# Appendix B

Air Quality and Greenhouse Gas Emissions

# Mt. Lebanon Project

## Draft EIR

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# Mt. Lebanon Project

Draft EIR

Appendix B-1-Air Quality and Greenhouse Gas Emissions Methodology

# AIR QUALITY AND GREENHOUSE GAS EMISSIONS METHODLOGY

**Mt. Lebanon Project**

***Prepared by:***

**Eyestone Environmental, LLC**

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# Mt. Lebanon Project

# Air Quality and Greenhouse Gas Emissions Methodology

## 1. Introduction

Eyestone Environmental has been retained to conduct a comprehensive greenhouse gas (GHG) and criteria air pollutant emissions assessment for the Mt. Lebanon Project (the "Project"). Emissions during both construction and operation of the Project were quantified. This assessment describes the methodology used to estimate the GHG and air pollutant emissions from existing and Project conditions and describes the methodology used to quantify GHG and air pollutant emission reductions from project design features and mitigation measures.

## 2. Air Pollutant and Greenhouse Gas Emissions Methodology

The Project would result in direct emissions of criteria pollutants and direct and indirect GHG emissions generated by different types of emissions sources, including:[1]

- Direct Emissions:
  - Construction: emissions associated with demolition of existing uses, shoring, excavation, grading, and construction-related equipment and vehicular activity;
  - Area source: emissions associated with consumer products, architectural coatings, and landscape equipment;
  - Energy source (building operations): emissions associated with space heating and cooling, and water heating;

[1] *Direct sources of emissions include Project-related vehicular trips and onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel). Whereas, indirect sources of emissions include offsite emissions associated with purchased electricity and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater)*

  - Mobile source: emissions associated with vehicles accessing the project site; and
  - Stationary source: emissions associated with stationary equipment (e.g., emergency generators).

- Indirect Emissions:
  - Energy source (building operations): emissions associated with energy consumption, and lighting;
  - Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
  - Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

## a. Emission Inventories

Project-related construction and operation emissions were calculated using SCAQMD's recommended California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying criteria pollutant and GHG impacts from land use projects throughout California.[2]

CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB's on-road emission model (EMission FACtor model (EMFAC)) and off-road equipment emission model (Off-road Emissions Inventory Program model (OFFROAD)).

[2] *See www.caleemod.com.*

## (1) Construction

Construction activities would generate emissions from off-road equipment usage, on-road vehicle travel (truck hauling, vendor deliveries, and workers commuting), architectural coating, and paving. Each of these source types is discussed in more detail below. The Project's construction emissions were calculated using the SCAQMD recommended CalEEMod (Version 2016.3.2). Please refer to CalEEMod construction output files for a complete listing of construction details modeled. CalEEMod default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths. It should be noted that the maximum daily emissions were predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction. The maximum daily emissions were compared to the SCAQMD daily regional numeric indicators. Annual emissions were calculated based on the total number of hours each piece of equipment was used and the total number of vehicular trips (i.e., worker, vendor, and haul) over the duration of construction. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years.[3] Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

### *(a) Emissions from Construction Equipment*

The emission calculations associated with construction equipment are from off-road equipment engine use based on the equipment list and phase length. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel. Construction equipment emissions vary with engine model years in which newer equipment will emit fewer pollutants. As a conservative assumption, the CalEEMod model uses an emission rate for equipment which represents an average model year for available equipment within the Air Basin. CalEEMod calculates the exhaust emissions based on CARB OFFROAD methodology using the equation presented below.

Construction Off-Road Equipment:

$$\text{Emissions Diesel [lbs]} = \left( \sum_i \left(EF_i \times Pop_i \times AvgHP_i \times Load_i \times Activity_i \right.\right.$$

Where: $EF_i$ = Emission factor from OFFROAD (lbs/hr)

$Pop_i$ = Population (quantity of same equipment)

[3] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

$AvgHP_i$ = Maximum rated average horsepower (hp)

$Load_i$ = Load Factor (dimensionless)

$Activity_i$ = Hours of operation (hours)

*i* = Summation index

Fugitive dust emissions from use of off-road equipment were also calculated using CalEEMod based on the types of equipment used during grading activities and based on the amount of import/export from loading or unloading dirt into haul trucks. These methods have been adapted from USEPA's AP-42 method for Western Coal Mining. As recommended by SCAQMD, the fugitive dust emissions from the grading phase are calculated using the methodology described in USEPA AP-42. $PM_{10}$ and $PM_{2.5}$ emissions from fugitive dust will be controlled by watering the construction site three times a day consistent with SCAQMD Rule 403 and were estimated to be reduced by 61 percent.

*(b) Emissions from On-Road Trips*

Construction generates on-road vehicle exhaust, evaporative, and dust emissions from personal vehicles for worker commuting, vendor deliveries, and trucks for soil and material hauling. These emissions are based on the number of trips and VMT along with emission factors from EMFAC. The emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running from EMFAC as follows:

Construction On-Road Equipment:

Emissions pollutant (lbs) = VMT * EF running, pollutant

Where: VMT = vehicle miles traveled (miles)

EF running,pollutant = emission factor for running emissions (lbs/VMT)

Evaporative emissions, starting and idling emissions in CalEEMod were calculated by multiplying the number of trips times the respective emission factor for each pollutant.

*(c) Emissions from Architectural Coating*

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings. CalEEMod calculates the VOC evaporative emissions from application of residential and non-residential surface coatings using the following equation:

Construction Architectural Coating Emissions:

Emissions Architectural Coatings (lbs) $=EF_{AC}$ x F $*A_{paint}$

Where: $EF_{AC}$ = Emission Factor (lb/sf)

$A_{paint}$ = Building Surface Area (sf)

The CalEEMod tool assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage. All of the land use information provided by a metric other than square footage erewill be converted to square footage using the default conversions or user defined equivalence.

F = fraction of surface area [%].

The default values based on SCAQMD methods used in their coating rules are 75 percent for the interior surfaces and 25 percent for the exterior shell. Parking areas are based on 6-percent coverage.

The emission factor (EF) is based on the VOC content of the surface coatings and is calculated estimated using the equation below:

$EF_{AC} = C_{VOC}/454(g/lb)$ x 3.785(L/gal)/180*sf)

Where: EF = emission factor (lb/sf)

C = VOC content (g/L or gram per liter)

The emission factors for coating categories were calculated using the equation above based on default VOC content from provided by the air districts or CARB's statewide limits in CalEEMod. Architectural coating VOC emission factors are also consistent with SCAQMD Rule 1113 as discussed above.

*(d) Emissions from Paving*

CalEEMod estimates VOC off-gassing emissions associated with asphalt paving of parking lots using the following equation:

$Emissions_{AP}$ (lbs) = $EF_{AP}$ x $A_{parking}$

Where: EF = emission factor (lb/acre)

A = area of the parking lot (acre)

Note: The Sacramento Metropolitan Air Quality Management District (SMAQMD) default emission factor is 2.62 lb/acre.

### (2) Operation

Similar to construction, the SCAQMD-recommended CalEEMod was used to calculate potential emissions generated by the Project, including area source, energy sources (electricity and natural gas), mobile source, stationary sources (emergency generator), solid waste generation and disposal, and water usage/wastewater generation.

### (3) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes consumer products, architectural coatings, and landscape maintenance equipment. Pollutant emissions generated by the Project were calculated using CalEEMod defaults, based upon the land uses that will be included in each project.

Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. SCAQMD did an evaluation of consumer product use compared to the total square footage of buildings using data from CARB consumer product Emission Inventory. To calculate the VOC emissions from consumer product use, the following equation was used in CalEEMod:

Emissions Consumer Products (lbs) = $EF_{CP}$ x Building Area

Where:

$EF_{CP}$ = pounds of VOC per building square foot

The factor is $1.98 \times 10^{-5}$ lbs/sf for SCAQMD areas.

Building Area = the total square footage of all buildings including residential square footage

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. The operational emission methodology from architecture coating is the same as the construction methodology discussed above. All land

use buildings are assumed to be repainted at a rate of 10 percent of area per year. This is based on the assumptions used by SCAQMD.

The combustion of fossil fuels to operate landscape equipment such as lawnmowers and trimmers, results in pollutant emissions. The emissions occur on-site and are considered a direct source of pollutant emissions. The emissions for landscaping equipment are based on the size of the land uses, the pollutant emission factors for fuel combustion. Pollutant emissions from landscaping equipment are generally calculated in CalEEMod as follows:

Landscaping Equipment:

Landscaping Equipment Emissions [lbs] = ( $\Sigma_i$ (Units × $EF_{LE}$ × $A_{LE}$)$_i$ )

Where: Units = Number of land use units (same land use type) [1,000 sf]

$EF_{LE}$ = Emission factor [grams (g)/1,000 sfday]

*i* = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

## (4) Energy Emissions (Electricity and Natural Gas)

Pollutant emissions are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits pollutant emissions directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. Pollutant emissions are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Energy demand emissions were calculated using the CalEEMod emissions inventory model. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 Building Energy Efficiency Standards (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod energy demand is based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) study.[4] The data is specific for climate zones and, therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. CalEEMod currently assumes 2016 Title 24 Energy Efficiency Standards when calculating project energy usage. In order to account for 2019 Title 24 Energy Efficiency Standards, energy consumption was assumed to be 10 percent more efficient than the 2016 Building Energy Efficiency Standards requirements.

*(a) Electricity*

Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves, and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. In contrast, GHG emissions from power plants are not subject to stationary source permitting requirements to the same degree as criteria pollutants. As such, GHGs emitted by power plants may be indirectly attributed to individual buildings and electricity users, who have the greatest ability to decrease usage by applying mitigation measures to individual electricity "end uses." CalEEMod therefore calculates GHG emissions (but not criteria pollutant emissions) from regional power plants associated with building electricity use.

Emissions associated with electricity demand are based on the size of the residential, commercial and retail land uses, the electrical demand factors for the land uses, the emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual electricity GHG emissions in units of $MTCO_2e$ are calculated as follows:

[4] *CEC, Commercial End-Use Survey, March 2006.*

Electricity:

Annual Emissions [$MTCO_2e$] = ( $\Sigma_i$ (Units × $D_E$ × $EF_E$ × GWP)$_i$ ) ÷ 2,204.62

Where: Units = Number of land use units (same land use type) [1,000 sf]

$D_E$ = Electrical demand factor [megawatt-hour (MWh)/1,000 sf/yr]

$EF_E$ = GHG emission factor [pounds per megawatt-hour (MWh)]

GWP = Global warming potential [$CO_2$ = 1, $CH_4$ = 21, $N_2O$ = 310]

2,204.62 = Conversion factor [pounds/MT]

*i* = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

GHG emissions from electricity use are directly dependent on the electricity utility provider. The Los Angeles Department of Water and Power (LADWP) provides electric service to the Project Site. Thus, GHG intensity factors for LADWP were selected in CalEEMod. Intensity factors for GHGs due to electrical generation to serve the electrical demands of the existing condition were obtained from the LADWP 2017 Power Integrated Resource Plan, which provides a $CO_2$ intensity of 801 pounds of $CO_2$ per MWh for 2019. By 2030, at least 50 percent of electricity shall be obtained from renewable sources. The 2016 Power Integrated Resource Plan estimates that the LADWP CO2 intensity would be 500 pounds of $CO_2$ per MWh by Year 2026.[5] As year-by-year data is currently not available, the $CO_2$ intensity factor for the Project buildout was determined based on straight line interpolation based on current and Year 2026 data points (801 pounds of $CO_2$ per MWh for Year 2019 and 647 pounds of $CO_2$ per MWh for Year 2024).

*(b) Natural Gas*

The direct source emissions associated with natural gas combustion are based on the size of the land uses and the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu). Natural gas emissions are calculated in CalEEMod as follows:

[5] *2016 Final Power Integrated Resource Plan, Figure 4-7. LADWP. December 2016.*

Natural Gas:

Natural Gas Emissions (lbs) = ( $\Sigma_i$ (Units × $D_{NG}$ × $EF_{NG}$)$_I$ )

Where: Units = Number of land use units (same land use type) [1,000 sf]

$D_{NG}$ = Natural Gas combustion factor [MMBtu/1,000 sf]

$EF_{NG}$ = Natural Gas combustion factor [pounds/MMBtu]

*I* = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

## (5) Mobile Source Emissions

Mobile-source emissions were calculated using the CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and vehicle miles traveled (VMT). The Traffic Study prepared by Linscott, Law and Greenspan had calculated Project VMT which was entered into CalEEMod in calculating Project mobile source emissions.

Modeling was also conducted using the Los Angeles County vehicle fleet mix for all vehicle types as provided in EMFAC2014.

Mobile source emissions were generally calculated in CalEEMod as follows:

Mobile:

Mobile Emissions [lbs] = ( $\Sigma_i$ (Units × ADT x $D_{TRIP}$ × $EF_i$ )

Where: Units = Number of vehicles (same vehicle model year and class)

ADT = Average daily trip rate [trips/day]

$D_{TRIP}$ = Trip distance [miles/trip]

EF = Pollutant emission factor [pounds per mile]

*i* = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

Mobile source operational emissions were calculated based on the Project VMT estimates provided by Linscott, Law and Greenspan. [6] As discussed in Section IV.I, Transportation, of this Draft EIR, to calculate peak daily trip estimates, the Los Angeles Department of Transportation (LADOT) VMT Calculator was used.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use developments.[7] The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites.

The Project design includes characteristics that would reduce trips and VMT as compared to a standard project within the air basin as measured by the air quality model (CalEEMod). While these Project characteristics primarily reduce greenhouse gas emissions, they would also reduce criteria air pollutants discussed herein. These relative reductions in vehicle trips and VMT from a standard project within the air basin help quantify the criteria air pollutant emissions reductions achieved by locating the Project in any infill, HQTA area that promotes alternative modes of transportation.

## (6) Stationary Source (Emergency Generator Emissions)

Emissions of GHGs associated with use of emergency generators were calculated using CalEEMod, in which emission factors are based on Table 3.4-1 (Gaseous Emission Factors for Large Stationary Diesel Engines) from EPA's AP-42: Compilation of Air Pollutant Emission Factors. The emissions are based on the horsepower rating of the diesel generator and the number of hours operated per year for testing purposes. Annual emergency generator GHG emissions in units of $MTCO_2e$ were calculated as follows:

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[6] *Transportation Impact Study for the Our Lady of Mt. Lebanon Project, Linscott, Law and Greenspan Engineers. April 16, 2019*

[7] *Environmental Protection Agency, Mixed-Use Trip Generation Model. www.epa.gov/smartgrowth/mixed-use-trip-generation-model. Accessed December 16, 2019.*

Emergency Generator:

Emissions [lbs] = ( Total HP x LF x HR × EF)

Where: Total HP = Total horsepower of emergency generators (Hp)
LF = Load Factor (CalEEMod default of 0.73)
HR = Hours Operated per Year
EF = AP-42 Emission Factor of 1.16 lb/hp-hr)

## (7) Solid Waste Emissions

The generation of municipal solid waste (MSW) from day-to-day operational activities generally consists of product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the MSW is diverted to waste recycling and reclamation facilities. Waste that is not diverted is usually sent to local landfills for disposal. MSW that is disposed in landfills results in GHG emissions of $CO_2$ and $CH_4$ from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the retail and restaurant land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted. Annual waste disposal GHG emissions in units of $MTCO_2e$ were calculated in CalEEMod as follows:

Solid Waste:

Annual Emissions [$MTCO_2e$] = ( $\Sigma_i$ (Units × $D_{MSW}$ × $EF_{MSW}$ × GWP)$_i$ ) ÷ 1.1023

Where: Units = Number of land use units (same land use type) [1,000 sf]
$D_{MSW}$ = Waste disposal rate [tons/1,000 sf/yr]
$EF_{MSW}$ = GHG emission factor [tons/ton waste]
GWP = Global warming potential [$CO_2$ = 1, $CH_4$ = 21, $N_2O$ = 310]
1.1023 = Conversion factor [tons/MT]
*i* = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod allows the input of several variables to quantify solid waste emissions. The model requires the amount of waste disposed, which is the product of the waste disposal rate times the land use units. CalEEMod default annaual solid waste disposal rates used. The GHG emission factors, particularly for $CH_4$, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, were used in this assessment. The Project includes a 76.4-percent recycling/diversion rate currently achieved within the City.[8]

## (8) Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water and include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. CalEEMod default annual water demand and wastewater rates were used. GHG emissions due to electricity are calculated in CalEEMod as follows for indoor and outdoor water demand:

[8] *City of Los Angeles, Sustainable City pLAn, Waste & Landfills, http://plan.lamayor.org/portfolio/waste-landfills-3rd, accessed February 21, 2019.*

Water Supply, Treatment, and Distribution; Wastewater Treatment (electricity):

Annual Emissions [$MTCO_2e$] = ($\Sigma_i$ (Units × $D_W$ × ($EI_W$ ÷ 1,000) × $EF_W$ × GWP)$_i$ ) ÷ 2,204.62

Where: Units = Number of land use units (same land use type) [1,000 sf]

$D_W$ = Water demand factor [million gallons (Mgal)/1,000 sf/yr]

$EI_W$ = Electricity intensity factor [kilowatt-hours (kWh)/Mgal]

1,000 = Conversion factor [kWh/MWh]

$EF_W$ = GHG emission factor [pounds/MWh]

GWP = Global warming potential [$CO_2$ = 1, $CH_4$ = 21, $N_2O$ = 310]

2,205 = Conversion factor [pounds/MT]

*i* = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod provides options to account for the use of water saving features such as the use of low-flow water fixtures (e.g., low-flow faucets, low-flow toilets). The same electricity GHG emissions factors discussed above were used for water and wastewater energy usage. In addition, the calculation of Project GHG emissions from water/wastewater usage accounts for a 20 percent reduction in water/wastewater emissions with implementation of Project Design Features WAT-PDF-1 provided in Section IV.J, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.

## b. Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[9] Even though these studies did not provide an exact

[9] *Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of*

*(Footnote continued on next page)*

regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which would require the State board to ensure that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan outlined in SB 32 involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. An evaluation was provided to determine whether the Project's design features advanced these goals by reducing VMT, increasing the use of electric vehicles, improving energy efficiency and reducing water usage.

Further, an evaluation of the Project's consistency with SCAG's RTP/SCS was provided to demonstrate that the Project will be consistent with post-2020 GHG reduction goals. The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita GHG emissions by 2020, 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035, and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016–2040 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

*technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

# Mt. Lebanon Project

## Draft EIR

## Appendix B-2-Air Quality Worksheets and Modeling Output Files

- Appendix B-2:  Air Quality Worksheets and Modeling Output Files
    - Appendix B-2.1:  Summary of Air Pollutant Emissions
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Mt. Lebanon
Air Quality Emissions Summary

**AQ SUMMARY OF EMISSIONS**

**Construction Emissions (Unmitigated)**

| Regional (Daily) Unmitigated | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| 2021 | 5 | 67 | 36 | 0 | 7 | 3 |
| 2022 | 4 | 88 | 40 | 0 | 7 | 3 |
| 2023 | 4 | 23 | 31 | 0 | 5 | 2 |
| 2024 | 23 | 26 | 38 | 0 | 5 | 2 |
| MAX | 23 | 88 | 40 | <1 | 7 | 3 |
| **Threshold** | **75** | **100** | **550** | **150** | **150** | **55** |
| **Difference** | **(52)** | **(12)** | **(510)** | **(150)** | **(143)** | **(52)** |
| **Impact** | **No** | **No** | **No** | **No** | **No** | **No** |

| Localized (Daily) Unmitigated | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| 2021 | 3 | 39 | 26 | <1 | 2 | 1 |
| 2022 | 3 | 50 | 27 | <1 | 1 | 1 |
| 2023 | 3 | 22 | 22 | <1 | <1 | <1 |
| 2024 | 22 | 25 | 29 | <1 | 1 | 1 |
| MAX | | 50 | 29 | <1 | 2 | 1 |
| **Threshold** | | 91 | 562 | | 4 | 3 |
| **Difference** | | **(40)** | **(533)** | | **(2)** | **(2)** |
| **Impact** | | **No** | **No** | | **No** | **No** |

**Construction Emissions (With Project Design Features)**

| Regional (Daily) w/PDFs | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| 2021 | 5 | 67 | 36 | <1 | 7 | 3 |
| 2022 | 4 | 88 | 40 | <1 | 7 | 3 |
| 2023 | 4 | 23 | 31 | <1 | 5 | 2 |
| 2024 | 23 | 26 | 38 | <1 | 5 | 2 |
| MAX | 23 | 88 | 40 | <1 | 7 | 3 |
| **Threshold** | **75** | **100** | **550** | **150** | **150** | **55** |
| **Difference** | **(52)** | **(12)** | **(510)** | **(150)** | **(143)** | **(52)** |
| **Impact** | **No** | **No** | **No** | **No** | **No** | **No** |
| Percent Reduction: | 0% | 0% | 0% | 0% | 0% | 0% |

| Localized (Daily) w/PDFs | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| 2021 | 3 | 39 | 26 | <1 | 2 | 1 |
| 2022 | 3 | 50 | 27 | <1 | 1 | 1 |
| 2023 | 3 | 22 | 22 | <1 | <1 | <1 |
| 2024 | 22 | 25 | 29 | <1 | 1 | 1 |
| MAX | | 50 | 29 | | 2 | 1 |
| **Threshold** | | 91 | 562 | | 4 | 3 |
| **Difference** | | **(40)** | **(533)** | | **(2)** | **(2)** |
| **Impact** | | **No** | **No** | | **No** | **No** |
| Percent Reduction: | | 0% | 0% | | 0% | 0% |

**Operation Emissions (Without Project Design Features)**

| Regional Buildout (Buildout Year) | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| Area | 4 | 2 | 14 | <1 | <1 | <1 |
| Energy | <1 | <1 | <1 | <1 | <1 | <1 |
| Mobile | 1 | 5 | 12 | <1 | 4 | 1 |
| Emergency Generator | <1 | 1 | 1 | <1 | <1 | <1 |
| Total | 6 | 9 | 28 | <1 | 5 | 2 |

| Project Regional (Buildout Less Baseline (Buildout Year)) | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| Area | 4 | 2 | 14 | 0 | 0 | 0 |
| Energy | <1 | <1 | <1 | <1 | <1 | <1 |
| Mobile | 1 | 5 | 12 | 0 | 4 | 1 |
| Emergency Generator | <1 | 1 | 1 | <1 | <1 | <1 |
| Total | 6 | 9 | 28 | 0 | 5 | 2 |
| **Threshold** | **55** | **55** | **550** | **150** | **150** | **55** |
| **Difference** | **(49)** | **(46)** | **(522)** | **(150)** | **(145)** | **(53)** |
| **Impact** | **No** | **No** | **No** | **No** | **No** | **No** |

| Project Localized (Buildout Less Baseline (Buildout Year)) | | | | | |
|---|---|---|---|---|---|
| Onsite Total | 4 | 15 | | 0 | 0.4 |
| **Threshold** | **91** | **562** | | **1** | **1** |
| **Difference** | **(87)** | **(547)** | | **(1)** | **(1)** |
| **Impact** | **No** | **No** | | **No** | **No** |

**Operation Emissions (With Project Design Features)**

| Regional Buildout (Buildout Year) | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| Area | 4 | 2 | 14 | <1 | <1 | <1 |
| Energy | <1 | <1 | <1 | <1 | <1 | <1 |
| Mobile | 1 | 5 | 12 | <1 | 4 | 1 |
| Emergency Generator | <1 | 1 | 1 | <1 | <1 | <1 |
| Total | 6 | 9 | 28 | <1 | 5 | 2 |

| Project Regional (Buildout Less Baseline (Buildout Year)) | ROG | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| Area | 4 | 2 | 14 | 0 | 0 | 0 |
| Energy | <1 | <1 | <1 | <1 | <1 | <1 |
| Mobile | 1 | 5 | 12 | 0 | 4 | 1 |
| Emergency Generator | <1 | 1 | 1 | <1 | <1 | <1 |
| Total | 6 | 9 | 28 | 0 | 5 | 2 |
| **Threshold** | **55** | **55** | **550** | **150** | **150** | **55** |
| **Difference** | **(49)** | **(46)** | **(522)** | **(150)** | **(145)** | **(53)** |
| **Impact** | **No** | **No** | **No** | **No** | **No** | **No** |
| Percent Reduction: | 0% | 0% | 0% | 0% | 0% | 0% |

| Project Localized (Buildout Less Baseline (Buildout Year)) | | | | | |
|---|---|---|---|---|---|
| Onsite Total | 4 | 15 | | 0 | 0.4 |
| **Threshold** | **91** | **562** | | **1** | **1** |
| **Difference** | **(87)** | **(547)** | | **(1)** | **(1)** |
| **Impact** | **No** | **No** | | **No** | **No** |

