

## **Appendix C**



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# Air Quality and Greenhouse Gas Emissions

# Metro TCN

## Draft EIR

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# **Metro TCN**

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

# **AIR QUALITY AND GREENHOUSE GAS EMISSIONS METHODOLOGY**

**Metro TCN**

***Prepared by:***

**Eyestone Environmental, LLC**

**August 2022**

# Metro TCN Project

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## 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 Metro TCN 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:<sup>1</sup>

- 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;

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<sup>1</sup> *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.<sup>2</sup>

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)).

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<sup>2</sup> See [www.caleemod.com](http://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 2020.4.0). 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.<sup>3</sup> 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:

$$\text{Emissions Diesel [lbs]} = \left( \sum_i (\text{EF}_i \times \text{Pop}_i \times \text{AvgHP}_i \times \text{Load}_i \times \text{Activity}_i) \right)$$

Where:  $\text{EF}_i$  = Emission factor from OFFROAD (lbs/hr)

$\text{Pop}_i$  = Population (quantity of same equipment)

<sup>3</sup> SCAQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, 2008.

- AvgHP<sub>i</sub> = Maximum rated average horsepower (hp)  
 Load<sub>i</sub> = Load Factor (dimensionless)  
 Activity<sub>i</sub> = 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<sub>10</sub> and PM<sub>2.5</sub> 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:

$$\text{Emissions Architectural Coatings (lbs)} = \text{EF}_{\text{AC}} \times F \times A_{\text{paint}}$$

Where:  $\text{EF}_{\text{AC}}$  = Emission Factor (lb/sf)

$A_{\text{paint}}$  = 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 will 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:

$$\text{EF}_{\text{AC}} = C_{\text{VOC}}/454(\text{g/lb}) \times 3.785(\text{L/gal})/180(\text{sf})$$

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:

$$\text{Emissions}_{\text{SAP}} (\text{lbs}) = \text{EF}_{\text{AP}} \times A_{\text{parking}}$$

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. This value is used as the default emission factor within CalEEMod

## (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:

$$\text{Emissions Consumer Products (lbs)} = \text{EF}_{\text{CP}} \times \text{Building Area}$$

Where:

$\text{EF}_{\text{CP}}$  = 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:

$$\text{Landscaping Equipment Emissions [lbs]} = ( \sum_i (\text{Units} \times \text{EF}_{\text{LE}} \times \text{A}_{\text{LE}})_i )$$

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

$\text{EF}_{\text{LE}}$  = Emission factor [grams (g)/1,000 sfdays]

$i$  = 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.<sup>4</sup> The data is specific for climate zones and, therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. CalEEMod includes 2019 Title 24 Energy Efficiency Standards when calculating project energy usage.

*(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<sub>2e</sub> are calculated as follows:

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<sup>4</sup> CEC, *Commercial End-Use Survey, March 2006*.

Electricity:

$$\text{Annual Emissions [MTCO}_2\text{e]} = ( \sum_i (\text{Units} \times D_E \times EF_E \times \text{GWP})_i ) \div 2,204.62$$

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 [ $\text{CO}_2 = 1$ ,  $\text{CH}_4 = 21$ ,  $\text{N}_2\text{O} = 310$ ]

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  $\text{CO}_2$  intensity of 801 pounds of  $\text{CO}_2$  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  $\text{CO}_2$  intensity would be 585 pounds of  $\text{CO}_2$  per MWh by Year 2026.<sup>5</sup>

*(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:

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<sup>5</sup> 2016 Final Power Integrated Resource Plan, Figure 4-7. LADWP. December 2016.

Natural Gas:

$$\text{Natural Gas Emissions (lbs)} = ( \sum_i (\text{Units} \times D_{\text{NG}} \times EF_{\text{NG}})_i )$$

Where: Units = Number of land use units (same land use type) [1,000 sf]  
 $D_{\text{NG}}$  = Natural Gas combustion factor [MMBtu/1,000 sf]  
 $EF_{\text{NG}}$  = 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 the 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 EMFAC2017.

Mobile source emissions were generally calculated in CalEEMod as follows:

Mobile:

$$\text{Mobile Emissions [lbs]} = ( \sum_i (\text{Units} \times \text{ADT} \times D_{\text{TRIP}} \times EF_i) )$$

Where: Units = Number of vehicles (same vehicle model year and class)  
ADT = Average daily trip rate [trips/day]  
 $D_{\text{TRIP}}$  = 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 the Linscott Law and Greenspan.<sup>6</sup> As discussed in Section IV.G, 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.<sup>7</sup> 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, HQTAs 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<sub>2e</sub> were calculated as follows:

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<sup>6</sup> *Fehr & Peers., Transportation Assessment for the Sunset Wilcox Project, March 2021.*

<sup>7</sup> *Environmental Protection Agency, Mixed-Use Trip Generation Model. [www.epa.gov/smartgrowth/mixed-use-trip-generation-model](http://www.epa.gov/smartgrowth/mixed-use-trip-generation-model). Accessed April 1, 2022.*

Emergency Generator:

$$\text{Emissions [lbs]} = (\text{Total HP} \times \text{LF} \times \text{HR} \times \text{EF})$$

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<sub>2</sub> and CH<sub>4</sub> 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<sub>2</sub>e were calculated in CalEEMod as follows:

Solid Waste:

$$\text{Annual Emissions [MTCO}_2\text{e]} = (\sum_i (\text{Units} \times D_{\text{MSW}} \times \text{EF}_{\text{MSW}} \times \text{GWP})_i) \div 1.1023$$

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

D<sub>MSW</sub> = Waste disposal rate [tons/1,000 sf/yr]

EF<sub>MSW</sub> = GHG emission factor [tons/ton waste]

GWP = Global warming potential [CO<sub>2</sub> = 1, CH<sub>4</sub> = 21, N<sub>2</sub>O = 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 annual solid waste disposal rates used. The GHG emission factors, particularly for CH<sub>4</sub>, 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.<sup>8</sup>

## (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:

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<sup>8</sup> City of Los Angeles, *Sustainable City pLAN, Waste & Landfills*, <http://plan.lamayor.org/portfolio/waste-landfills-3rd>, accessed April 1, 2022.

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

$$\text{Annual Emissions [MTCO}_2\text{e]} = \left( \sum_i (\text{Units} \times D_w \times (\text{El}_w \div 1,000) \times \text{EF}_w \times \text{GWP})_i \right) \div 2,204.62$$

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]
$\text{El}_w$	=	Electricity intensity factor [kilowatt-hours (kWh)/Mgal]
1,000	=	Conversion factor [kWh/MWh]
$\text{EF}_w$	=	GHG emission factor [pounds/MWh]
GWP	=	Global warming potential [ $\text{CO}_2 = 1$ , $\text{CH}_4 = 21$ , $\text{N}_2\text{O} = 310$ ]
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.1, 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.<sup>9</sup> Even though these studies did not provide an exact

<sup>9</sup> *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.

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*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.*

# Metro TCN

## Draft EIR

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

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Note:

CalEEMod runs presented below for Existing Static Display removal (demolition) and TCN Structure Construction represent one construction crew. It was assumed that there will be up to four Existing Static Display removal crews and four TCN Structure Construction crews operating on the same day.

Emissions presented in the summary sheet represent four removal crews and four construction crews operating on the same day.

