003** | | **147.9761** |

## 3.6 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| **Total** | **8.8594** | **1.3030** | **1.8111** | **2.9700e-003** | | **0.0708** | **0.0708** | | **0.0708** | **0.0708** | | **281.4481** | **281.4481** | **0.0168** | | **281.8690** |

## 3.6 Architectural Coating - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5882 | 0.3756 | 5.3385 | 0.0166 | 1.7437 | 0.0133 | 1.7570 | 0.4624 | 0.0122 | 0.4747 | | 1,651.2319 | 1,651.2319 | 0.0427 | | 1,652.2982 |
| **Total** | **0.5882** | **0.3756** | **5.3385** | **0.0166** | **1.7437** | **0.0133** | **1.7570** | **0.4624** | **0.0122** | **0.4747** | | **1,651.2319** | **1,651.2319** | **0.0427** | | **1,652.2982** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0594 | 1.3570 | 1.8324 | 2.9700e-003 | | 0.0951 | 0.0951 | | 0.0951 | 0.0951 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| **Total** | **8.7272** | **1.3570** | **1.8324** | **2.9700e-003** | | **0.0951** | **0.0951** | | **0.0951** | **0.0951** | **0.0000** | **281.4481** | **281.4481** | **0.0168** | | **281.8690** |

## 3.6 Architectural Coating - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5882 | 0.3756 | 5.3385 | 0.0166 | 1.7437 | 0.0133 | 1.7570 | 0.4624 | 0.0122 | 0.4747 | | 1,651.2319 | 1,651.2319 | 0.0427 | | 1,652.2982 |
| **Total** | **0.5882** | **0.3756** | **5.3385** | **0.0166** | **1.7437** | **0.0133** | **1.7570** | **0.4624** | **0.0122** | **0.4747** | | **1,651.2319** | **1,651.2319** | **0.0427** | | **1,652.2982** |

## 3.6 Architectural Coating - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1808 | 1.2188 | 1.8101 | 2.9700e-003 | | 0.0609 | 0.0609 | | 0.0609 | 0.0609 | | 281.4481 | 281.4481 | 0.0159 | | 281.8443 |
| **Total** | **8.8485** | **1.2188** | **1.8101** | **2.9700e-003** | | **0.0609** | **0.0609** | | **0.0609** | **0.0609** | | **281.4481** | **281.4481** | **0.0159** | | **281.8443** |

## 3.6 Architectural Coating - 2024

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5564 | 0.3426 | 4.9767 | 0.0161 | 1.7437 | 0.0131 | 1.7568 | 0.4624 | 0.0120 | 0.4745 | | 1,600.0581 | 1,600.0581 | 0.0391 | | 1,601.0364 |
| **Total** | **0.5564** | **0.3426** | **4.9767** | **0.0161** | **1.7437** | **0.0131** | **1.7568** | **0.4624** | **0.0120** | **0.4745** | | **1,600.0581** | **1,600.0581** | **0.0391** | | **1,601.0364** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0594 | 1.3570 | 1.8324 | 2.9700e-003 | | 0.0951 | 0.0951 | | 0.0951 | 0.0951 | 0.0000 | 281.4481 | 281.4481 | 0.0159 | | 281.8443 |
| **Total** | **8.7272** | **1.3570** | **1.8324** | **2.9700e-003** | | **0.0951** | **0.0951** | | **0.0951** | **0.0951** | **0.0000** | **281.4481** | **281.4481** | **0.0159** | | **281.8443** |

## 3.6 Architectural Coating - 2024

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5564 | 0.3426 | 4.9767 | 0.0161 | 1.7437 | 0.0131 | 1.7568 | 0.4624 | 0.0120 | 0.4745 | | 1,600.0581 | 1,600.0581 | 0.0391 | | 1,601.0364 |
| **Total** | **0.5564** | **0.3426** | **4.9767** | **0.0161** | **1.7437** | **0.0131** | **1.7568** | **0.4624** | **0.0120** | **0.4745** | | **1,600.0581** | **1,600.0581** | **0.0391** | | **1,601.0364** |

## 3.6 Architectural Coating - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1709 | 1.1455 | 1.8091 | 2.9700e-003 | | 0.0515 | 0.0515 | | 0.0515 | 0.0515 | | 281.4481 | 281.4481 | 0.0154 | | 281.8319 |
| **Total** | **8.8386** | **1.1455** | **1.8091** | **2.9700e-003** | | **0.0515** | **0.0515** | | **0.0515** | **0.0515** | | **281.4481** | **281.4481** | **0.0154** | | **281.8319** |

## 3.6 Architectural Coating - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5284 | 0.3134 | 4.6223 | 0.0154 | 1.7437 | 0.0128 | 1.7565 | 0.4624 | 0.0118 | 0.4742 | | 1,538.0586 | 1,538.0586 | 0.0357 | | 1,538.9510 |
| **Total** | **0.5284** | **0.3134** | **4.6223** | **0.0154** | **1.7437** | **0.0128** | **1.7565** | **0.4624** | **0.0118** | **0.4742** | | **1,538.0586** | **1,538.0586** | **0.0357** | | **1,538.9510** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 8.6677 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0594 | 1.3570 | 1.8324 | 2.9700e-003 | | 0.0951 | 0.0951 | | 0.0951 | 0.0951 | 0.0000 | 281.4481 | 281.4481 | 0.0154 | | 281.8319 |
| **Total** | **8.7272** | **1.3570** | **1.8324** | **2.9700e-003** | | **0.0951** | **0.0951** | | **0.0951** | **0.0951** | **0.0000** | **281.4481** | **281.4481** | **0.0154** | | **281.8319** |

### 3.6 Architectural Coating - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5284 | 0.3134 | 4.6223 | 0.0154 | 1.7437 | 0.0128 | 1.7565 | 0.4624 | 0.0118 | 0.4742 | | 1,538.0586 | 1,538.0586 | 0.0357 | | 1,538.9510 |
| **Total** | **0.5284** | **0.3134** | **4.6223** | **0.0154** | **1.7437** | **0.0128** | **1.7565** | **0.4624** | **0.0118** | **0.4742** | | **1,538.0586** | **1,538.0586** | **0.0357** | | **1,538.9510** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 8.5949 | 37.8313 | 108.1177 | 0.4466 | 40.3599 | 0.3258 | 40.6856 | 10.7979 | 0.3024 | 11.1003 | | 45,605.8524 | 45,605.8524 | 2.0310 | | 45,656.6277 |
| Unmitigated | 8.5949 | 37.8313 | 108.1177 | 0.4466 | 40.3599 | 0.3258 | 40.6856 | 10.7979 | 0.3024 | 11.1003 | | 45,605.8524 | 45,605.8524 | 2.0310 | | 45,656.6277 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,779.05 | 3,661.47 | 3357.78 | 10,209,718 | 10,209,718 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 165.58 | 285.07 | 237.31 | 262,888 | 262,888 |
| Hotel | 2,284.08 | 2,514.33 | 1826.65 | 5,372,764 | 5,372,764 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 33.13 | 44.98 | 21.86 | 63,188 | 63,188 |
| Total | 5,261.84 | 6,505.85 | 5,443.60 | 15,908,557 | 15,908,557 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| City Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Hotel | 16.60 | 8.40 | 6.90 | 19.40 | 61.60 | 19.00 | 58 | 38 | 4 |
| Other Asphalt Surfaces | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Recreational Swimming Pool | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 52 | 39 | 9 |
| Strip Mall | 16.60 | 8.40 | 6.90 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| City Park | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Enclosed Parking with Elevator | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| High Turnover (Sit Down Restaurant) | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Hotel | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Other Asphalt Surfaces | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Recreational Swimming Pool | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Strip Mall | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

La Terra Mixed Use Project - Los Angeles-South Coast County, Summer

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |
| NaturalGas Unmitigated | 0.3486 | 3.0681 | 1.9189 | 0.0190 | | 0.2409 | 0.2409 | | 0.2409 | 0.2409 | | 3,803.3112 | 3,803.3112 | 0.0729 | 0.0697 | 3,825.9124 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 17234.2 | 0.1859 | 1.5883 | 0.6759 | 0.0101 | | 0.1284 | 0.1284 | | 0.1284 | 0.1284 | | 2,027.5575 | 2,027.5575 | 0.0389 | 0.0372 | 2,039.6063 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1137.99 | 0.0123 | 0.1116 | 0.0937 | 6.7000e-004 | | 8.4800e-003 | 8.4800e-003 | | 8.4800e-003 | 8.4800e-003 | | 133.8817 | 133.8817 | 2.5700e-003 | 2.4500e-003 | 134.6773 |
| Hotel | 13951.1 | 0.1505 | 1.3678 | 1.1489 | 8.2100e-003 | | 0.1040 | 0.1040 | | 0.1040 | 0.1040 | | 1,641.3064 | 1,641.3064 | 0.0315 | 0.0301 | 1,651.0598 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 4.80767 | 5.0000e-005 | 4.7000e-004 | 4.0000e-004 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.5656 | 0.5656 | 1.0000e-005 | 1.0000e-005 | 0.5690 |
| **Total** | | **0.3486** | **3.0681** | **1.9189** | **0.0190** | | **0.2409** | **0.2409** | | **0.2409** | **0.2409** | | **3,803.3112** | **3,803.3112** | **0.0729** | **0.0697** | **3,825.9124** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 17.2342 | 0.1859 | 1.5883 | 0.6759 | 0.0101 | | 0.1284 | 0.1284 | | 0.1284 | 0.1284 | | 2,027.5575 | 2,027.5575 | 0.0389 | 0.0372 | 2,039.6063 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.13799 | 0.0123 | 0.1116 | 0.0937 | 6.7000e-004 | | 8.4800e-003 | 8.4800e-003 | | 8.4800e-003 | 8.4800e-003 | | 133.8817 | 133.8817 | 2.5700e-003 | 2.4500e-003 | 134.6773 |
| Hotel | 13.9511 | 0.1505 | 1.3678 | 1.1489 | 8.2100e-003 | | 0.1040 | 0.1040 | | 0.1040 | 0.1040 | | 1,641.3064 | 1,641.3064 | 0.0315 | 0.0301 | 1,651.0598 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.00480767 | 5.0000e-005 | 4.7000e-004 | 4.0000e-004 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.5656 | 0.5656 | 1.0000e-005 | 1.0000e-005 | 0.5690 |
| **Total** | | **0.3486** | **3.0681** | **1.9189** | **0.0190** | | **0.2409** | **0.2409** | | **0.2409** | **0.2409** | | **3,803.3112** | **3,803.3112** | **0.0729** | **0.0697** | **3,825.9124** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |
| Unmitigated | 20.4149 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | 0.0000 | 85.5310 | 85.5310 | 0.0826 | 0.0000 | 87.5955 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 1.7027 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 17.2766 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.4356 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | | 85.5310 | 85.5310 | 0.0826 | | 87.5955 |
| **Total** | **20.4149** | **0.5458** | **47.4195** | **2.5100e-003** | | **0.2627** | **0.2627** | | **0.2627** | **0.2627** | **0.0000** | **85.5310** | **85.5310** | **0.0826** | **0.0000** | **87.5955** |