## Step 1. Determine Allowable Increase using 98th percentile NO2 and Max NO2 data

**Northwest LA NO2 Monitoring Data**

| SRA | City | Design Value 2014-2016 | 98th percentile, ppb 2016 | 2017 | 2018 | Threshold (ppb) | Allowable Increase (ppb) |
|---|---|---|---|---|---|---|---|
| 2 | Northwest LA | 47 | 49 | 46 | 46 | 100 | 53 |

| SRA | City | Design Value 2006-2008 | Max Hourly, ppb 2016 | 2017 | 2018 | Threshold (ppb) | Allowable Increase (ppb) |
|---|---|---|---|---|---|---|---|
| 2 | Northwest LA | 120 | 55 | 56 | 65 | 180 | 60 |

| Max Hourly vs. 98th Percentile Ratio (Allowable Increase) | 88% |
|---|---|

## Step 2. Use ratio in Step 1 to determine LST lookup value. Extrapolate/Interpolate LST look-up value for project area

**LST Threshold (SRA 1, 25 meter receptor)**

| Project Size (acres) | NO2 (lbs/day) | 98th Percentile NO2 (lbs/day) | CO (lbs/day) | PM10 (lbs/day) | PM2.5 (lbs/day) | PM10 Ops (lbs/day) | PM2.5 Ops (lbs/day) |
|---|---|---|---|---|---|---|---|
| 1 | 103 | 91 | 562 | 4 | 3 | 1 | 1 |

## Mt. Lebanon Project

**Air Quality Analysis Assumptions**

| | | | | | | | | | Construction (Sq Ft) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Construction Details** | **Start Date** | **End Date** | **Duration (Months)** | **Work Days** | **Max Daily Employee Trips** | **Max Daily Hauls** | **Total Hauls** | **Max Daily Deliveries** | **Residential** | **Non-Residential** | **Parking (Spaces)** |
| Overall Duration | **4/1/2021** | **3/31/2024** | **36** | 939 | | | | | | | |
| Demolition / Deconstruction of Cathedral | 4/1/2021 | 9/30/2021 | 6 | 131 | 50 | 20 | 125 | ----- | | | |
| Grading/Excavation | 10/1/2021 | 3/30/2022 | 6 | 129 | 60 | 63 | 8,127 | 5 | | | |
| Mat Foundation | 4/1/2022 | 4/4/2022 | - | 2 | 60 | - | - | 348 | | | |
| Building Foundation | 4/5/2022 | 5/31/2022 | 2 | 41 | 60 | | | 20 | | | |
| Building Construction | 6/1/2022 | 3/31/2024 | 22 | 478 | 350 | ----- | ----- | 64 | 148,641 | 24,591 | 397 |
| Paving/Landscape | 1/1/2024 | 3/31/2024 | 3 | 65 | 20 | ----- | ----- | 5 | | | |
| | | | | | | | | | | | |

| **Site Acreage** | |
|---|---|
| | 1.0 |
| **Demolition Quantities** | |
| Building Square Footage (SF) | 12,370 |
| Parking (SF) | - |
| Parking (spaces) | |
| **Import/Export Quantities during Grading** | **(CY)** |
| Import | - |
| Export | 110,000 |

| **Equipment** | **Demo** | **Grading/ Excavation** | **Mat Foundation** | **Foundation** | **Building Construction** | **Paving/ Landscape** |
|---|---|---|---|---|---|---|
| Air Compressor | | **2** | | **1** | **2** | |
| Aerial Lift | | | | | | |
| Bore/Drill Rig | | **2** | | | | |
| Cement and Mortar Mixers | | | | | | **1** |
| Concrete/Industrial Saws | | | | | | |
| Cranes (Tower) | | | | | **1** | |
| Cranes (Mobile) | | **1** | **1** | **1** | **2** | |
| Crawler Tractors | | | | | | |
| Crushing/Proc. Equipment | | | | | | |
| Excavators | **1** | **1** | | | | |
| Forklifts | | | **1** | **1** | **2** | |
| Generator Sets | | **1** | **1** | | | |
| Graders | | **1** | | | | |
| Off-Highway Tractors | | | | | | |
| Water Truck | | | | | | |
| Pavers | | | | | | |
| Paving Equipment | | | | | | **1** |
| Pumps | | | **4** | **1** | **2** | |
| Plate Compactors | | | | **3** | **2** | |
| Rollers | | | | | | **1** |
| Rough Terrain Forklifts | | | | | | |
| Rubber Tired Dozers | | | | | | |
| Rubber Tired Loaders | **1** | **1** | | **1** | | |
| Scrapers | | | | | | |
| Signal Boards | | | | | | |
| Skid Steer Loaders | | | | | | |
| Surfacing Equipment | | | | | | |
| Tractors/Loaders/Backhoes | **1** | | | **1** | **1** | |
| Trenchers | | | | | | |
| Welders | | | | | | |
| Other ( ) | | **1** | | | | |
| Total Pieces | **3** | **10** | **7** | **9** | **12** | **3** |

CalEEMod Version: CalEEMod.2016.3.2



Mt. Lebanon Project - Existing Uses - South Coast Air Basin, Winter

# Mt. Lebanon Project - Existing Uses

**South Coast Air Basin, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 19.22 | 1000sqft | 0.97 | 19,218.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2019 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 801 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2019) - 801 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - see assumptions

Mat Foundation concrete truck emissions calculated separately using EMFAC2017. Please see appendix

Demolition -

Grading - see assumptions

Vehicle Trips - Trips based on VMT analysis

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation -

Waste Mitigation - Current City of LA Diversion Rates

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 19,220.00 | 19,218.00 |
| tblLandUse | LotAcreage | 0.44 | 0.97 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 801 |
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 125.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,127.00 |
| tblVehicleTrips | CC_TL | 8.40 | 6.94 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 273.24 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 273.24 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 69.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.4295 | 2.0000e-005 | 2.0800e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| Energy | 0.0103 | 0.0934 | 0.0785 | 5.6000e-004 | | 7.1000e-003 | 7.1000e-003 | | 7.1000e-003 | 7.1000e-003 | | | | | | |
| Mobile | 0.5101 | 2.4568 | 6.0292 | 0.0184 | 1.4675 | 0.0220 | 1.4895 | 0.3927 | 0.0207 | 0.4133 | | | | | | |
| **Total** | **0.9499** | **2.5503** | **6.1098** | **0.0190** | **1.4675** | **0.0291** | **1.4966** | **0.3927** | **0.0278** | **0.4204** | | | | | | |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.4295 | 2.0000e-005 | 2.0800e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| Energy | 9.5000e-003 | 0.0864 | 0.0726 | 5.2000e-004 | | 6.5700e-003 | 6.5700e-003 | | 6.5700e-003 | 6.5700e-003 | | | | | | |
| Mobile | 0.5101 | 2.4568 | 6.0292 | 0.0184 | 1.4675 | 0.0220 | 1.4895 | 0.3927 | 0.0207 | 0.4133 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.9491** | **2.5433** | **6.1039** | **0.0189** | **1.4675** | **0.0286** | **1.4961** | **0.3927** | **0.0273** | **0.4199** | | | | | | |

| | **ROG** | **NOx** | **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** | **0.08** | **0.28** | **0.10** | **0.21** | **0.00** | **1.82** | **0.04** | **0.00** | **1.91** | **0.13** | | | | | | |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.5101 | 2.4568 | 6.0292 | 0.0184 | 1.4675 | 0.0220 | 1.4895 | 0.3927 | 0.0207 | 0.4133 | | | | | | |
| Unmitigated | 0.5101 | 2.4568 | 6.0292 | 0.0184 | 1.4675 | 0.0220 | 1.4895 | 0.3927 | 0.0207 | 0.4133 | | | | | | |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |
| Total | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |

### 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 |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 6.94 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Place of Worship | 0.548893 | 0.044275 | 0.199565 | 0.124385 | 0.017503 | 0.005874 | 0.020174 | 0.028962 | 0.001990 | 0.002015 | 0.004673 | 0.000702 | 0.000989 |
| User Defined Commercial | 0.548893 | 0.044275 | 0.199565 | 0.124385 | 0.017503 | 0.005874 | 0.020174 | 0.028962 | 0.001990 | 0.002015 | 0.004673 | 0.000702 | 0.000989 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 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 | 9.5000e-003 | 0.0864 | 0.0726 | 5.2000e-004 | | 6.5700e-003 | 6.5700e-003 | | 6.5700e-003 | 6.5700e-003 | | | | | | |
| NaturalGas Unmitigated | 0.0103 | 0.0934 | 0.0785 | 5.6000e-004 | | 7.1000e-003 | 7.1000e-003 | | 7.1000e-003 | 7.1000e-003 | | | | | | |

### 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 | | | | | |
| Place of Worship | 953.002 | 0.0103 | 0.0934 | 0.0785 | 5.6000e-004 | | 7.1000e-003 | 7.1000e-003 | | 7.1000e-003 | 7.1000e-003 | | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | | **0.0103** | **0.0934** | **0.0785** | **5.6000e-004** | | **7.1000e-003** | **7.1000e-003** | | **7.1000e-003** | **7.1000e-003** | | | | | | |

**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 | | | | | |
| Place of Worship | 0.881132 | 9.5000e-003 | 0.0864 | 0.0726 | 5.2000e-004 | | 6.5700e-003 | 6.5700e-003 | | 6.5700e-003 | 6.5700e-003 | | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | | **9.5000e-003** | **0.0864** | **0.0726** | **5.2000e-004** | | **6.5700e-003** | **6.5700e-003** | | **6.5700e-003** | **6.5700e-003** | | | | | | |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.4295 | 2.0000e-005 | 2.0800e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| Unmitigated | 0.4295 | 2.0000e-005 | 2.0800e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |

### 6.2 Area by SubCategory

**Unmitigated**

| SubCategory | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0488 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Consumer Products | 0.3805 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Landscaping | 2.0000e-004 | 2.0000e-005 | 2.0800e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| **Total** | **0.4295** | **2.0000e-005** | **2.0800e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | | | | | | |

**Mitigated**

| SubCategory | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0488 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Consumer Products | 0.3805 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Landscaping | 2.0000e-004 | 2.0000e-005 | 2.0800e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| **Total** | **0.4295** | **2.0000e-005** | **2.0800e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | | | | | | |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 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

Mt. Lebanon Project - Existing Uses (Buildout Year) - South Coast Air Basin, Winter

# Mt. Lebanon Project - Existing Uses (Buildout Year)

**South Coast Air Basin, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 19.22 | 1000sqft | 0.97 | 19,218.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2024 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 647 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2024) - 647 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - see assumptions

Mat Foundation concrete truck emissions calculated separately using EMFAC2017. Please see appendix

Demolition -

Grading - see assumptions

Vehicle Trips - Trips based on VMT analysis

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation -

Waste Mitigation - Current City of LA Diversion Rates

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 19,220.00 | 19,218.00 |
| tblLandUse | LotAcreage | 0.44 | 0.97 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 647 |
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 125.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,127.00 |
| tblVehicleTrips | CC_TL | 8.40 | 6.94 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 273.24 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 273.24 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 69.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.4295 | 2.0000e-005 | 2.0600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| Energy | 0.0103 | 0.0934 | 0.0785 | 5.6000e-004 | | 7.1000e-003 | 7.1000e-003 | | 7.1000e-003 | 7.1000e-003 | | | | | | |
| Mobile | 0.3457 | 1.5628 | 4.0719 | 0.0160 | 1.4674 | 0.0120 | 1.4794 | 0.3925 | 0.0112 | 0.4037 | | | | | | |
| **Total** | **0.7855** | **1.6563** | **4.1524** | **0.0166** | **1.4674** | **0.0191** | **1.4865** | **0.3925** | **0.0183** | **0.4108** | | | | | | |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.4295 | 2.0000e-005 | 2.0600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| Energy | 9.5000e-003 | 0.0864 | 0.0726 | 5.2000e-004 | | 6.5700e-003 | 6.5700e-003 | | 6.5700e-003 | 6.5700e-003 | | | | | | |
| Mobile | 0.3457 | 1.5628 | 4.0719 | 0.0160 | 1.4674 | 0.0120 | 1.4794 | 0.3925 | 0.0112 | 0.4037 | | | | | | |
| **Total** | **0.7847** | **1.6492** | **4.1465** | **0.0166** | **1.4674** | **0.0186** | **1.4859** | **0.3925** | **0.0177** | **0.4103** | | | | | | |

| | ROG | NOx | 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** | **0.10** | **0.43** | **0.14** | **0.24** | **0.00** | **2.77** | **0.04** | **0.00** | **2.90** | **0.13** | | | | | | |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.3457 | 1.5628 | 4.0719 | 0.0160 | 1.4674 | 0.0120 | 1.4794 | 0.3925 | 0.0112 | 0.4037 | | | | | | |
| Unmitigated | 0.3457 | 1.5628 | 4.0719 | 0.0160 | 1.4674 | 0.0120 | 1.4794 | 0.3925 | 0.0112 | 0.4037 | | | | | | |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |
| Total | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |

### 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 |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 6.94 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Place of Worship | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| User Defined Commercial | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 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 | 9.5000e-003 | 0.0864 | 0.0726 | 5.2000e-004 | | 6.5700e-003 | 6.5700e-003 | | 6.5700e-003 | 6.5700e-003 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NaturalGas Unmitigated | 0.0103 | 0.0934 | 0.0785 | 5.6000e-004 | | 7.1000e-003 | 7.1000e-003 | | 7.1000e-003 | 7.1000e-003 | | | | | | |

### 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 | | | | | |
| Place of Worship | 953.002 | 0.0103 | 0.0934 | 0.0785 | 5.6000e-004 | | 7.1000e-003 | 7.1000e-003 | | 7.1000e-003 | 7.1000e-003 | | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | | **0.0103** | **0.0934** | **0.0785** | **5.6000e-004** | | **7.1000e-003** | **7.1000e-003** | | **7.1000e-003** | **7.1000e-003** | | | | | | |

**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 | | | | | |
| Place of Worship | 0.881132 | 9.5000e-003 | 0.0864 | 0.0726 | 5.2000e-004 | | 6.5700e-003 | 6.5700e-003 | | 6.5700e-003 | 6.5700e-003 | | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | | **9.5000e-003** | **0.0864** | **0.0726** | **5.2000e-004** | | **6.5700e-003** | **6.5700e-003** | | **6.5700e-003** | **6.5700e-003** | | | | | | |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.4295 | 2.0000e-005 | 2.0600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| Unmitigated | 0.4295 | 2.0000e-005 | 2.0600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0488 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Consumer Products | 0.3805 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Landscaping | 1.9000e-004 | 2.0000e-005 | 2.0600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| **Total** | **0.4295** | **2.0000e-005** | **2.0600e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | | | | | | |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0488 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Consumer Products | 0.3805 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Landscaping | 1.9000e-004 | 2.0000e-005 | 2.0600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | | | | | |
| **Total** | **0.4295** | **2.0000e-005** | **2.0600e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | | | | | | |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 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

Mt. Lebanon Project (No TDM) - South Coast Air Basin, Winter

# Mt. Lebanon Project (No TDM)

**South Coast Air Basin, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 3.40 | 1000sqft | 0.97 | 3,400.00 | 0 |
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 21.19 | 1000sqft | 0.97 | 21,191.00 | 0 |
| Enclosed Parking with Elevator | 397.00 | Space | 3.57 | 158,800.00 | 0 |
| Apartments High Rise | 153.00 | Dwelling Unit | 0.97 | 148,641.00 | 398 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2024 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 647 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2024) - 647 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - Demolition and Haul trucks would be travelling to the Vulcan Sun Valley Landfill (~20 miles one-way) or Sunshine Canyon Landfill (~26 miles one-way)

Demolition -

Grading - see assumptions

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Install high efficiency lighting

Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation - Consistent with CalGreen for water conservation (20%)

Waste Mitigation - Current City of LA Diversion Rates

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|

| | | | |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 230.00 | 2.00 |
| tblConstructionPhase | NumDays | 230.00 | 41.00 |
| tblConstructionPhase | NumDays | 230.00 | 478.00 |
| tblConstructionPhase | NumDays | 20.00 | 131.00 |
| tblConstructionPhase | NumDays | 20.00 | 129.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblEnergyUse | LightingElect | 1.75 | 2.33 |
| tblEnergyUse | T24E | 3.92 | 0.41 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberWood | 7.65 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 110,000.00 |
| tblLandUse | LandUseSquareFeet | 21,190.00 | 21,191.00 |
| tblLandUse | LandUseSquareFeet | 153,000.00 | 148,641.00 |
| tblLandUse | LotAcreage | 0.08 | 0.97 |
| tblLandUse | LotAcreage | 0.49 | 0.97 |
| tblLandUse | LotAcreage | 2.47 | 0.97 |
| tblLandUse | Population | 438.00 | 398.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 7.00 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 647 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 52.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 52.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 2,620.00 |
| tblTripsAndVMT | HaulingTripNumber | 13,750.00 | 8,127.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 13.80 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 348.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 64.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 20.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorVehicleClass | HDT_Mix | HHDT |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 25.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 350.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 20.00 |
| tblTripsAndVMT | WorkerTripNumber | 37.00 | 0.00 |
| tblVehicleTrips | CC_TL | 8.40 | 5.69 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 4.98 | 0.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 974.26 |
| tblVehicleTrips | SU_TR | 3.65 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 974.26 |
| tblVehicleTrips | WD_TR | 4.20 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 618.00 |
| tblWoodstoves | NumberCatalytic | 7.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 7.65 | 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 | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 4.5839 | 67.4182 | 35.7595 | 0.1848 | 6.2553 | 1.4902 | 7.7456 | 1.5495 | 1.4093 | 2.9588 | 0.0000 | 19,251.9886 | 19,251.9886 | 2.4321 | 0.0000 | 19,312.7909 |
| 2022 | 4.4404 | 87.7937 | 39.5366 | 0.2344 | 6.4569 | 1.2784 | 7.7353 | 1.5990 | 1.2095 | 2.8084 | 0.0000 | 24,889.8237 | 24,889.8237 | 2.4196 | 0.0000 | 24,940.6278 |
| 2023 | 3.7792 | 22.7903 | 31.4462 | 0.0783 | 4.0402 | 1.0202 | 5.0604 | 1.0744 | 0.9769 | 2.0513 | 0.0000 | 7,659.8170 | 7,659.8170 | 0.7737 | 0.0000 | 7,679.1589 |
| 2024 | 22.7025 | 26.2678 | 37.7901 | 0.0906 | 4.2957 | 1.1355 | 5.4312 | 1.1429 | 1.0841 | 2.2269 | 0.0000 | 8,839.7724 | 8,839.7724 | 1.0042 | 0.0000 | 8,864.8771 |
| **Maximum** | **22.7025** | **87.7937** | **39.5366** | **0.2344** | **6.4569** | **1.4902** | **7.7456** | **1.5990** | **1.4093** | **2.9588** | **0.0000** | **24,889.8237** | **24,889.8237** | **2.4321** | **0.0000** | **24,940.6278** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 4.5839 | 67.4182 | 35.7595 | 0.1848 | 5.8730 | 1.4902 | 7.3633 | 1.5057 | 1.4093 | 2.9150 | 0.0000 | 19,251.9886 | 19,251.9886 | 2.4321 | 0.0000 | 19,312.7909 |
| 2022 | 4.4404 | 87.7937 | 39.5366 | 0.2344 | 6.0746 | 1.2784 | 7.3530 | 1.5551 | 1.2095 | 2.7646 | 0.0000 | 24,889.8237 | 24,889.8237 | 2.4196 | 0.0000 | 24,940.6278 |
| 2023 | 3.7792 | 22.7903 | 31.4462 | 0.0783 | 4.0402 | 1.0202 | 5.0604 | 1.0744 | 0.9769 | 2.0513 | 0.0000 | 7,659.8170 | 7,659.8170 | 0.7737 | 0.0000 | 7,679.1589 |
| 2024 | 22.7025 | 26.2678 | 37.7901 | 0.0906 | 4.2957 | 1.1355 | 5.4312 | 1.1429 | 1.0841 | 2.2269 | 0.0000 | 8,839.7724 | 8,839.7724 | 1.0042 | 0.0000 | 8,864.8771 |
| **Maximum** | **22.7025** | **87.7937** | **39.5366** | **0.2344** | **6.0746** | **1.4902** | **7.3633** | **1.5551** | **1.4093** | **2.9150** | **0.0000** | **24,889.8237** | **24,889.8237** | **2.4321** | **0.0000** | **24,940.6278** |

| | ROG | NOx | 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** | **3.63** | **0.00** | **2.94** | **1.63** | **0.00** | **0.87** | **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 | 4.4514 | 2.3031 | 13.5785 | 0.0144 | | 0.2445 | 0.2445 | | 0.2445 | 0.2445 | 0.0000 | 2,776.8210 | 2,776.8210 | 0.0748 | 0.0505 | 2,793.7379 |
| Energy | 0.0540 | 0.4686 | 0.2460 | 2.9500e-003 | | 0.0373 | 0.0373 | | 0.0373 | 0.0373 | | 589.5706 | 589.5706 | 0.0113 | 0.0108 | 593.0742 |
| Mobile | 1.1519 | 5.1223 | 12.4872 | 0.0476 | 4.2879 | 0.0361 | 4.3239 | 1.1470 | 0.0335 | 1.1805 | | 4,858.8368 | 4,858.8368 | 0.2346 | | 4,864.7019 |
| Stationary | 0.4923 | 1.3760 | 1.2553 | 2.3700e-003 | | 0.0724 | 0.0724 | | 0.0724 | 0.0724 | | 251.8542 | 251.8542 | 0.0353 | | 252.7370 |
| **Total** | **6.1497** | **9.2700** | **27.5670** | **0.0674** | **4.2879** | **0.3903** | **4.6782** | **1.1470** | **0.3878** | **1.5348** | **0.0000** | **8,477.0827** | **8,477.0827** | **0.3560** | **0.0613** | **8,504.2509** |

**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 | 4.4514 | 2.3031 | 13.5785 | 0.0144 | | 0.2445 | 0.2445 | | 0.2445 | 0.2445 | 0.0000 | 2,776.8210 | 2,776.8210 | 0.0748 | 0.0505 | 2,793.7379 |
| Energy | 0.0511 | 0.4430 | 0.2315 | 2.7900e-003 | | 0.0353 | 0.0353 | | 0.0353 | 0.0353 | | 557.5199 | 557.5199 | 0.0107 | 0.0102 | 560.8330 |
| Mobile | 1.1519 | 5.1223 | 12.4872 | 0.0476 | 4.2879 | 0.0361 | 4.3239 | 1.1470 | 0.0335 | 1.1805 | | 4,858.8368 | 4,858.8368 | 0.2346 | | 4,864.7019 |
| Stationary | 0.4923 | 1.3760 | 1.2553 | 2.3700e-003 | | 0.0724 | 0.0724 | | 0.0724 | 0.0724 | | 251.8542 | 251.8542 | 0.0353 | | 252.7370 |
| **Total** | **6.1468** | **9.2443** | **27.5525** | **0.0672** | **4.2879** | **0.3883** | **4.6762** | **1.1470** | **0.3857** | **1.5328** | **0.0000** | **8,445.0320** | **8,445.0320** | **0.3554** | **0.0607** | **8,472.0097** |

| | ROG | NOx | 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** | **0.05** | **0.28** | **0.05** | **0.24** | **0.00** | **0.52** | **0.04** | **0.00** | **0.52** | **0.13** | **0.00** | **0.38** | **0.38** | **0.17** | **0.96** | **0.38** |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 4/1/2021 | 9/30/2021 | 5 | 131 | |
| 2 | Grading | Grading | 10/1/2021 | 3/30/2022 | 5 | 129 | |
| 3 | Mat Foundation | Building Construction | 4/1/2022 | 4/4/2022 | 5 | 2 | |
| 4 | Building Foundation | Building Construction | 4/5/2022 | 5/31/2022 | 5 | 41 | |
| 5 | Building Construction | Building Construction | 6/1/2022 | 3/31/2024 | 5 | 478 | |
| 6 | Paving | Paving | 1/1/2024 | 3/31/2024 | 5 | 65 | |
| 7 | Architectural Coating | Architectural Coating | 1/1/2024 | 3/31/2024 | 5 | 65 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 64.5**