Metro TCN  
Air Quality Emissions Summary

<b>AQ SUMMARY OF EMISSIONS</b>							
<b>Construction Emissions (Unmitigated)</b>							
Regional (Daily) Unmitigated	ROG	NO <sub>x</sub>	CO	SO2	PM <sub>10</sub>	PM <sub>2.5</sub>	
2023	4	37	116	<1	3	1	
2024	4	37	116	<1	3	1	
2025	4	40	116	<1	5	2	
MAX	4	40	116	<1	5	2	
<b>Threshold</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>	
<b>Difference</b>	<b>(71)</b>	<b>(60)</b>	<b>(434)</b>	<b>(150)</b>	<b>(145)</b>	<b>(53)</b>	
<b>Impact</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	
Localized (Daily) Unmitigated	ROG	NO <sub>x</sub>	CO	SO2	PM <sub>10</sub>	PM <sub>2.5</sub>	
2023		27	113		<1	<1	
2024		26	112		<1	<1	
2025		26	112		<1	<1	
MAX		27	113		<1	<1	
<b>Threshold</b>		<b>59</b>	<b>714</b>		<b>5</b>	<b>3</b>	
<b>Difference</b>		<b>(32)</b>	<b>(601)</b>		<b>(4)</b>	<b>(3)</b>	
<b>Impact</b>		<b>No</b>	<b>No</b>		<b>No</b>	<b>No</b>	

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

Existing Regional Emissions (Existing Year)	ROG	NO <sub>x</sub>	CO	SO2	PM <sub>10</sub>	PM <sub>2.5</sub>	
Energy	<1	<1	<1	<1	<1	<1	
Mobile	<1	<1	<1	<1	<1	<1	
Off Road Equipmet	<1	1	<1	<1	<1	<1	
Total	<1	1	<1	<1	<1	<1	
Existing Regional Emissions (Buildout Year)	ROG	NO <sub>x</sub>	CO	SO2	PM <sub>10</sub>	PM <sub>2.5</sub>	
Energy	<1	<1	<1	<1	<1	<1	
Mobile	<1	<1	<1	<1	<1	<1	
Off Road Equipmet	<1	<1	<1	<1	<1	<1	
Total	<1	1	<1	<1	<1	<1	
Project Regional Emissions (Buildout Year)	ROG	NO <sub>x</sub>	CO	SO2	PM <sub>10</sub>	PM <sub>2.5</sub>	
Energy	<1	<1	<1	<1	<1	<1	
Mobile	<1	<1	<1	<1	<1	<1	
Emergency Generator	<1	<1	<1	<1	<1	<1	
Total	<1	<1	<1	<1	<1	<1	
Incremental Regional Emissions (Project Less Existing)	ROG	NO <sub>x</sub>	CO	SO2	PM <sub>10</sub>	PM <sub>2.5</sub>	
Energy	<1	<1	<1	<1	<1	<1	
Mobile	<1	<1	<1	<1	<1	<1	
Off Road Equipment	<1	<1	<1	<1	<1	<1	
Total	<1	<1	<1	<1	<1	<1	
<b>Threshold</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>	
<b>Difference</b>	<b>(55)</b>	<b>(55)</b>	<b>(550)</b>	<b>(150)</b>	<b>(150)</b>	<b>(55)</b>	
<b>Impact</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	
Project Localized (Buildout Year)							
Onsite Total		1	<1		<1	<1	
<b>Threshold</b>		<b>59</b>	<b>714</b>		<b>2</b>	<b>1</b>	
<b>Difference</b>		<b>(58)</b>	<b>(713)</b>		<b>(2)</b>	<b>(1)</b>	
<b>Impact</b>		<b>No</b>	<b>No</b>		<b>No</b>	<b>No</b>	

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

**Central LA NO2 Monitoring Data**

SRA	City	Design Value	98th percentile, ppb			
		2014-2016	2017	2018	2019	2020
1	Central LA	56	57	56	55	

  

SRA	City	Design Value	Max Hourly, ppb			
		2006-2008	2017	2018	2019	2020
1	Central LA	120	70	70	62	

Threshold (ppb)      Allowable Increase (ppb)  
100                      44

Threshold (ppb)      Allowable Increase (ppb)  
180                      60

<b>Max Hourly vs. 98th Percentile Ratio (Allowable Increase)</b>	<b>74%</b>
--	------------

**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	74	55	680	5	3	2	1
2	108	80	1048	8	5	2	2
5	161	119	1861	16	8	4	2
<b>1</b>	<b>80</b>	<b>59</b>	<b>714</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>1</b>

<----Interpolated Value

# Metro TCN Project

## Air Quality and Noise Analysis Assumptions

Construction Details	Start Date	End Date	Duration (Months)	Work Days	Max Daily Employee Trips	Max Daily Hauls	Total Hauls	Max Daily Deliveries
Overall Duration	4/3/2023	4/24/2023	1	18	2			
Demolition (if applicable - pavement, etc.)	4/5/2023	4/5/2023		1	2	5	10	
Grading/Excavation (Depth: up to 50 feet)	4/6/2023	4/12/2023		5	2	5	10	
TCN Structure Foundation	4/13/2023	4/16/2023		2	2			5
TCN Structure Construction	4/17/2023	4/24/2023		6	2			5
Paving/Landscape	4/20/2023	4/24/2023		3	2			5
<b>Site Acreage</b>								
<b>Import/Export Quantities during Grading (CY)</b>								
Import								
Export		93	per TCN Structure					

The TCN Structures are anticipated to be installed in a phased approach, and would take approximately four weeks per sign for installation. Overall, Project construction is anticipated to commence in 2023 and be completed in 2025. It is estimated that approximately 93 cubic yards of soil export would be required per TCN Structure installation for a total of up to approximately 5,185 cubic yards of export.

Landfill Location	One-Way Distance (miles)
Vulcan Irwindale	30
Vulcan Sun Valley	35

North and downtown sites  
South sites

Equipment						
	Demo	Grading/Excavation	Mat Foundation	Foundation	Building Construction	Paving/Landscape
Air Compressor						
Aerial Lift	1				1	
Bore/Drill Rig				1		
Cement and Mortar Mixers				1		
Concrete/Industrial Saws	1			1		
Cranes (Tower)						
Cranes (Mobile)	1				1	
Crawler Tractors						
Crushing/Proc. Equipment						
Excavators						
Forklifts						
Generator Sets						
Graders						
Off-Highway Tractors						
Water Truck				1		
Pavers						
Paving Equipment						1
Pumps						
Plate Compactors						
Rollers						
Rough Terrain Forklifts						
Rubber Tired Dozers						
Rubber Tired Loaders					1	
Scrapers						
Signal Boards						
Skid Steer Loaders						
Surfacing Equipment						
Tractors/Loaders/Backhoes	1	1			1	
Trenchers					1	
Welders					2	
Other ( )						
<b>Total Pieces</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>1</b>



Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Allvision - Operations**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2022
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	550	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics - SB 100
- Land Use -
- Construction Phase -
- Vehicle Trips - One trip per day for maintenance of signs
- Energy Use - sign energy usage
- Water And Wastewater - no water usage
- Waste Mitigation -
- Operational Off-Road Equipment - crane for maintenance
- Fleet Mix - All vehicles for maintenance are MHD

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	1,000.00
tblEnergyUse	T24NG	13.51	0.00
tblFleetMix	HHD	8.6030e-003	0.00
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2270e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.8450e-003	0.00
tblFleetMix	MHD	0.01	1.00
tblFleetMix	OBUS	8.2900e-004	0.00
tblFleetMix	SBUS	7.4100e-004	0.00
tblFleetMix	UBUS	5.2100e-004	0.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	550
tblVehicleTrips	ST_TR	1.99	0.00

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	10.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	0.0185	0.4534	0.1476	2.6900e-003	0.1186	8.8700e-003	0.1275	0.0355	8.4800e-003	0.0440						
Offroad	0.0933	1.0461	0.4731	1.4400e-003		0.0434	0.0434		0.0400	0.0400						
<b>Total</b>	<b>0.1346</b>	<b>1.4994</b>	<b>0.6209</b>	<b>4.1300e-003</b>	<b>0.1186</b>	<b>0.0523</b>	<b>0.1709</b>	<b>0.0355</b>	<b>0.0484</b>	<b>0.0840</b>						

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	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	0.0185	0.4534	0.1476	2.6900e-003	0.1186	8.8700e-003	0.1275	0.0355	8.4800e-003	0.0440						
Offroad	0.0933	1.0461	0.4731	1.4400e-003		0.0434	0.0434		0.0400	0.0400						
<b>Total</b>	<b>0.1346</b>	<b>1.4994</b>	<b>0.6209</b>	<b>4.1300e-003</b>	<b>0.1186</b>	<b>0.0523</b>	<b>0.1709</b>	<b>0.0355</b>	<b>0.0484</b>	<b>0.0840</b>						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0185	0.4534	0.1476	2.6900e-003	0.1186	8.8700e-003	0.1275	0.0355	8.4800e-003	0.0440						
Unmitigated	0.0185	0.4534	0.1476	2.6900e-003	0.1186	8.8700e-003	0.1275	0.0355	8.4800e-003	0.0440						