### 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 1.7027 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 17.2766 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.4356 | 0.5458 | 47.4195 | 2.5100e-003 | | 0.2627 | 0.2627 | | 0.2627 | 0.2627 | | 85.5310 | 85.5310 | 0.0826 | | 87.5955 |
| **Total** | **20.4149** | **0.5458** | **47.4195** | **2.5100e-003** | | **0.2627** | **0.2627** | | **0.2627** | **0.2627** | **0.0000** | **85.5310** | **85.5310** | **0.0826** | **0.0000** | **87.5955** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# La Terra Mixed Use Project

**Los Angeles-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Enclosed Parking with Elevator | 1,537.00 | Space | 0.00 | 614,800.00 | 0 |
| Other Asphalt Surfaces | 27.80 | 1000sqft | 0.64 | 27,800.00 | 0 |
| City Park | 0.30 | Acre | 0.00 | 13,068.00 | 0 |
| High Turnover (Sit Down Restaurant) | 1.80 | 1000sqft | 0.00 | 1,800.00 | 0 |
| Hotel | 307.00 | Room | 0.00 | 212,350.00 | 0 |
| Apartments Mid Rise | 573.00 | Dwelling Unit | 7.45 | 645,806.00 | 1639 |
| Strip Mall | 1.07 | 1000sqft | 0.00 | 1,070.00 | 0 |
| Recreational Swimming Pool | 0.80 | 1000sqft | 0.00 | 800.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2026 |
| **Utility Company** | Burbank Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 1096.12 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

La Terra Mixed Use Project - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - Applicant provided information from site plan

Construction Phase - Applicant provided construction schedule

Grading - Exporting 90,000 CY of total material (concrete and dirt) and grading entire 8.09 site

Trips and VMT - 3750 roundtrips w/ 24 CY truck and 190 miles to Kettleman landfill

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Woodstoves - SCAQMD Rule 445

Construction Off-road Equipment Mitigation - SCAQMD Rule 401 and CARB in-use off-road regulation

Water Mitigation - project applicant proposed to use water efficnet irrigation

Fleet Mix -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstEquipMitigation | Tier | No Change | Tier 3 |
| tblConstructionPhase | NumDays | 20.00 | 717.00 |
| tblConstructionPhase | NumDays | 230.00 | 1,435.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 10.00 | 87.00 |
| tblConstructionPhase | PhaseEndDate | 11/20/2020 | 9/30/2025 |
| tblConstructionPhase | PhaseEndDate | 9/25/2020 | 9/30/2025 |
| tblConstructionPhase | PhaseEndDate | 11/8/2019 | 3/31/2020 |
| tblConstructionPhase | PhaseEndDate | 10/23/2020 | 9/26/2025 |
| tblConstructionPhase | PhaseEndDate | 10/11/2019 | 12/31/2019 |
| tblConstructionPhase | PhaseStartDate | 10/24/2020 | 1/2/2023 |
| tblConstructionPhase | PhaseStartDate | 11/9/2019 | 4/1/2020 |
| tblConstructionPhase | PhaseStartDate | 10/12/2019 | 1/1/2020 |
| tblConstructionPhase | PhaseStartDate | 9/26/2020 | 6/30/2025 |
| tblConstructionPhase | PhaseStartDate | 9/28/2019 | 9/2/2019 |

| | | | |
|---|---|---|---|
| tblEnergyUse | LightingElect | 741.44 | 185.36 |
| tblEnergyUse | LightingElect | 1.75 | 0.44 |
| tblEnergyUse | LightingElect | 7.87 | 1.97 |
| tblEnergyUse | LightingElect | 2.14 | 0.54 |
| tblEnergyUse | LightingElect | 6.26 | 1.57 |
| tblFireplaces | FireplaceDayYear | 25.00 | 0.00 |
| tblFireplaces | FireplaceHourDay | 3.00 | 0.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 487.05 | 0.00 |
| tblFireplaces | NumberNoFireplace | 57.30 | 0.00 |
| tblFireplaces | NumberWood | 28.65 | 0.00 |
| tblGrading | AcresOfGrading | 32.50 | 8.09 |
| tblGrading | AcresOfGrading | 0.00 | 8.09 |
| tblGrading | MaterialExported | 0.00 | 90,000.00 |
| tblLandUse | LandUseSquareFeet | 445,764.00 | 212,350.00 |
| tblLandUse | LandUseSquareFeet | 573,000.00 | 645,806.00 |
| tblLandUse | LotAcreage | 13.83 | 0.00 |
| tblLandUse | LotAcreage | 0.30 | 0.00 |
| tblLandUse | LotAcreage | 0.04 | 0.00 |
| tblLandUse | LotAcreage | 10.23 | 0.00 |
| tblLandUse | LotAcreage | 15.08 | 7.45 |
| tblLandUse | LotAcreage | 0.02 | 0.00 |
| tblLandUse | LotAcreage | 0.02 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 263.58 | 197.69 |
| tblSolidWaste | SolidWasteGenerationRate | 0.03 | 0.02 |
| tblSolidWaste | SolidWasteGenerationRate | 21.42 | 16.07 |
| tblSolidWaste | SolidWasteGenerationRate | 168.08 | 126.06 |

| | | | |
|---|---|---|---|
| tblSolidWaste | SolidWasteGenerationRate | 4.56 | 3.42 |
| tblSolidWaste | SolidWasteGenerationRate | 1.12 | 0.84 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 190.00 |
| tblTripsAndVMT | HaulingTripNumber | 11,250.00 | 3,750.00 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | ST_TR | 9.10 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | SU_TR | 13.60 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.85 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 91.99 |
| tblVehicleTrips | WD_TR | 8.17 | 7.44 |
| tblVehicleTrips | WD_TR | 33.82 | 0.00 |
| tblVehicleTrips | WD_TR | 44.32 | 30.96 |
| tblWater | IndoorWaterUseRate | 37,333,256.68 | 2,986,605.00 |
| tblWater | IndoorWaterUseRate | 546,360.68 | 437,088.50 |
| tblWater | IndoorWaterUseRate | 7,787,598.39 | 6,230,079.00 |
| tblWater | IndoorWaterUseRate | 79,257.60 | 63,406.08 |
| tblWaterMitigation | Evapotranspiration | 52.031579 | 59.196676 |
| tblWoodstoves | NumberCatalytic | 28.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 28.65 | 0.00 |
| tblWoodstoves | WoodstoveDayYear | 25.00 | 0.00 |
| tblWoodstoves | WoodstoveWoodMass | 999.60 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2019 | 0.1925 | 1.9857 | 0.9953 | 1.7400e-003 | 0.7988 | 0.1041 | 0.9028 | 0.4347 | 0.0957 | 0.5305 | 0.0000 | 156.8816 | 156.8816 | 0.0473 | 0.0000 | 158.0643 |
| 2020 | 0.8459 | 8.9934 | 6.8916 | 0.0299 | 1.4836 | 0.1844 | 1.6681 | 0.4540 | 0.1729 | 0.6269 | 0.0000 | 2,815.8927 | 2,815.8927 | 0.2101 | 0.0000 | 2,821.1458 |
| 2021 | 0.7682 | 5.2427 | 6.7197 | 0.0214 | 1.2817 | 0.1396 | 1.4213 | 0.3443 | 0.1312 | 0.4755 | 0.0000 | 1,963.8380 | 1,963.8380 | 0.1428 | 0.0000 | 1,967.4071 |
| 2022 | 0.7077 | 4.8230 | 6.3272 | 0.0209 | 1.2768 | 0.1187 | 1.3955 | 0.3430 | 0.1116 | 0.4545 | 0.0000 | 1,915.4826 | 1,915.4826 | 0.1375 | 0.0000 | 1,918.9197 |
| 2023 | 1.8747 | 4.2508 | 6.8440 | 0.0227 | 1.4990 | 0.1127 | 1.6117 | 0.4020 | 0.1064 | 0.5084 | 0.0000 | 2,079.5559 | 2,079.5559 | 0.1366 | 0.0000 | 2,082.9718 |
| 2024 | 1.8485 | 4.1125 | 6.5980 | 0.0225 | 1.5105 | 0.1008 | 1.6113 | 0.4051 | 0.0951 | 0.5002 | 0.0000 | 2,058.1801 | 2,058.1801 | 0.1342 | 0.0000 | 2,061.5358 |
| 2025 | 1.3797 | 3.2072 | 5.1830 | 0.0171 | 1.1296 | 0.0792 | 1.2088 | 0.3029 | 0.0744 | 0.3773 | 0.0000 | 1,567.1599 | 1,567.1599 | 0.1186 | 0.0000 | 1,570.1244 |
| **Maximum** | **1.8747** | **8.9934** | **6.8916** | **0.0299** | **1.5105** | **0.1844** | **1.6681** | **0.4540** | **0.1729** | **0.6269** | **0.0000** | **2,815.8927** | **2,815.8927** | **0.2101** | **0.0000** | **2,821.1458** |