**Acres of Paving: 3.57**

**Residential Indoor: 300,998; Residential Outdoor: 100,333; Non-Residential Indoor: 36,887; Non-Residential Outdoor: 12,296; Striped**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 1 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Demolition | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Demolition | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Grading | Bore/Drill Rigs | 2 | 8.00 | 221 | 0.50 |
| Grading | Cranes | 1 | 8.00 | 231 | 0.29 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Other Material Handling Equipment | 1 | 8.00 | 168 | 0.40 |
| Grading | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Grading | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Mat Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Mat Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |

| | | | | | |
|---|---|---|---|---|---|
| Mat Foundation | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Mat Foundation | Pumps | 4 | 8.00 | 84 | 0.74 |
| Mat Foundation | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Mat Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Foundation | Air Compressors | 1 | 8.00 | 78 | 0.48 |
| Building Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Building Foundation | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Foundation | Plate Compactors | 3 | 8.00 | 8 | 0.43 |
| Building Foundation | Pumps | 1 | 8.00 | 84 | 0.74 |
| Building Foundation | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Building Foundation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Construction | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Building Construction | Cranes | 2 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Construction | Plate Compactors | 2 | 8.00 | 8 | 0.43 |
| Building Construction | Pumps | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 0 | 8.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 8.00 | | |
| Paving | Pavers | 0 | 8.00 | | |
| Paving | Paving Equipment | 1 | 8.00 | | |
| Paving | Rollers | 1 | 8.00 | | |
| Paving | Tractors/Loaders/Backhoes | 0 | 8.00 | | |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 3 | 50.00 | 0.00 | 2,620.00 | 14.70 | 6.90 | 52.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 10 | 60.00 | 5.00 | 8,127.00 | 14.70 | 6.90 | 52.00 | LD_Mix | HDT_Mix | HHDT |
| Mat Foundation | 7 | 60.00 | 348.00 | 0.00 | 14.70 | 13.80 | 20.00 | LD_Mix | HHDT | HHDT |
| Building Foundation | 9 | 60.00 | 64.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 11 | 350.00 | 20.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 3 | 20.00 | 5.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

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

| Category | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | | | | | 0.0930 | 0.0000 | 0.0930 | 0.0141 | 0.0000 | 0.0141 | | | | | | |
| Off-Road | 0.7595 | 7.9130 | 7.1307 | 0.0145 | | 0.3451 | 0.3451 | | 0.3175 | 0.3175 | | | | | | |
| **Total** | **0.7595** | **7.9130** | **7.1307** | **0.0145** | **0.0930** | **0.3451** | **0.4380** | **0.0141** | **0.3175** | **0.3315** | | | | | | |

**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 | 0.3499 | 10.8012 | 2.6993 | 0.0363 | 0.9076 | 0.0412 | 0.9487 | 0.2486 | 0.0394 | 0.2880 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.2306 | 0.1499 | 1.6993 | 5.2100e-003 | 0.5589 | 4.1400e-003 | 0.5630 | 0.1482 | 3.8100e-003 | 0.1520 | | | | | | |
| **Total** | **0.5805** | **10.9511** | **4.3986** | **0.0415** | **1.4664** | **0.0453** | **1.5117** | **0.3968** | **0.0432** | **0.4400** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0363 | 0.0000 | 0.0363 | 5.4900e-003 | 0.0000 | 5.4900e-003 | | | | | | |
| Off-Road | 0.7595 | 7.9130 | 7.1307 | 0.0145 | | 0.3451 | 0.3451 | | 0.3175 | 0.3175 | | | | | | |
| **Total** | **0.7595** | **7.9130** | **7.1307** | **0.0145** | **0.0363** | **0.3451** | **0.3813** | **5.4900e-003** | **0.3175** | **0.3229** | | | | | | |

**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 | 0.3499 | 10.8012 | 2.6993 | 0.0363 | 0.9076 | 0.0412 | 0.9487 | 0.2486 | 0.0394 | 0.2880 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.2306 | 0.1499 | 1.6993 | 5.2100e-003 | 0.5589 | 4.1400e-003 | 0.5630 | 0.1482 | 3.8100e-003 | 0.1520 | | | | | | |
| **Total** | **0.5805** | **10.9511** | **4.3986** | **0.0415** | **1.4664** | **0.0453** | **1.5117** | **0.3968** | **0.0432** | **0.4400** | | | | | | |

### 3.3 Grading - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.6267 | 0.0000 | 0.6267 | 0.0719 | 0.0000 | 0.0719 | | | | | | |
| Off-Road | 3.1904 | 32.7367 | 25.0884 | 0.0629 | | 1.3546 | 1.3546 | | 1.2797 | 1.2797 | | | | | | |
| **Total** | **3.1904** | **32.7367** | **25.0884** | **0.0629** | **0.6267** | **1.3546** | **1.9813** | **0.0719** | **1.2797** | **1.3516** | | | | | | |

**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 | 1.1021 | 34.0239 | 8.5027 | 0.1144 | 4.9260 | 0.1297 | 5.0556 | 1.2906 | 0.1240 | 1.4146 | | | | | | |
| Vendor | 0.0148 | 0.4777 | 0.1292 | 1.2300e-003 | 0.0320 | 1.0100e-003 | 0.0330 | 9.2100e-003 | 9.6000e-004 | 0.0102 | | | | | | |
| Worker | 0.2767 | 0.1799 | 2.0392 | 6.2500e-003 | 0.6707 | 4.9600e-003 | 0.6756 | 0.1779 | 4.5700e-003 | 0.1824 | | | | | | |
| **Total** | **1.3935** | **34.6815** | **10.6711** | **0.1219** | **5.6286** | **0.1356** | **5.7643** | **1.4776** | **0.1296** | **1.6072** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.2444 | 0.0000 | 0.2444 | 0.0280 | 0.0000 | 0.0280 | | | | | | |
| Off-Road | 3.1904 | 32.7367 | 25.0884 | 0.0629 | | 1.3546 | 1.3546 | | 1.2797 | 1.2797 | | | | | | |
| **Total** | **3.1904** | **32.7367** | **25.0884** | **0.0629** | **0.2444** | **1.3546** | **1.5990** | **0.0280** | **1.2797** | **1.3078** | | | | | | |

**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 | 1.1021 | 34.0239 | 8.5027 | 0.1144 | 4.9260 | 0.1297 | 5.0556 | 1.2906 | 0.1240 | 1.4146 | | | | | | |
| Vendor | 0.0148 | 0.4777 | 0.1292 | 1.2300e-003 | 0.0320 | 1.0100e-003 | 0.0330 | 9.2100e-003 | 9.6000e-004 | 0.0102 | | | | | | |
| Worker | 0.2767 | 0.1799 | 2.0392 | 6.2500e-003 | 0.6707 | 4.9600e-003 | 0.6756 | 0.1779 | 4.5700e-003 | 0.1824 | | | | | | |
| **Total** | **1.3935** | **34.6815** | **10.6711** | **0.1219** | **5.6286** | **0.1356** | **5.7643** | **1.4776** | **0.1296** | **1.6072** | | | | | | |

### 3.3 Grading - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.6267 | 0.0000 | 0.6267 | 0.0719 | 0.0000 | 0.0719 | | | | | | |
| Off-Road | 2.8728 | 27.7055 | 24.7592 | 0.0630 | | 1.1604 | 1.1604 | | 1.0968 | 1.0968 | | | | | | |
| **Total** | **2.8728** | **27.7055** | **24.7592** | **0.0630** | **0.6267** | **1.1604** | **1.7871** | **0.0719** | **1.0968** | **1.1686** | | | | | | |

**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 | 1.0490 | 31.0645 | 8.4274 | 0.1129 | 5.1275 | 0.1123 | 5.2398 | 1.3400 | 0.1074 | 1.4475 | | | | | | |
| Vendor | 0.0139 | 0.4534 | 0.1224 | 1.2200e-003 | 0.0320 | 8.8000e-004 | 0.0329 | 9.2100e-003 | 8.4000e-004 | 0.0101 | | | | | | |
| Worker | 0.2603 | 0.1625 | 1.8824 | 6.0300e-003 | 0.6707 | 4.8200e-003 | 0.6755 | 0.1779 | 4.4400e-003 | 0.1823 | | | | | | |
| **Total** | **1.3231** | **31.6804** | **10.4322** | **0.1201** | **5.8302** | **0.1180** | **5.9482** | **1.5271** | **0.1127** | **1.6398** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.2444 | 0.0000 | 0.2444 | 0.0280 | 0.0000 | 0.0280 | | | | | | |
| Off-Road | 2.8728 | 27.7055 | 24.7592 | 0.0630 | | 1.1604 | 1.1604 | | 1.0968 | 1.0968 | | | | | | |
| **Total** | **2.8728** | **27.7055** | **24.7592** | **0.0630** | **0.2444** | **1.1604** | **1.4048** | **0.0280** | **1.0968** | **1.1248** | | | | | | |

**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 | 1.0490 | 31.0645 | 8.4274 | 0.1129 | 5.1275 | 0.1123 | 5.2398 | 1.3400 | 0.1074 | 1.4475 | | | | | | |
| Vendor | 0.0139 | 0.4534 | 0.1224 | 1.2200e-003 | 0.0320 | 8.8000e-004 | 0.0329 | 9.2100e-003 | 8.4000e-004 | 0.0101 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.2603 | 0.1625 | 1.8824 | 6.0300e-003 | 0.6707 | 4.8200e-003 | 0.6755 | 0.1779 | 4.4400e-003 | 0.1823 | | | | | | |
| **Total** | **1.3231** | **31.6804** | **10.4322** | **0.1201** | **5.8302** | **0.1180** | **5.9482** | **1.5271** | **0.1127** | **1.6398** | | | | | | |

### 3.4 Mat Foundation - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2242 | 20.0427 | 21.6495 | 0.0402 | | 1.0132 | 1.0132 | | 0.9937 | 0.9937 | | | | | | |
| **Total** | **2.2242** | **20.0427** | **21.6495** | **0.0402** | | **1.0132** | **1.0132** | | **0.9937** | **0.9937** | | | | | | |

**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 | | | | | | |
| Vendor | 1.9559 | 67.5886 | 16.0048 | 0.1882 | 4.1962 | 0.1746 | 4.3708 | 1.1500 | 0.1670 | 1.3171 | | | | | | |
| Worker | 0.2603 | 0.1625 | 1.8824 | 6.0300e-003 | 0.6707 | 4.8200e-003 | 0.6755 | 0.1779 | 4.4400e-003 | 0.1823 | | | | | | |
| **Total** | **2.2161** | **67.7510** | **17.8872** | **0.1942** | **4.8669** | **0.1794** | **5.0463** | **1.3279** | **0.1715** | **1.4994** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2242 | 20.0427 | 21.6495 | 0.0402 | | 1.0132 | 1.0132 | | 0.9937 | 0.9937 | | | | | | |
| **Total** | **2.2242** | **20.0427** | **21.6495** | **0.0402** | | **1.0132** | **1.0132** | | **0.9937** | **0.9937** | | | | | | |

**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 | | | | | | |
| Vendor | 1.9559 | 67.5886 | 16.0048 | 0.1882 | 4.1962 | 0.1746 | 4.3708 | 1.1500 | 0.1670 | 1.3171 | | | | | | |
| Worker | 0.2603 | 0.1625 | 1.8824 | 6.0300e-003 | 0.6707 | 4.8200e-003 | 0.6755 | 0.1779 | 4.4400e-003 | 0.1823 | | | | | | |
| **Total** | **2.2161** | **67.7510** | **17.8872** | **0.1942** | **4.8669** | **0.1794** | **5.0463** | **1.3279** | **0.1715** | **1.4994** | | | | | | |

## 3.5 Building Foundation - 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 | 1.6876 | 15.5405 | 13.5966 | 0.0287 | | 0.7291 | 0.7291 | | 0.6943 | 0.6943 | | | | | | |
| **Total** | **1.6876** | **15.5405** | **13.5966** | **0.0287** | | **0.7291** | **0.7291** | | **0.6943** | **0.6943** | | | | | | |

### 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 | | | | | | |
| Vendor | 0.1776 | 5.8038 | 1.5669 | 0.0156 | 0.4095 | 0.0112 | 0.4208 | 0.1179 | 0.0108 | 0.1286 | | | | | | |
| Worker | 0.2603 | 0.1625 | 1.8824 | 6.0300e-003 | 0.6707 | 4.8200e-003 | 0.6755 | 0.1779 | 4.4400e-003 | 0.1823 | | | | | | |
| **Total** | **0.4378** | **5.9662** | **3.4493** | **0.0216** | **1.0802** | **0.0161** | **1.0962** | **0.2958** | **0.0152** | **0.3109** | | | | | | |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.6876 | 15.5405 | 13.5966 | 0.0287 | | 0.7291 | 0.7291 | | 0.6943 | 0.6943 | | | | | | |
| **Total** | **1.6876** | **15.5405** | **13.5966** | **0.0287** | | **0.7291** | **0.7291** | | **0.6943** | **0.6943** | | | | | | |

### 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 | | | | | | |
| Vendor | 0.1776 | 5.8038 | 1.5669 | 0.0156 | 0.4095 | 0.0112 | 0.4208 | 0.1179 | 0.0108 | 0.1286 | | | | | | |
| Worker | 0.2603 | 0.1625 | 1.8824 | 6.0300e-003 | 0.6707 | 4.8200e-003 | 0.6755 | 0.1779 | 4.4400e-003 | 0.1823 | | | | | | |
| **Total** | **0.4378** | **5.9662** | **3.4493** | **0.0216** | **1.0802** | **0.0161** | **1.0962** | **0.2958** | **0.0152** | **0.3109** | | | | | | |

## 3.6 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 | 2.4673 | 22.3502 | 21.0510 | 0.0398 | | 1.1261 | 1.1261 | | 1.0800 | 1.0800 | | | | | | |
| **Total** | **2.4673** | **22.3502** | **21.0510** | **0.0398** | | **1.1261** | **1.1261** | | **1.0800** | **1.0800** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0555 | 1.8137 | 0.4896 | 4.8800e-003 | 0.1280 | 3.5100e-003 | 0.1315 | 0.0368 | 3.3600e-003 | 0.0402 | | | | | | |
| Worker | 1.5181 | 0.9477 | 10.9808 | 0.0352 | 3.9122 | 0.0281 | 3.9403 | 1.0375 | 0.0259 | 1.0634 | | | | | | |
| **Total** | **1.5736** | **2.7613** | **11.4705** | **0.0400** | **4.0402** | **0.0316** | **4.0718** | **1.0744** | **0.0293** | **1.1036** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.4673 | 22.3502 | 21.0510 | 0.0398 | | 1.1261 | 1.1261 | | 1.0800 | 1.0800 | | | | | | |
| **Total** | **2.4673** | **22.3502** | **21.0510** | **0.0398** | | **1.1261** | **1.1261** | | **1.0800** | **1.0800** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0555 | 1.8137 | 0.4896 | 4.8800e-003 | 0.1280 | 3.5100e-003 | 0.1315 | 0.0368 | 3.3600e-003 | 0.0402 | | | | | | |
| Worker | 1.5181 | 0.9477 | 10.9808 | 0.0352 | 3.9122 | 0.0281 | 3.9403 | 1.0375 | 0.0259 | 1.0634 | | | | | | |
| **Total** | **1.5736** | **2.7613** | **11.4705** | **0.0400** | **4.0402** | **0.0316** | **4.0718** | **1.0744** | **0.0293** | **1.1036** | | | | | | |

## 3.6 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 | 2.3062 | 20.5690 | 20.8909 | 0.0398 | | 0.9912 | 0.9912 | | 0.9501 | 0.9501 | | | | | | |
| **Total** | **2.3062** | **20.5690** | **20.8909** | **0.0398** | | **0.9912** | **0.9912** | | **0.9501** | **0.9501** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0412 | 1.3641 | 0.4342 | 4.7200e-003 | 0.1280 | 1.6500e-003 | 0.1296 | 0.0368 | 1.5800e-003 | 0.0384 | | | | | | |
| Worker | 1.4318 | 0.8572 | 10.1211 | 0.0338 | 3.9122 | 0.0274 | 3.9396 | 1.0375 | 0.0252 | 1.0628 | | | | | | |
| **Total** | **1.4730** | **2.2213** | **10.5553** | **0.0386** | **4.0402** | **0.0291** | **4.0692** | **1.0744** | **0.0268** | **1.1012** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.3062 | 20.5690 | 20.8909 | 0.0398 | | 0.9912 | 0.9912 | | 0.9501 | 0.9501 | | | | | | |
| **Total** | **2.3062** | **20.5690** | **20.8909** | **0.0398** | | **0.9912** | **0.9912** | | **0.9501** | **0.9501** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0412 | 1.3641 | 0.4342 | 4.7200e-003 | 0.1280 | 1.6500e-003 | 0.1296 | 0.0368 | 1.5800e-003 | 0.0384 | | | | | | |
| Worker | 1.4318 | 0.8572 | 10.1211 | 0.0338 | 3.9122 | 0.0274 | 3.9396 | 1.0375 | 0.0252 | 1.0628 | | | | | | |
| **Total** | **1.4730** | **2.2213** | **10.5553** | **0.0386** | **4.0402** | **0.0291** | **4.0692** | **1.0744** | **0.0268** | **1.1012** | | | | | | |

## 3.6 Building Construction - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1698 | 19.1337 | 20.7512 | 0.0398 | | 0.8767 | 0.8767 | | 0.8399 | 0.8399 | | | | | | |
| **Total** | **2.1698** | **19.1337** | **20.7512** | **0.0398** | | **0.8767** | **0.8767** | | **0.8399** | **0.8399** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0403 | 1.3609 | 0.4219 | 4.7000e-003 | 0.1280 | 1.6200e-003 | 0.1296 | 0.0368 | 1.5500e-003 | 0.0384 | | | | | | |
| Worker | 1.3592 | 0.7809 | 9.4341 | 0.0327 | 3.9122 | 0.0270 | 3.9392 | 1.0375 | 0.0249 | 1.0624 | | | | | | |
| **Total** | **1.3994** | **2.1418** | **9.8560** | **0.0374** | **4.0402** | **0.0286** | **4.0688** | **1.0744** | **0.0264** | **1.1008** | | | | | | |

**Mitigated Construction On-Site**

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 2.1698 | 19.1337 | 20.7512 | 0.0398 | | 0.8767 | 0.8767 | | 0.8399 | 0.8399 | | | | | | |
| **Total** | **2.1698** | **19.1337** | **20.7512** | **0.0398** | | **0.8767** | **0.8767** | | **0.8399** | **0.8399** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0403 | 1.3609 | 0.4219 | 4.7000e-003 | 0.1280 | 1.6200e-003 | 0.1296 | 0.0368 | 1.5500e-003 | 0.0384 | | | | | | |
| Worker | 1.3592 | 0.7809 | 9.4341 | 0.0327 | 3.9122 | 0.0270 | 3.9392 | 1.0375 | 0.0249 | 1.0624 | | | | | | |
| **Total** | **1.3994** | **2.1418** | **9.8560** | **0.0374** | **4.0402** | **0.0286** | **4.0688** | **1.0744** | **0.0264** | **1.1008** | | | | | | |

## 3.7 Paving - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.3692 | 3.3886 | 4.7283 | 7.4100e-003 | | 0.1672 | 0.1672 | | 0.1550 | 0.1550 | | | | | | |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.3692** | **3.3886** | **4.7283** | **7.4100e-003** | | **0.1672** | **0.1672** | | **0.1550** | **0.1550** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0101 | 0.3402 | 0.1055 | 1.1800e-003 | 0.0320 | 4.1000e-004 | 0.0324 | 9.2100e-003 | 3.9000e-004 | 9.6000e-003 | | | | | | |
| Worker | 0.0777 | 0.0446 | 0.5391 | 1.8700e-003 | 0.2236 | 1.5400e-003 | 0.2251 | 0.0593 | 1.4200e-003 | 0.0607 | | | | | | |
| **Total** | **0.0877** | **0.3849** | **0.6446** | **3.0500e-003** | **0.2555** | **1.9500e-003** | **0.2575** | **0.0685** | **1.8100e-003** | **0.0703** | | | | | | |

**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 | 0.3692 | 3.3886 | 4.7283 | 7.4100e-003 | | 0.1672 | 0.1672 | | 0.1550 | 0.1550 | | | | | | |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.3692** | **3.3886** | **4.7283** | **7.4100e-003** | | **0.1672** | **0.1672** | | **0.1550** | **0.1550** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0101 | 0.3402 | 0.1055 | 1.1800e-003 | 0.0320 | 4.1000e-004 | 0.0324 | 9.2100e-003 | 3.9000e-004 | 9.6000e-003 | | | | | | |
| Worker | 0.0777 | 0.0446 | 0.5391 | 1.8700e-003 | 0.2236 | 1.5400e-003 | 0.2251 | 0.0593 | 1.4200e-003 | 0.0607 | | | | | | |
| **Total** | **0.0877** | **0.3849** | **0.6446** | **3.0500e-003** | **0.2555** | **1.9500e-003** | **0.2575** | **0.0685** | **1.8100e-003** | **0.0703** | | | | | | |

## 3.8 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 | 18.4955 | | | | | 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 | | | | | | |
| **Total** | **18.6763** | **1.2188** | **1.8101** | **2.9700e-003** | | **0.0609** | **0.0609** | | **0.0609** | **0.0609** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | | | | | |

**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 | 18.4955 | | | | | 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 | | | | | | |
| **Total** | **18.6763** | **1.2188** | **1.8101** | **2.9700e-003** | | **0.0609** | **0.0609** | | **0.0609** | **0.0609** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | | | | | |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 1.1519 | 5.1223 | 12.4872 | 0.0476 | 4.2879 | 0.0361 | 4.3239 | 1.1470 | 0.0335 | 1.1805 | | | | | | |
| Unmitigated | 1.1519 | 5.1223 | 12.4872 | 0.0476 | 4.2879 | 0.0361 | 4.3239 | 1.1470 | 0.0335 | 1.1805 | | | | | | |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments High Rise | 0.00 | 0.00 | 0.00 | | |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 618.00 | 974.26 | 974.26 | 1,490,619 | 1,490,619 |
| Total | 618.00 | 974.26 | 974.26 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments High Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 5.69 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments High Rise | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| Enclosed Parking with Elevator | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| General Office Building | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| Place of Worship | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| User Defined Commercial | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 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 | 0.0511 | 0.4430 | 0.2315 | 2.7900e-003 | | 0.0353 | 0.0353 | | 0.0353 | 0.0353 | | | | | | |
| NaturalGas Unmitigated | 0.0540 | 0.4686 | 0.2460 | 2.9500e-003 | | 0.0373 | 0.0373 | | 0.0373 | 0.0373 | | | | | | |

### 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 High Rise | 3863.54 | 0.0417 | 0.3561 | 0.1515 | 2.2700e-003 | | 0.0288 | 0.0288 | | 0.0288 | 0.0288 | | | | | | |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| General Office Building | 96.9699 | 1.0500e-003 | 9.5100e-003 | 7.9900e-003 | 6.0000e-005 | | 7.2000e-004 | 7.2000e-004 | | 7.2000e-004 | 7.2000e-004 | | | | | | |
| Place of Worship | 1050.84 | 0.0113 | 0.1030 | 0.0865 | 6.2000e-004 | | 7.8300e-003 | 7.8300e-003 | | 7.8300e-003 | 7.8300e-003 | | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | | **0.0541** | **0.4686** | **0.2460** | **2.9500e-003** | | **0.0373** | **0.0373** | | **0.0373** | **0.0373** | | | | | | |