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
General Light Industry	10.00	0.00	0.00	31,631	31,631
Other Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>10.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31,631</b>	<b>31,631</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.544368	0.059978	0.184244	0.130791	0.023854	0.006227	0.012011	0.008603	0.000829	0.000521	0.023988	0.000741	0.003845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

Mitigated

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Natural Gas 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					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

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	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

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	2.6200e-003					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.0202					0.0000	0.0000		0.0000	0.0000						
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.0228</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

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	2.6200e-003					0.0000	0.0000		0.0000	0.0000						

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	0.0202				0.0000	0.0000		0.0000	0.0000					
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000	0.0000	0.0000		0.0000	0.0000					
<b>Total</b>	<b>0.0228</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>					

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
Cranes	1	2.00	260	231	0.29	Diesel

UnMitigated/Mitigated

Equipment Type	ROG	NOx	CO	SO2	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					
Cranes	0.0933	1.0461	0.4731	1.4400e-003		0.0434	0.0434		0.0400	0.0400						
<b>Total</b>	<b>0.0933</b>	<b>1.0461</b>	<b>0.4731</b>	<b>1.4400e-003</b>		<b>0.0434</b>	<b>0.0434</b>		<b>0.0400</b>	<b>0.0400</b>						

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Allvision - Operations**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2025
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	484	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics - SB 100
- Land Use -
- Construction Phase -
- Vehicle Trips - One trip per day for maintenance of signs
- Energy Use - sign energy usage
- Water And Wastewater - no water usage
- Waste Mitigation -
- Operational Off-Road Equipment - crane for maintenance
- Fleet Mix - All vehicles for maintenance are MHD

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	1,000.00
tblEnergyUse	T24NG	13.51	0.00
tblFleetMix	HHD	8.6600e-003	0.00
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.5260e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.6440e-003	0.00
tblFleetMix	MHD	0.01	1.00
tblFleetMix	OBUS	8.1600e-004	0.00
tblFleetMix	SBUS	7.4600e-004	0.00
tblFleetMix	UBUS	5.0200e-004	0.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	484
tblVehicleTrips	ST_TR	1.99	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	10.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	5.4700e-003	0.3176	0.0803	2.5000e-003	0.1186	1.7700e-003	0.1204	0.0355	1.6900e-003	0.0372						
Offroad	0.0782	0.7920	0.4341	1.4400e-003		0.0337	0.0337		0.0310	0.0310						
<b>Total</b>	<b>0.1065</b>	<b>1.1095</b>	<b>0.5146</b>	<b>3.9400e-003</b>	<b>0.1186</b>	<b>0.0354</b>	<b>0.1540</b>	<b>0.0355</b>	<b>0.0327</b>	<b>0.0682</b>						

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	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	5.4700e-003	0.3176	0.0803	2.5000e-003	0.1186	1.7700e-003	0.1204	0.0355	1.6900e-003	0.0372						
Offroad	0.0782	0.7920	0.4341	1.4400e-003		0.0337	0.0337		0.0310	0.0310						
<b>Total</b>	<b>0.1065</b>	<b>1.1095</b>	<b>0.5146</b>	<b>3.9400e-003</b>	<b>0.1186</b>	<b>0.0354</b>	<b>0.1540</b>	<b>0.0355</b>	<b>0.0327</b>	<b>0.0682</b>						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.4700e-003	0.3176	0.0803	2.5000e-003	0.1186	1.7700e-003	0.1204	0.0355	1.6900e-003	0.0372						
Unmitigated	5.4700e-003	0.3176	0.0803	2.5000e-003	0.1186	1.7700e-003	0.1204	0.0355	1.6900e-003	0.0372						

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
General Light Industry	10.00	0.00	0.00	31,631	31,631
Other Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>10.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31,631</b>	<b>31,631</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
General Light Industry	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Mitigated



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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Natural Gas 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					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

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	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

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	2.6200e-003					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.0202					0.0000	0.0000		0.0000	0.0000						
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.0228</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

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	2.6200e-003					0.0000	0.0000		0.0000	0.0000						

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	0.0202				0.0000	0.0000		0.0000	0.0000					
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000	0.0000	0.0000		0.0000	0.0000					
<b>Total</b>	<b>0.0228</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>					

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
Cranes	1	2.00	260	231	0.29	Diesel

UnMitigated/Mitigated

Equipment Type	ROG	NOx	CO	SO2	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					
Cranes	0.0782	0.7920	0.4341	1.4400e-003		0.0337	0.0337		0.0310	0.0310						
<b>Total</b>	<b>0.0782</b>	<b>0.7920</b>	<b>0.4341</b>	<b>1.4400e-003</b>		<b>0.0337</b>	<b>0.0337</b>		<b>0.0310</b>	<b>0.0310</b>						

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Allvision - Operations**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2025
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	484	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics - SB 100
- Land Use -
- Construction Phase -
- Vehicle Trips - One trip per day for maintenance of signs
- Energy Use - sign energy usage
- Water And Wastewater - no water usage
- Waste Mitigation -
- Operational Off-Road Equipment - crane for maintenance
- Fleet Mix - All vehicles for maintenance are MHD

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	3,288.69
tblEnergyUse	T24NG	13.51	0.00
tblFleetMix	HHD	8.6600e-003	0.00
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.5260e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.6440e-003	0.00
tblFleetMix	MHD	0.01	1.00
tblFleetMix	OBUS	8.1600e-004	0.00
tblFleetMix	SBUS	7.4600e-004	0.00
tblFleetMix	UBUS	5.0200e-004	0.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	484
tblVehicleTrips	ST_TR	1.99	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	2.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

2.0 Emissions Summary

2.2 Overall Operational  
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.0900e-003	0.0635	0.0161	5.0000e-004	0.0237	3.5000e-004	0.0241	7.1100e-003	3.4000e-004	7.4400e-003						
Offroad	0.0782	0.7920	0.4341	1.4400e-003		0.0337	0.0337		0.0310	0.0310						
<b>Total</b>	<b>0.1021</b>	<b>0.8555</b>	<b>0.4504</b>	<b>1.9400e-003</b>	<b>0.0237</b>	<b>0.0340</b>	<b>0.0577</b>	<b>7.1100e-003</b>	<b>0.0313</b>	<b>0.0384</b>						

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	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Mobile	1.0900e-003	0.0635	0.0161	5.0000e-004	0.0237	3.5000e-004	0.0241	7.1100e-003	3.4000e-004	7.4400e-003						
Offroad	0.0782	0.7920	0.4341	1.4400e-003		0.0337	0.0337		0.0310	0.0310						
<b>Total</b>	<b>0.1021</b>	<b>0.8555</b>	<b>0.4504</b>	<b>1.9400e-003</b>	<b>0.0237</b>	<b>0.0340</b>	<b>0.0577</b>	<b>7.1100e-003</b>	<b>0.0313</b>	<b>0.0384</b>						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0900e-003	0.0635	0.0161	5.0000e-004	0.0237	3.5000e-004	0.0241	7.1100e-003	3.4000e-004	7.4400e-003						
Unmitigated	1.0900e-003	0.0635	0.0161	5.0000e-004	0.0237	3.5000e-004	0.0241	7.1100e-003	3.4000e-004	7.4400e-003						

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	2.00	0.00	0.00	6,326	6,326
Other Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6,326</b>	<b>6,326</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	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
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

Mitigated

AllVision  
Project Operations - Winter

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Allvision - Operations - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Natural Gas 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					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

**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	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	0.0228	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

**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	2.6200e-003					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.0202					0.0000	0.0000		0.0000	0.0000						
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.0228</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

**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	2.6200e-003					0.0000	0.0000		0.0000	0.0000						

Allvision - Operations - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	0.0202				0.0000	0.0000		0.0000	0.0000					
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000	0.0000	0.0000		0.0000	0.0000					
<b>Total</b>	<b>0.0228</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>					

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
Cranes	1	2.00	260	231	0.29	Diesel

UnMitigated/Mitigated

Equipment Type	ROG	NOx	CO	SO2	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					
Cranes	0.0782	0.7920	0.4341	1.4400e-003		0.0337	0.0337		0.0310	0.0310						
<b>Total</b>	<b>0.0782</b>	<b>0.7920</b>	<b>0.4341</b>	<b>1.4400e-003</b>		<b>0.0337</b>	<b>0.0337</b>		<b>0.0310</b>	<b>0.0310</b>						