## 2.1 Overall Construction

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2019 | 0.0444 | 0.8326 | 1.0343 | 1.7400e-003 | 0.3642 | 0.0412 | 0.4054 | 0.1969 | 0.0412 | 0.2381 | 0.0000 | 156.8814 | 156.8814 | 0.0473 | 0.0000 | 158.0641 |
| 2020 | 0.6481 | 8.1295 | 7.0880 | 0.0299 | 1.3708 | 0.1466 | 1.5174 | 0.3942 | 0.1449 | 0.5391 | 0.0000 | 2,815.8923 | 2,815.8923 | 0.2101 | 0.0000 | 2,821.1454 |
| 2021 | 0.6080 | 4.8243 | 6.8892 | 0.0214 | 1.2817 | 0.1325 | 1.4141 | 0.3443 | 0.1315 | 0.4758 | 0.0000 | 1,963.8376 | 1,963.8376 | 0.1428 | 0.0000 | 1,967.4067 |
| 2022 | 0.5735 | 4.6424 | 6.5235 | 0.0209 | 1.2768 | 0.1310 | 1.4078 | 0.3430 | 0.1301 | 0.4730 | 0.0000 | 1,915.4822 | 1,915.4822 | 0.1375 | 0.0000 | 1,918.9193 |
| 2023 | 1.7407 | 4.2371 | 7.0587 | 0.0227 | 1.4990 | 0.1424 | 1.6414 | 0.4020 | 0.1414 | 0.5434 | 0.0000 | 2,079.5555 | 2,079.5555 | 0.1366 | 0.0000 | 2,082.9714 |
| 2024 | 1.7281 | 4.2331 | 6.8245 | 0.0225 | 1.5105 | 0.1433 | 1.6538 | 0.4051 | 0.1424 | 0.5474 | 0.0000 | 2,058.1797 | 2,058.1797 | 0.1342 | 0.0000 | 2,061.5354 |
| 2025 | 1.2897 | 3.4873 | 5.4480 | 0.0171 | 1.1296 | 0.1263 | 1.2559 | 0.3029 | 0.1256 | 0.4285 | 0.0000 | 1,567.1595 | 1,567.1595 | 0.1186 | 0.0000 | 1,570.1240 |
| **Maximum** | **1.7407** | **8.1295** | **7.0880** | **0.0299** | **1.5105** | **0.1466** | **1.6538** | **0.4051** | **0.1449** | **0.5474** | **0.0000** | **2,815.8923** | **2,815.8923** | **0.2101** | **0.0000** | **2,821.1454** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **12.93** | **6.83** | **-3.31** | **0.00** | **6.10** | **-2.82** | **5.33** | **11.08** | **-8.87** | **6.56** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| 1 | 9-2-2019 | 12-1-2019 | 1.6274 | 0.6553 |
| 2 | 12-2-2019 | 3-1-2020 | 3.7439 | 3.1348 |
| 3 | 3-2-2020 | 6-1-2020 | 2.6816 | 2.3978 |
| 4 | 6-2-2020 | 9-1-2020 | 1.6385 | 1.4280 |

| | | | | |
|---|---|---|---|---|
| **5** | **9-2-2020** | **12-1-2020** | 1.6361 | 1.4279 |
| **6** | **12-2-2020** | **3-1-2021** | 1.5276 | 1.3639 |
| **7** | **3-2-2021** | **6-1-2021** | 1.4981 | 1.3524 |
| **8** | **6-2-2021** | **9-1-2021** | 1.4915 | 1.3459 |
| **9** | **9-2-2021** | **12-1-2021** | 1.4888 | 1.3447 |
| **10** | **12-2-2021** | **3-1-2022** | 1.4036 | 1.3042 |
| **11** | **3-2-2022** | **6-1-2022** | 1.3840 | 1.3045 |
| **12** | **6-2-2022** | **9-1-2022** | 1.3780 | 1.2985 |
| **13** | **9-2-2022** | **12-1-2022** | 1.3755 | 1.2967 |
| **14** | **12-2-2022** | **3-1-2023** | 1.4636 | 1.4133 |
| **15** | **3-2-2023** | **6-1-2023** | 1.5384 | 1.5011 |
| **16** | **6-2-2023** | **9-1-2023** | 1.5318 | 1.4945 |
| **17** | **9-2-2023** | **12-1-2023** | 1.5288 | 1.4919 |
| **18** | **12-2-2023** | **3-1-2024** | 1.4999 | 1.4877 |
| **19** | **3-2-2024** | **6-1-2024** | 1.4858 | 1.4859 |
| **20** | **6-2-2024** | **9-1-2024** | 1.4795 | 1.4796 |
| **21** | **9-2-2024** | **12-1-2024** | 1.4764 | 1.4765 |
| **22** | **12-2-2024** | **3-1-2025** | 1.4306 | 1.4555 |
| **23** | **3-2-2025** | **6-1-2025** | 1.4318 | 1.4700 |
| **24** | **6-2-2025** | **9-1-2025** | 1.6453 | 1.7374 |
| **25** | **9-2-2025** | **9-30-2025** | 0.5352 | 0.5683 |
| | | **Highest** | 3.7439 | 3.1348 |

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 3.6432 | 0.0682 | 5.9274 | 3.1000e-004 | | 0.0328 | 0.0328 | | 0.0328 | 0.0328 | 0.0000 | 9.6991 | 9.6991 | 9.3600e-003 | 0.0000 | 9.9332 |
| Energy | 0.0636 | 0.5599 | 0.3502 | 3.4700e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | 0.0000 | 3,687.1848 | 3,687.1848 | 0.0930 | 0.0283 | 3,697.9364 |
| Mobile | 1.2389 | 5.9777 | 15.9087 | 0.0658 | 6.0362 | 0.0497 | 6.0859 | 1.6175 | 0.0462 | 1.6637 | 0.0000 | 6,097.1222 | 6,097.1222 | 0.2800 | 0.0000 | 6,104.1213 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 69.8492 | 0.0000 | 69.8492 | 4.1280 | 0.0000 | 173.0484 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.0978 | 200.5991 | 203.6969 | 0.3235 | 8.6100e-003 | 214.3501 |
| **Total** | **4.9457** | **6.6058** | **22.1863** | **0.0696** | **6.0362** | **0.1265** | **6.1627** | **1.6175** | **0.1230** | **1.7405** | **72.9470** | **9,994.6051** | **10,067.5521** | **4.8337** | **0.0369** | **10,199.3894** |

## 2.2 Overall Operational

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 3.6432 | 0.0682 | 5.9274 | 3.1000e-004 | | 0.0328 | 0.0328 | | 0.0328 | 0.0328 | 0.0000 | 9.6991 | 9.6991 | 9.3600e-003 | 0.0000 | 9.9332 |
| Energy | 0.0636 | 0.5599 | 0.3502 | 3.4700e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | 0.0000 | 3,687.1848 | 3,687.1848 | 0.0930 | 0.0283 | 3,697.9364 |
| Mobile | 1.2389 | 5.9777 | 15.9087 | 0.0658 | 6.0362 | 0.0497 | 6.0859 | 1.6175 | 0.0462 | 1.6637 | 0.0000 | 6,097.1222 | 6,097.1222 | 0.2800 | 0.0000 | 6,104.1213 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 69.8492 | 0.0000 | 69.8492 | 4.1280 | 0.0000 | 173.0484 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.0978 | 192.2187 | 195.3165 | 0.3233 | 8.5700e-003 | 205.9504 |
| **Total** | **4.9457** | **6.6058** | **22.1863** | **0.0696** | **6.0362** | **0.1265** | **6.1627** | **1.6175** | **0.1230** | **1.7405** | **72.9470** | **9,986.2246** | **10,059.1717** | **4.8335** | **0.0369** | **10,190.9897** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.08** | **0.08** | **0.00** | **0.11** | **0.08** |

## 3.0 Construction Detail

**Construction Phase**

La Terra Mixed Use Project - Los Angeles-South Coast County, Annual

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Site Preparation | Site Preparation | 9/2/2019 | 12/31/2019 | 5 | 87 | |
| 2 | Grading | Grading | 1/1/2020 | 3/31/2020 | 5 | 65 | |
| 3 | Building Construction | Building Construction | 4/1/2020 | 9/30/2025 | 5 | 1435 | |
| 4 | Paving | Paving | 6/30/2025 | 9/26/2025 | 5 | 65 | |
| 5 | Architectural Coating | Architectural Coating | 1/2/2023 | 9/30/2025 | 5 | 717 | |