**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 High Rise | 3.67969 | 0.0397 | 0.3391 | 0.1443 | 2.1600e-003 | | 0.0274 | 0.0274 | | 0.0274 | 0.0274 | | | | | | |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| General Office Building | 0.0876362 | 9.5000e-004 | 8.5900e-003 | 7.2200e-003 | 5.0000e-005 | | 6.5000e-004 | 6.5000e-004 | | 6.5000e-004 | 6.5000e-004 | | | | | | |
| Place of Worship | 0.971593 | 0.0105 | 0.0953 | 0.0800 | 5.7000e-004 | | 7.2400e-003 | 7.2400e-003 | | 7.2400e-003 | 7.2400e-003 | | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | | **0.0511** | **0.4430** | **0.2315** | **2.7800e-003** | | **0.0353** | **0.0353** | | **0.0353** | **0.0353** | | | | | | |

## 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 | 4.4514 | 2.3031 | 13.5785 | 0.0144 | | 0.2445 | 0.2445 | | 0.2445 | 0.2445 | | | | | | |
| Unmitigated | 4.4514 | 2.3031 | 13.5785 | 0.0144 | | 0.2445 | 0.2445 | | 0.2445 | 0.2445 | | | | | | |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.3294 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Consumer Products | 3.4862 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Hearth | 0.2525 | 2.1573 | 0.9180 | 0.0138 | | 0.1744 | 0.1744 | | 0.1744 | 0.1744 | | | | | | |
| Landscaping | 0.3834 | 0.1458 | 12.6605 | 6.7000e-004 | | 0.0701 | 0.0701 | | 0.0701 | 0.0701 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **4.4514** | **2.3031** | **13.5785** | **0.0144** | | **0.2445** | **0.2445** | | **0.2445** | **0.2445** | | | | | | |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.3294 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Consumer Products | 3.4862 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| Hearth | 0.2525 | 2.1573 | 0.9180 | 0.0138 | | 0.1744 | 0.1744 | | 0.1744 | 0.1744 | | | | | | |
| Landscaping | 0.3834 | 0.1458 | 12.6605 | 6.7000e-004 | | 0.0701 | 0.0701 | | 0.0701 | 0.0701 | | | | | | |
| **Total** | **4.4514** | **2.3031** | **13.5785** | **0.0144** | | **0.2445** | **0.2445** | | **0.2445** | **0.2445** | | | | | | |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 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 |
|---|---|---|---|---|---|---|
| Emergency Generator | 1 | 1 | 12 | 300 | 0.73 | Diesel |

**Boilers**

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

**User Defined Equipment**

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

### 10.1 Stationary Sources

**Unmitigated/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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Generator - Diesel (300 - 600 | 0.4923 | 1.3760 | 1.2553 | 2.3700e-003 | | 0.0724 | 0.0724 | | 0.0724 | 0.0724 | | | | | | |
| **Total** | **0.4923** | **1.3760** | **1.2553** | **2.3700e-003** | | **0.0724** | **0.0724** | | **0.0724** | **0.0724** | | | | | | |

## 11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.2



Mt. Lebanon Project - Construction Onsite - South Coast Air Basin, Winter

# Mt. Lebanon Project - Construction Onsite

**South Coast Air Basin, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 3.40 | 1000sqft | 0.97 | 3,400.00 | 0 |
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 21.19 | 1000sqft | 0.97 | 21,191.00 | 0 |
| Enclosed Parking with Elevator | 397.00 | Space | 3.57 | 158,800.00 | 0 |
| Apartments High Rise | 153.00 | Dwelling Unit | 0.97 | 148,641.00 | 398 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2024 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 647 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2024) - 647 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - Demolition and Haul trucks would be travelling to the Vulcan Sun Valley Landfill (~20 miles one-way) or Sunshine Canyon Landfill (~26 miles one-way)

Demolition -

Grading - see assumptions

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Install high efficiency lighting
Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation - Consistent with CalGreen for water conservation (20%)

Waste Mitigation - Current City of LA Diversion Rates

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 230.00 | 2.00 |
| tblConstructionPhase | NumDays | 230.00 | 41.00 |
| tblConstructionPhase | NumDays | 230.00 | 478.00 |
| tblConstructionPhase | NumDays | 20.00 | 131.00 |
| tblConstructionPhase | NumDays | 20.00 | 129.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblEnergyUse | LightingElect | 1.75 | 2.33 |
| tblEnergyUse | T24E | 3.92 | 0.41 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberWood | 7.65 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 110,000.00 |
| tblLandUse | LandUseSquareFeet | 21,190.00 | 21,191.00 |
| tblLandUse | LandUseSquareFeet | 153,000.00 | 148,641.00 |
| tblLandUse | LotAcreage | 0.08 | 0.97 |
| tblLandUse | LotAcreage | 0.49 | 0.97 |
| tblLandUse | LotAcreage | 2.47 | 0.97 |
| tblLandUse | Population | 438.00 | 398.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 7.00 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 647 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.10 |
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 2,620.00 |
| tblTripsAndVMT | HaulingTripNumber | 13,750.00 | 8,127.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.10 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 348.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 64.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 20.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorVehicleClass | HDT_Mix | HHDT |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 25.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 350.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 20.00 |
| tblTripsAndVMT | WorkerTripNumber | 37.00 | 0.00 |
| tblVehicleTrips | CC_TL | 8.40 | 5.71 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 4.98 | 0.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 579.00 |
| tblVehicleTrips | SU_TR | 3.65 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 579.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | WD_TR | 4.20 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 579.00 |
| tblWoodstoves | NumberCatalytic | 7.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 7.65 | 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 | | | | | |
| 2021 | 3.3650 | 38.7005 | 26.3620 | 0.0692 | 0.6387 | 1.3583 | 1.9970 | 0.0752 | 1.2833 | 1.3585 | 0.0000 | 6,739.2419 | 6,739.2419 | 1.7275 | 0.0000 | 6,782.4305 |
| 2022 | 3.0360 | 50.3452 | 26.9253 | 0.0724 | 0.6391 | 1.1636 | 1.8026 | 0.0753 | 1.0998 | 1.1751 | 0.0000 | 7,312.3083 | 7,312.3083 | 1.7167 | 0.0000 | 7,337.7841 |
| 2023 | 2.6044 | 21.6236 | 22.3349 | 0.0415 | 5.8200e-003 | 0.9936 | 0.9994 | 2.1100e-003 | 0.9524 | 0.9545 | 0.0000 | 3,956.3636 | 3,956.3636 | 0.6855 | 0.0000 | 3,973.5021 |
| 2024 | 21.5112 | 25.0316 | 28.7394 | 0.0521 | 6.6100e-003 | 1.1074 | 1.1141 | 2.3700e-003 | 1.0582 | 1.0606 | 0.0000 | 4,963.3425 | 4,963.3425 | 0.9146 | 0.0000 | 4,986.2062 |
| **Maximum** | **21.5112** | **50.3452** | **28.7394** | **0.0724** | **0.6391** | **1.3583** | **1.9970** | **0.0753** | **1.2833** | **1.3585** | **0.0000** | **7,312.3083** | **7,312.3083** | **1.7275** | **0.0000** | **7,337.7841** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.3650 | 38.7005 | 26.3620 | 0.0692 | 0.2564 | 1.3583 | 1.6147 | 0.0314 | 1.2833 | 1.3147 | 0.0000 | 6,739.2419 | 6,739.2419 | 1.7275 | 0.0000 | 6,782.4305 |
| 2022 | 3.0360 | 50.3452 | 26.9253 | 0.0724 | 0.2568 | 1.1636 | 1.4204 | 0.0315 | 1.0998 | 1.1313 | 0.0000 | 7,312.3083 | 7,312.3083 | 1.7167 | 0.0000 | 7,337.7841 |
| 2023 | 2.6044 | 21.6236 | 22.3349 | 0.0415 | 5.8200e-003 | 0.9936 | 0.9994 | 2.1100e-003 | 0.9524 | 0.9545 | 0.0000 | 3,956.3636 | 3,956.3636 | 0.6855 | 0.0000 | 3,973.5021 |
| 2024 | 21.5112 | 25.0316 | 28.7394 | 0.0521 | 6.6100e-003 | 1.1074 | 1.1141 | 2.3700e-003 | 1.0582 | 1.0606 | 0.0000 | 4,963.3425 | 4,963.3425 | 0.9146 | 0.0000 | 4,986.2062 |
| **Maximum** | **21.5112** | **50.3452** | **28.7394** | **0.0724** | **0.2568** | **1.3583** | **1.6147** | **0.0315** | **1.2833** | **1.3147** | **0.0000** | **7,312.3083** | **7,312.3083** | **1.7275** | **0.0000** | **7,337.7841** |

| | ROG | NOx | 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** | **59.26** | **0.00** | **12.93** | **56.55** | **0.00** | **1.93** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 4/1/2021 | 9/30/2021 | 5 | 131 | |
| 2 | Grading | Grading | 10/1/2021 | 3/30/2022 | 5 | 129 | |
| 3 | Mat Foundation | Building Construction | 4/1/2022 | 4/4/2022 | 5 | 2 | |
| 4 | Building Foundation | Building Construction | 4/5/2022 | 5/31/2022 | 5 | 41 | |
| 5 | Building Construction | Building Construction | 6/1/2022 | 3/31/2024 | 5 | 478 | |
| 6 | Paving | Paving | 1/1/2024 | 3/31/2024 | 5 | 65 | |
| 7 | Architectural Coating | Architectural Coating | 1/1/2024 | 3/31/2024 | 5 | 65 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 64.5**

**Acres of Paving: 3.57**

**Residential Indoor: 300,998; Residential Outdoor: 100,333; Non-Residential Indoor: 36,887; Non-Residential Outdoor: 12,296; Striped**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 1 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Demolition | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Demolition | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Grading | Bore/Drill Rigs | 2 | 8.00 | 221 | 0.50 |
| Grading | Cranes | 1 | 8.00 | 231 | 0.29 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Other Material Handling Equipment | 1 | 8.00 | 168 | 0.40 |
| Grading | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Grading | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Mat Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Mat Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Mat Foundation | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Mat Foundation | Pumps | 4 | 8.00 | 84 | 0.74 |
| Mat Foundation | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Mat Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Foundation | Air Compressors | 1 | 8.00 | 78 | 0.48 |
| Building Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Building Foundation | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Foundation | Plate Compactors | 3 | 8.00 | 8 | 0.43 |
| Building Foundation | Pumps | 1 | 8.00 | 84 | 0.74 |
| Building Foundation | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Building Foundation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Construction | Air Compressors | 2 | 8.00 | 78 | 0.48 |

| | | | | | |
|---|---|---|---|---|---|
| Building Construction | Cranes | 2 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Construction | Plate Compactors | 2 | 8.00 | 8 | 0.43 |
| Building Construction | Pumps | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 0 | 8.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 8.00 | | |
| Paving | Pavers | 0 | 8.00 | | |
| Paving | Paving Equipment | 1 | 8.00 | | |
| Paving | Rollers | 1 | 8.00 | | |
| Paving | Tractors/Loaders/Backhoes | 0 | 8.00 | | |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 3 | 50.00 | 0.00 | 2,620.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HDT_Mix | HHDT |
| Grading | 10 | 60.00 | 5.00 | 8,127.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HDT_Mix | HHDT |
| Mat Foundation | 7 | 60.00 | 348.00 | 0.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HHDT | HHDT |
| Building Foundation | 9 | 60.00 | 64.00 | 0.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 11 | 350.00 | 20.00 | 0.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HDT_Mix | HHDT |
| Paving | 3 | 20.00 | 5.00 | 0.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0930 | 0.0000 | 0.0930 | 0.0141 | 0.0000 | 0.0141 | | | | | | |
| Off-Road | 0.7595 | 7.9130 | 7.1307 | 0.0145 | | 0.3451 | 0.3451 | | 0.3175 | 0.3175 | | | | | | |
| **Total** | **0.7595** | **7.9130** | **7.1307** | **0.0145** | **0.0930** | **0.3451** | **0.4380** | **0.0141** | **0.3175** | **0.3315** | | | | | | |

**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 | 0.0353 | 1.7971 | 0.3007 | 1.8600e-003 | 2.1700e-003 | 1.0100e-003 | 3.1800e-003 | 6.3000e-004 | 9.7000e-004 | 1.6000e-003 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.0469 | 0.0137 | 0.2084 | 1.1000e-004 | 4.9000e-004 | 3.1000e-004 | 8.1000e-004 | 2.0000e-004 | 2.9000e-004 | 4.8000e-004 | | | | | | |
| **Total** | **0.0822** | **1.8108** | **0.5091** | **1.9700e-003** | **2.6600e-003** | **1.3200e-003** | **3.9900e-003** | **8.3000e-004** | **1.2600e-003** | **2.0800e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0363 | 0.0000 | 0.0363 | 5.4900e-003 | 0.0000 | 5.4900e-003 | | | | | | |
| Off-Road | 0.7595 | 7.9130 | 7.1307 | 0.0145 | | 0.3451 | 0.3451 | | 0.3175 | 0.3175 | | | | | | |
| **Total** | **0.7595** | **7.9130** | **7.1307** | **0.0145** | **0.0363** | **0.3451** | **0.3813** | **5.4900e-003** | **0.3175** | **0.3229** | | | | | | |

**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 | 0.0353 | 1.7971 | 0.3007 | 1.8600e-003 | 2.1700e-003 | 1.0100e-003 | 3.1800e-003 | 6.3000e-004 | 9.7000e-004 | 1.6000e-003 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.0469 | 0.0137 | 0.2084 | 1.1000e-004 | 4.9000e-004 | 3.1000e-004 | 8.1000e-004 | 2.0000e-004 | 2.9000e-004 | 4.8000e-004 | | | | | | |
| **Total** | **0.0822** | **1.8108** | **0.5091** | **1.9700e-003** | **2.6600e-003** | **1.3200e-003** | **3.9900e-003** | **8.3000e-004** | **1.2600e-003** | **2.0800e-003** | | | | | | |

## 3.3 Grading - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.6267 | 0.0000 | 0.6267 | 0.0719 | 0.0000 | 0.0719 | | | | | | |
| Off-Road | 3.1904 | 32.7367 | 25.0884 | 0.0629 | | 1.3546 | 1.3546 | | 1.2797 | 1.2797 | | | | | | |
| **Total** | **3.1904** | **32.7367** | **25.0884** | **0.0629** | **0.6267** | **1.3546** | **1.9813** | **0.0719** | **1.2797** | **1.3516** | | | | | | |

**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 | 0.1113 | 5.6609 | 0.9472 | 5.8700e-003 | 0.0108 | 3.2000e-003 | 0.0140 | 2.9600e-003 | 3.0600e-003 | 6.0200e-003 | | | | | | |
| Vendor | 7.1200e-003 | 0.2865 | 0.0763 | 2.6000e-004 | 5.9000e-004 | 1.4000e-004 | 7.3000e-004 | 1.8000e-004 | 1.3000e-004 | 3.2000e-004 | | | | | | |
| Worker | 0.0563 | 0.0164 | 0.2501 | 1.4000e-004 | 5.9000e-004 | 3.8000e-004 | 9.7000e-004 | 2.3000e-004 | 3.5000e-004 | 5.8000e-004 | | | | | | |
| **Total** | **0.1747** | **5.9638** | **1.2736** | **6.2700e-003** | **0.0120** | **3.7200e-003** | **0.0157** | **3.3700e-003** | **3.5400e-003** | **6.9200e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.2444 | 0.0000 | 0.2444 | 0.0280 | 0.0000 | 0.0280 | | | | | | |
| Off-Road | 3.1904 | 32.7367 | 25.0884 | 0.0629 | | 1.3546 | 1.3546 | | 1.2797 | 1.2797 | | | | | | |
| **Total** | **3.1904** | **32.7367** | **25.0884** | **0.0629** | **0.2444** | **1.3546** | **1.5990** | **0.0280** | **1.2797** | **1.3078** | | | | | | |

**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 | 0.1113 | 5.6609 | 0.9472 | 5.8700e-003 | 0.0108 | 3.2000e-003 | 0.0140 | 2.9600e-003 | 3.0600e-003 | 6.0200e-003 | | | | | | |
| Vendor | 7.1200e-003 | 0.2865 | 0.0763 | 2.6000e-004 | 5.9000e-004 | 1.4000e-004 | 7.3000e-004 | 1.8000e-004 | 1.3000e-004 | 3.2000e-004 | | | | | | |
| Worker | 0.0563 | 0.0164 | 0.2501 | 1.4000e-004 | 5.9000e-004 | 3.8000e-004 | 9.7000e-004 | 2.3000e-004 | 3.5000e-004 | 5.8000e-004 | | | | | | |
| **Total** | **0.1747** | **5.9638** | **1.2736** | **6.2700e-003** | **0.0120** | **3.7200e-003** | **0.0157** | **3.3700e-003** | **3.5400e-003** | **6.9200e-003** | | | | | | |

## 3.3 Grading - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.6267 | 0.0000 | 0.6267 | 0.0719 | 0.0000 | 0.0719 | | | | | | |
| Off-Road | 2.8728 | 27.7055 | 24.7592 | 0.0630 | | 1.1604 | 1.1604 | | 1.0968 | 1.0968 | | | | | | |
| **Total** | **2.8728** | **27.7055** | **24.7592** | **0.0630** | **0.6267** | **1.1604** | **1.7871** | **0.0719** | **1.0968** | **1.1686** | | | | | | |

**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 | 0.1049 | 5.4832 | 0.9142 | 5.8100e-003 | 0.0112 | 2.6700e-003 | 0.0139 | 3.0600e-003 | 2.5600e-003 | 5.6200e-003 | | | | | | |
| Vendor | 6.6000e-003 | 0.2800 | 0.0712 | 2.5000e-004 | 5.9000e-004 | 1.2000e-004 | 7.1000e-004 | 1.8000e-004 | 1.1000e-004 | 3.0000e-004 | | | | | | |
| Worker | 0.0517 | 0.0145 | 0.2262 | 1.3000e-004 | 5.9000e-004 | 3.7000e-004 | 9.6000e-004 | 2.3000e-004 | 3.4000e-004 | 5.7000e-004 | | | | | | |
| **Total** | **0.1632** | **5.7776** | **1.2116** | **6.1900e-003** | **0.0124** | **3.1600e-003** | **0.0155** | **3.4700e-003** | **3.0100e-003** | **6.4900e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.2444 | 0.0000 | 0.2444 | 0.0280 | 0.0000 | 0.0280 | | | | | | |
| Off-Road | 2.8728 | 27.7055 | 24.7592 | 0.0630 | | 1.1604 | 1.1604 | | 1.0968 | 1.0968 | | | | | | |
| **Total** | **2.8728** | **27.7055** | **24.7592** | **0.0630** | **0.2444** | **1.1604** | **1.4048** | **0.0280** | **1.0968** | **1.1248** | | | | | | |

**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 | 0.1049 | 5.4832 | 0.9142 | 5.8100e-003 | 0.0112 | 2.6700e-003 | 0.0139 | 3.0600e-003 | 2.5600e-003 | 5.6200e-003 | | | | | | |
| Vendor | 6.6000e-003 | 0.2800 | 0.0712 | 2.5000e-004 | 5.9000e-004 | 1.2000e-004 | 7.1000e-004 | 1.8000e-004 | 1.1000e-004 | 3.0000e-004 | | | | | | |
| Worker | 0.0517 | 0.0145 | 0.2262 | 1.3000e-004 | 5.9000e-004 | 3.7000e-004 | 9.6000e-004 | 2.3000e-004 | 3.4000e-004 | 5.7000e-004 | | | | | | |
| **Total** | **0.1632** | **5.7776** | **1.2116** | **6.1900e-003** | **0.0124** | **3.1600e-003** | **0.0155** | **3.4700e-003** | **3.0100e-003** | **6.4900e-003** | | | | | | |

## 3.4 Mat Foundation - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2242 | 20.0427 | 21.6495 | 0.0402 | | 1.0132 | 1.0132 | | 0.9937 | 0.9937 | | | | | | |
| **Total** | **2.2242** | **20.0427** | **21.6495** | **0.0402** | | **1.0132** | **1.0132** | | **0.9937** | **0.9937** | | | | | | |

**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 | | | | | | |
| Vendor | 0.5793 | 30.2880 | 5.0496 | 0.0321 | 0.0377 | 0.0148 | 0.0525 | 0.0110 | 0.0141 | 0.0251 | | | | | | |
| Worker | 0.0517 | 0.0145 | 0.2262 | 1.3000e-004 | 5.9000e-004 | 3.7000e-004 | 9.6000e-004 | 2.3000e-004 | 3.4000e-004 | 5.7000e-004 | | | | | | |
| **Total** | **0.6310** | **30.3024** | **5.2758** | **0.0322** | **0.0383** | **0.0152** | **0.0534** | **0.0112** | **0.0145** | **0.0257** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2242 | 20.0427 | 21.6495 | 0.0402 | | 1.0132 | 1.0132 | | 0.9937 | 0.9937 | | | | | | |
| **Total** | **2.2242** | **20.0427** | **21.6495** | **0.0402** | | **1.0132** | **1.0132** | | **0.9937** | **0.9937** | | | | | | |

**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 | | | | | | |
| Vendor | 0.5793 | 30.2880 | 5.0496 | 0.0321 | 0.0377 | 0.0148 | 0.0525 | 0.0110 | 0.0141 | 0.0251 | | | | | | |
| Worker | 0.0517 | 0.0145 | 0.2262 | 1.3000e-004 | 5.9000e-004 | 3.7000e-004 | 9.6000e-004 | 2.3000e-004 | 3.4000e-004 | 5.7000e-004 | | | | | | |
| **Total** | **0.6310** | **30.3024** | **5.2758** | **0.0322** | **0.0383** | **0.0152** | **0.0534** | **0.0112** | **0.0145** | **0.0257** | | | | | | |

## 3.5 Building Foundation - 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 | 1.6876 | 15.5405 | 13.5966 | 0.0287 | | 0.7291 | 0.7291 | | 0.6943 | 0.6943 | | | | | | |
| **Total** | **1.6876** | **15.5405** | **13.5966** | **0.0287** | | **0.7291** | **0.7291** | | **0.6943** | **0.6943** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0845 | 3.5836 | 0.9115 | 3.2400e-003 | 7.5900e-003 | 1.5100e-003 | 9.1000e-003 | 2.3600e-003 | 1.4400e-003 | 3.8000e-003 | | | | | | |
| Worker | 0.0517 | 0.0145 | 0.2262 | 1.3000e-004 | 5.9000e-004 | 3.7000e-004 | 9.6000e-004 | 2.3000e-004 | 3.4000e-004 | 5.7000e-004 | | | | | | |
| **Total** | **0.1362** | **3.5981** | **1.1377** | **3.3700e-003** | **8.1800e-003** | **1.8800e-003** | **0.0101** | **2.5900e-003** | **1.7800e-003** | **4.3700e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.6876 | 15.5405 | 13.5966 | 0.0287 | | 0.7291 | 0.7291 | | 0.6943 | 0.6943 | | | | | | |
| **Total** | **1.6876** | **15.5405** | **13.5966** | **0.0287** | | **0.7291** | **0.7291** | | **0.6943** | **0.6943** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0845 | 3.5836 | 0.9115 | 3.2400e-003 | 7.5900e-003 | 1.5100e-003 | 9.1000e-003 | 2.3600e-003 | 1.4400e-003 | 3.8000e-003 | | | | | | |
| Worker | 0.0517 | 0.0145 | 0.2262 | 1.3000e-004 | 5.9000e-004 | 3.7000e-004 | 9.6000e-004 | 2.3000e-004 | 3.4000e-004 | 5.7000e-004 | | | | | | |
| **Total** | **0.1362** | **3.5981** | **1.1377** | **3.3700e-003** | **8.1800e-003** | **1.8800e-003** | **0.0101** | **2.5900e-003** | **1.7800e-003** | **4.3700e-003** | | | | | | |