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

Metro TCN - Demolition - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Demolition**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2024
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumption

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	10.00	5.00

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction



Metro TCN - Demolition - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	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					
2023	0.9140	10.7696	9.4482	0.0284	0.4053	0.3901	0.7954	0.1106	0.3698	0.4803						
Maximum	0.9140	10.7696	9.4482	0.0284	0.4053	0.3901	0.7954	0.1106	0.3698	0.4803						

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					
2023	0.2556	3.9876	10.7076	0.0284	0.4053	0.0431	0.4483	0.1106	0.0423	0.1528						
Maximum	0.2556	3.9876	10.7076	0.0284	0.4053	0.0431	0.4483	0.1106	0.0423	0.1528						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	72.03	62.97	-13.33	0.00	0.00	88.96	43.63	0.00	88.56	68.18	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	4/5/2023	4/5/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	5.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT

Metro TCN - Demolition - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 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	0.8711	8.4687	8.8151	0.0168		0.3726	0.3726		0.3531	0.3531						
<b>Total</b>	<b>0.8711</b>	<b>8.4687</b>	<b>8.8151</b>	<b>0.0168</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3531</b>	<b>0.3531</b>						

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	0.0260	2.2893	0.4742	0.0111	0.3494	0.0171	0.3665	0.0957	0.0164	0.1121						
Worker	0.0168	0.0117	0.1589	4.6000e-004	0.0559	3.1000e-004	0.0562	0.0148	2.9000e-004	0.0151						
<b>Total</b>	<b>0.0428</b>	<b>2.3009</b>	<b>0.6331</b>	<b>0.0116</b>	<b>0.4053</b>	<b>0.0174</b>	<b>0.4227</b>	<b>0.1106</b>	<b>0.0167</b>	<b>0.1272</b>						

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	0.2128	1.6867	10.0745	0.0168		0.0256	0.0256		0.0256	0.0256						
<b>Total</b>	<b>0.2128</b>	<b>1.6867</b>	<b>10.0745</b>	<b>0.0168</b>		<b>0.0256</b>	<b>0.0256</b>		<b>0.0256</b>	<b>0.0256</b>						

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					

Metro TCN  
Demolition - Winter

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Metro TCN - Demolition - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0260	2.2893	0.4742	0.0111	0.3494	0.0171	0.3665	0.0957	0.0164	0.1121						
Worker	0.0168	0.0117	0.1589	4.6000e-004	0.0559	3.1000e-004	0.0562	0.0148	2.9000e-004	0.0151						
<b>Total</b>	<b>0.0428</b>	<b>2.3009</b>	<b>0.6331</b>	<b>0.0116</b>	<b>0.4053</b>	<b>0.0174</b>	<b>0.4227</b>	<b>0.1106</b>	<b>0.0167</b>	<b>0.1272</b>						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2024
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumption

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tbiConstructionPhase	NumDays	2.00	5.00
tbiConstructionPhase	NumDays	100.00	2.00
tbiConstructionPhase	NumDays	100.00	6.00
tbiConstructionPhase	NumDays	5.00	3.00
tbiGrading	MaterialExported	0.00	93.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	UsageHours	4.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	WorkerTripNumber	8.00	2.00
tbiTripsAndVMT	WorkerTripNumber	3.00	2.00
tbiTripsAndVMT	WorkerTripNumber	1.00	2.00
tbiTripsAndVMT	WorkerTripNumber	1.00	2.00
tbiTripsAndVMT	WorkerTripNumber	3.00	2.00

**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					
2023	1.8755	16.6088	15.4443	0.0316	0.3738	0.7480	0.8568	0.1020	0.6971	0.7274						
Maximum	1.8755	16.6088	15.4443	0.0316	0.3738	0.7480	0.8568	0.1020	0.6971	0.7274						

**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					
2023	0.8693	5.3811	18.3254	0.0316	0.3726	0.1523	0.4052	0.1018	0.1522	0.1825						
Maximum	0.8693	5.3811	18.3254	0.0316	0.3726	0.1523	0.4052	0.1018	0.1522	0.1825						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	53.65	67.60	-18.65	0.00	0.34	79.64	52.71	0.20	78.16	74.91	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	4/5/2023	4/5/2023	5	1	
2	Grading/Excavation	Grading	4/6/2023	4/12/2023	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2023	4/14/2023	5	2	
4	TCN Structure Construction	Building Construction	4/17/2023	4/24/2023	5	6	
5	Paving/Landscaping	Paving	4/20/2023	4/24/2023	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

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	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TCN Structure Construction	7	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Landscaping	1	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	0.5197	4.6532	6.9807	0.0111		0.2133	0.2133		0.2065	0.2065						
<b>Total</b>	<b>0.5197</b>	<b>4.6532</b>	<b>6.9807</b>	<b>0.0111</b>		<b>0.2133</b>	<b>0.2133</b>		<b>0.2065</b>	<b>0.2065</b>						

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	0.0260	2.2893	0.4742	0.0111	0.3494	0.0171	0.3665	0.0957	0.0164	0.1121						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0327</b>	<b>2.2939</b>	<b>0.5378</b>	<b>0.0113</b>	<b>0.3717</b>	<b>0.0173</b>	<b>0.3890</b>	<b>0.1017</b>	<b>0.0165</b>	<b>0.1182</b>						

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	0.1419	1.3795	7.4752	0.0111		0.0162	0.0162		0.0162	0.0162						
<b>Total</b>	<b>0.1419</b>	<b>1.3795</b>	<b>7.4752</b>	<b>0.0111</b>		<b>0.0162</b>	<b>0.0162</b>		<b>0.0162</b>	<b>0.0162</b>						

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	0.0260	2.2893	0.4742	0.0111	0.3494	0.0171	0.3665	0.0957	0.0164	0.1121						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	0.0327	2.2939	0.5378	0.0113	0.3717	0.0173	0.3890	0.1017	0.0165	0.1182						
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3.3 Grading/Excavation - 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					
Fugitive Dust					2.1000e-003	0.0000	2.1000e-003	3.2000e-004	0.0000	3.2000e-004						
Off-Road	0.1514	1.5357	2.2313	3.1200e-003		0.0758	0.0758		0.0698	0.0698						
<b>Total</b>	<b>0.1514</b>	<b>1.5357</b>	<b>2.2313</b>	<b>3.1200e-003</b>	<b>2.1000e-003</b>	<b>0.0758</b>	<b>0.0779</b>	<b>3.2000e-004</b>	<b>0.0698</b>	<b>0.0701</b>						

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	0.0260	2.2893	0.4742	0.0111	0.3494	0.0171	0.3665	0.0957	0.0164	0.1121						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0327</b>	<b>2.2939</b>	<b>0.5378</b>	<b>0.0113</b>	<b>0.3717</b>	<b>0.0173</b>	<b>0.3890</b>	<b>0.1017</b>	<b>0.0165</b>	<b>0.1182</b>						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004						
Off-Road	0.0380	0.1646	2.3421	3.1200e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003						
<b>Total</b>	<b>0.0380</b>	<b>0.1646</b>	<b>2.3421</b>	<b>3.1200e-003</b>	<b>8.2000e-004</b>	<b>5.0600e-003</b>	<b>5.8800e-003</b>	<b>1.2000e-004</b>	<b>5.0600e-003</b>	<b>5.1800e-003</b>						

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
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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0260	2.2893	0.4742	0.0111	0.3494	0.0171	0.3665	0.0957	0.0164	0.1121							
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003							
<b>Total</b>	<b>0.0327</b>	<b>2.2939</b>	<b>0.5378</b>	<b>0.0113</b>	<b>0.3717</b>	<b>0.0173</b>	<b>0.3890</b>	<b>0.1017</b>	<b>0.0165</b>	<b>0.1182</b>							

3.4 TCN Structure Foundation - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.6076	4.9920	5.9986	0.0164		0.2086	0.2086		0.2033	0.2033						
<b>Total</b>	<b>0.6076</b>	<b>4.9920</b>	<b>5.9986</b>	<b>0.0164</b>		<b>0.2086</b>	<b>0.2086</b>		<b>0.2033</b>	<b>0.2033</b>						