**Acres of Grading (Site Preparation Phase): 8.09**

**Acres of Grading (Grading Phase): 8.09**

**Acres of Paving: 0.64**

**Residential Indoor: 1,307,757; Residential Outdoor: 435,919; Non-Residential Indoor: 322,830; Non-Residential Outdoor: 107,610; Striped Parking Area: 38,556 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 3,750.00 | 14.70 | 6.90 | 190.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 779.00 | 204.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 156.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

### 3.2 Site Preparation - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.7902 | 0.0000 | 0.7902 | 0.4325 | 0.0000 | 0.4325 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1886 | 1.9824 | 0.9597 | 1.6500e-003 | | 0.1040 | 0.1040 | | 0.0957 | 0.0957 | 0.0000 | 148.6338 | 148.6338 | 0.0470 | 0.0000 | 149.8094 |
| **Total** | **0.1886** | **1.9824** | **0.9597** | **1.6500e-003** | **0.7902** | **0.1040** | **0.8942** | **0.4325** | **0.0957** | **0.5281** | **0.0000** | **148.6338** | **148.6338** | **0.0470** | **0.0000** | **149.8094** |

## 3.2 Site Preparation - 2019

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.9200e-003 | 3.2700e-003 | 0.0356 | 9.0000e-005 | 8.5800e-003 | 8.0000e-005 | 8.6600e-003 | 2.2800e-003 | 7.0000e-005 | 2.3500e-003 | 0.0000 | 8.2478 | 8.2478 | 2.8000e-004 | 0.0000 | 8.2549 |
| **Total** | **3.9200e-003** | **3.2700e-003** | **0.0356** | **9.0000e-005** | **8.5800e-003** | **8.0000e-005** | **8.6600e-003** | **2.2800e-003** | **7.0000e-005** | **2.3500e-003** | **0.0000** | **8.2478** | **8.2478** | **2.8000e-004** | **0.0000** | **8.2549** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.3556 | 0.0000 | 0.3556 | 0.1946 | 0.0000 | 0.1946 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0405 | 0.8294 | 0.9988 | 1.6500e-003 | | 0.0412 | 0.0412 | | 0.0412 | 0.0412 | 0.0000 | 148.6336 | 148.6336 | 0.0470 | 0.0000 | 149.8093 |
| **Total** | **0.0405** | **0.8294** | **0.9988** | **1.6500e-003** | **0.3556** | **0.0412** | **0.3967** | **0.1946** | **0.0412** | **0.2358** | **0.0000** | **148.6336** | **148.6336** | **0.0470** | **0.0000** | **149.8093** |

## 3.2 Site Preparation - 2019

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.9200e-003 | 3.2700e-003 | 0.0356 | 9.0000e-005 | 8.5800e-003 | 8.0000e-005 | 8.6600e-003 | 2.2800e-003 | 7.0000e-005 | 2.3500e-003 | 0.0000 | 8.2478 | 8.2478 | 2.8000e-004 | 0.0000 | 8.2549 |
| **Total** | **3.9200e-003** | **3.2700e-003** | **0.0356** | **9.0000e-005** | **8.5800e-003** | **8.0000e-005** | **8.6600e-003** | **2.2800e-003** | **7.0000e-005** | **2.3500e-003** | **0.0000** | **8.2478** | **8.2478** | **2.8000e-004** | **0.0000** | **8.2549** |

## 3.3 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.2051 | 0.0000 | 0.2051 | 0.1088 | 0.0000 | 0.1088 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0789 | 0.8575 | 0.5217 | 9.6000e-004 | | 0.0414 | 0.0414 | | 0.0381 | 0.0381 | 0.0000 | 84.6909 | 84.6909 | 0.0274 | 0.0000 | 85.3757 |
| **Total** | **0.0789** | **0.8575** | **0.5217** | **9.6000e-004** | **0.2051** | **0.0414** | **0.2465** | **0.1088** | **0.0381** | **0.1469** | **0.0000** | **84.6909** | **84.6909** | **0.0274** | **0.0000** | **85.3757** |

## 3.3 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.1288 | 3.7811 | 0.9423 | 0.0124 | 0.3058 | 0.0157 | 0.3215 | 0.0839 | 0.0150 | 0.0990 | 0.0000 | 1,215.2017 | 1,215.2017 | 0.0705 | 0.0000 | 1,216.9642 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.2500e-003 | 1.8100e-003 | 0.0201 | 6.0000e-005 | 5.3400e-003 | 5.0000e-005 | 5.3900e-003 | 1.4200e-003 | 4.0000e-005 | 1.4600e-003 | 0.0000 | 4.9791 | 4.9791 | 1.6000e-004 | 0.0000 | 4.9830 |
| **Total** | **0.1310** | **3.7829** | **0.9623** | **0.0124** | **0.3111** | **0.0157** | **0.3269** | **0.0854** | **0.0151** | **0.1004** | **0.0000** | **1,220.1807** | **1,220.1807** | **0.0707** | **0.0000** | **1,221.9472** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0923 | 0.0000 | 0.0923 | 0.0490 | 0.0000 | 0.0490 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0236 | 0.4823 | 0.6172 | 9.6000e-004 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 84.6908 | 84.6908 | 0.0274 | 0.0000 | 85.3756 |
| **Total** | **0.0236** | **0.4823** | **0.6172** | **9.6000e-004** | **0.0923** | **0.0246** | **0.1169** | **0.0490** | **0.0246** | **0.0735** | **0.0000** | **84.6908** | **84.6908** | **0.0274** | **0.0000** | **85.3756** |

## 3.3 Grading - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.1288 | 3.7811 | 0.9423 | 0.0124 | 0.3058 | 0.0157 | 0.3215 | 0.0839 | 0.0150 | 0.0990 | 0.0000 | 1,215.2017 | 1,215.2017 | 0.0705 | 0.0000 | 1,216.9642 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.2500e-003 | 1.8100e-003 | 0.0201 | 6.0000e-005 | 5.3400e-003 | 5.0000e-005 | 5.3900e-003 | 1.4200e-003 | 4.0000e-005 | 1.4600e-003 | 0.0000 | 4.9791 | 4.9791 | 1.6000e-004 | 0.0000 | 4.9830 |
| **Total** | **0.1310** | **3.7829** | **0.9623** | **0.0124** | **0.3111** | **0.0157** | **0.3269** | **0.0854** | **0.0151** | **0.1004** | **0.0000** | **1,220.1807** | **1,220.1807** | **0.0707** | **0.0000** | **1,221.9472** |

## 3.4 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2088 | 1.8898 | 1.6596 | 2.6500e-003 | | 0.1100 | 0.1100 | | 0.1035 | 0.1035 | 0.0000 | 228.1358 | 228.1358 | 0.0557 | 0.0000 | 229.5273 |
| **Total** | **0.2088** | **1.8898** | **1.6596** | **2.6500e-003** | | **0.1100** | **0.1100** | | **0.1035** | **0.1035** | **0.0000** | **228.1358** | **228.1358** | **0.0557** | **0.0000** | **229.5273** |

## 3.4 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0729 | 2.1775 | 0.5894 | 5.1500e-003 | 0.1266 | 0.0101 | 0.1367 | 0.0365 | 9.6900e-003 | 0.0462 | 0.0000 | 499.1876 | 499.1876 | 0.0317 | 0.0000 | 499.9806 |
| Worker | 0.3542 | 0.2856 | 3.1585 | 8.6700e-003 | 0.8408 | 7.1700e-003 | 0.8480 | 0.2233 | 6.6100e-003 | 0.2299 | 0.0000 | 783.6976 | 783.6976 | 0.0247 | 0.0000 | 784.3150 |
| **Total** | **0.4271** | **2.4631** | **3.7480** | **0.0138** | **0.9674** | **0.0173** | **0.9847** | **0.2599** | **0.0163** | **0.2762** | **0.0000** | **1,282.8852** | **1,282.8852** | **0.0564** | **0.0000** | **1,284.2956** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0664 | 1.4013 | 1.7606 | 2.6500e-003 | | 0.0890 | 0.0890 | | 0.0890 | 0.0890 | 0.0000 | 228.1356 | 228.1356 | 0.0557 | 0.0000 | 229.5270 |
| **Total** | **0.0664** | **1.4013** | **1.7606** | **2.6500e-003** | | **0.0890** | **0.0890** | | **0.0890** | **0.0890** | **0.0000** | **228.1356** | **228.1356** | **0.0557** | **0.0000** | **229.5270** |

## 3.4 Building Construction - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0729 | 2.1775 | 0.5894 | 5.1500e-003 | 0.1266 | 0.0101 | 0.1367 | 0.0365 | 9.6900e-003 | 0.0462 | 0.0000 | 499.1876 | 499.1876 | 0.0317 | 0.0000 | 499.9806 |
| Worker | 0.3542 | 0.2856 | 3.1585 | 8.6700e-003 | 0.8408 | 7.1700e-003 | 0.8480 | 0.2233 | 6.6100e-003 | 0.2299 | 0.0000 | 783.6976 | 783.6976 | 0.0247 | 0.0000 | 784.3150 |
| **Total** | **0.4271** | **2.4631** | **3.7480** | **0.0138** | **0.9674** | **0.0173** | **0.9847** | **0.2599** | **0.0163** | **0.2762** | **0.0000** | **1,282.8852** | **1,282.8852** | **0.0564** | **0.0000** | **1,284.2956** |