## 3.6 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 | 2.4673 | 22.3502 | 21.0510 | 0.0398 | | 1.1261 | 1.1261 | | 1.0800 | 1.0800 | | | | | | |
| **Total** | **2.4673** | **22.3502** | **21.0510** | **0.0398** | | **1.1261** | **1.1261** | | **1.0800** | **1.0800** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0264 | 1.1199 | 0.2848 | 1.0100e-003 | 2.3700e-003 | 4.7000e-004 | 2.8400e-003 | 7.4000e-004 | 4.5000e-004 | 1.1900e-003 | | | | | | |
| Worker | 0.3016 | 0.0844 | 1.3196 | 7.6000e-004 | 3.4500e-003 | 2.1600e-003 | 5.6100e-003 | 1.3700e-003 | 1.9800e-003 | 3.3500e-003 | | | | | | |
| **Total** | **0.3280** | **1.2043** | **1.6045** | **1.7700e-003** | **5.8200e-003** | **2.6300e-003** | **8.4500e-003** | **2.1100e-003** | **2.4300e-003** | **4.5400e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.4673 | 22.3502 | 21.0510 | 0.0398 | | 1.1261 | 1.1261 | | 1.0800 | 1.0800 | | | | | | |
| **Total** | **2.4673** | **22.3502** | **21.0510** | **0.0398** | | **1.1261** | **1.1261** | | **1.0800** | **1.0800** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0264 | 1.1199 | 0.2848 | 1.0100e-003 | 2.3700e-003 | 4.7000e-004 | 2.8400e-003 | 7.4000e-004 | 4.5000e-004 | 1.1900e-003 | | | | | | |
| Worker | 0.3016 | 0.0844 | 1.3196 | 7.6000e-004 | 3.4500e-003 | 2.1600e-003 | 5.6100e-003 | 1.3700e-003 | 1.9800e-003 | 3.3500e-003 | | | | | | |
| **Total** | **0.3280** | **1.2043** | **1.6045** | **1.7700e-003** | **5.8200e-003** | **2.6300e-003** | **8.4500e-003** | **2.1100e-003** | **2.4300e-003** | **4.5400e-003** | | | | | | |

### 3.6 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 | 2.3062 | 20.5690 | 20.8909 | 0.0398 | | 0.9912 | 0.9912 | | 0.9501 | 0.9501 | | | | | | |
| **Total** | **2.3062** | **20.5690** | **20.8909** | **0.0398** | | **0.9912** | **0.9912** | | **0.9501** | **0.9501** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0206 | 0.9796 | 0.2485 | 9.6000e-004 | 2.3700e-003 | 3.2000e-004 | 2.6900e-003 | 7.4000e-004 | 3.0000e-004 | 1.0400e-003 | | | | | | |
| Worker | 0.2777 | 0.0749 | 1.1955 | 7.3000e-004 | 3.4500e-003 | 2.1200e-003 | 5.5700e-003 | 1.3700e-003 | 1.9500e-003 | 3.3200e-003 | | | | | | |
| **Total** | **0.2983** | **1.0545** | **1.4441** | **1.6900e-003** | **5.8200e-003** | **2.4400e-003** | **8.2600e-003** | **2.1100e-003** | **2.2500e-003** | **4.3600e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.3062 | 20.5690 | 20.8909 | 0.0398 | | 0.9912 | 0.9912 | | 0.9501 | 0.9501 | | | | | | |
| **Total** | **2.3062** | **20.5690** | **20.8909** | **0.0398** | | **0.9912** | **0.9912** | | **0.9501** | **0.9501** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0206 | 0.9796 | 0.2485 | 9.6000e-004 | 2.3700e-003 | 3.2000e-004 | 2.6900e-003 | 7.4000e-004 | 3.0000e-004 | 1.0400e-003 | | | | | | |
| Worker | 0.2777 | 0.0749 | 1.1955 | 7.3000e-004 | 3.4500e-003 | 2.1200e-003 | 5.5700e-003 | 1.3700e-003 | 1.9500e-003 | 3.3200e-003 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.2983** | **1.0545** | **1.4441** | **1.6900e-003** | **5.8200e-003** | **2.4400e-003** | **8.2600e-003** | **2.1100e-003** | **2.2500e-003** | **4.3600e-003** | | | | | | |

### 3.6 Building Construction - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1698 | 19.1337 | 20.7512 | 0.0398 | | 0.8767 | 0.8767 | | 0.8399 | 0.8399 | | | | | | |
| **Total** | **2.1698** | **19.1337** | **20.7512** | **0.0398** | | **0.8767** | **0.8767** | | **0.8399** | **0.8399** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0196 | 0.9758 | 0.2362 | 9.5000e-004 | 2.3700e-003 | 2.9000e-004 | 2.6600e-003 | 7.4000e-004 | 2.8000e-004 | 1.0100e-003 | | | | | | |
| Worker | 0.2567 | 0.0669 | 1.0922 | 7.1000e-004 | 3.4500e-003 | 2.0900e-003 | 5.5400e-003 | 1.3700e-003 | 1.9200e-003 | 3.2900e-003 | | | | | | |
| **Total** | **0.2763** | **1.0427** | **1.3284** | **1.6600e-003** | **5.8200e-003** | **2.3800e-003** | **8.2000e-003** | **2.1100e-003** | **2.2000e-003** | **4.3000e-003** | | | | | | |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1698 | 19.1337 | 20.7512 | 0.0398 | | 0.8767 | 0.8767 | | 0.8399 | 0.8399 | | | | | | |
| **Total** | **2.1698** | **19.1337** | **20.7512** | **0.0398** | | **0.8767** | **0.8767** | | **0.8399** | **0.8399** | | | | | | |

**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 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.0196 | 0.9758 | 0.2362 | 9.5000e-004 | 2.3700e-003 | 2.9000e-004 | 2.6600e-003 | 7.4000e-004 | 2.8000e-004 | 1.0100e-003 | | | | | | |
| Worker | 0.2567 | 0.0669 | 1.0922 | 7.1000e-004 | 3.4500e-003 | 2.0900e-003 | 5.5400e-003 | 1.3700e-003 | 1.9200e-003 | 3.2900e-003 | | | | | | |
| **Total** | **0.2763** | **1.0427** | **1.3284** | **1.6600e-003** | **5.8200e-003** | **2.3800e-003** | **8.2000e-003** | **2.1100e-003** | **2.2000e-003** | **4.3000e-003** | | | | | | |

### 3.7 Paving - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.3692 | 3.3886 | 4.7283 | 7.4100e-003 | | 0.1672 | 0.1672 | | 0.1550 | 0.1550 | | | | | | |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.3692** | **3.3886** | **4.7283** | **7.4100e-003** | | **0.1672** | **0.1672** | | **0.1550** | **0.1550** | | | | | | |

**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 | | | | | | |
| Vendor | 4.9000e-003 | 0.2440 | 0.0591 | 2.4000e-004 | 5.9000e-004 | 7.0000e-005 | 6.7000e-004 | 1.8000e-004 | 7.0000e-005 | 2.5000e-004 | | | | | | |
| Worker | 0.0147 | 3.8200e-003 | 0.0624 | 4.0000e-005 | 2.0000e-004 | 1.2000e-004 | 3.2000e-004 | 8.0000e-005 | 1.1000e-004 | 1.9000e-004 | | | | | | |
| **Total** | **0.0196** | **0.2478** | **0.1215** | **2.8000e-004** | **7.9000e-004** | **1.9000e-004** | **9.9000e-004** | **2.6000e-004** | **1.8000e-004** | **4.4000e-004** | | | | | | |

**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 | 0.3692 | 3.3886 | 4.7283 | 7.4100e-003 | | 0.1672 | 0.1672 | | 0.1550 | 0.1550 | | | | | | |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.3692** | **3.3886** | **4.7283** | **7.4100e-003** | | **0.1672** | **0.1672** | | **0.1550** | **0.1550** | | | | | | |

**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 | | | | | | |
| Vendor | 4.9000e-003 | 0.2440 | 0.0591 | 2.4000e-004 | 5.9000e-004 | 7.0000e-005 | 6.7000e-004 | 1.8000e-004 | 7.0000e-005 | 2.5000e-004 | | | | | | |
| Worker | 0.0147 | 3.8200e-003 | 0.0624 | 4.0000e-005 | 2.0000e-004 | 1.2000e-004 | 3.2000e-004 | 8.0000e-005 | 1.1000e-004 | 1.9000e-004 | | | | | | |
| **Total** | **0.0196** | **0.2478** | **0.1215** | **2.8000e-004** | **7.9000e-004** | **1.9000e-004** | **9.9000e-004** | **2.6000e-004** | **1.8000e-004** | **4.4000e-004** | | | | | | |

## 3.8 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 | 18.4955 | | | | | 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 | | | | | | |
| **Total** | **18.6763** | **1.2188** | **1.8101** | **2.9700e-003** | | **0.0609** | **0.0609** | | **0.0609** | **0.0609** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | | | | | |

**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 | 18.4955 | | | | | 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 | | | | | | |
| **Total** | **18.6763** | **1.2188** | **1.8101** | **2.9700e-003** | | **0.0609** | **0.0609** | | **0.0609** | **0.0609** | | | | | | |

**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 | | | | | | |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | | | | | |

# Mt. Lebanon Project

## CO Hotspots

**CO Hotspots Analysis - Maximum Impacted Intersection**

| **Peak Hour Volumes** | | |
|---|---|---|
| **Intersection** | Burton and La Cienega | |
| **Direction** | **AM** | **PM** |
| NBL | 277 | 138 |
| NBT | 1393 | 1347 |
| NBR | | |
| SBL | 256 | 387 |
| SBT | 2117 | 1151 |
| SBR | 6 | |
| EBL | 808 | 25 |
| EBT | 139 | 1307 |
| EBR | 204 | 204 |
| WBL | 1000 | 220 |
| WBT | | 2233 |
| WBR | | 2 |
| Peak Hour Totals | 6200 | 7014 |
| Daily Maximum | 62,000 | 70,140 |

# Mt. Lebanon Project

## Draft EIR

## Appendix B-3-Greenhouse Gas Emissions Worksheets and Modeling Output Files

- Appendix B-3: Greenhouse Gas Worksheets and Modeling Output Files
  - Appendix B-3.1: GHG Modeling Parameters and Summary of Emissions
    - GHG Emissions Summary
    - GHG Parameters and Summary
      - Land Use Site Characteristics
      - Parking Structure Electricity Calculations
      - Project Trip Generation and VMT Calculations
  - Appendix B-3.2: CalEEMod Outputs
    - Baseline (Existing Year)
    - Baseline (Buildout Year)
    - Buildout without MXD/TDM or Project Design Features (Annual)
    - Buildout with Project Design Features and TDM Plan (Construction and Operations)

## Mt. Lebanon

### Operational Emissions Summary (GHG)

| CalEEMod Output Summary | Project with no PDFs | Project with PDFs |
|---|---|---|
| **Baseline (Existing Year)[a]** | **$CO_2e$** | **$CO_2e$** |
| Area | 0 | 0 |
| Energy (Natural Gas) | 93 | 93 |
| Mobile | 146 | 146 |
| Emergency Generators | 0 | 0 |
| Solid Waste | 13 | 13 |
| Water/Wastewater | 7 | 7 |
| Total | 260 | 260 |
| **Baseline (Buildout Year)[a]** | **$CO_2e$** | **$CO_2e$** |
| Area | 0 | 0 |
| Energy (Natural Gas) | 79 | 79 |
| Mobile | 128 | 128 |
| Emergency Generators | 0 | 0 |
| Solid Waste | 13 | 13 |
| Water/Wastewater | 6 | 6 |
| Total | 226 | 226 |
| **Buildout (Buildout Year)[b]** | | |
| Area | 34 | 3 |
| Energy (Natural Gas) | 496 | 445 |
| Mobile | 1,073 | 567 |
| Electric Vehicle Charging Credit | (19) | (19) |
| Emergency Generators | 1 | 1 |
| Solid Waste | 23 | 23 |
| Water/Wastewater | 84 | 67 |
| Construction | 111 | 111 |
| **Total** | **1,803** | **1,197** |

[a] Existing Uses

[b] Please refer to CalEEMod outputs for Future uses

# LADOT VMT Calculator Data

**CalEEMod Inputs**

**VMT Summary**

| | Proposed Project | With Mitigation | Project Weekday Trips | Weekend Trips | Weekend Vs. Weekday Ratio |
|---|---|---|---|---|---|
| Daily Trips | 618 | 580 | 765 | 1206 | **1.58** |
| Daily VMT | 3516 | 3312 | | | |
| Household VMT per Capita | 6.2 | 5.8 | | | |
| Work VMT per capita | 2.8 | 2.8 | | | |
| | | | | | |
| Population | 345 | | | | |
| Employees | 6 | | | | |

**Project without TDM (MXD Data)**

| | Unadjusted Trips | MXD Adjustment | MXD Trips | Average Trip Length | Unadjusted VMT | MXD VMT |
|---|---|---|---|---|---|---|
| Home Based Work Production | 207 | -34.3% | 136 | 6.0 | 1,242 | 816 |
| Home Based Other Production | 555 | -47.7% | 290 | 4.8 | 2,664 | 1,392 |
| Non-Home Based Other Production | 19 | -10.5% | 17 | 6.3 | 120 | 107 |
| Home-Based Work Attraction | 9 | -77.8% | 2 | 8.6 | 77 | 17 |
| Home-Based Other Attraction | 240 | -48.3% | 124 | 7.1 | 1,704 | 880 |
| Non-Home Based Other Attraction | 74 | -13.5% | 64 | 6.2 | 459 | 397 |
| | | | | | | |
| Total | **1,104** | | | | **6,266** | |

**Project with TDM (MXD Data)**

| | *Proposed Project* | | | *Project with Mitigation Measures* | | |
|---|---|---|---|---|---|---|
| | TDM Adjustment | Project Trips | Project VMT | TDM Adjustment | Mitigated Trips | Mitigated VMT |
| Home Based Work Production | -2.6% | 133 | 795 | -9.3% | 123 | 740 |
| Home Based Other Production | -2.6% | 283 | 1,356 | -9.3% | 263 | 1,262 |
| Non-Home Based Other Production | -2.6% | 17 | 104 | -6.5% | 16 | 100 |
| Home-Based Work Attraction | -2.6% | 2 | 17 | -6.5% | 2 | 16 |
| Home-Based Other Attraction | -2.6% | 121 | 857 | -6.5% | 116 | 823 |
| Non-Home Based Other Attraction | -2.6% | 62 | 387 | -6.5% | 60 | 371 |
| | | | | | | |
| Total | | **618** | **3,516** | | | **3,312** |
| Residential VMT | | | 2,151 | | | 2,002 |

Source: Linscott, Law and Greenspan

Mt. Lebanon Project - Existing Uses - South Coast Air Basin, Annual

# Mt. Lebanon Project - Existing Uses

**South Coast Air Basin, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 19.22 | 1000sqft | 0.97 | 19,218.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2019 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 801 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2019) - 801 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - see assumptions

Mat Foundation concrete truck emissions calculated separately using EMFAC2017. Please see appendix

Demolition -

Grading - see assumptions

Vehicle Trips - Trips based on VMT analysis

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation -

Waste Mitigation - Current City of LA Diversion Rates

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 19,220.00 | 19,218.00 |
| tblLandUse | LotAcreage | 0.44 | 0.97 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 801 |
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 125.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,127.00 |
| tblVehicleTrips | CC_TL | 8.40 | 6.94 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 273.24 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 273.24 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 69.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.4000e-004 |
| Energy | | | | | | | | | | | 0.0000 | 96.0673 | 96.0673 | 3.1600e-003 | 9.2000e-004 | 96.4208 |
| Mobile | | | | | | | | | | | 0.0000 | 145.8540 | 145.8540 | 8.1500e-003 | 0.0000 | 146.0578 |
| Waste | | | | | | | | | | | 22.2377 | 0.0000 | 22.2377 | 1.3142 | 0.0000 | 55.0929 |
| Water | | | | | | | | | | | 0.1908 | 6.6419 | 6.8327 | 0.0198 | 5.1000e-004 | 7.4813 |
| **Total** | | | | | | | | | | | **22.4285** | **248.5637** | **270.9922** | **1.3454** | **1.4300e-003** | **305.0533** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.4000e-004 |
| Energy | | | | | | | | | | | 0.0000 | 93.0964 | 93.0964 | 3.0800e-003 | 8.8000e-004 | 93.4366 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | | | | | | | | | | | 0.0000 | 145.8540 | 145.8540 | 8.1500e-003 | 0.0000 | 146.0578 |
| Waste | | | | | | | | | | | 5.2481 | 0.0000 | 5.2481 | 0.3102 | 0.0000 | 13.0019 |
| Water | | | | | | | | | | | 0.1908 | 6.6419 | 6.8327 | 0.0198 | 5.1000e-004 | 7.4813 |
| **Total** | | | | | | | | | | | **5.4389** | **245.5928** | **251.0317** | **0.3412** | **1.3900e-003** | **259.9782** |

| | ROG | NOx | 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** | **0.12** | **0.56** | **0.20** | **0.60** | **0.00** | **3.17** | **0.08** | **0.00** | **3.29** | **0.28** | **75.75** | **1.20** | **7.37** | **74.64** | **2.80** | **14.78** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 145.8540 | 145.8540 | 8.1500e-003 | 0.0000 | 146.0578 |
| Unmitigated | | | | | | | | | | | 0.0000 | 145.8540 | 145.8540 | 8.1500e-003 | 0.0000 | 146.0578 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |
| Total | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |

### 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 |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 6.94 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Place of Worship | 0.548893 | 0.044275 | 0.199565 | 0.124385 | 0.017503 | 0.005874 | 0.020174 | 0.028962 | 0.001990 | 0.002015 | 0.004673 | 0.000702 | 0.000989 |
| User Defined Commercial | 0.548893 | 0.044275 | 0.199565 | 0.124385 | 0.017503 | 0.005874 | 0.020174 | 0.028962 | 0.001990 | 0.002015 | 0.004673 | 0.000702 | 0.000989 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

| | ROG | NOx | CO | SO2 | Fugitive 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 | 75.9339 | 75.9339 | 2.7500e-003 | 5.7000e-004 | 76.1721 |
| Electricity Unmitigated | | | | | | | | | | | 0.0000 | 77.5050 | 77.5050 | 2.8100e-003 | 5.8000e-004 | 77.7481 |
| NaturalGas Mitigated | | | | | | | | | | | 0.0000 | 17.1625 | 17.1625 | 3.3000e-004 | 3.1000e-004 | 17.2645 |
| NaturalGas Unmitigated | | | | | | | | | | | 0.0000 | 18.5624 | 18.5624 | 3.6000e-004 | 3.4000e-004 | 18.6727 |

## 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 | | | | | |
| Place of Worship | 347846 | | | | | | | | | | | 0.0000 | 18.5624 | 18.5624 | 3.6000e-004 | 3.4000e-004 | 18.6727 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **18.5624** | **18.5624** | **3.6000e-004** | **3.4000e-004** | **18.6727** |

**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 | | | | | |
| Place of Worship | 321613 | | | | | | | | | | | 0.0000 | 17.1625 | 17.1625 | 3.3000e-004 | 3.1000e-004 | 17.2645 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **17.1625** | **17.1625** | **3.3000e-004** | **3.1000e-004** | **17.2645** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Place of Worship | 213320 | 77.5050 | 2.8100e-003 | 5.8000e-004 | 77.7481 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | |
|---|---|---|---|---|---|
| **Total** | | **77.5050** | **2.8100e-003** | **5.8000e-004** | **77.7481** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Place of Worship | 208996 | 75.9339 | 2.7500e-003 | 5.7000e-004 | 76.1721 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **75.9339** | **2.7500e-003** | **5.7000e-004** | **76.1721** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.4000e-004 |
| Unmitigated | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.4000e-004 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.4000e-004 |
| **Total** | | | | | | | | | | | **0.0000** | **5.0000e-004** | **5.0000e-004** | **0.0000** | **0.0000** | **5.4000e-004** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.4000e-004 |
| **Total** | | | | | | | | | | | **0.0000** | **5.0000e-004** | **5.0000e-004** | **0.0000** | **0.0000** | **5.4000e-004** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 6.8327 | 0.0198 | 5.1000e-004 | 7.4813 |
| Unmitigated | 6.8327 | 0.0198 | 5.1000e-004 | 7.4813 |

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Place of Worship | 0.601373 / 0.940609 | 6.8327 | 0.0198 | 5.1000e-004 | 7.4813 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **6.8327** | **0.0198** | **5.1000e-004** | **7.4813** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Place of Worship | 0.601373 / 0.940609 | 6.8327 | 0.0198 | 5.1000e-004 | 7.4813 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **6.8327** | **0.0198** | **5.1000e-004** | **7.4813** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 5.2481 | 0.3102 | 0.0000 | 13.0019 |
| Unmitigated | 22.2377 | 1.3142 | 0.0000 | 55.0929 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Place of Worship | 109.55 | 22.2377 | 1.3142 | 0.0000 | 55.0929 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **22.2377** | **1.3142** | **0.0000** | **55.0929** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Place of Worship | 25.8538 | 5.2481 | 0.3102 | 0.0000 | 13.0019 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **5.2481** | **0.3102** | **0.0000** | **13.0019** |

## 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

Mt. Lebanon Project - Existing Uses (Buildout Year) - South Coast Air Basin, Annual

# Mt. Lebanon Project - Existing Uses (Buildout Year)

**South Coast Air Basin, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 19.22 | 1000sqft | 0.97 | 19,218.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2024 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 647 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2024) - 647 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - see assumptions

Mat Foundation concrete truck emissions calculated separately using EMFAC2017. Please see appendix

Demolition -

Grading - see assumptions

Vehicle Trips - Trips based on VMT analysis

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation -

Waste Mitigation - Current City of LA Diversion Rates

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 19,220.00 | 19,218.00 |
| tblLandUse | LotAcreage | 0.44 | 0.97 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 647 |
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 125.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,127.00 |
| tblVehicleTrips | CC_TL | 8.40 | 6.94 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 273.24 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 273.24 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 69.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.3000e-004 |
| Energy | | | | | | | | | | | 0.0000 | 81.1663 | 81.1663 | 3.1600e-003 | 9.2000e-004 | 81.5197 |
| Mobile | | | | | | | | | | | 0.0000 | 127.7666 | 127.7666 | 5.8500e-003 | 0.0000 | 127.9127 |
| Waste | | | | | | | | | | | 22.2377 | 0.0000 | 22.2377 | 1.3142 | 0.0000 | 55.0929 |
| Water | | | | | | | | | | | 0.1908 | 5.3649 | 5.5557 | 0.0198 | 5.1000e-004 | 6.2043 |
| **Total** | | | | | | | | | | | **22.4285** | **214.2982** | **236.7266** | **1.3431** | **1.4300e-003** | **270.7301** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.3000e-004 |
| Energy | | | | | | | | | | | 0.0000 | 78.4974 | 78.4974 | 3.0800e-003 | 8.8000e-004 | 78.8376 |
| Mobile | | | | | | | | | | | 0.0000 | 127.7666 | 127.7666 | 5.8500e-003 | 0.0000 | 127.9127 |
| Waste | | | | | | | | | | | 5.2481 | 0.0000 | 5.2481 | 0.3102 | 0.0000 | 13.0019 |
| Water | | | | | | | | | | | 0.1908 | 5.3649 | 5.5557 | 0.0198 | 5.1000e-004 | 6.2043 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | | | | | | | | | | | **5.4389** | **211.6293** | **217.0682** | **0.3389** | **1.3900e-003** | **225.9570** |

| | ROG | NOx | 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** | | | | | | | | | | | **75.75** | **1.25** | **8.30** | **74.77** | **2.80** | **16.54** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 127.7666 | 127.7666 | 5.8500e-003 | 0.0000 | 127.9127 |
| Unmitigated | | | | | | | | | | | 0.0000 | 127.7666 | 127.7666 | 5.8500e-003 | 0.0000 | 127.9127 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |
| Total | 69.00 | 273.24 | 273.24 | 321,811 | 321,811 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-... | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 6.94 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Place of Worship | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| User Defined Commercial | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

| | ROG | NOx | CO | SO2 | Fugitive 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 | 61.3349 | 61.3349 | 2.7500e-003 | 5.7000e-004 | 61.5731 |
| Electricity Unmitigated | | | | | | | | | | | 0.0000 | 62.6039 | 62.6039 | 2.8100e-003 | 5.8000e-004 | 62.8470 |
| NaturalGas Mitigated | | | | | | | | | | | 0.0000 | 17.1625 | 17.1625 | 3.3000e-004 | 3.1000e-004 | 17.2645 |
| NaturalGas Unmitigated | | | | | | | | | | | 0.0000 | 18.5624 | 18.5624 | 3.6000e-004 | 3.4000e-004 | 18.6727 |

## 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 | | | | | |
| Place of Worship | 347846 | | | | | | | | | | | 0.0000 | 18.5624 | 18.5624 | 3.6000e-004 | 3.4000e-004 | 18.6727 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **18.5624** | **18.5624** | **3.6000e-004** | **3.4000e-004** | **18.6727** |