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.1600e-003	0.1916	0.0725	9.1000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.7000e-004	0.0102						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0119</b>	<b>0.1963</b>	<b>0.1360</b>	<b>1.0900e-003</b>	<b>0.0544</b>	<b>1.1500e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2383	1.1460	8.4546	0.0164		0.0383	0.0383		0.0383	0.0383						
<b>Total</b>	<b>0.2383</b>	<b>1.1460</b>	<b>8.4546</b>	<b>0.0164</b>		<b>0.0383</b>	<b>0.0383</b>		<b>0.0383</b>	<b>0.0383</b>						

Mitigated Construction Off-Site

Metro TCN  
Construction 2023 - Winter

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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.1600e-003	0.1916	0.0725	9.1000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.7000e-004	0.0102						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0119</b>	<b>0.1963</b>	<b>0.1360</b>	<b>1.0900e-003</b>	<b>0.0544</b>	<b>1.1500e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

3.5 TCN Structure Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6635	14.6134	12.6155	0.0253		0.6678	0.6678		0.6232	0.6232						
<b>Total</b>	<b>1.6635</b>	<b>14.6134</b>	<b>12.6155</b>	<b>0.0253</b>		<b>0.6678</b>	<b>0.6678</b>		<b>0.6232</b>	<b>0.6232</b>						

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	5.1600e-003	0.1916	0.0725	9.1000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.7000e-004	0.0102						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0119</b>	<b>0.1963</b>	<b>0.1360</b>	<b>1.0900e-003</b>	<b>0.0544</b>	<b>1.1500e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

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	0.7777	4.7706	14.9523	0.0253		0.1433	0.1433		0.1433	0.1433						
<b>Total</b>	<b>0.7777</b>	<b>4.7706</b>	<b>14.9523</b>	<b>0.0253</b>		<b>0.1433</b>	<b>0.1433</b>		<b>0.1433</b>	<b>0.1433</b>						

Metro TCN - Construction - South Coast Air Basin, Winter  
EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**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	5.1600e-003	0.1916	0.0725	9.1000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.7000e-004	0.0102						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0119</b>	<b>0.1963</b>	<b>0.1360</b>	<b>1.0900e-003</b>	<b>0.0544</b>	<b>1.1500e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

**3.6 Paving/Landscaping - 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	0.1707	1.6029	2.5567	4.0800e-003		0.0780	0.0780		0.0717	0.0717						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1882</b>	<b>1.6029</b>	<b>2.5567</b>	<b>4.0800e-003</b>		<b>0.0780</b>	<b>0.0780</b>		<b>0.0717</b>	<b>0.0717</b>						

**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	5.1600e-003	0.1916	0.0725	9.1000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.7000e-004	0.0102						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0119</b>	<b>0.1963</b>	<b>0.1360</b>	<b>1.0900e-003</b>	<b>0.0544</b>	<b>1.1500e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

**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
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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day					
	Off-Road	0.0503	0.2179	3.1010	4.0800e-003	6.7000e-003	6.7000e-003	6.7000e-003	6.7000e-003	6.7000e-003	6.7000e-003					
Paving	0.0175				0.0000	0.0000		0.0000	0.0000							
<b>Total</b>	<b>0.0678</b>	<b>0.2179</b>	<b>3.1010</b>	<b>4.0800e-003</b>	<b>6.7000e-003</b>	<b>6.7000e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>							

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.1600e-003	0.1916	0.0725	9.1000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.7000e-004	0.0102						
Worker	6.7400e-003	4.6700e-003	0.0636	1.8000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0400e-003						
<b>Total</b>	<b>0.0119</b>	<b>0.1963</b>	<b>0.1360</b>	<b>1.0900e-003</b>	<b>0.0544</b>	<b>1.1500e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2024
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumptions

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tbiConstructionPhase	NumDays	2.00	5.00
tbiConstructionPhase	NumDays	100.00	2.00
tbiConstructionPhase	NumDays	100.00	6.00
tbiConstructionPhase	NumDays	5.00	3.00
tbiGrading	MaterialExported	0.00	93.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	UsageHours	4.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	WorkerTripNumber	8.00	2.00
tbiTripsAndVMT	WorkerTripNumber	3.00	2.00
tbiTripsAndVMT	WorkerTripNumber	1.00	2.00
tbiTripsAndVMT	WorkerTripNumber	1.00	2.00
tbiTripsAndVMT	WorkerTripNumber	3.00	2.00

**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					
2024	1.7809	15.6168	15.3495	0.0316	0.3738	0.6873	0.7961	0.1020	0.6400	0.6703						
Maximum	1.7809	15.6168	15.3495	0.0316	0.3738	0.6873	0.7961	0.1020	0.6400	0.6703						

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					
2024	0.8309	5.3021	18.2858	0.0316	0.3726	0.1370	0.4052	0.1018	0.1369	0.1672						
Maximum	0.8309	5.3021	18.2858	0.0316	0.3726	0.1370	0.4052	0.1018	0.1369	0.1672						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	53.34	66.05	-19.13	0.00	0.34	80.07	49.09	0.20	78.61	75.06	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	4/5/2024	4/5/2024	5	1	
2	Grading/Excavation	Grading	4/6/2024	4/12/2024	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2024	4/16/2024	5	2	
4	TCN Structure Construction	Building Construction	4/17/2024	4/24/2024	5	6	
5	Paving/Landscaping	Paving	4/20/2024	4/24/2024	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

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	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TCN Structure Construction	7	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Landscaping	1	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	0.4914	4.3888	6.9785	0.0111		0.1861	0.1861		0.1801	0.1801						
<b>Total</b>	<b>0.4914</b>	<b>4.3888</b>	<b>6.9785</b>	<b>0.0111</b>		<b>0.1861</b>	<b>0.1861</b>		<b>0.1801</b>	<b>0.1801</b>						

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	0.0257	2.3013	0.4863	0.0110	0.3494	0.0172	0.3666	0.0957	0.0165	0.1122						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0320</b>	<b>2.3055</b>	<b>0.5455</b>	<b>0.0111</b>	<b>0.3717</b>	<b>0.0173</b>	<b>0.3891</b>	<b>0.1017</b>	<b>0.0166</b>	<b>0.1182</b>						

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	0.1419	1.3795	7.4752	0.0111		0.0162	0.0162		0.0162	0.0162						
<b>Total</b>	<b>0.1419</b>	<b>1.3795</b>	<b>7.4752</b>	<b>0.0111</b>		<b>0.0162</b>	<b>0.0162</b>		<b>0.0162</b>	<b>0.0162</b>						

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	0.0257	2.3013	0.4863	0.0110	0.3494	0.0172	0.3666	0.0957	0.0165	0.1122						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						



Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	0.0320	2.3055	0.5455	0.0111	0.3717	0.0173	0.3891	0.1017	0.0166	0.1182						
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3.3 Grading/Excavation - 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					
Fugitive Dust					2.1000e-003	0.0000	2.1000e-003	3.2000e-004	0.0000	3.2000e-004						
Off-Road	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612						
<b>Total</b>	<b>0.1439</b>	<b>1.4483</b>	<b>2.2356</b>	<b>3.1200e-003</b>	<b>2.1000e-003</b>	<b>0.0665</b>	<b>0.0686</b>	<b>3.2000e-004</b>	<b>0.0612</b>	<b>0.0615</b>						

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	0.0257	2.3013	0.4863	0.0110	0.3494	0.0172	0.3666	0.0957	0.0165	0.1122						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0320</b>	<b>2.3055</b>	<b>0.5455</b>	<b>0.0111</b>	<b>0.3717</b>	<b>0.0173</b>	<b>0.3891</b>	<b>0.1017</b>	<b>0.0166</b>	<b>0.1182</b>						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004						
Off-Road	0.0380	0.1646	2.3421	3.1200e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003						
<b>Total</b>	<b>0.0380</b>	<b>0.1646</b>	<b>2.3421</b>	<b>3.1200e-003</b>	<b>8.2000e-004</b>	<b>5.0600e-003</b>	<b>5.8800e-003</b>	<b>1.2000e-004</b>	<b>5.0600e-003</b>	<b>5.1800e-003</b>						