## 3.4 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2481 | 2.2749 | 2.1631 | 3.5100e-003 | | 0.1251 | 0.1251 | | 0.1176 | 0.1176 | 0.0000 | 302.2867 | 302.2867 | 0.0729 | 0.0000 | 304.1099 |
| **Total** | **0.2481** | **2.2749** | **2.1631** | **3.5100e-003** | | **0.1251** | **0.1251** | | **0.1176** | **0.1176** | **0.0000** | **302.2867** | **302.2867** | **0.0729** | **0.0000** | **304.1099** |

## 3.4 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0827 | 2.6273 | 0.7123 | 6.7700e-003 | 0.1677 | 5.3600e-003 | 0.1731 | 0.0484 | 5.1200e-003 | 0.0535 | 0.0000 | 656.2232 | 656.2232 | 0.0403 | 0.0000 | 657.2295 |
| Worker | 0.4374 | 0.3405 | 3.8443 | 0.0111 | 1.1140 | 9.1800e-003 | 1.1232 | 0.2959 | 8.4600e-003 | 0.3043 | 0.0000 | 1,005.3281 | 1,005.3281 | 0.0296 | 0.0000 | 1,006.0677 |
| **Total** | **0.5201** | **2.9678** | **4.5567** | **0.0179** | **1.2817** | **0.0145** | **1.2962** | **0.3443** | **0.0136** | **0.3579** | **0.0000** | **1,661.5513** | **1,661.5513** | **0.0698** | **0.0000** | **1,663.2972** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0879 | 1.8565 | 2.3325 | 3.5100e-003 | | 0.1179 | 0.1179 | | 0.1179 | 0.1179 | 0.0000 | 302.2863 | 302.2863 | 0.0729 | 0.0000 | 304.1095 |
| **Total** | **0.0879** | **1.8565** | **2.3325** | **3.5100e-003** | | **0.1179** | **0.1179** | | **0.1179** | **0.1179** | **0.0000** | **302.2863** | **302.2863** | **0.0729** | **0.0000** | **304.1095** |

## 3.4 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0827 | 2.6273 | 0.7123 | 6.7700e-003 | 0.1677 | 5.3600e-003 | 0.1731 | 0.0484 | 5.1200e-003 | 0.0535 | 0.0000 | 656.2232 | 656.2232 | 0.0403 | 0.0000 | 657.2295 |
| Worker | 0.4374 | 0.3405 | 3.8443 | 0.0111 | 1.1140 | 9.1800e-003 | 1.1232 | 0.2959 | 8.4600e-003 | 0.3043 | 0.0000 | 1,005.3281 | 1,005.3281 | 0.0296 | 0.0000 | 1,006.0677 |
| **Total** | **0.5201** | **2.9678** | **4.5567** | **0.0179** | **1.2817** | **0.0145** | **1.2962** | **0.3443** | **0.0136** | **0.3579** | **0.0000** | **1,661.5513** | **1,661.5513** | **0.0698** | **0.0000** | **1,663.2972** |

## 3.4 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2218 | 2.0300 | 2.1272 | 3.5000e-003 | | 0.1052 | 0.1052 | | 0.0990 | 0.0990 | 0.0000 | 301.2428 | 301.2428 | 0.0722 | 0.0000 | 303.0471 |
| **Total** | **0.2218** | **2.0300** | **2.1272** | **3.5000e-003** | | **0.1052** | **0.1052** | | **0.0990** | **0.0990** | **0.0000** | **301.2428** | **301.2428** | **0.0722** | **0.0000** | **303.0471** |

## 3.4 Building Construction - 2022

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0773 | 2.4866 | 0.6714 | 6.6800e-003 | 0.1671 | 4.6700e-003 | 0.1717 | 0.0482 | 4.4600e-003 | 0.0527 | 0.0000 | 647.9672 | 647.9672 | 0.0387 | 0.0000 | 648.9348 |
| Worker | 0.4086 | 0.3064 | 3.5286 | 0.0107 | 1.1097 | 8.8600e-003 | 1.1186 | 0.2947 | 8.1600e-003 | 0.3029 | 0.0000 | 966.2726 | 966.2726 | 0.0266 | 0.0000 | 966.9378 |
| **Total** | **0.4859** | **2.7930** | **4.2000** | **0.0174** | **1.2768** | **0.0135** | **1.2903** | **0.3430** | **0.0126** | **0.3556** | **0.0000** | **1,614.2398** | **1,614.2398** | **0.0653** | **0.0000** | **1,615.8726** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0876 | 1.8494 | 2.3236 | 3.5000e-003 | | 0.1175 | 0.1175 | | 0.1175 | 0.1175 | 0.0000 | 301.2425 | 301.2425 | 0.0722 | 0.0000 | 303.0467 |
| **Total** | **0.0876** | **1.8494** | **2.3236** | **3.5000e-003** | | **0.1175** | **0.1175** | | **0.1175** | **0.1175** | **0.0000** | **301.2425** | **301.2425** | **0.0722** | **0.0000** | **303.0467** |

## 3.4 Building Construction - 2022

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0773 | 2.4866 | 0.6714 | 6.6800e-003 | 0.1671 | 4.6700e-003 | 0.1717 | 0.0482 | 4.4600e-003 | 0.0527 | 0.0000 | 647.9672 | 647.9672 | 0.0387 | 0.0000 | 648.9348 |
| Worker | 0.4086 | 0.3064 | 3.5286 | 0.0107 | 1.1097 | 8.8600e-003 | 1.1186 | 0.2947 | 8.1600e-003 | 0.3029 | 0.0000 | 966.2726 | 966.2726 | 0.0266 | 0.0000 | 966.9378 |
| **Total** | **0.4859** | **2.7930** | **4.2000** | **0.0174** | **1.2768** | **0.0135** | **1.2903** | **0.3430** | **0.0126** | **0.3556** | **0.0000** | **1,614.2398** | **1,614.2398** | **0.0653** | **0.0000** | **1,615.8726** |

## 3.4 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2045 | 1.8700 | 2.1117 | 3.5000e-003 | | 0.0910 | 0.0910 | | 0.0856 | 0.0856 | 0.0000 | 301.3462 | 301.3462 | 0.0717 | 0.0000 | 303.1383 |
| **Total** | **0.2045** | **1.8700** | **2.1117** | **3.5000e-003** | | **0.0910** | **0.0910** | | **0.0856** | **0.0856** | **0.0000** | **301.3462** | **301.3462** | **0.0717** | **0.0000** | **303.1383** |

## 3.4 Building Construction - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0574 | 1.8787 | 0.6024 | 6.4600e-003 | 0.1671 | 2.1900e-003 | 0.1693 | 0.0482 | 2.1000e-003 | 0.0503 | 0.0000 | 627.6818 | 627.6818 | 0.0342 | 0.0000 | 628.5369 |
| Worker | 0.3842 | 0.2772 | 3.2447 | 0.0103 | 1.1097 | 8.6100e-003 | 1.1183 | 0.2947 | 7.9300e-003 | 0.3027 | 0.0000 | 930.9138 | 930.9138 | 0.0240 | 0.0000 | 931.5130 |
| **Total** | **0.4416** | **2.1558** | **3.8471** | **0.0168** | **1.2768** | **0.0108** | **1.2876** | **0.3430** | **0.0100** | **0.3530** | **0.0000** | **1,558.5957** | **1,558.5957** | **0.0582** | **0.0000** | **1,560.0498** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0876 | 1.8494 | 2.3236 | 3.5000e-003 | | 0.1175 | 0.1175 | | 0.1175 | 0.1175 | 0.0000 | 301.3458 | 301.3458 | 0.0717 | 0.0000 | 303.1380 |
| **Total** | **0.0876** | **1.8494** | **2.3236** | **3.5000e-003** | | **0.1175** | **0.1175** | | **0.1175** | **0.1175** | **0.0000** | **301.3458** | **301.3458** | **0.0717** | **0.0000** | **303.1380** |

## 3.4 Building Construction - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0574 | 1.8787 | 0.6024 | 6.4600e-003 | 0.1671 | 2.1900e-003 | 0.1693 | 0.0482 | 2.1000e-003 | 0.0503 | 0.0000 | 627.6818 | 627.6818 | 0.0342 | 0.0000 | 628.5369 |
| Worker | 0.3842 | 0.2772 | 3.2447 | 0.0103 | 1.1097 | 8.6100e-003 | 1.1183 | 0.2947 | 7.9300e-003 | 0.3027 | 0.0000 | 930.9138 | 930.9138 | 0.0240 | 0.0000 | 931.5130 |
| **Total** | **0.4416** | **2.1558** | **3.8471** | **0.0168** | **1.2768** | **0.0108** | **1.2876** | **0.3430** | **0.0100** | **0.3530** | **0.0000** | **1,558.5957** | **1,558.5957** | **0.0582** | **0.0000** | **1,560.0498** |

## 3.4 Building Construction - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1928 | 1.7611 | 2.1179 | 3.5300e-003 | | 0.0803 | 0.0803 | | 0.0756 | 0.0756 | 0.0000 | 303.7223 | 303.7223 | 0.0718 | 0.0000 | 305.5179 |
| **Total** | **0.1928** | **1.7611** | **2.1179** | **3.5300e-003** | | **0.0803** | **0.0803** | | **0.0756** | **0.0756** | **0.0000** | **303.7223** | **303.7223** | **0.0718** | **0.0000** | **305.5179** |