**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 | | | | | |
| Place of Worship | 321613 | | | | | | | | | | | 0.0000 | 17.1625 | 17.1625 | 3.3000e-004 | 3.1000e-004 | 17.2645 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **17.1625** | **17.1625** | **3.3000e-004** | **3.1000e-004** | **17.2645** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Place of Worship | 213320 | 62.6039 | 2.8100e-003 | 5.8000e-004 | 62.8470 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **62.6039** | **2.8100e-003** | **5.8000e-004** | **62.8470** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Place of Worship | 208996 | 61.3349 | 2.7500e-003 | 5.7000e-004 | 61.5731 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **61.3349** | **2.7500e-003** | **5.7000e-004** | **61.5731** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

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

### 6.2 Area by SubCategory

**Unmitigated**

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

**Mitigated**

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coating | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | | | | | | | | | | | 0.0000 | 5.0000e-004 | 5.0000e-004 | 0.0000 | 0.0000 | 5.3000e-004 |
| **Total** | | | | | | | | | | | **0.0000** | **5.0000e-004** | **5.0000e-004** | **0.0000** | **0.0000** | **5.3000e-004** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 5.5557 | 0.0198 | 5.1000e-004 | 6.2043 |
| Unmitigated | 5.5557 | 0.0198 | 5.1000e-004 | 6.2043 |

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Place of Worship | 0.601373 / 0.940609 | 5.5557 | 0.0198 | 5.1000e-004 | 6.2043 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **5.5557** | **0.0198** | **5.1000e-004** | **6.2043** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Place of Worship | 0.601373 / 0.940609 | 5.5557 | 0.0198 | 5.1000e-004 | 6.2043 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **5.5557** | **0.0198** | **5.1000e-004** | **6.2043** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 5.2481 | 0.3102 | 0.0000 | 13.0019 |
| Unmitigated | 22.2377 | 1.3142 | 0.0000 | 55.0929 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Place of Worship | 109.55 | 22.2377 | 1.3142 | 0.0000 | 55.0929 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **22.2377** | **1.3142** | **0.0000** | **55.0929** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Place of Worship | 25.8538 | 5.2481 | 0.3102 | 0.0000 | 13.0019 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **5.2481** | **0.3102** | **0.0000** | **13.0019** |

## 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

Mt. Lebanon Project (No TDM or MXD Reductions) - South Coast Air Basin, Annual

# Mt. Lebanon Project (No TDM or MXD Reductions)

**South Coast Air Basin, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 3.40 | 1000sqft | 0.97 | 3,400.00 | 0 |
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 21.19 | 1000sqft | 0.97 | 21,191.00 | 0 |
| Enclosed Parking with Elevator | 397.00 | Space | 3.57 | 158,800.00 | 0 |
| Apartments High Rise | 153.00 | Dwelling Unit | 0.97 | 148,641.00 | 398 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2024 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 647 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2024) - 647 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - Demolition and Haul trucks would be travelling to the Vulcan Sun Valley Landfill (~20 miles one-way) or Sunshine Canyon Landfill (~26 miles one-way)

Demolition -

Grading - see assumptions

Woodstoves - No Wood Stoves

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Install high efficiency lighting

Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation - Consistent with CalGreen for water conservation (20%)

Waste Mitigation - Current City of LA Diversion Rates

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|

| | | | |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 230.00 | 2.00 |
| tblConstructionPhase | NumDays | 230.00 | 41.00 |
| tblConstructionPhase | NumDays | 230.00 | 478.00 |
| tblConstructionPhase | NumDays | 20.00 | 131.00 |
| tblConstructionPhase | NumDays | 20.00 | 129.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblEnergyUse | LightingElect | 1.75 | 2.33 |
| tblEnergyUse | T24E | 3.92 | 0.41 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberWood | 7.65 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 110,000.00 |
| tblLandUse | LandUseSquareFeet | 21,190.00 | 21,191.00 |
| tblLandUse | LandUseSquareFeet | 153,000.00 | 148,641.00 |
| tblLandUse | LotAcreage | 0.08 | 0.97 |
| tblLandUse | LotAcreage | 0.49 | 0.97 |
| tblLandUse | LotAcreage | 2.47 | 0.97 |
| tblLandUse | Population | 438.00 | 398.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 7.00 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 647 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 52.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 52.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 2,620.00 |
| tblTripsAndVMT | HaulingTripNumber | 13,750.00 | 8,127.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 13.80 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 348.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 64.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 20.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorVehicleClass | HDT_Mix | HHDT |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 25.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 350.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 20.00 |
| tblTripsAndVMT | WorkerTripNumber | 37.00 | 0.00 |
| tblVehicleTrips | CC_TL | 8.40 | 5.68 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 4.98 | 0.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 1,740.42 |
| tblVehicleTrips | SU_TR | 3.65 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 1,740.42 |
| tblVehicleTrips | WD_TR | 4.20 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 1,104.00 |
| tblWoodstoves | NumberCatalytic | 7.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 7.65 | 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 | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 0.2362 | 3.4937 | 1.9330 | 9.8100e-003 | 0.3233 | 0.0747 | 0.3980 | 0.0791 | 0.0701 | 0.1492 | 0.0000 | 928.7075 | 928.7075 | 0.1155 | 0.0000 | 931.5953 |
| 2022 | 0.4758 | 4.3463 | 4.0028 | 0.0132 | 0.5507 | 0.1453 | 0.6959 | 0.1400 | 0.1386 | 0.2786 | 0.0000 | 1,209.4424 | 1,209.4424 | 0.1393 | 0.0000 | 1,212.9246 |
| 2023 | 0.4722 | 2.9687 | 4.1221 | 0.0103 | 0.5156 | 0.1326 | 0.6482 | 0.1373 | 0.1270 | 0.2643 | 0.0000 | 910.5771 | 910.5771 | 0.0913 | 0.0000 | 912.8592 |
| 2024 | 0.7330 | 0.8553 | 1.2365 | 2.9700e-003 | 0.1371 | 0.0369 | 0.1740 | 0.0365 | 0.0352 | 0.0717 | 0.0000 | 262.5269 | 262.5269 | 0.0296 | 0.0000 | 263.2671 |
| **Maximum** | **0.7330** | **4.3463** | **4.1221** | **0.0132** | **0.5507** | **0.1453** | **0.6959** | **0.1400** | **0.1386** | **0.2786** | **0.0000** | **1,209.4424** | **1,209.4424** | **0.1393** | **0.0000** | **1,212.9246** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2021 | 0.2362 | 3.4937 | 1.9330 | 9.8100e-003 | 0.2949 | 0.0747 | 0.3696 | 0.0757 | 0.0701 | 0.1458 | 0.0000 | 928.7072 | 928.7072 | 0.1155 | 0.0000 | 931.5950 |
| 2022 | 0.4758 | 4.3463 | 4.0028 | 0.0132 | 0.5260 | 0.1453 | 0.6713 | 0.1372 | 0.1386 | 0.2758 | 0.0000 | 1,209.4419 | 1,209.4419 | 0.1393 | 0.0000 | 1,212.9241 |
| 2023 | 0.4722 | 2.9687 | 4.1221 | 0.0103 | 0.5156 | 0.1326 | 0.6482 | 0.1373 | 0.1270 | 0.2643 | 0.0000 | 910.5765 | 910.5765 | 0.0913 | 0.0000 | 912.8587 |
| 2024 | 0.7330 | 0.8553 | 1.2365 | 2.9700e-003 | 0.1371 | 0.0369 | 0.1740 | 0.0365 | 0.0352 | 0.0717 | 0.0000 | 262.5267 | 262.5267 | 0.0296 | 0.0000 | 263.2670 |
| **Maximum** | **0.7330** | **4.3463** | **4.1221** | **0.0132** | **0.5260** | **0.1453** | **0.6713** | **0.1373** | **0.1386** | **0.2758** | **0.0000** | **1,209.4419** | **1,209.4419** | **0.1393** | **0.0000** | **1,212.9241** |

| | ROG | NOx | 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** | **3.47** | **0.00** | **2.77** | **1.58** | **0.00** | **0.81** | **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) |
|---|---|---|---|---|
| **6** | **1-22-2021** | **4-21-2021** | 0.1492 | 0.1492 |
| **7** | **4-22-2021** | **7-21-2021** | 0.6463 | 0.6463 |
| **8** | **7-22-2021** | **10-21-2021** | 1.0443 | 1.0443 |
| **9** | **10-22-2021** | **1-21-2022** | 2.3026 | 2.3026 |
| **10** | **1-22-2022** | **4-21-2022** | 1.8186 | 1.8186 |
| **11** | **4-22-2022** | **7-21-2022** | 0.8641 | 0.8641 |
| **12** | **7-22-2022** | **10-21-2022** | 0.9521 | 0.9521 |
| **13** | **10-22-2022** | **1-21-2023** | 0.9385 | 0.9385 |
| **14** | **1-22-2023** | **4-21-2023** | 0.8524 | 0.8524 |
| **15** | **4-22-2023** | **7-21-2023** | 0.8567 | 0.8567 |
| **16** | **7-22-2023** | **10-21-2023** | 0.8677 | 0.8677 |
| **17** | **10-22-2023** | **1-21-2024** | 1.0410 | 1.0410 |
| **18** | **1-22-2024** | **4-21-2024** | 1.2243 | 1.2243 |
| | | **Highest** | 2.3026 | 2.3026 |

## 2.2 Overall Operational

**Unmitigated Operational**

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 0.7474 | 0.0452 | 1.5940 | 2.6000e-004 | | 0.0109 | 0.0109 | | 0.0109 | 0.0109 | 0.0000 | 33.8177 | 33.8177 | 3.1000e-003 | 5.7000e-004 | 34.0658 |
| Energy | 9.8600e-003 | 0.0855 | 0.0449 | 5.4000e-004 | | 6.8100e-003 | 6.8100e-003 | | 6.8100e-003 | 6.8100e-003 | 0.0000 | 493.9653 | 493.9653 | 0.0196 | 5.4700e-003 | 496.0848 |
| Mobile | 0.2679 | 1.2489 | 3.0265 | 0.0116 | 1.0089 | 8.6000e-003 | 1.0175 | 0.2703 | 7.9900e-003 | 0.2783 | 0.0000 | 1,072.1105 | 1,072.1105 | 0.0505 | 0.0000 | 1,073.3737 |
| Stationary | 2.9500e-003 | 8.2600e-003 | 7.5300e-003 | 1.0000e-005 | | 4.3000e-004 | 4.3000e-004 | | 4.3000e-004 | 4.3000e-004 | 0.0000 | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 39.4452 | 0.0000 | 39.4452 | 2.3311 | 0.0000 | 97.7238 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.5646 | 68.0155 | 71.5801 | 0.3692 | 9.2800e-003 | 83.5735 |
| **Total** | **1.0282** | **1.3878** | **4.6730** | **0.0124** | **1.0089** | **0.0268** | **1.0356** | **0.2703** | **0.0262** | **0.2965** | **43.0098** | **1,669.2798** | **1,712.2896** | **2.7738** | **0.0153** | **1,786.1973** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.7474 | 0.0452 | 1.5940 | 2.6000e-004 | | 0.0109 | 0.0109 | | 0.0109 | 0.0109 | 0.0000 | 33.8177 | 33.8177 | 3.1000e-003 | 5.7000e-004 | 34.0658 |
| Energy | 9.3300e-003 | 0.0808 | 0.0423 | 5.1000e-004 | | 6.4400e-003 | 6.4400e-003 | | 6.4400e-003 | 6.4400e-003 | 0.0000 | 442.9213 | 442.9213 | 0.0175 | 4.9400e-003 | 444.8317 |
| Mobile | 0.2679 | 1.2489 | 3.0265 | 0.0116 | 1.0089 | 8.6000e-003 | 1.0175 | 0.2703 | 7.9900e-003 | 0.2783 | 0.0000 | 1,072.1105 | 1,072.1105 | 0.0505 | 0.0000 | 1,073.3737 |
| Stationary | 2.9500e-003 | 8.2600e-003 | 7.5300e-003 | 1.0000e-005 | | 4.3000e-004 | 4.3000e-004 | | 4.3000e-004 | 4.3000e-004 | 0.0000 | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 9.3091 | 0.0000 | 9.3091 | 0.5502 | 0.0000 | 23.0628 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.8517 | 54.4124 | 57.2641 | 0.2953 | 7.4200e-003 | 66.8588 |
| **Total** | **1.0276** | **1.3832** | **4.6703** | **0.0124** | **1.0089** | **0.0264** | **1.0353** | **0.2703** | **0.0258** | **0.2961** | **12.1608** | **1,604.6327** | **1,616.7935** | **0.9168** | **0.0129** | **1,643.5685** |

| | ROG | NOx | 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** | **0.05** | **0.34** | **0.06** | **0.24** | **0.00** | **1.38** | **0.04** | **0.00** | **1.41** | **0.12** | **71.73** | **3.87** | **5.58** | **66.95** | **15.60** | **7.99** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 4/1/2021 | 9/30/2021 | 5 | 131 | |
| 2 | Grading | Grading | 10/1/2021 | 3/30/2022 | 5 | 129 | |
| 3 | Mat Foundation | Building Construction | 4/1/2022 | 4/4/2022 | 5 | 2 | |
| 4 | Building Foundation | Building Construction | 4/5/2022 | 5/31/2022 | 5 | 41 | |
| 5 | Building Construction | Building Construction | 6/1/2022 | 3/31/2024 | 5 | 478 | |
| 6 | Paving | Paving | 1/1/2024 | 3/31/2024 | 5 | 65 | |
| 7 | Architectural Coating | Architectural Coating | 1/1/2024 | 3/31/2024 | 5 | 65 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 64.5**

**Acres of Paving: 3.57**

**Residential Indoor: 300,998; Residential Outdoor: 100,333; Non-Residential Indoor: 36,887; Non-Residential Outdoor: 12,296; Striped**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 1 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Demolition | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Demolition | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Grading | Bore/Drill Rigs | 2 | 8.00 | 221 | 0.50 |
| Grading | Cranes | 1 | 8.00 | 231 | 0.29 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Other Material Handling Equipment | 1 | 8.00 | 168 | 0.40 |
| Grading | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Grading | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Mat Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Mat Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Mat Foundation | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Mat Foundation | Pumps | 4 | 8.00 | 84 | 0.74 |
| Mat Foundation | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Mat Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Foundation | Air Compressors | 1 | 8.00 | 78 | 0.48 |
| Building Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Building Foundation | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Foundation | Plate Compactors | 3 | 8.00 | 8 | 0.43 |
| Building Foundation | Pumps | 1 | 8.00 | 84 | 0.74 |
| Building Foundation | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Building Foundation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Construction | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Building Construction | Cranes | 2 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Construction | Plate Compactors | 2 | 8.00 | 8 | 0.43 |
| Building Construction | Pumps | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 0 | 8.00 | 46 | 0.45 |
| | | | | | 0.56 |
| | | | | | 0.42 |
| | | | | | 0.36 |
| | | | | | 0.38 |
| | | | | | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 3 | 50.00 | 0.00 | 2,620.00 | 14.70 | 6.90 | 52.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 10 | 60.00 | 5.00 | 8,127.00 | 14.70 | 6.90 | 52.00 | LD_Mix | HDT_Mix | HHDT |
| Mat Foundation | 7 | 60.00 | 348.00 | 0.00 | 14.70 | 13.80 | 20.00 | LD_Mix | HHDT | HHDT |
| Building Foundation | 9 | 60.00 | 64.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 11 | 350.00 | 20.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 3 | 20.00 | 5.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Water Exposed Area

### 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 83.5643 | 83.5643 | 0.0270 | 0.0000 | 84.2399 |
| **Total** | | | | | | | | | | | | **83.5643** | **83.5643** | **0.0270** | **0.0000** | **84.2399** |

**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 | | | | | | | | | | | | 235.5411 | 235.5411 | 0.0151 | 0.0000 | 235.9177 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 31.3304 | 31.3304 | 8.4000e-004 | 0.0000 | 31.3514 |
| **Total** | | | | | | | | | | | | **266.8714** | **266.8714** | **0.0159** | **0.0000** | **267.2691** |

**Mitigated Construction On-Site**

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | | | | | | | | | | | | 83.5642 | 83.5642 | 0.0270 | 0.0000 | 84.2398 |
| **Total** | | | | | | | | | | | | **83.5642** | **83.5642** | **0.0270** | **0.0000** | **84.2398** |

**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 | | | | | | | | | | | | 235.5411 | 235.5411 | 0.0151 | 0.0000 | 235.9177 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 31.3304 | 31.3304 | 8.4000e-004 | 0.0000 | 31.3514 |
| **Total** | | | | | | | | | | | | **266.8714** | **266.8714** | **0.0159** | **0.0000** | **267.2691** |

### 3.3 Grading - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 181.5148 | 181.5148 | 0.0479 | 0.0000 | 182.7123 |
| **Total** | | | | | | | | | | | | **181.5148** | **181.5148** | **0.0479** | **0.0000** | **182.7123** |

**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 | | | | | | | | | | | | 373.8091 | 373.8091 | 0.0239 | 0.0000 | 374.4068 |
| Vendor | | | | | | | | | | | | 4.0063 | 4.0063 | 2.6000e-004 | 0.0000 | 4.0128 |
| Worker | | | | | | | | | | | | 18.9417 | 18.9417 | 5.1000e-004 | 0.0000 | 18.9545 |
| **Total** | | | | | | | | | | | | **396.7571** | **396.7571** | **0.0247** | **0.0000** | **397.3740** |

**Mitigated Construction On-Site**

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

| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| Off-Road | | | | | | | | | | | 181.5146 | 181.5146 | 0.0479 | 0.0000 | 182.7121 | |
| **Total** | | | | | | | | | | | **181.5146** | **181.5146** | **0.0479** | **0.0000** | **182.7121** | |

**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 | | | | | | | | | | | | 373.8091 | 373.8091 | 0.0239 | 0.0000 | 374.4068 |
| Vendor | | | | | | | | | | | | 4.0063 | 4.0063 | 2.6000e-004 | 0.0000 | 4.0128 |
| Worker | | | | | | | | | | | | 18.9417 | 18.9417 | 5.1000e-004 | 0.0000 | 18.9545 |
| **Total** | | | | | | | | | | | | **396.7571** | **396.7571** | **0.0247** | **0.0000** | **397.3740** |

### 3.3 Grading - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 173.3482 | 173.3482 | 0.0456 | 0.0000 | 174.4885 |
| **Total** | | | | | | | | | | | | **173.3482** | **173.3482** | **0.0456** | **0.0000** | **174.4885** |

**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 | | | | | | | | | | | | 352.4434 | 352.4434 | 0.0226 | 0.0000 | 353.0094 |
| Vendor | | | | | | | | | | | | 3.7904 | 3.7904 | 2.4000e-004 | 0.0000 | 3.7964 |
| Worker | | | | | | | | | | | | 17.4331 | 17.4331 | 4.4000e-004 | 0.0000 | 17.4441 |
| **Total** | | | | | | | | | | | | **373.6669** | **373.6669** | **0.0233** | **0.0000** | **374.2499** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | | MT/yr | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 173.3480 | 173.3480 | 0.0456 | 0.0000 | 174.4883 |
| **Total** | | | | | | | | | | | | **173.3480** | **173.3480** | **0.0456** | **0.0000** | **174.4883** |

**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 | | | | | | | | | | | | 352.4434 | 352.4434 | 0.0226 | 0.0000 | 353.0094 |
| Vendor | | | | | | | | | | | | 3.7904 | 3.7904 | 2.4000e-004 | 0.0000 | 3.7964 |
| Worker | | | | | | | | | | | | 17.4331 | 17.4331 | 4.4000e-004 | 0.0000 | 17.4441 |
| **Total** | | | | | | | | | | | | **373.6669** | **373.6669** | **0.0233** | **0.0000** | **374.2499** |

### 3.4 Mat Foundation - 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 | | | | | | | | | | | | 3.4673 | 3.4673 | 3.5000e-004 | 0.0000 | 3.4760 |
| **Total** | | | | | | | | | | | | **3.4673** | **3.4673** | **3.5000e-004** | **0.0000** | **3.4760** |

**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 |
| Vendor | | | | | | | | | | | | 18.8286 | 18.8286 | 1.4400e-003 | 0.0000 | 18.8647 |
| Worker | | | | | | | | | | | | 0.5534 | 0.5534 | 1.0000e-005 | 0.0000 | 0.5538 |
| **Total** | | | | | | | | | | | | **19.3820** | **19.3820** | **1.4500e-003** | **0.0000** | **19.4185** |

**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 | | | | | | | | | | | | 3.4673 | 3.4673 | 3.5000e-004 | 0.0000 | 3.4760 |
| **Total** | | | | | | | | | | | | **3.4673** | **3.4673** | **3.5000e-004** | **0.0000** | **3.4760** |

**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 |
| Vendor | | | | | | | | | | | | 18.8286 | 18.8286 | 1.4400e-003 | 0.0000 | 18.8647 |
| Worker | | | | | | | | | | | | 0.5534 | 0.5534 | 1.0000e-005 | 0.0000 | 0.5538 |
| **Total** | | | | | | | | | | | | **19.3820** | **19.3820** | **1.4500e-003** | **0.0000** | **19.4185** |

### 3.5 Building Foundation - 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 | | | | | | | | | | | | 50.5010 | 50.5010 | 0.0110 | 0.0000 | 50.7748 |
| **Total** | | | | | | | | | | | | **50.5010** | **50.5010** | **0.0110** | **0.0000** | **50.7748** |

**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 |
| Vendor | | | | | | | | | | | | 31.5748 | 31.5748 | 1.9800e-003 | 0.0000 | 31.6244 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | | | | | | | | | | | | 11.3454 | 11.3454 | 2.9000e-004 | 0.0000 | 11.3525 |
| **Total** | | | | | | | | | | | | **42.9202** | **42.9202** | **2.2700e-003** | **0.0000** | **42.9769** |

**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 | | | | | | | | | | | | 50.5009 | 50.5009 | 0.0110 | 0.0000 | 50.7747 |
| **Total** | | | | | | | | | | | | **50.5009** | **50.5009** | **0.0110** | **0.0000** | **50.7747** |

**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 |
| Vendor | | | | | | | | | | | | 31.5748 | 31.5748 | 1.9800e-003 | 0.0000 | 31.6244 |
| Worker | | | | | | | | | | | | 11.3454 | 11.3454 | 2.9000e-004 | 0.0000 | 11.3525 |
| **Total** | | | | | | | | | | | | **42.9202** | **42.9202** | **2.2700e-003** | **0.0000** | **42.9769** |

## 3.6 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 | | | | | | | | | | | | 262.3665 | 262.3665 | 0.0468 | 0.0000 | 263.5364 |
| **Total** | | | | | | | | | | | | **262.3665** | **262.3665** | **0.0468** | **0.0000** | **263.5364** |

**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 |
| Vendor | | | | | | | | | | | | 36.8212 | 36.8212 | 2.3100e-003 | 0.0000 | 36.8790 |
| Worker | | | | | | | | | | | | 246.9691 | 246.9691 | 6.2300e-003 | 0.0000 | 247.1247 |
| **Total** | | | | | | | | | | | | **283.7903** | **283.7903** | **8.5400e-003** | **0.0000** | **284.0037** |

**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 | | | | | | | | | | | | 262.3662 | 262.3662 | 0.0468 | 0.0000 | 263.5360 |
| **Total** | | | | | | | | | | | | **262.3662** | **262.3662** | **0.0468** | **0.0000** | **263.5360** |

**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 |
| Vendor | | | | | | | | | | | | 36.8212 | 36.8212 | 2.3100e-003 | 0.0000 | 36.8790 |
| Worker | | | | | | | | | | | | 246.9691 | 246.9691 | 6.2300e-003 | 0.0000 | 247.1247 |
| **Total** | | | | | | | | | | | | **283.7903** | **283.7903** | **8.5400e-003** | **0.0000** | **284.0037** |

### 3.6 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 | | | | | | | | | | | | 445.8888 | 445.8888 | 0.0783 | 0.0000 | 447.8460 |
| **Total** | | | | | | | | | | | | **445.8888** | **445.8888** | **0.0783** | **0.0000** | **447.8460** |