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
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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0257	2.3013	0.4863	0.0110	0.3494	0.0172	0.3666	0.0957	0.0165	0.1122							
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003							
<b>Total</b>	<b>0.0320</b>	<b>2.3055</b>	<b>0.5455</b>	<b>0.0111</b>	<b>0.3717</b>	<b>0.0173</b>	<b>0.3891</b>	<b>0.1017</b>	<b>0.0166</b>	<b>0.1182</b>							

3.4 TCN Structure Foundation - 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	0.5821	4.6834	5.9968	0.0165		0.1875	0.1875		0.1825	0.1825						
<b>Total</b>	<b>0.5821</b>	<b>4.6834</b>	<b>5.9968</b>	<b>0.0165</b>		<b>0.1875</b>	<b>0.1875</b>		<b>0.1825</b>	<b>0.1825</b>						

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	5.0200e-003	0.1924	0.0713	9.0000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0113</b>	<b>0.1966</b>	<b>0.1305</b>	<b>1.0800e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

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	0.2383	1.1460	8.4546	0.0165		0.0383	0.0383		0.0383	0.0383						
<b>Total</b>	<b>0.2383</b>	<b>1.1460</b>	<b>8.4546</b>	<b>0.0165</b>		<b>0.0383</b>	<b>0.0383</b>		<b>0.0383</b>	<b>0.0383</b>						

Mitigated Construction Off-Site

Metro TCN  
Construction 2024 - Winter

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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0200e-003	0.1924	0.0713	9.0000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0113</b>	<b>0.1966</b>	<b>0.1305</b>	<b>1.0800e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

3.5 TCN Structure Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5760	13.7275	12.5187	0.0253		0.6128	0.6128		0.5714	0.5714						
<b>Total</b>	<b>1.5760</b>	<b>13.7275</b>	<b>12.5187</b>	<b>0.0253</b>		<b>0.6128</b>	<b>0.6128</b>		<b>0.5714</b>	<b>0.5714</b>						

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	5.0200e-003	0.1924	0.0713	9.0000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0113</b>	<b>0.1966</b>	<b>0.1305</b>	<b>1.0800e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

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	0.7405	4.6910	14.9239	0.0253		0.1280	0.1280		0.1280	0.1280						
<b>Total</b>	<b>0.7405</b>	<b>4.6910</b>	<b>14.9239</b>	<b>0.0253</b>		<b>0.1280</b>	<b>0.1280</b>		<b>0.1280</b>	<b>0.1280</b>						

Metro TCN - Construction - South Coast Air Basin, Winter  
EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**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	5.0200e-003	0.1924	0.0713	9.0000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0113</b>	<b>0.1966</b>	<b>0.1305</b>	<b>1.0800e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

**3.6 Paving/Landscaping - 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	0.1648	1.4961	2.5698	4.0800e-003		0.0723	0.0723		0.0665	0.0665						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1822</b>	<b>1.4961</b>	<b>2.5698</b>	<b>4.0800e-003</b>		<b>0.0723</b>	<b>0.0723</b>		<b>0.0665</b>	<b>0.0665</b>						

**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	5.0200e-003	0.1924	0.0713	9.0000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0113</b>	<b>0.1966</b>	<b>0.1305</b>	<b>1.0800e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

**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
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Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Category	lb/day										lb/day					
	0.0503	0.2179	3.1010	4.0800e-003	6.7000e-003	6.7000e-003	6.7000e-003	6.7000e-003	6.7000e-003	6.7000e-003						
Off-Road																
Paving	0.0175				0.0000	0.0000		0.0000	0.0000							
<b>Total</b>	<b>0.0678</b>	<b>0.2179</b>	<b>3.1010</b>	<b>4.0800e-003</b>	<b>6.7000e-003</b>	<b>6.7000e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>							

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	5.0200e-003	0.1924	0.0713	9.0000e-004	0.0320	1.0200e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	6.3100e-003	4.1700e-003	0.0592	1.8000e-004	0.0224	1.2000e-004	0.0225	5.9300e-003	1.1000e-004	6.0400e-003						
<b>Total</b>	<b>0.0113</b>	<b>0.1966</b>	<b>0.1305</b>	<b>1.0800e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2025
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumptions
- Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tbiConstructionPhase	NumDays	10.00	1.00
tbiConstructionPhase	NumDays	2.00	5.00
tbiConstructionPhase	NumDays	100.00	2.00
tbiConstructionPhase	NumDays	100.00	6.00
tbiConstructionPhase	NumDays	5.00	3.00
tbiGrading	MaterialExported	0.00	93.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	UsageHours	4.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorTripNumber	0.00	5.00
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	WorkerTripNumber	8.00	2.00
tbiTripsAndVMT	WorkerTripNumber	3.00	2.00
tbiTripsAndVMT	WorkerTripNumber	1.00	2.00
tbiTripsAndVMT	WorkerTripNumber	1.00	2.00
tbiTripsAndVMT	WorkerTripNumber	3.00	2.00

**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					
2025	1.6471	14.1649	15.1980	0.0315	0.3738	0.6027	0.7115	0.1020	0.5611	0.5914						
Maximum	1.6471	14.1649	15.1980	0.0315	0.3738	0.6027	0.7115	0.1020	0.5611	0.5914						

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					
2025	0.7978	5.2222	18.2516	0.0315	0.3726	0.1239	0.4053	0.1018	0.1237	0.1540						
Maximum	0.7978	5.2222	18.2516	0.0315	0.3726	0.1239	0.4053	0.1018	0.1237	0.1540						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	51.56	63.13	-20.09	0.00	0.34	79.45	43.04	0.20	77.95	73.96	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	4/4/2025	4/4/2025	5	1	
2	Grading/Excavation	Grading	4/6/2025	4/11/2025	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2025	4/15/2025	5	2	
4	TCN Structure Construction	Building Construction	4/17/2025	4/24/2025	5	6	
5	Paving/Landscaping	Paving	4/20/2025	4/23/2025	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

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	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TCN Structure Construction	7	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Landscaping	1	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment



Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water Exposed Area

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4613	4.1248	6.9655	0.0111		0.1558	0.1558		0.1508	0.1508						
<b>Total</b>	<b>0.4613</b>	<b>4.1248</b>	<b>6.9655</b>	<b>0.0111</b>		<b>0.1558</b>	<b>0.1558</b>		<b>0.1508</b>	<b>0.1508</b>						

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	0.0254	2.2848	0.4951	0.0108	0.3494	0.0173	0.3666	0.0957	0.0165	0.1122						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0313</b>	<b>2.2885</b>	<b>0.5503</b>	<b>0.0109</b>	<b>0.3717</b>	<b>0.0174</b>	<b>0.3891</b>	<b>0.1017</b>	<b>0.0166</b>	<b>0.1183</b>						

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	0.1419	1.3795	7.4752	0.0111		0.0162	0.0162		0.0162	0.0162						
<b>Total</b>	<b>0.1419</b>	<b>1.3795</b>	<b>7.4752</b>	<b>0.0111</b>		<b>0.0162</b>	<b>0.0162</b>		<b>0.0162</b>	<b>0.0162</b>						

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	0.0254	2.2848	0.4951	0.0108	0.3494	0.0173	0.3666	0.0957	0.0165	0.1122						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	5.0300e-003						
Total	0.0313	2.2885	0.5503	0.0109	0.3717	0.0174	0.3891	0.1017	0.0166	0.1183						

3.3 Grading/Excavation - 2025

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.1000e-003	0.0000	2.1000e-003	3.2000e-004	0.0000	3.2000e-004						
Off-Road	0.1321	1.3351	2.2297	3.1200e-003		0.0541	0.0541		0.0498	0.0498						
Total	0.1321	1.3351	2.2297	3.1200e-003	2.1000e-003	0.0541	0.0562	3.2000e-004	0.0498	0.0501						

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0254	2.2848	0.4951	0.0108	0.3494	0.0173	0.3666	0.0957	0.0165	0.1122						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
Total	0.0313	2.2885	0.5503	0.0109	0.3717	0.0174	0.3891	0.1017	0.0166	0.1183						

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004						
Off-Road	0.0380	0.1646	2.3421	3.1200e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003						
Total	0.0380	0.1646	2.3421	3.1200e-003	8.2000e-004	5.0600e-003	5.8800e-003	1.2000e-004	5.0600e-003	5.1800e-003						