## 3.4 Building Construction - 2024

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0564 | 1.8860 | 0.5884 | 6.4800e-003 | 0.1684 | 2.1800e-003 | 0.1705 | 0.0486 | 2.0800e-003 | 0.0507 | 0.0000 | 629.9903 | 629.9903 | 0.0340 | 0.0000 | 630.8392 |
| Worker | 0.3667 | 0.2547 | 3.0449 | 0.0101 | 1.1183 | 8.5500e-003 | 1.1268 | 0.2970 | 7.8700e-003 | 0.3049 | 0.0000 | 908.9888 | 908.9888 | 0.0221 | 0.0000 | 909.5421 |
| **Total** | **0.4231** | **2.1407** | **3.6333** | **0.0165** | **1.2866** | **0.0107** | **1.2973** | **0.3456** | **9.9500e-003** | **0.3556** | **0.0000** | **1,538.9791** | **1,538.9791** | **0.0561** | **0.0000** | **1,540.3813** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0883 | 1.8636 | 2.3415 | 3.5300e-003 | | 0.1184 | 0.1184 | | 0.1184 | 0.1184 | 0.0000 | 303.7220 | 303.7220 | 0.0718 | 0.0000 | 305.5175 |
| **Total** | **0.0883** | **1.8636** | **2.3415** | **3.5300e-003** | | **0.1184** | **0.1184** | | **0.1184** | **0.1184** | **0.0000** | **303.7220** | **303.7220** | **0.0718** | **0.0000** | **305.5175** |

## 3.4 Building Construction - 2024

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0564 | 1.8860 | 0.5884 | 6.4800e-003 | 0.1684 | 2.1800e-003 | 0.1705 | 0.0486 | 2.0800e-003 | 0.0507 | 0.0000 | 629.9903 | 629.9903 | 0.0340 | 0.0000 | 630.8392 |
| Worker | 0.3667 | 0.2547 | 3.0449 | 0.0101 | 1.1183 | 8.5500e-003 | 1.1268 | 0.2970 | 7.8700e-003 | 0.3049 | 0.0000 | 908.9888 | 908.9888 | 0.0221 | 0.0000 | 909.5421 |
| **Total** | **0.4231** | **2.1407** | **3.6333** | **0.0165** | **1.2866** | **0.0107** | **1.2973** | **0.3456** | **9.9500e-003** | **0.3556** | **0.0000** | **1,538.9791** | **1,538.9791** | **0.0561** | **0.0000** | **1,540.3813** |

## 3.4 Building Construction - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1333 | 1.2158 | 1.5683 | 2.6300e-003 | | 0.0514 | 0.0514 | | 0.0484 | 0.0484 | 0.0000 | 226.1215 | 226.1215 | 0.0532 | 0.0000 | 227.4503 |
| **Total** | **0.1333** | **1.2158** | **1.5683** | **2.6300e-003** | | **0.0514** | **0.0514** | | **0.0484** | **0.0484** | **0.0000** | **226.1215** | **226.1215** | **0.0532** | **0.0000** | **227.4503** |

## 3.4 Building Construction - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0409 | 1.3916 | 0.4266 | 4.7900e-003 | 0.1253 | 1.5900e-003 | 0.1269 | 0.0362 | 1.5200e-003 | 0.0377 | 0.0000 | 466.3310 | 466.3310 | 0.0249 | 0.0000 | 466.9537 |
| Worker | 0.2595 | 0.1734 | 2.1032 | 7.1900e-003 | 0.8323 | 6.2300e-003 | 0.8385 | 0.2211 | 5.7400e-003 | 0.2268 | 0.0000 | 650.3412 | 650.3412 | 0.0150 | 0.0000 | 650.7166 |
| **Total** | **0.3004** | **1.5650** | **2.5298** | **0.0120** | **0.9576** | **7.8200e-003** | **0.9654** | **0.2572** | **7.2600e-003** | **0.2645** | **0.0000** | **1,116.6722** | **1,116.6722** | **0.0399** | **0.0000** | **1,117.6702** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0657 | 1.3870 | 1.7427 | 2.6300e-003 | | 0.0881 | 0.0881 | | 0.0881 | 0.0881 | 0.0000 | 226.1212 | 226.1212 | 0.0532 | 0.0000 | 227.4501 |
| **Total** | **0.0657** | **1.3870** | **1.7427** | **2.6300e-003** | | **0.0881** | **0.0881** | | **0.0881** | **0.0881** | **0.0000** | **226.1212** | **226.1212** | **0.0532** | **0.0000** | **227.4501** |

## 3.4 Building Construction - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0409 | 1.3916 | 0.4266 | 4.7900e-003 | 0.1253 | 1.5900e-003 | 0.1269 | 0.0362 | 1.5200e-003 | 0.0377 | 0.0000 | 466.3310 | 466.3310 | 0.0249 | 0.0000 | 466.9537 |
| Worker | 0.2595 | 0.1734 | 2.1032 | 7.1900e-003 | 0.8323 | 6.2300e-003 | 0.8385 | 0.2211 | 5.7400e-003 | 0.2268 | 0.0000 | 650.3412 | 650.3412 | 0.0150 | 0.0000 | 650.7166 |
| **Total** | **0.3004** | **1.5650** | **2.5298** | **0.0120** | **0.9576** | **7.8200e-003** | **0.9654** | **0.2572** | **7.2600e-003** | **0.2645** | **0.0000** | **1,116.6722** | **1,116.6722** | **0.0399** | **0.0000** | **1,117.6702** |

## 3.5 Paving - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0297 | 0.2789 | 0.4738 | 7.4000e-004 | | 0.0136 | 0.0136 | | 0.0125 | 0.0125 | 0.0000 | 65.0626 | 65.0626 | 0.0210 | 0.0000 | 65.5886 |
| Paving | 8.4000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0306** | **0.2789** | **0.4738** | **7.4000e-004** | | **0.0136** | **0.0136** | | **0.0125** | **0.0125** | **0.0000** | **65.0626** | **65.0626** | **0.0210** | **0.0000** | **65.5886** |

## 3.5 Paving - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6700e-003 | 1.1100e-003 | 0.0135 | 5.0000e-005 | 5.3400e-003 | 4.0000e-005 | 5.3800e-003 | 1.4200e-003 | 4.0000e-005 | 1.4600e-003 | 0.0000 | 4.1742 | 4.1742 | 1.0000e-004 | 0.0000 | 4.1766 |
| **Total** | **1.6700e-003** | **1.1100e-003** | **0.0135** | **5.0000e-005** | **5.3400e-003** | **4.0000e-005** | **5.3800e-003** | **1.4200e-003** | **4.0000e-005** | **1.4600e-003** | **0.0000** | **4.1742** | **4.1742** | **1.0000e-004** | **0.0000** | **4.1766** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0182 | 0.3671 | 0.5621 | 7.4000e-004 | | 0.0198 | 0.0198 | | 0.0198 | 0.0198 | 0.0000 | 65.0625 | 65.0625 | 0.0210 | 0.0000 | 65.5886 |
| Paving | 8.4000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0191** | **0.3671** | **0.5621** | **7.4000e-004** | | **0.0198** | **0.0198** | | **0.0198** | **0.0198** | **0.0000** | **65.0625** | **65.0625** | **0.0210** | **0.0000** | **65.5886** |

## 3.5 Paving - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6700e-003 | 1.1100e-003 | 0.0135 | 5.0000e-005 | 5.3400e-003 | 4.0000e-005 | 5.3800e-003 | 1.4200e-003 | 4.0000e-005 | 1.4600e-003 | 0.0000 | 4.1742 | 4.1742 | 1.0000e-004 | 0.0000 | 4.1766 |
| **Total** | **1.6700e-003** | **1.1100e-003** | **0.0135** | **5.0000e-005** | **5.3400e-003** | **4.0000e-005** | **5.3800e-003** | **1.4200e-003** | **4.0000e-005** | **1.4600e-003** | **0.0000** | **4.1742** | **4.1742** | **1.0000e-004** | **0.0000** | **4.1766** |

## 3.6 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.1268 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0249 | 0.1694 | 0.2355 | 3.9000e-004 | | 9.2100e-003 | 9.2100e-003 | | 9.2100e-003 | 9.2100e-003 | 0.0000 | 33.1923 | 33.1923 | 1.9900e-003 | 0.0000 | 33.2419 |
| **Total** | **1.1517** | **0.1694** | **0.2355** | **3.9000e-004** | | **9.2100e-003** | **9.2100e-003** | | **9.2100e-003** | **9.2100e-003** | **0.0000** | **33.1923** | **33.1923** | **1.9900e-003** | **0.0000** | **33.2419** |

## 3.6 Architectural Coating - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0769 | 0.0555 | 0.6498 | 2.0600e-003 | 0.2222 | 1.7200e-003 | 0.2240 | 0.0590 | 1.5900e-003 | 0.0606 | 0.0000 | 186.4218 | 186.4218 | 4.8000e-003 | 0.0000 | 186.5418 |
| **Total** | **0.0769** | **0.0555** | **0.6498** | **2.0600e-003** | **0.2222** | **1.7200e-003** | **0.2240** | **0.0590** | **1.5900e-003** | **0.0606** | **0.0000** | **186.4218** | **186.4218** | **4.8000e-003** | **0.0000** | **186.5418** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.1268 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 7.7300e-003 | 0.1764 | 0.2382 | 3.9000e-004 | | 0.0124 | 0.0124 | | 0.0124 | 0.0124 | 0.0000 | 33.1923 | 33.1923 | 1.9900e-003 | 0.0000 | 33.2419 |
| **Total** | **1.1345** | **0.1764** | **0.2382** | **3.9000e-004** | | **0.0124** | **0.0124** | | **0.0124** | **0.0124** | **0.0000** | **33.1923** | **33.1923** | **1.9900e-003** | **0.0000** | **33.2419** |