**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 |
| Vendor | | | | | | | | | | | | 60.6402 | 60.6402 | 3.4600e-003 | 0.0000 | 60.7268 |
| Worker | | | | | | | | | | | | 404.0481 | 404.0481 | 9.5400e-003 | 0.0000 | 404.2864 |
| **Total** | | | | | | | | | | | | **464.6883** | **464.6883** | **0.0130** | **0.0000** | **465.0132** |

**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 | | | | | | | | | | | | 445.8883 | 445.8883 | 0.0783 | 0.0000 | 447.8454 |
| **Total** | | | | | | | | | | | | **445.8883** | **445.8883** | **0.0783** | **0.0000** | **447.8454** |

**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 |
| Vendor | | | | | | | | | | | | 60.6402 | 60.6402 | 3.4600e-003 | 0.0000 | 60.7268 |
| Worker | | | | | | | | | | | | 404.0481 | 404.0481 | 9.5400e-003 | 0.0000 | 404.2864 |
| **Total** | | | | | | | | | | | | **464.6883** | **464.6883** | **0.0130** | **0.0000** | **465.0132** |

### 3.6 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 | | | | | | | | | | | | 111.4771 | 111.4771 | 0.0194 | 0.0000 | 111.9629 |
| **Total** | | | | | | | | | | | | **111.4771** | **111.4771** | **0.0194** | **0.0000** | **111.9629** |

**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 |
| Vendor | | | | | | | | | | | | 15.1057 | 15.1057 | 8.5000e-004 | 0.0000 | 15.1270 |
| Worker | | | | | | | | | | | | 97.6754 | 97.6754 | 2.1800e-003 | 0.0000 | 97.7299 |
| **Total** | | | | | | | | | | | | **112.7811** | **112.7811** | **3.0300e-003** | **0.0000** | **112.8570** |

**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 | | | | | | | | | | | | 111.4770 | 111.4770 | 0.0194 | 0.0000 | 111.9627 |
| **Total** | | | | | | | | | | | | **111.4770** | **111.4770** | **0.0194** | **0.0000** | **111.9627** |

**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 |
| Vendor | | | | | | | | | | | | 15.1057 | 15.1057 | 8.5000e-004 | 0.0000 | 15.1270 |
| Worker | | | | | | | | | | | | 97.6754 | 97.6754 | 2.1800e-003 | 0.0000 | 97.7299 |
| **Total** | | | | | | | | | | | | **112.7811** | **112.7811** | **3.0300e-003** | **0.0000** | **112.8570** |

## 3.7 Paving - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | | MT/yr | | | | |
| Off-Road | | | | | | | | | | | | 20.6127 | 20.6127 | 6.3400e-003 | 0.0000 | 20.7712 |
| Paving | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | | | | | | | | | | | | **20.6127** | **20.6127** | **6.3400e-003** | **0.0000** | **20.7712** |

**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 |
| Vendor | | | | | | | | | | | | 3.7764 | 3.7764 | 2.1000e-004 | 0.0000 | 3.7818 |
| Worker | | | | | | | | | | | | 5.5815 | 5.5815 | 1.2000e-004 | 0.0000 | 5.5846 |
| **Total** | | | | | | | | | | | | **9.3579** | **9.3579** | **3.3000e-004** | **0.0000** | **9.3663** |

**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 | | | | | | | | | | | | 20.6127 | 20.6127 | 6.3400e-003 | 0.0000 | 20.7712 |
| Paving | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **20.6127** | **20.6127** | **6.3400e-003** | **0.0000** | **20.7712** |

**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 |
| Vendor | | | | | | | | | | | | 3.7764 | 3.7764 | 2.1000e-004 | 0.0000 | 3.7818 |
| Worker | | | | | | | | | | | | 5.5815 | 5.5815 | 1.2000e-004 | 0.0000 | 5.5846 |
| **Total** | | | | | | | | | | | | **9.3579** | **9.3579** | **3.3000e-004** | **0.0000** | **9.3663** |

### 3.8 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 | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 8.2981 | 8.2981 | 4.7000e-004 | 0.0000 | 8.3098 |
| **Total** | | | | | | | | | | | | **8.2981** | **8.2981** | **4.7000e-004** | **0.0000** | **8.3098** |

**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 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**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 | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 8.2981 | 8.2981 | 4.7000e-004 | 0.0000 | 8.3098 |
| **Total** | | | | | | | | | | | | **8.2981** | **8.2981** | **4.7000e-004** | **0.0000** | **8.3098** |

**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 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 1,072.1105 | 1,072.1105 | 0.0505 | 0.0000 | 1,073.3737 |
| Unmitigated | | | | | | | | | | | 0.0000 | 1,072.1105 | 1,072.1105 | 0.0505 | 0.0000 | 1,073.3737 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments High Rise | 0.00 | 0.00 | 0.00 | | |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 1,104.00 | 1,740.42 | 1740.42 | 2,656,489 | 2,656,489 |
| | | | | | 2,656,489 |

### 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 High Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 5.68 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments High Rise | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| Enclosed Parking with Elevator | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| General Office Building | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| Place of Worship | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| User Defined Commercial | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

| | ROG | NOx | CO | SO2 | Fugitive 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 | 350.6177 | 350.6177 | 0.0157 | 3.2500e-003 | 351.9795 |
| Electricity Unmitigated | | | | | | | | | | | 0.0000 | 396.3553 | 396.3553 | 0.0178 | 3.6800e-003 | 397.8948 |
| NaturalGas Mitigated | | | | | | | | | | | 0.0000 | 92.3037 | 92.3037 | 1.7700e-003 | 1.6900e-003 | 92.8522 |
| NaturalGas Unmitigated | | | | | | | | | | | 0.0000 | 97.6100 | 97.6100 | 1.8700e-003 | 1.7900e-003 | 98.1901 |

## 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 High Rise | 1.41019e+006 | | | | | | | | | | | 0.0000 | 75.2532 | 75.2532 | 1.4400e-003 | 1.3800e-003 | 75.7004 |
| Enclosed Parking with Elevator | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 35394 | | | | | | | | | | | 0.0000 | 1.8888 | 1.8888 | 4.0000e-005 | 3.0000e-005 | 1.9000 |
| Place of Worship | 383557 | | | | | | | | | | | 0.0000 | 20.4681 | 20.4681 | 3.9000e-004 | 3.8000e-004 | 20.5897 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **97.6100** | **97.6100** | **1.8700e-003** | **1.7900e-003** | **98.1901** |

**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 High Rise | 1.34309e+006 | | | | | | | | | | | 0.0000 | 71.6722 | 71.6722 | 1.3700e-003 | 1.3100e-003 | 72.0982 |
| Enclosed Parking with Elevator | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 31987.2 | | | | | | | | | | | 0.0000 | 1.7070 | 1.7070 | 3.0000e-005 | 3.0000e-005 | 1.7171 |
| Place of Worship | 354631 | | | | | | | | | | | 0.0000 | 18.9245 | 18.9245 | 3.6000e-004 | 3.5000e-004 | 19.0369 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **92.3037** | **92.3037** | **1.7600e-003** | **1.6900e-003** | **92.8522** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments High Rise | 605892 | 177.8138 | 7.9700e-003 | 1.6500e-003 | 178.5044 |

| | | | | | |
|---|---|---|---|---|---|
| Enclosed Parking with Elevator | 465284 | 136.5489 | 6.1200e-003 | 1.2700e-003 | 137.0793 |
| General Office Building | 44166 | 12.9616 | 5.8000e-004 | 1.2000e-004 | 13.0119 |
| Place of Worship | 235220 | 69.0311 | 3.0900e-003 | 6.4000e-004 | 69.2992 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments High Rise | 575015 | 168.7520 | 7.5600e-003 | 1.5600e-003 | 169.4075 |
| Enclosed Parking with Elevator | 366272 | 107.4915 | 4.8200e-003 | 1.0000e-003 | 107.9090 |
| General Office Building | 39397.5 | 11.5622 | 5.2000e-004 | 1.1000e-004 | 11.6071 |
| Place of Worship | 214029 | 62.8120 | 2.8200e-003 | 5.8000e-004 | 63.0560 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 33.8177 | 33.8177 | 3.1000e-003 | 5.7000e-004 | 34.0658 |
| Unmitigated | | | | | | | | | | | 0.0000 | 33.8177 | 33.8177 | 3.1000e-003 | 5.7000e-004 | 34.0658 |

### 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 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer Products | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | | | | | | | | | | | 0.0000 | 31.2298 | 31.2298 | 6.0000e-004 | 5.7000e-004 | 31.4154 |
| Landscaping | | | | | | | | | | | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| **Total** | | | | | | | | | | | **0.0000** | **33.8177** | **33.8177** | **3.1000e-003** | **5.7000e-004** | **34.0658** |

**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 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | | | | | | | | | | | 0.0000 | 31.2298 | 31.2298 | 6.0000e-004 | 5.7000e-004 | 31.4154 |
| Landscaping | | | | | | | | | | | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| **Total** | | | | | | | | | | | **0.0000** | **33.8177** | **33.8177** | **3.1000e-003** | **5.7000e-004** | **34.0658** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 57.2641 | 0.2953 | 7.4200e-003 | 66.8588 |
| Unmitigated | 71.5801 | 0.3692 | 9.2800e-003 | 83.5735 |

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments High Rise | 9.96857 / 6.28453 | 61.7464 | 0.3275 | 8.2100e-003 | 72.3802 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 0.604295 / 0.370374 | 3.7085 | 0.0199 | 5.0000e-004 | 4.3530 |

| | | | | | |
|---|---|---|---|---|---|
| Place of Worship | 0.663012 / 1.03702 | 6.1251 | 0.0219 | 5.6000e-004 | 6.8402 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **71.5801** | **0.3692** | **9.2700e-003** | **83.5735** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments High Rise | 7.97485 / 5.02762 | 49.3972 | 0.2620 | 6.5700e-003 | 57.9042 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 0.483436 / 0.296299 | 2.9668 | 0.0159 | 4.0000e-004 | 3.4824 |
| Place of Worship | 0.53041 / 0.829615 | 4.9001 | 0.0175 | 4.5000e-004 | 5.4722 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **57.2641** | **0.2953** | **7.4200e-003** | **66.8588** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 9.3091 | 0.5502 | 0.0000 | 23.0628 |
| Unmitigated | 39.4452 | 2.3311 | 0.0000 | 97.7238 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments High Rise | 70.38 | 14.2865 | 0.8443 | 0.0000 | 35.3942 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 3.16 | 0.6415 | 0.0379 | 0.0000 | 1.5892 |

| | | | | | |
|---|---|---|---|---|---|
| Place of Worship | 120.78 | 24.5173 | 1.4489 | 0.0000 | 60.7405 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **39.4452** | **2.3312** | **0.0000** | **97.7238** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments High Rise | 16.6097 | 3.3716 | 0.1993 | 0.0000 | 8.3530 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 0.74576 | 0.1514 | 8.9500e-003 | 0.0000 | 0.3750 |
| Place of Worship | 28.5041 | 5.7861 | 0.3420 | 0.0000 | 14.3348 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **9.3091** | **0.5502** | **0.0000** | **23.0628** |

## 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 |
|---|---|---|---|---|---|---|
| Emergency Generator | 1 | 1 | 12 | 300 | 0.73 | Diesel |

**Boilers**

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

**User Defined Equipment**

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

### 10.1 Stationary Sources

**Unmitigated/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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Emergency Generator - Diesel (300 - 600 HP) | | | | | | | | | | | 0.0000 | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |
| **Total** | | | | | | | | | | | | **1.3709** | **1.3709** | **1.9000e-004** | **0.0000** | **1.3757** |

## 11.0 Vegetation

Mt. Lebanon Project - South Coast Air Basin, Annual

# Mt. Lebanon Project

**South Coast Air Basin, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 3.40 | 1000sqft | 0.97 | 3,400.00 | 0 |
| User Defined Commercial | 1.00 | User Defined Unit | 0.00 | 0.00 | 0 |
| Place of Worship | 21.19 | 1000sqft | 0.97 | 21,191.00 | 0 |
| Enclosed Parking with Elevator | 397.00 | Space | 3.57 | 158,800.00 | 0 |
| Apartments High Rise | 153.00 | Dwelling Unit | 0.97 | 148,641.00 | 398 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 11 | | | **Operational Year** | 2024 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 647 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics - LADWP SB100 Carbon Intensity (2024) - 647 lbs/MWh

Land Use - see project description

Construction Phase - see assumptions

Off-road Equipment -

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Off-road Equipment - see assumptions

Trips and VMT - Demolition and Haul trucks would be travelling to the Vulcan Sun Valley Landfill (~20 miles one-way) or Sunshine Canyon Landfill (~26 miles one-way)

Demolition -

Grading - see assumptions

Woodstoves - No Fireplaces

Energy Use - See parking garage ventilation and lighting calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Install high efficiency lighting

Compliance with 2019 Title 24 (Exceed 2016 Title 24 by 10%)

Water Mitigation - Consistent with CalGreen for water conservation (20%)

Waste Mitigation - Current City of LA Diversion Rates

Stationary Sources - Emergency Generators and Fire Pumps - 1 Emergency Generator (300 hp). Tested for 1 hour each month.

Area Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblConstructionPhase | NumDays | 230.00 | 2.00 |
| tblConstructionPhase | NumDays | 230.00 | 41.00 |
| tblConstructionPhase | NumDays | 230.00 | 478.00 |
| tblConstructionPhase | NumDays | 20.00 | 131.00 |
| tblConstructionPhase | NumDays | 20.00 | 129.00 |
| tblConstructionPhase | NumDays | 20.00 | 65.00 |
| tblEnergyUse | LightingElect | 1.75 | 2.33 |
| tblEnergyUse | T24E | 3.92 | 0.41 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 130.05 | 0.00 |
| tblFireplaces | NumberWood | 7.65 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 110,000.00 |
| tblLandUse | LandUseSquareFeet | 21,190.00 | 21,191.00 |
| tblLandUse | LandUseSquareFeet | 153,000.00 | 148,641.00 |
| tblLandUse | LotAcreage | 0.08 | 0.97 |
| tblLandUse | LotAcreage | 0.49 | 0.97 |
| tblLandUse | LotAcreage | 2.47 | 0.97 |
| tblLandUse | Population | 438.00 | 398.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 7.00 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 647 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 52.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 52.00 |
| tblTripsAndVMT | HaulingTripNumber | 56.00 | 2,620.00 |
| tblTripsAndVMT | HaulingTripNumber | 13,750.00 | 8,127.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 13.80 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 348.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 64.00 |
| tblTripsAndVMT | VendorTripNumber | 46.00 | 20.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 5.00 |
| tblTripsAndVMT | VendorVehicleClass | HDT_Mix | HHDT |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 25.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 60.00 |
| tblTripsAndVMT | WorkerTripNumber | 187.00 | 350.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 20.00 |
| tblTripsAndVMT | WorkerTripNumber | 37.00 | 0.00 |
| tblVehicleTrips | CC_TL | 8.40 | 5.71 |
| tblVehicleTrips | CC_TTP | 0.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 6.90 | 0.00 |
| tblVehicleTrips | CW_TL | 16.60 | 0.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 4.98 | 0.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 10.37 | 0.00 |
| tblVehicleTrips | ST_TR | 0.00 | 914.35 |
| tblVehicleTrips | SU_TR | 3.65 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 36.63 | 0.00 |
| tblVehicleTrips | SU_TR | 0.00 | 914.35 |
| tblVehicleTrips | WD_TR | 4.20 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 9.11 | 0.00 |
| tblVehicleTrips | WD_TR | 0.00 | 580.00 |
| tblWoodstoves | NumberCatalytic | 7.65 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 7.65 | 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 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 0.2362 | 3.4937 | 1.9330 | 9.8100e-003 | 0.3233 | 0.0747 | 0.3980 | 0.0791 | 0.0701 | 0.1492 | 0.0000 | 928.7075 | 928.7075 | 0.1155 | 0.0000 | 931.5953 |
| 2022 | 0.4758 | 4.3463 | 4.0028 | 0.0132 | 0.5507 | 0.1453 | 0.6959 | 0.1400 | 0.1386 | 0.2786 | 0.0000 | 1,209.4424 | 1,209.4424 | 0.1393 | 0.0000 | 1,212.9246 |
| 2023 | 0.4722 | 2.9687 | 4.1221 | 0.0103 | 0.5156 | 0.1326 | 0.6482 | 0.1373 | 0.1270 | 0.2643 | 0.0000 | 910.5771 | 910.5771 | 0.0913 | 0.0000 | 912.8592 |
| 2024 | 0.7330 | 0.8553 | 1.2365 | 2.9700e-003 | 0.1371 | 0.0369 | 0.1740 | 0.0365 | 0.0352 | 0.0717 | 0.0000 | 262.5269 | 262.5269 | 0.0296 | 0.0000 | 263.2671 |
| **Maximum** | **0.7330** | **4.3463** | **4.1221** | **0.0132** | **0.5507** | **0.1453** | **0.6959** | **0.1400** | **0.1386** | **0.2786** | **0.0000** | **1,209.4424** | **1,209.4424** | **0.1393** | **0.0000** | **1,212.9246** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2021 | 0.2362 | 3.4937 | 1.9330 | 9.8100e-003 | 0.2949 | 0.0747 | 0.3696 | 0.0757 | 0.0701 | 0.1458 | 0.0000 | 928.7072 | 928.7072 | 0.1155 | 0.0000 | 931.5950 |
| 2022 | 0.4758 | 4.3463 | 4.0028 | 0.0132 | 0.5260 | 0.1453 | 0.6713 | 0.1372 | 0.1386 | 0.2758 | 0.0000 | 1,209.4419 | 1,209.4419 | 0.1393 | 0.0000 | 1,212.9241 |
| 2023 | 0.4722 | 2.9687 | 4.1221 | 0.0103 | 0.5156 | 0.1326 | 0.6482 | 0.1373 | 0.1270 | 0.2643 | 0.0000 | 910.5765 | 910.5765 | 0.0913 | 0.0000 | 912.8587 |
| 2024 | 0.7330 | 0.8553 | 1.2365 | 2.9700e-003 | 0.1371 | 0.0369 | 0.1740 | 0.0365 | 0.0352 | 0.0717 | 0.0000 | 262.5267 | 262.5267 | 0.0296 | 0.0000 | 263.2670 |
| **Maximum** | **0.7330** | **4.3463** | **4.1221** | **0.0132** | **0.5260** | **0.1453** | **0.6713** | **0.1373** | **0.1386** | **0.2758** | **0.0000** | **1,209.4419** | **1,209.4419** | **0.1393** | **0.0000** | **1,212.9241** |

| | ROG | NOx | 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** | **3.47** | **0.00** | **2.77** | **1.58** | **0.00** | **0.81** | **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) |
|---|---|---|---|---|
| **6** | **1-22-2021** | **4-21-2021** | 0.1492 | 0.1492 |
| **7** | **4-22-2021** | **7-21-2021** | 0.6463 | 0.6463 |
| **8** | **7-22-2021** | **10-21-2021** | 1.0443 | 1.0443 |
| **9** | **10-22-2021** | **1-21-2022** | 2.3026 | 2.3026 |
| **10** | **1-22-2022** | **4-21-2022** | 1.8186 | 1.8186 |
| **11** | **4-22-2022** | **7-21-2022** | 0.8641 | 0.8641 |
| **12** | **7-22-2022** | **10-21-2022** | 0.9521 | 0.9521 |
| **13** | **10-22-2022** | **1-21-2023** | 0.9385 | 0.9385 |
| **14** | **1-22-2023** | **4-21-2023** | 0.8524 | 0.8524 |
| **15** | **4-22-2023** | **7-21-2023** | 0.8567 | 0.8567 |
| **16** | **7-22-2023** | **10-21-2023** | 0.8677 | 0.8677 |
| **17** | **10-22-2023** | **1-21-2024** | 1.0410 | 1.0410 |
| **18** | **1-22-2024** | **4-21-2024** | 1.2243 | 1.2243 |
| | | **Highest** | 2.3026 | 2.3026 |

## 2.2 Overall Operational

**Unmitigated Operational**

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

| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 0.7443 | 0.0182 | 1.5826 | 8.0000e-005 | | 8.7600e-003 | 8.7600e-003 | | 8.7600e-003 | 8.7600e-003 | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| Energy | 9.8600e-003 | 0.0855 | 0.0449 | 5.4000e-004 | | 6.8100e-003 | 6.8100e-003 | | 6.8100e-003 | 6.8100e-003 | 0.0000 | 493.9653 | 493.9653 | 0.0196 | 5.4700e-003 | 496.0848 |
| Mobile | 0.1410 | 0.6577 | 1.5973 | 6.1200e-003 | 0.5333 | 4.5400e-003 | 0.5378 | 0.1429 | 4.2200e-003 | 0.1471 | 0.0000 | 566.3760 | 566.3760 | 0.0267 | 0.0000 | 567.0427 |
| Stationary | 2.9500e-003 | 8.2600e-003 | 7.5300e-003 | 1.0000e-005 | | 4.3000e-004 | 4.3000e-004 | | 4.3000e-004 | 4.3000e-004 | 0.0000 | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 39.4452 | 0.0000 | 39.4452 | 2.3311 | 0.0000 | 97.7238 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.5646 | 68.0155 | 71.5801 | 0.3692 | 9.2800e-003 | 83.5735 |
| **Total** | **0.8981** | **0.7697** | **3.2323** | **6.7500e-003** | **0.5333** | **0.0205** | **0.5538** | **0.1429** | **0.0202** | **0.1631** | **43.0098** | **1,132.3155** | **1,175.3253** | **2.7493** | **0.0148** | **1,248.4509** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.7443 | 0.0182 | 1.5826 | 8.0000e-005 | | 8.7600e-003 | 8.7600e-003 | | 8.7600e-003 | 8.7600e-003 | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| Energy | 9.3300e-003 | 0.0808 | 0.0423 | 5.1000e-004 | | 6.4400e-003 | 6.4400e-003 | | 6.4400e-003 | 6.4400e-003 | 0.0000 | 442.9213 | 442.9213 | 0.0175 | 4.9400e-003 | 444.8317 |
| Mobile | 0.1410 | 0.6577 | 1.5973 | 6.1200e-003 | 0.5333 | 4.5400e-003 | 0.5378 | 0.1429 | 4.2200e-003 | 0.1471 | 0.0000 | 566.3760 | 566.3760 | 0.0267 | 0.0000 | 567.0427 |
| Stationary | 2.9500e-003 | 8.2600e-003 | 7.5300e-003 | 1.0000e-005 | | 4.3000e-004 | 4.3000e-004 | | 4.3000e-004 | 4.3000e-004 | 0.0000 | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 9.3091 | 0.0000 | 9.3091 | 0.5502 | 0.0000 | 23.0628 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.8517 | 54.4124 | 57.2641 | 0.2953 | 7.4200e-003 | 66.8588 |
| **Total** | **0.8976** | **0.7650** | **3.2296** | **6.7200e-003** | **0.5333** | **0.0202** | **0.5534** | **0.1429** | **0.0199** | **0.1627** | **12.1608** | **1,067.6684** | **1,079.8292** | **0.8923** | **0.0124** | **1,105.8220** |

| | ROG | NOx | 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** | **0.06** | **0.61** | **0.08** | **0.44** | **0.00** | **1.80** | **0.07** | **0.00** | **1.83** | **0.23** | **71.73** | **5.71** | **8.13** | **67.54** | **16.20** | **11.42** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 4/1/2021 | 9/30/2021 | 5 | 131 | |
| 2 | Grading | Grading | 10/1/2021 | 3/30/2022 | 5 | 129 | |
| 3 | Mat Foundation | Building Construction | 4/1/2022 | 4/4/2022 | 5 | 2 | |
| 4 | Building Foundation | Building Construction | 4/5/2022 | 5/31/2022 | 5 | 41 | |
| 5 | Building Construction | Building Construction | 6/1/2022 | 3/31/2024 | 5 | 478 | |
| 6 | Paving | Paving | 1/1/2024 | 3/31/2024 | 5 | 65 | |
| 7 | Architectural Coating | Architectural Coating | 1/1/2024 | 3/31/2024 | 5 | 65 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 64.5**