Mitigated Construction Off-Site

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0254	2.2848	0.4951	0.0108	0.3494	0.0173	0.3666	0.0957	0.0165	0.1122						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0313</b>	<b>2.2885</b>	<b>0.5503</b>	<b>0.0109</b>	<b>0.3717</b>	<b>0.0174</b>	<b>0.3891</b>	<b>0.1017</b>	<b>0.0166</b>	<b>0.1183</b>						

**3.4 TCN Structure Foundation - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5632	4.5029	5.9895	0.0165		0.1684	0.1684		0.1635	0.1635						
<b>Total</b>	<b>0.5632</b>	<b>4.5029</b>	<b>5.9895</b>	<b>0.0165</b>		<b>0.1684</b>	<b>0.1684</b>		<b>0.1635</b>	<b>0.1635</b>						

**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	4.8900e-003	0.1916	0.0702	8.8000e-004	0.0320	1.0300e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0108</b>	<b>0.1953</b>	<b>0.1254</b>	<b>1.0500e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

**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	0.2383	1.1460	8.4546	0.0165		0.0383	0.0383		0.0383	0.0383						
<b>Total</b>	<b>0.2383</b>	<b>1.1460</b>	<b>8.4546</b>	<b>0.0165</b>		<b>0.0383</b>	<b>0.0383</b>		<b>0.0383</b>	<b>0.0383</b>						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.8900e-003	0.1916	0.0702	8.8000e-004	0.0320	1.0300e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0108</b>	<b>0.1953</b>	<b>0.1254</b>	<b>1.0500e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

3.5 TCN Structure Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4612	12.5095	12.4006	0.0253		0.5379	0.5379		0.5014	0.5014						
<b>Total</b>	<b>1.4612</b>	<b>12.5095</b>	<b>12.4006</b>	<b>0.0253</b>		<b>0.5379</b>	<b>0.5379</b>		<b>0.5014</b>	<b>0.5014</b>						

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	4.8900e-003	0.1916	0.0702	8.8000e-004	0.0320	1.0300e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0108</b>	<b>0.1953</b>	<b>0.1254</b>	<b>1.0500e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

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	0.7084	4.6136	14.8998	0.0253		0.1149	0.1149		0.1149	0.1149						
<b>Total</b>	<b>0.7084</b>	<b>4.6136</b>	<b>14.8998</b>	<b>0.0253</b>		<b>0.1149</b>	<b>0.1149</b>		<b>0.1149</b>	<b>0.1149</b>						

Metro TCN - Construction - South Coast Air Basin, Winter  
EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.8900e-003	0.1916	0.0702	8.8000e-004	0.0320	1.0300e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0108</b>	<b>0.1953</b>	<b>0.1254</b>	<b>1.0500e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

**3.6 Paving/Landscaping - 2025**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1468	1.2647	2.5465	4.0700e-003		0.0626	0.0626		0.0575	0.0575						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1643</b>	<b>1.2647</b>	<b>2.5465</b>	<b>4.0700e-003</b>		<b>0.0626</b>	<b>0.0626</b>		<b>0.0575</b>	<b>0.0575</b>						

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	4.8900e-003	0.1916	0.0702	8.8000e-004	0.0320	1.0300e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0108</b>	<b>0.1953</b>	<b>0.1254</b>	<b>1.0500e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

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
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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day						
Off-Road	0.0503	0.2179	3.1010	4.0700e-003		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003							
Paving	0.0175					0.0000	0.0000		0.0000	0.0000							
<b>Total</b>	<b>0.0678</b>	<b>0.2179</b>	<b>3.1010</b>	<b>4.0700e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>							

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.8900e-003	0.1916	0.0702	8.8000e-004	0.0320	1.0300e-003	0.0330	9.2200e-003	9.8000e-004	0.0102						
Worker	5.9200e-003	3.7500e-003	0.0552	1.7000e-004	0.0224	1.1000e-004	0.0225	5.9300e-003	1.1000e-004	6.0300e-003						
<b>Total</b>	<b>0.0108</b>	<b>0.1953</b>	<b>0.1254</b>	<b>1.0500e-003</b>	<b>0.0544</b>	<b>1.1400e-003</b>	<b>0.0555</b>	<b>0.0152</b>	<b>1.0900e-003</b>	<b>0.0162</b>						

Metro TCN - Construction Onsite - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - 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 Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2024
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumption

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00

Metro TCN - Construction Onsite - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tbiConstructionPhase	NumDays	2.00	5.00
tbiConstructionPhase	NumDays	100.00	2.00
tbiConstructionPhase	NumDays	100.00	6.00
tbiConstructionPhase	NumDays	5.00	3.00
tbiGrading	MaterialExported	0.00	93.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	UsageHours	4.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	WorkerTripNumber	8.00	0.00
tbiTripsAndVMT	WorkerTripNumber	3.00	0.00
tbiTripsAndVMT	WorkerTripNumber	1.00	0.00
tbiTripsAndVMT	WorkerTripNumber	1.00	0.00
tbiTripsAndVMT	WorkerTripNumber	3.00	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					
2023	1.8517	16.2163	15.1722	0.0294	2.1000e-003	0.7458	0.7458	3.2000e-004	0.6949	0.6949						
Maximum	1.8517	16.2163	15.1722	0.0294	2.1000e-003	0.7458	0.7458	3.2000e-004	0.6949	0.6949						

**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					
2023	0.8455	4.9885	18.0533	0.0294	8.2000e-004	0.1501	0.1500	1.2000e-004	0.1501	0.1500						
Maximum	0.8455	4.9885	18.0533	0.0294	8.2000e-004	0.1501	0.1500	1.2000e-004	0.1501	0.1500						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	54.34	69.24	-18.99	0.00	60.95	79.88	79.88	62.50	78.41	78.41	0.00	0.00	0.00	0.00	0.00	0.00



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Metro TCN - Construction Onsite - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/5/2023	4/5/2023	5	1	
2	Grading/Excavation	Grading	4/6/2023	4/12/2023	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2023	4/14/2023	5	2	
4	TCN Structure Construction	Building Construction	4/17/2023	4/24/2023	5	6	
5	Paving/Landscaping	Paving	4/20/2023	4/24/2023	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

**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	0.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	0.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TCN Structure Construction	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Landscaping	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 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

Metro TCN - Construction Onsite - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day					
Off-Road	0.5197	4.6532	6.9807	0.0111		0.2133	0.2133		0.2065	0.2065						
<b>Total</b>	<b>0.5197</b>	<b>4.6532</b>	<b>6.9807</b>	<b>0.0111</b>		<b>0.2133</b>	<b>0.2133</b>		<b>0.2065</b>	<b>0.2065</b>						

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1419	1.3795	7.4752	0.0111		0.0162	0.0162		0.0162	0.0162						
<b>Total</b>	<b>0.1419</b>	<b>1.3795</b>	<b>7.4752</b>	<b>0.0111</b>		<b>0.0162</b>	<b>0.0162</b>		<b>0.0162</b>	<b>0.0162</b>						

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

3.3 Grading/Excavation - 2023

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1000e-003	0.0000	2.1000e-003	3.2000e-004	0.0000	3.2000e-004						
Off-Road	0.1514	1.5357	2.2313	3.1200e-003		0.0758	0.0758		0.0698	0.0698						
<b>Total</b>	<b>0.1514</b>	<b>1.5357</b>	<b>2.2313</b>	<b>3.1200e-003</b>	<b>2.1000e-003</b>	<b>0.0758</b>	<b>0.0779</b>	<b>3.2000e-004</b>	<b>0.0698</b>	<b>0.0701</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004						
Off-Road	0.0380	0.1646	2.3421	3.1200e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003						
<b>Total</b>	<b>0.0380</b>	<b>0.1646</b>	<b>2.3421</b>	<b>3.1200e-003</b>	<b>8.2000e-004</b>	<b>5.0600e-003</b>	<b>5.8800e-003</b>	<b>1.2000e-004</b>	<b>5.0600e-003</b>	<b>5.1800e-003</b>						