## 3.6 Architectural Coating - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0769 | 0.0555 | 0.6498 | 2.0600e-003 | 0.2222 | 1.7200e-003 | 0.2240 | 0.0590 | 1.5900e-003 | 0.0606 | 0.0000 | 186.4218 | 186.4218 | 4.8000e-003 | 0.0000 | 186.5418 |
| **Total** | **0.0769** | **0.0555** | **0.6498** | **2.0600e-003** | **0.2222** | **1.7200e-003** | **0.2240** | **0.0590** | **1.5900e-003** | **0.0606** | **0.0000** | **186.4218** | **186.4218** | **4.8000e-003** | **0.0000** | **186.5418** |

## 3.6 Architectural Coating - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.1355 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0237 | 0.1597 | 0.2371 | 3.9000e-004 | | 7.9800e-003 | 7.9800e-003 | | 7.9800e-003 | 7.9800e-003 | 0.0000 | 33.4476 | 33.4476 | 1.8800e-003 | 0.0000 | 33.4947 |
| **Total** | **1.1592** | **0.1597** | **0.2371** | **3.9000e-004** | | **7.9800e-003** | **7.9800e-003** | | **7.9800e-003** | **7.9800e-003** | **0.0000** | **33.4476** | **33.4476** | **1.8800e-003** | **0.0000** | **33.4947** |

## 3.6 Architectural Coating - 2024

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0734 | 0.0510 | 0.6098 | 2.0100e-003 | 0.2239 | 1.7100e-003 | 0.2257 | 0.0595 | 1.5800e-003 | 0.0611 | 0.0000 | 182.0311 | 182.0311 | 4.4300e-003 | 0.0000 | 182.1419 |
| **Total** | **0.0734** | **0.0510** | **0.6098** | **2.0100e-003** | **0.2239** | **1.7100e-003** | **0.2257** | **0.0595** | **1.5800e-003** | **0.0611** | **0.0000** | **182.0311** | **182.0311** | **4.4300e-003** | **0.0000** | **182.1419** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.1355 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 7.7900e-003 | 0.1778 | 0.2401 | 3.9000e-004 | | 0.0125 | 0.0125 | | 0.0125 | 0.0125 | 0.0000 | 33.4476 | 33.4476 | 1.8800e-003 | 0.0000 | 33.4947 |
| **Total** | **1.1433** | **0.1778** | **0.2401** | **3.9000e-004** | | **0.0125** | **0.0125** | | **0.0125** | **0.0125** | **0.0000** | **33.4476** | **33.4476** | **1.8800e-003** | **0.0000** | **33.4947** |

## 3.6 Architectural Coating - 2024

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0734 | 0.0510 | 0.6098 | 2.0100e-003 | 0.2239 | 1.7100e-003 | 0.2257 | 0.0595 | 1.5800e-003 | 0.0611 | 0.0000 | 182.0311 | 182.0311 | 4.4300e-003 | 0.0000 | 182.1419 |
| **Total** | **0.0734** | **0.0510** | **0.6098** | **2.0100e-003** | **0.2239** | **1.7100e-003** | **0.2257** | **0.0595** | **1.5800e-003** | **0.0611** | **0.0000** | **182.0311** | **182.0311** | **4.4300e-003** | **0.0000** | **182.1419** |

## 3.6 Architectural Coating - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.8451 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0167 | 0.1117 | 0.1764 | 2.9000e-004 | | 5.0200e-003 | 5.0200e-003 | | 5.0200e-003 | 5.0200e-003 | 0.0000 | 24.8942 | 24.8942 | 1.3600e-003 | 0.0000 | 24.9282 |
| **Total** | **0.8618** | **0.1117** | **0.1764** | **2.9000e-004** | | **5.0200e-003** | **5.0200e-003** | | **5.0200e-003** | **5.0200e-003** | **0.0000** | **24.8942** | **24.8942** | **1.3600e-003** | **0.0000** | **24.9282** |

## 3.6 Architectural Coating - 2025

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0520 | 0.0347 | 0.4212 | 1.4400e-003 | 0.1667 | 1.2500e-003 | 0.1679 | 0.0443 | 1.1500e-003 | 0.0454 | 0.0000 | 130.2352 | 130.2352 | 3.0100e-003 | 0.0000 | 130.3104 |
| **Total** | **0.0520** | **0.0347** | **0.4212** | **1.4400e-003** | **0.1667** | **1.2500e-003** | **0.1679** | **0.0443** | **1.1500e-003** | **0.0454** | **0.0000** | **130.2352** | **130.2352** | **3.0100e-003** | **0.0000** | **130.3104** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.8451 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.7900e-003 | 0.1323 | 0.1787 | 2.9000e-004 | | 9.2700e-003 | 9.2700e-003 | | 9.2700e-003 | 9.2700e-003 | 0.0000 | 24.8942 | 24.8942 | 1.3600e-003 | 0.0000 | 24.9281 |
| **Total** | **0.8509** | **0.1323** | **0.1787** | **2.9000e-004** | | **9.2700e-003** | **9.2700e-003** | | **9.2700e-003** | **9.2700e-003** | **0.0000** | **24.8942** | **24.8942** | **1.3600e-003** | **0.0000** | **24.9281** |

### 3.6 Architectural Coating - 2025

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0520 | 0.0347 | 0.4212 | 1.4400e-003 | 0.1667 | 1.2500e-003 | 0.1679 | 0.0443 | 1.1500e-003 | 0.0454 | 0.0000 | 130.2352 | 130.2352 | 3.0100e-003 | 0.0000 | 130.3104 |
| **Total** | **0.0520** | **0.0347** | **0.4212** | **1.4400e-003** | **0.1667** | **1.2500e-003** | **0.1679** | **0.0443** | **1.1500e-003** | **0.0454** | **0.0000** | **130.2352** | **130.2352** | **3.0100e-003** | **0.0000** | **130.3104** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 1.2389 | 5.9777 | 15.9087 | 0.0658 | 6.0362 | 0.0497 | 6.0859 | 1.6175 | 0.0462 | 1.6637 | 0.0000 | 6,097.1222 | 6,097.1222 | 0.2800 | 0.0000 | 6,104.1213 |
| Unmitigated | 1.2389 | 5.9777 | 15.9087 | 0.0658 | 6.0362 | 0.0497 | 6.0859 | 1.6175 | 0.0462 | 1.6637 | 0.0000 | 6,097.1222 | 6,097.1222 | 0.2800 | 0.0000 | 6,104.1213 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,779.05 | 3,661.47 | 3357.78 | 10,209,718 | 10,209,718 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 165.58 | 285.07 | 237.31 | 262,888 | 262,888 |
| Hotel | 2,284.08 | 2,514.33 | 1826.65 | 5,372,764 | 5,372,764 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 33.13 | 44.98 | 21.86 | 63,188 | 63,188 |
| Total | 5,261.84 | 6,505.85 | 5,443.60 | 15,908,557 | 15,908,557 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| City Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Hotel | 16.60 | 8.40 | 6.90 | 19.40 | 61.60 | 19.00 | 58 | 38 | 4 |
| Other Asphalt Surfaces | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Recreational Swimming Pool | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 52 | 39 | 9 |
| Strip Mall | 16.60 | 8.40 | 6.90 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| City Park | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Enclosed Parking with Elevator | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| High Turnover (Sit Down Restaurant) | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Hotel | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Other Asphalt Surfaces | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Recreational Swimming Pool | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |
| Strip Mall | 0.544210 | 0.044379 | 0.208611 | 0.117175 | 0.014456 | 0.006301 | 0.020907 | 0.032661 | 0.002589 | 0.001903 | 0.005267 | 0.000705 | 0.000834 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