**Acres of Paving: 3.57**

**Residential Indoor: 300,998; Residential Outdoor: 100,333; Non-Residential Indoor: 36,887; Non-Residential Outdoor: 12,296; Striped**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 1 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Demolition | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Demolition | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Grading | Bore/Drill Rigs | 2 | 8.00 | 221 | 0.50 |
| Grading | Cranes | 1 | 8.00 | 231 | 0.29 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Other Material Handling Equipment | 1 | 8.00 | 168 | 0.40 |
| Grading | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Grading | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Mat Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Mat Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Mat Foundation | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Mat Foundation | Pumps | 4 | 8.00 | 84 | 0.74 |
| Mat Foundation | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Mat Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Foundation | Air Compressors | 1 | 8.00 | 78 | 0.48 |
| Building Foundation | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Foundation | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Building Foundation | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Foundation | Plate Compactors | 3 | 8.00 | 8 | 0.43 |
| Building Foundation | Pumps | 1 | 8.00 | 84 | 0.74 |
| Building Foundation | Rubber Tired Loaders | 1 | 8.00 | 203 | 0.36 |
| Building Foundation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Foundation | Welders | 0 | 8.00 | 46 | 0.45 |
| Building Construction | Air Compressors | 2 | 8.00 | 78 | 0.48 |
| Building Construction | Cranes | 2 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Building Construction | Plate Compactors | 2 | 8.00 | 8 | 0.43 |
| Building Construction | Pumps | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 0 | 8.00 | 46 | 0.45 |
| | | | | | 0.56 |
| | | | | | 0.42 |
| | | | | | 0.36 |
| | | | | | 0.38 |
| | | | | | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 3 | 50.00 | 0.00 | 2,620.00 | 14.70 | 6.90 | 52.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 10 | 60.00 | 5.00 | 8,127.00 | 14.70 | 6.90 | 52.00 | LD_Mix | HDT_Mix | HHDT |
| Mat Foundation | 7 | 60.00 | 348.00 | 0.00 | 14.70 | 13.80 | 20.00 | LD_Mix | HHDT | HHDT |
| Building Foundation | 9 | 60.00 | 64.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 11 | 350.00 | 20.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 3 | 20.00 | 5.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 83.5643 | 83.5643 | 0.0270 | 0.0000 | 84.2399 |
| **Total** | | | | | | | | | | | | **83.5643** | **83.5643** | **0.0270** | **0.0000** | **84.2399** |

**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 | | | | | | | | | | | | 235.5411 | 235.5411 | 0.0151 | 0.0000 | 235.9177 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 31.3304 | 31.3304 | 8.4000e-004 | 0.0000 | 31.3514 |
| **Total** | | | | | | | | | | | | **266.8714** | **266.8714** | **0.0159** | **0.0000** | **267.2691** |

**Mitigated Construction On-Site**

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 83.5642 | 83.5642 | 0.0270 | 0.0000 | 84.2398 |
| **Total** | | | | | | | | | | | | **83.5642** | **83.5642** | **0.0270** | **0.0000** | **84.2398** |

**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 | | | | | | | | | | | | 235.5411 | 235.5411 | 0.0151 | 0.0000 | 235.9177 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 31.3304 | 31.3304 | 8.4000e-004 | 0.0000 | 31.3514 |
| **Total** | | | | | | | | | | | | **266.8714** | **266.8714** | **0.0159** | **0.0000** | **267.2691** |

### 3.3 Grading - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 181.5148 | 181.5148 | 0.0479 | 0.0000 | 182.7123 |
| **Total** | | | | | | | | | | | | **181.5148** | **181.5148** | **0.0479** | **0.0000** | **182.7123** |

**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 | | | | | | | | | | | | 373.8091 | 373.8091 | 0.0239 | 0.0000 | 374.4068 |
| Vendor | | | | | | | | | | | | 4.0063 | 4.0063 | 2.6000e-004 | 0.0000 | 4.0128 |
| Worker | | | | | | | | | | | | 18.9417 | 18.9417 | 5.1000e-004 | 0.0000 | 18.9545 |
| **Total** | | | | | | | | | | | | **396.7571** | **396.7571** | **0.0247** | **0.0000** | **397.3740** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 181.5146 | 181.5146 | 0.0479 | 0.0000 | 182.7121 |
| **Total** | | | | | | | | | | | | **181.5146** | **181.5146** | **0.0479** | **0.0000** | **182.7121** |

**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 | | | | | | | | | | | | 373.8091 | 373.8091 | 0.0239 | 0.0000 | 374.4068 |
| Vendor | | | | | | | | | | | | 4.0063 | 4.0063 | 2.6000e-004 | 0.0000 | 4.0128 |
| Worker | | | | | | | | | | | | 18.9417 | 18.9417 | 5.1000e-004 | 0.0000 | 18.9545 |
| **Total** | | | | | | | | | | | | **396.7571** | **396.7571** | **0.0247** | **0.0000** | **397.3740** |

### 3.3 Grading - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 173.3482 | 173.3482 | 0.0456 | 0.0000 | 174.4885 |
| **Total** | | | | | | | | | | | | **173.3482** | **173.3482** | **0.0456** | **0.0000** | **174.4885** |

**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 | | | | | | | | | | | | 352.4434 | 352.4434 | 0.0226 | 0.0000 | 353.0094 |
| Vendor | | | | | | | | | | | | 3.7904 | 3.7904 | 2.4000e-004 | 0.0000 | 3.7964 |
| Worker | | | | | | | | | | | | 17.4331 | 17.4331 | 4.4000e-004 | 0.0000 | 17.4441 |
| **Total** | | | | | | | | | | | | **373.6669** | **373.6669** | **0.0233** | **0.0000** | **374.2499** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 173.3480 | 173.3480 | 0.0456 | 0.0000 | 174.4883 |
| **Total** | | | | | | | | | | | | **173.3480** | **173.3480** | **0.0456** | **0.0000** | **174.4883** |

**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 | | | | | | | | | | | | 352.4434 | 352.4434 | 0.0226 | 0.0000 | 353.0094 |
| Vendor | | | | | | | | | | | | 3.7904 | 3.7904 | 2.4000e-004 | 0.0000 | 3.7964 |
| Worker | | | | | | | | | | | | 17.4331 | 17.4331 | 4.4000e-004 | 0.0000 | 17.4441 |
| **Total** | | | | | | | | | | | | **373.6669** | **373.6669** | **0.0233** | **0.0000** | **374.2499** |

### 3.4 Mat Foundation - 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 | | | | | | | | | | | | 3.4673 | 3.4673 | 3.5000e-004 | 0.0000 | 3.4760 |
| **Total** | | | | | | | | | | | | **3.4673** | **3.4673** | **3.5000e-004** | **0.0000** | **3.4760** |

**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 |
| Vendor | | | | | | | | | | | | 18.8286 | 18.8286 | 1.4400e-003 | 0.0000 | 18.8647 |
| Worker | | | | | | | | | | | | 0.5534 | 0.5534 | 1.0000e-005 | 0.0000 | 0.5538 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | | | | | | | | | | | | **19.3820** | **19.3820** | **1.4500e-003** | **0.0000** | **19.4185** |

**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 | | | | | | | | | | | | 3.4673 | 3.4673 | 3.5000e-004 | 0.0000 | 3.4760 |
| **Total** | | | | | | | | | | | | **3.4673** | **3.4673** | **3.5000e-004** | **0.0000** | **3.4760** |

**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 |
| Vendor | | | | | | | | | | | | 18.8286 | 18.8286 | 1.4400e-003 | 0.0000 | 18.8647 |
| Worker | | | | | | | | | | | | 0.5534 | 0.5534 | 1.0000e-005 | 0.0000 | 0.5538 |
| **Total** | | | | | | | | | | | | **19.3820** | **19.3820** | **1.4500e-003** | **0.0000** | **19.4185** |

### 3.5 Building Foundation - 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 | | | | | | | | | | | | 50.5010 | 50.5010 | 0.0110 | 0.0000 | 50.7748 |
| **Total** | | | | | | | | | | | | **50.5010** | **50.5010** | **0.0110** | **0.0000** | **50.7748** |

**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 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | | | | | | | | | | | | 31.5748 | 31.5748 | 1.9800e-003 | 0.0000 | 31.6244 |
| Worker | | | | | | | | | | | | 11.3454 | 11.3454 | 2.9000e-004 | 0.0000 | 11.3525 |
| **Total** | | | | | | | | | | | | **42.9202** | **42.9202** | **2.2700e-003** | **0.0000** | **42.9769** |

**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 | | | | | | | | | | | | 50.5009 | 50.5009 | 0.0110 | 0.0000 | 50.7747 |
| **Total** | | | | | | | | | | | | **50.5009** | **50.5009** | **0.0110** | **0.0000** | **50.7747** |

**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 |
| Vendor | | | | | | | | | | | | 31.5748 | 31.5748 | 1.9800e-003 | 0.0000 | 31.6244 |
| Worker | | | | | | | | | | | | 11.3454 | 11.3454 | 2.9000e-004 | 0.0000 | 11.3525 |
| **Total** | | | | | | | | | | | | **42.9202** | **42.9202** | **2.2700e-003** | **0.0000** | **42.9769** |

## 3.6 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 | | | | | | | | | | | | 262.3665 | 262.3665 | 0.0468 | 0.0000 | 263.5364 |
| **Total** | | | | | | | | | | | | **262.3665** | **262.3665** | **0.0468** | **0.0000** | **263.5364** |

**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 |
| Vendor | | | | | | | | | | | 36.8212 | 36.8212 | 2.3100e-003 | 0.0000 | 36.8790 |
| Worker | | | | | | | | | | | 246.9691 | 246.9691 | 6.2300e-003 | 0.0000 | 247.1247 |
| **Total** | | | | | | | | | | | **283.7903** | **283.7903** | **8.5400e-003** | **0.0000** | **284.0037** |

**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 | | | | | | | | | | | | 262.3662 | 262.3662 | 0.0468 | 0.0000 | 263.5360 |
| **Total** | | | | | | | | | | | | **262.3662** | **262.3662** | **0.0468** | **0.0000** | **263.5360** |

**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 |
| Vendor | | | | | | | | | | | | 36.8212 | 36.8212 | 2.3100e-003 | 0.0000 | 36.8790 |
| Worker | | | | | | | | | | | | 246.9691 | 246.9691 | 6.2300e-003 | 0.0000 | 247.1247 |
| **Total** | | | | | | | | | | | | **283.7903** | **283.7903** | **8.5400e-003** | **0.0000** | **284.0037** |

### 3.6 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 | | | | | | | | | | | | 445.8888 | 445.8888 | 0.0783 | 0.0000 | 447.8460 |
| **Total** | | | | | | | | | | | | **445.8888** | **445.8888** | **0.0783** | **0.0000** | **447.8460** |

**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 |
| Vendor | | | | | | | | | | | | 60.6402 | 60.6402 | 3.4600e-003 | 0.0000 | 60.7268 |
| Worker | | | | | | | | | | | | 404.0481 | 404.0481 | 9.5400e-003 | 0.0000 | 404.2864 |
| **Total** | | | | | | | | | | | | **464.6883** | **464.6883** | **0.0130** | **0.0000** | **465.0132** |

**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 | | | | | | | | | | | | 445.8883 | 445.8883 | 0.0783 | 0.0000 | 447.8454 |
| **Total** | | | | | | | | | | | | **445.8883** | **445.8883** | **0.0783** | **0.0000** | **447.8454** |

**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 |
| Vendor | | | | | | | | | | | | 60.6402 | 60.6402 | 3.4600e-003 | 0.0000 | 60.7268 |
| Worker | | | | | | | | | | | | 404.0481 | 404.0481 | 9.5400e-003 | 0.0000 | 404.2864 |
| **Total** | | | | | | | | | | | | **464.6883** | **464.6883** | **0.0130** | **0.0000** | **465.0132** |

### 3.6 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 | | | | | | | | | | | | 111.4771 | 111.4771 | 0.0194 | 0.0000 | 111.9629 |
| **Total** | | | | | | | | | | | | **111.4771** | **111.4771** | **0.0194** | **0.0000** | **111.9629** |

**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 |
| Vendor | | | | | | | | | | | | 15.1057 | 15.1057 | 8.5000e-004 | 0.0000 | 15.1270 |
| Worker | | | | | | | | | | | | 97.6754 | 97.6754 | 2.1800e-003 | 0.0000 | 97.7299 |
| **Total** | | | | | | | | | | | | **112.7811** | **112.7811** | **3.0300e-003** | **0.0000** | **112.8570** |

**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 | | | | | | | | | | | | 111.4770 | 111.4770 | 0.0194 | 0.0000 | 111.9627 |
| **Total** | | | | | | | | | | | | **111.4770** | **111.4770** | **0.0194** | **0.0000** | **111.9627** |

**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 |
| Vendor | | | | | | | | | | | | 15.1057 | 15.1057 | 8.5000e-004 | 0.0000 | 15.1270 |
| Worker | | | | | | | | | | | | 97.6754 | 97.6754 | 2.1800e-003 | 0.0000 | 97.7299 |
| **Total** | | | | | | | | | | | | **112.7811** | **112.7811** | **3.0300e-003** | **0.0000** | **112.8570** |

## 3.7 Paving - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | | | | | | | | | | | | 20.6127 | 20.6127 | 6.3400e-003 | 0.0000 | 20.7712 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Paving | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **20.6127** | **20.6127** | **6.3400e-003** | **0.0000** | **20.7712** |

**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 |
| Vendor | | | | | | | | | | | | 3.7764 | 3.7764 | 2.1000e-004 | 0.0000 | 3.7818 |
| Worker | | | | | | | | | | | | 5.5815 | 5.5815 | 1.2000e-004 | 0.0000 | 5.5846 |
| **Total** | | | | | | | | | | | | **9.3579** | **9.3579** | **3.3000e-004** | **0.0000** | **9.3663** |

**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 | | | | | | | | | | | | 20.6127 | 20.6127 | 6.3400e-003 | 0.0000 | 20.7712 |
| Paving | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **20.6127** | **20.6127** | **6.3400e-003** | **0.0000** | **20.7712** |

**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 |
| Vendor | | | | | | | | | | | | 3.7764 | 3.7764 | 2.1000e-004 | 0.0000 | 3.7818 |
| Worker | | | | | | | | | | | | 5.5815 | 5.5815 | 1.2000e-004 | 0.0000 | 5.5846 |
| **Total** | | | | | | | | | | | | **9.3579** | **9.3579** | **3.3000e-004** | **0.0000** | **9.3663** |

### 3.8 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 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| Off-Road | | | | | | | | | | | 8.2981 | 8.2981 | 4.7000e-004 | 0.0000 | 8.3098 | |
| **Total** | | | | | | | | | | | **8.2981** | **8.2981** | **4.7000e-004** | **0.0000** | **8.3098** | |

**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 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**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 | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | | | | | | | | | | | | 8.2981 | 8.2981 | 4.7000e-004 | 0.0000 | 8.3098 |
| **Total** | | | | | | | | | | | | **8.2981** | **8.2981** | **4.7000e-004** | **0.0000** | **8.3098** |

**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 |
| Vendor | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 566.3760 | 566.3760 | 0.0267 | 0.0000 | 567.0427 |
| Unmitigated | | | | | | | | | | | 0.0000 | 566.3760 | 566.3760 | 0.0267 | 0.0000 | 567.0427 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments High Rise | 0.00 | 0.00 | 0.00 | | |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Place of Worship | 0.00 | 0.00 | 0.00 | | |
| User Defined Commercial | 580.00 | 914.35 | 914.35 | 1,404,132 | 1,404,132 |
| | | | | | 1,404,132 |

### 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 High Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Place of Worship | 16.60 | 8.40 | 6.90 | 0.00 | 95.00 | 5.00 | 64 | 25 | 11 |
| User Defined Commercial | 0.00 | 5.71 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments High Rise | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| Enclosed Parking with Elevator | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| General Office Building | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| Place of Worship | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |
| User Defined Commercial | 0.553363 | 0.042540 | 0.203692 | 0.115607 | 0.014606 | 0.005830 | 0.021800 | 0.032323 | 0.002120 | 0.001725 | 0.004837 | 0.000711 | 0.000846 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

| | ROG | NOx | CO | SO2 | Fugitive 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 | 350.6177 | 350.6177 | 0.0157 | 3.2500e-003 | 351.9795 |
| Electricity Unmitigated | | | | | | | | | | | 0.0000 | 396.3553 | 396.3553 | 0.0178 | 3.6800e-003 | 397.8948 |
| NaturalGas Mitigated | | | | | | | | | | | 0.0000 | 92.3037 | 92.3037 | 1.7700e-003 | 1.6900e-003 | 92.8522 |
| NaturalGas Unmitigated | | | | | | | | | | | 0.0000 | 97.6100 | 97.6100 | 1.8700e-003 | 1.7900e-003 | 98.1901 |

## 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 High Rise | 1.41019e+006 | | | | | | | | | | | 0.0000 | 75.2532 | 75.2532 | 1.4400e-003 | 1.3800e-003 | 75.7004 |
| Enclosed Parking with Elevator | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 35394 | | | | | | | | | | | 0.0000 | 1.8888 | 1.8888 | 4.0000e-005 | 3.0000e-005 | 1.9000 |
| Place of Worship | 383557 | | | | | | | | | | | 0.0000 | 20.4681 | 20.4681 | 3.9000e-004 | 3.8000e-004 | 20.5897 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **97.6100** | **97.6100** | **1.8700e-003** | **1.7900e-003** | **98.1901** |

**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 High Rise | 1.34309e+006 | | | | | | | | | | | 0.0000 | 71.6722 | 71.6722 | 1.3700e-003 | 1.3100e-003 | 72.0982 |
| Enclosed Parking with Elevator | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 31987.2 | | | | | | | | | | | 0.0000 | 1.7070 | 1.7070 | 3.0000e-005 | 3.0000e-005 | 1.7171 |
| Place of Worship | 354631 | | | | | | | | | | | 0.0000 | 18.9245 | 18.9245 | 3.6000e-004 | 3.5000e-004 | 19.0369 |
| User Defined Commercial | 0 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | | | | | | | | **0.0000** | **92.3037** | **92.3037** | **1.7600e-003** | **1.6900e-003** | **92.8522** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments High Rise | 605892 | 177.8138 | 7.9700e-003 | 1.6500e-003 | 178.5044 |
| Enclosed Parking with Elevator | 465284 | 136.5489 | 6.1200e-003 | 1.2700e-003 | 137.0793 |
| General Office Building | 44166 | 12.9616 | 5.8000e-004 | 1.2000e-004 | 13.0119 |
| Place of Worship | 235220 | 69.0311 | 3.0900e-003 | 6.4000e-004 | 69.2992 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments High Rise | 575015 | 168.7520 | 7.5600e-003 | 1.5600e-003 | 169.4075 |
| Enclosed Parking with Elevator | 366272 | 107.4915 | 4.8200e-003 | 1.0000e-003 | 107.9090 |
| General Office Building | 39397.5 | 11.5622 | 5.2000e-004 | 1.1000e-004 | 11.6071 |
| Place of Worship | 214029 | 62.8120 | 2.8200e-003 | 5.8000e-004 | 63.0560 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | | | | |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

No Hearths Installed

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | | | | | | | | | | | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| Unmitigated | | | | | | | | | | | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |

### 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 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | | | | | | | | | | | 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 |
| Landscaping | | | | | | | | | | | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| **Total** | | | | | | | | | | | **0.0000** | **2.5879** | **2.5879** | **2.5000e-003** | **0.0000** | **2.6504** |

**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 | | | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | | | | | | | | | | | 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 |
| Landscaping | | | | | | | | | | | 0.0000 | 2.5879 | 2.5879 | 2.5000e-003 | 0.0000 | 2.6504 |
| **Total** | | | | | | | | | | | **0.0000** | **2.5879** | **2.5879** | **2.5000e-003** | **0.0000** | **2.6504** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 57.2641 | 0.2953 | 7.4200e-003 | 66.8588 |
| Unmitigated | 71.5801 | 0.3692 | 9.2800e-003 | 83.5735 |

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |

| | | | | | |
|---|---|---|---|---|---|
| Apartments High Rise | 9.96857 / 6.28453 | 61.7464 | 0.3275 | 8.2100e-003 | 72.3802 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 0.604295 / 0.370374 | 3.7085 | 0.0199 | 5.0000e-004 | 4.3530 |
| Place of Worship | 0.663012 / 1.03702 | 6.1251 | 0.0219 | 5.6000e-004 | 6.8402 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **71.5801** | **0.3692** | **9.2700e-003** | **83.5735** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments High Rise | 7.97485 / 5.02762 | 49.3972 | 0.2620 | 6.5700e-003 | 57.9042 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 0.483436 / 0.296299 | 2.9668 | 0.0159 | 4.0000e-004 | 3.4824 |
| Place of Worship | 0.53041 / 0.829615 | 4.9001 | 0.0175 | 4.5000e-004 | 5.4722 |
| User Defined Commercial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **57.2641** | **0.2953** | **7.4200e-003** | **66.8588** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 9.3091 | 0.5502 | 0.0000 | 23.0628 |
| Unmitigated | 39.4452 | 2.3311 | 0.0000 | 97.7238 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |

| | | | | | |
|---|---|---|---|---|---|
| Apartments High Rise | 70.38 | 14.2865 | 0.8443 | 0.0000 | 35.3942 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 3.16 | 0.6415 | 0.0379 | 0.0000 | 1.5892 |
| Place of Worship | 120.78 | 24.5173 | 1.4489 | 0.0000 | 60.7405 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **39.4452** | **2.3312** | **0.0000** | **97.7238** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments High Rise | 16.6097 | 3.3716 | 0.1993 | 0.0000 | 8.3530 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Office Building | 0.74576 | 0.1514 | 8.9500e-003 | 0.0000 | 0.3750 |
| Place of Worship | 28.5041 | 5.7861 | 0.3420 | 0.0000 | 14.3348 |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **9.3091** | **0.5502** | **0.0000** | **23.0628** |

## 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 |
|---|---|---|---|---|---|---|
| Emergency Generator | 1 | 1 | 12 | 300 | 0.73 | Diesel |

**Boilers**

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

**User Defined Equipment**

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

### 10.1 Stationary Sources

**Unmitigated/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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Emergency Generator - Diesel (300 - 600 HP) | | | | | | | | | | | 0.0000 | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | | | | | | | | | | | | 1.3709 | 1.3709 | 1.9000e-004 | 0.0000 | 1.3757 |

## 11.0 Vegetation

**GHG Emissions Reductions for Residential Uses Associated with PDF XX-XX (Electric Vehicle Charging Stations/Plugins)**

**Step 1: Estimating GHG Emisisons Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle**

| | | |
|---|---|---|
| LADWP Electricity Emission Factor[1] | 0.27 | MTCO2E/MWh |
| Fuel Economy of Electric Vehicle[2] | 0.33 | kWh/mile |
| Electric Vehicle GHG Emissions | 89.4 | grams/mile |
| GHG Emissions from Residential Miles Traveled (CalEEMod)[3] | 354.0 | grams/mile |
| GHG Emissions Reduction from Additional Electric Vehicles, per mile | 264.6 | grams/mile |

**Step 2: Estimating Project Residential-Related VMT GHG Emissions**

| | | |
|---|---|---|
| Residential Average Yearly VMT with TDM and PDFs[4] | 730,730 | miles/year |
| Percent of Residential Miles Driven in Electric Vehicles due to this Measure | 10.0% | |
| Residential VMT that is Displaced by Evs due to this Measure | 73,073 | miles/year |
| GHG Emisisons Reduction from Residential Electric Vehicles | **19** | MTCO2E/MWh |
| | | |
| Energy Usage for Charging Vehicles | **24,114** | kWH/year |

Notes:
1) CO2 intensity factor reflects a 2023 RPS for LADWP (672 lbs of CO2E/MWh).
2) US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: http://afdc.energy.gov/fuels/electricity_benefits.html.
3) CalEEMod Output file provided in Appendix XX.X of this Draft EIR.
4) Residential charging of vehicles would primarily occur over night, while commercial use charging of vehicles would primarily occur during the day. In addition, it is assumed that the charging stations/plugins for residential uses would be fully utlized which is supported by the projected number of electric vehicles in the future. Bloomberg New Energy Finance projects that electric vehicles will represent 35 percent of global new car sales by 2040 (https://about.bnef.com/blog/electric-vehicles-to-be-35-of-global-new-car-sales-by-2040/).