La Terra Mixed Use Project - Los Angeles-South Coast County, Annual

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 3,057.5040 | 3,057.5040 | 0.0809 | 0.0167 | 3,064.5137 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 3,057.5040 | 3,057.5040 | 0.0809 | 0.0167 | 3,064.5137 |
| NaturalGas Mitigated | 0.0636 | 0.5599 | 0.3502 | 3.4700e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | 0.0000 | 629.6808 | 629.6808 | 0.0121 | 0.0115 | 633.4227 |
| NaturalGas Unmitigated | 0.0636 | 0.5599 | 0.3502 | 3.4700e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | 0.0000 | 629.6808 | 629.6808 | 0.0121 | 0.0115 | 633.4227 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 6.2905e+006 | 0.0339 | 0.2899 | 0.1233 | 1.8500e-003 | | 0.0234 | 0.0234 | | 0.0234 | 0.0234 | 0.0000 | 335.6849 | 335.6849 | 6.4300e-003 | 6.1500e-003 | 337.6797 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 415368 | 2.2400e-003 | 0.0204 | 0.0171 | 1.2000e-004 | | 1.5500e-003 | 1.5500e-003 | | 1.5500e-003 | 1.5500e-003 | 0.0000 | 22.1656 | 22.1656 | 4.2000e-004 | 4.1000e-004 | 22.2973 |
| Hotel | 5.09215e+006 | 0.0275 | 0.2496 | 0.2097 | 1.5000e-003 | | 0.0190 | 0.0190 | | 0.0190 | 0.0190 | 0.0000 | 271.7367 | 271.7367 | 5.2100e-003 | 4.9800e-003 | 273.3515 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 1754.8 | 1.0000e-005 | 9.0000e-005 | 7.0000e-005 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0936 | 0.0936 | 0.0000 | 0.0000 | 0.0942 |
| **Total** | | **0.0636** | **0.5599** | **0.3502** | **3.4700e-003** | | **0.0440** | **0.0440** | | **0.0440** | **0.0440** | **0.0000** | **629.6808** | **629.6808** | **0.0121** | **0.0115** | **633.4227** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 6.2905e+006 | 0.0339 | 0.2899 | 0.1233 | 1.8500e-003 | | 0.0234 | 0.0234 | | 0.0234 | 0.0234 | 0.0000 | 335.6849 | 335.6849 | 6.4300e-003 | 6.1500e-003 | 337.6797 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 415368 | 2.2400e-003 | 0.0204 | 0.0171 | 1.2000e-004 | | 1.5500e-003 | 1.5500e-003 | | 1.5500e-003 | 1.5500e-003 | 0.0000 | 22.1656 | 22.1656 | 4.2000e-004 | 4.1000e-004 | 22.2973 |
| Hotel | 5.09215e+006 | 0.0275 | 0.2496 | 0.2097 | 1.5000e-003 | | 0.0190 | 0.0190 | | 0.0190 | 0.0190 | 0.0000 | 271.7367 | 271.7367 | 5.2100e-003 | 4.9800e-003 | 273.3515 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 1754.8 | 1.0000e-005 | 9.0000e-005 | 7.0000e-005 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0936 | 0.0936 | 0.0000 | 0.0000 | 0.0942 |
| **Total** | | **0.0636** | **0.5599** | **0.3502** | **3.4700e-003** | | **0.0440** | **0.0440** | | **0.0440** | **0.0440** | **0.0000** | **629.6808** | **629.6808** | **0.0121** | **0.0115** | **633.4227** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 2.0041e+006 | 996.4199 | 0.0264 | 5.4500e-003 | 998.7043 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 2.79734e+006 | 1,390.8141 | 0.0368 | 7.6100e-003 | 1,394.0028 |
| High Turnover (Sit Down Restaurant) | 68832 | 34.2227 | 9.1000e-004 | 1.9000e-004 | 34.3012 |
| Hotel | 1.26985e+006 | 631.3603 | 0.0167 | 3.4600e-003 | 632.8078 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 9426.7 | 4.6869 | 1.2000e-004 | 3.0000e-005 | 4.6976 |
| **Total** | | **3,057.5040** | **0.0809** | **0.0167** | **3,064.5137** |

## 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 2.0041e+006 | 996.4199 | 0.0264 | 5.4500e-003 | 998.7043 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Enclosed Parking with Elevator | 2.79734e+006 | 1,390.8141 | 0.0368 | 7.6100e-003 | 1,394.0028 |
| High Turnover (Sit Down Restaurant) | 68832 | 34.2227 | 9.1000e-004 | 1.9000e-004 | 34.3012 |
| Hotel | 1.26985e+006 | 631.3603 | 0.0167 | 3.4600e-003 | 632.8078 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 9426.7 | 4.6869 | 1.2000e-004 | 3.0000e-005 | 4.6976 |
| **Total** | | **3,057.5040** | **0.0809** | **0.0167** | **3,064.5137** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 3.6432 | 0.0682 | 5.9274 | 3.1000e-004 | | 0.0328 | 0.0328 | | 0.0328 | 0.0328 | 0.0000 | 9.6991 | 9.6991 | 9.3600e-003 | 0.0000 | 9.9332 |
| Unmitigated | 3.6432 | 0.0682 | 5.9274 | 3.1000e-004 | | 0.0328 | 0.0328 | | 0.0328 | 0.0328 | 0.0000 | 9.6991 | 9.6991 | 9.3600e-003 | 0.0000 | 9.9332 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.3107 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 3.1530 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.1795 | 0.0682 | 5.9274 | 3.1000e-004 | | 0.0328 | 0.0328 | | 0.0328 | 0.0328 | 0.0000 | 9.6991 | 9.6991 | 9.3600e-003 | 0.0000 | 9.9332 |
| **Total** | **3.6432** | **0.0682** | **5.9274** | **3.1000e-004** | | **0.0328** | **0.0328** | | **0.0328** | **0.0328** | **0.0000** | **9.6991** | **9.6991** | **9.3600e-003** | **0.0000** | **9.9332** |

## 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.3107 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 3.1530 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.1795 | 0.0682 | 5.9274 | 3.1000e-004 | | 0.0328 | 0.0328 | | 0.0328 | 0.0328 | 0.0000 | 9.6991 | 9.6991 | 9.3600e-003 | 0.0000 | 9.9332 |
| **Total** | **3.6432** | **0.0682** | **5.9274** | **3.1000e-004** | | **0.0328** | **0.0328** | | **0.0328** | **0.0328** | **0.0000** | **9.6991** | **9.6991** | **9.3600e-003** | **0.0000** | **9.9332** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

La Terra Mixed Use Project - Los Angeles-South Coast County, Annual

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 195.3165 | 0.3233 | 8.5700e-003 | 205.9504 |
| Unmitigated | 203.6969 | 0.3235 | 8.6100e-003 | 214.3501 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 2.98661 / 23.5362 | 150.2918 | 0.1013 | 3.1200e-003 | 153.7519 |
| City Park | 0 / 0.357444 | 1.9745 | 5.0000e-005 | 1.0000e-005 | 1.9790 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 0.437088 / 0.0348741 | 3.1610 | 0.0143 | 3.5000e-004 | 3.6242 |
| Hotel | 6.23008 / 0.865289 | 47.0893 | 0.2042 | 5.0400e-003 | 53.6964 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0.0473145 / 0.0289992 | 0.4815 | 1.5500e-003 | 4.0000e-005 | 0.5320 |
| Strip Mall | 0.0634061 / 0.0485772 | 0.6989 | 2.0800e-003 | 5.0000e-005 | 0.7667 |
| **Total** | | **203.6969** | **0.3235** | **8.6100e-003** | **214.3501** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 2.98661 / 22.1005 | 142.3612 | 0.1011 | 3.0700e-003 | 145.8031 |
| City Park | 0 / 0.33564 | 1.8540 | 5.0000e-005 | 1.0000e-005 | 1.8583 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 0.437088 / 0.0327468 | 3.1492 | 0.0143 | 3.5000e-004 | 3.6124 |
| Hotel | 6.23008 / 0.812506 | 46.7978 | 0.2042 | 5.0400e-003 | 53.4041 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 0.0473145 / 0.0272303 | 0.4717 | 1.5500e-003 | 4.0000e-005 | 0.5222 |
| Strip Mall | 0.0634061 / 0.045614 | 0.6826 | 2.0800e-003 | 5.0000e-005 | 0.7503 |
| **Total** | | **195.3165** | **0.3233** | **8.5600e-003** | **205.9504** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 69.8492 | 4.1280 | 0.0000 | 173.0484 |
| Unmitigated | 69.8492 | 4.1280 | 0.0000 | 173.0484 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 197.69 | 40.1293 | 2.3716 | 0.0000 | 99.4186 |
| City Park | 0.02 | 4.0600e-003 | 2.4000e-004 | 0.0000 | 0.0101 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 16.07 | 3.2621 | 0.1928 | 0.0000 | 8.0816 |
| Hotel | 126.06 | 25.5890 | 1.5123 | 0.0000 | 63.3958 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 3.42 | 0.6942 | 0.0410 | 0.0000 | 1.7199 |
| Strip Mall | 0.84 | 0.1705 | 0.0101 | 0.0000 | 0.4224 |
| **Total** | | **69.8492** | **4.1280** | **0.0000** | **173.0484** |

## 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 197.69 | 40.1293 | 2.3716 | 0.0000 | 99.4186 |
| City Park | 0.02 | 4.0600e-003 | 2.4000e-004 | 0.0000 | 0.0101 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 16.07 | 3.2621 | 0.1928 | 0.0000 | 8.0816 |
| Hotel | 126.06 | 25.5890 | 1.5123 | 0.0000 | 63.3958 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Recreational Swimming Pool | 3.42 | 0.6942 | 0.0410 | 0.0000 | 1.7199 |
| Strip Mall | 0.84 | 0.1705 | 0.0101 | 0.0000 | 0.4224 |
| **Total** | | **69.8492** | **4.1280** | **0.0000** | **173.0484** |

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

**MM AQ-1 Calculation**

| | | | | |
|---|---|---|---|---|
| 2020 NOx from hauling | | | | |
| Grading | 114.3 | | | |
| Days | 65 | | | |
| one way trips/day | 115.385 | | 116 | (rounded up) |
| VMT/day | 11020 | | | |
| Total | 179.3 | | | |
| | 7500 | one way trip | | |
| | 3750 | roundtrips | | |
| | 170 | mi to dump | | |
| | 20 | mi to site | | |
| | 190 | rountrip mi | | |
| New Emissions hauling | 57.53178 | | | |

| | g/mi NOX RUNEX*** | g/trip NOx_IDLEX* | g/trip NOx_STREX** | |
|---|---|---|---|---|
| Emission factor (2010-2018) | 1.997102 | 12.811221 | 19.443686 | |
| Emissions per day | 22008.06 | 1486.101636 | 2255.467576 | |
| | | | 25749.63325 | |
| | | | 56.76822397 | lb/day of NOX |

*NOX IDLEX is from Caleemod default

**NOX STREX Is recalced based on CalEEMod User Guide App A for 2010 to 2018

***NOX RUNEX is updated from emfac for model years 2010 - 2018

| | | |
|---|---|---|
| Mitigated Construction Onsite | All | 14.84 |
| Mitigated Construction Offsite | Vendor | 0 |
| | Worker | 0.05 |
| | Subtotal non hauling | 14.89 |
| | New Hauling Emissions | 57.53177603 |
| | **Total** | **72.42177603** |