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						

Metro TCN - Construction Onsite - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
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**3.4 TCN Structure Foundation - 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	0.6076	4.9920	5.9986	0.0164		0.2086	0.2086		0.2033	0.2033						
<b>Total</b>	<b>0.6076</b>	<b>4.9920</b>	<b>5.9986</b>	<b>0.0164</b>		<b>0.2086</b>	<b>0.2086</b>		<b>0.2033</b>	<b>0.2033</b>						

**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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

**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	0.2383	1.1460	8.4546	0.0164		0.0383	0.0383		0.0383	0.0383						
<b>Total</b>	<b>0.2383</b>	<b>1.1460</b>	<b>8.4546</b>	<b>0.0164</b>		<b>0.0383</b>	<b>0.0383</b>		<b>0.0383</b>	<b>0.0383</b>						

**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					

Metro TCN - Construction Onsite - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

**3.5 TCN Structure Construction - 2023**

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.6635	14.6134	12.6155	0.0253		0.6678	0.6678		0.6232	0.6232						
<b>Total</b>	<b>1.6635</b>	<b>14.6134</b>	<b>12.6155</b>	<b>0.0253</b>		<b>0.6678</b>	<b>0.6678</b>		<b>0.6232</b>	<b>0.6232</b>						

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.7777	4.7706	14.9523	0.0253		0.1433	0.1433		0.1433	0.1433						
<b>Total</b>	<b>0.7777</b>	<b>4.7706</b>	<b>14.9523</b>	<b>0.0253</b>		<b>0.1433</b>	<b>0.1433</b>		<b>0.1433</b>	<b>0.1433</b>						

Mitigated Construction Off-Site

Metro TCN - Construction Onsite - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

3.6 Paving/Landscaping - 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	0.1707	1.6029	2.5567	4.0800e-003		0.0780	0.0780		0.0717	0.0717						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1882</b>	<b>1.6029</b>	<b>2.5567</b>	<b>4.0800e-003</b>		<b>0.0780</b>	<b>0.0780</b>		<b>0.0717</b>	<b>0.0717</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.0503	0.2179	3.1010	4.0800e-003		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.0678</b>	<b>0.2179</b>	<b>3.1010</b>	<b>4.0800e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>						

Metro TCN - Construction Onsite - South Coast Air Basin, Winter  
**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2024
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumptions

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00



Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tbiConstructionPhase	NumDays	2.00	5.00
tbiConstructionPhase	NumDays	100.00	2.00
tbiConstructionPhase	NumDays	100.00	6.00
tbiConstructionPhase	NumDays	5.00	3.00
tbiGrading	MaterialExported	0.00	93.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	UsageHours	4.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	WorkerTripNumber	8.00	0.00
tbiTripsAndVMT	WorkerTripNumber	3.00	0.00
tbiTripsAndVMT	WorkerTripNumber	1.00	0.00
tbiTripsAndVMT	WorkerTripNumber	1.00	0.00
tbiTripsAndVMT	WorkerTripNumber	3.00	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					
2024	1.7582	15.2236	15.0885	0.0294	2.1000e-003	0.6850	0.6850	3.2000e-004	0.6378	0.6378						
Maximum	1.7582	15.2236	15.0885	0.0294	2.1000e-003	0.6850	0.6850	3.2000e-004	0.6378	0.6378						

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					
2024	0.8083	4.9089	18.0249	0.0294	8.2000e-004	0.1347	0.1347	1.2000e-004	0.1347	0.1347						
Maximum	0.8083	4.9089	18.0249	0.0294	8.2000e-004	0.1347	0.1347	1.2000e-004	0.1347	0.1347						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	54.03	67.75	-19.46	0.00	60.95	80.34	80.34	62.50	78.88	78.88	0.00	0.00	0.00	0.00	0.00	0.00

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4/5/2024	4/5/2024	5	1	
2	Grading/Excavation	Grading	4/6/2024	4/12/2024	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2024	4/16/2024	5	2	
4	TCN Structure Construction	Building Construction	4/17/2024	4/24/2024	5	6	
5	Paving/Landscaping	Paving	4/20/2024	4/24/2024	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

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	0.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	0.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TCN Structure Construction	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Landscaping	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2024

Unmitigated Construction On-Site

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4914	4.3888	6.9785	0.0111		0.1861	0.1861		0.1801	0.1801						
<b>Total</b>	<b>0.4914</b>	<b>4.3888</b>	<b>6.9785</b>	<b>0.0111</b>		<b>0.1861</b>	<b>0.1861</b>		<b>0.1801</b>	<b>0.1801</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.1419	1.3795	7.4752	0.0111		0.0162	0.0162		0.0162	0.0162						
<b>Total</b>	<b>0.1419</b>	<b>1.3795</b>	<b>7.4752</b>	<b>0.0111</b>		<b>0.0162</b>	<b>0.0162</b>		<b>0.0162</b>	<b>0.0162</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

3.3 Grading/Excavation - 2024

Metro TCN  
Construction Onsite 2024 - Winter

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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					2.1000e-003	0.0000	2.1000e-003	3.2000e-004	0.0000	3.2000e-004						
Off-Road	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612						
<b>Total</b>	<b>0.1439</b>	<b>1.4483</b>	<b>2.2356</b>	<b>3.1200e-003</b>	<b>2.1000e-003</b>	<b>0.0665</b>	<b>0.0686</b>	<b>3.2000e-004</b>	<b>0.0612</b>	<b>0.0615</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004						
Off-Road	0.0380	0.1646	2.3421	3.1200e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003						
<b>Total</b>	<b>0.0380</b>	<b>0.1646</b>	<b>2.3421</b>	<b>3.1200e-003</b>	<b>8.2000e-004</b>	<b>5.0600e-003</b>	<b>5.8800e-003</b>	<b>1.2000e-004</b>	<b>5.0600e-003</b>	<b>5.1800e-003</b>						

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						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

3.4 TCN Structure Foundation - 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	0.5821	4.6834	5.9968	0.0165		0.1875	0.1875		0.1825	0.1825						
<b>Total</b>	<b>0.5821</b>	<b>4.6834</b>	<b>5.9968</b>	<b>0.0165</b>		<b>0.1875</b>	<b>0.1875</b>		<b>0.1825</b>	<b>0.1825</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.2383	1.1460	8.4546	0.0165		0.0383	0.0383		0.0383	0.0383						
<b>Total</b>	<b>0.2383</b>	<b>1.1460</b>	<b>8.4546</b>	<b>0.0165</b>		<b>0.0383</b>	<b>0.0383</b>		<b>0.0383</b>	<b>0.0383</b>						

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

3.5 TCN Structure Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5760	13.7275	12.5187	0.0253		0.6128	0.6128		0.5714	0.5714						
<b>Total</b>	<b>1.5760</b>	<b>13.7275</b>	<b>12.5187</b>	<b>0.0253</b>		<b>0.6128</b>	<b>0.6128</b>		<b>0.5714</b>	<b>0.5714</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.7405	4.6910	14.9239	0.0253		0.1280	0.1280		0.1280	0.1280						
<b>Total</b>	<b>0.7405</b>	<b>4.6910</b>	<b>14.9239</b>	<b>0.0253</b>		<b>0.1280</b>	<b>0.1280</b>		<b>0.1280</b>	<b>0.1280</b>						

Mitigated Construction Off-Site

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Construction Onsite 2024 - Winter

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

3.6 Paving/Landscaping - 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	0.1648	1.4961	2.5698	4.0800e-003		0.0723	0.0723		0.0665	0.0665						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1822</b>	<b>1.4961</b>	<b>2.5698</b>	<b>4.0800e-003</b>		<b>0.0723</b>	<b>0.0723</b>		<b>0.0665</b>	<b>0.0665</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.0503	0.2179	3.1010	4.0800e-003		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Total	0.0678	0.2179	3.1010	4.0800e-003		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003						
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**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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						



Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2025
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumptions
- Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tbiConstructionPhase	NumDays	10.00	1.00
tbiConstructionPhase	NumDays	2.00	5.00
tbiConstructionPhase	NumDays	100.00	2.00
tbiConstructionPhase	NumDays	100.00	6.00
tbiConstructionPhase	NumDays	5.00	3.00
tbiGrading	MaterialExported	0.00	93.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	UsageHours	4.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorTripLength	6.90	80.00
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tbiTripsAndVMT	WorkerTripNumber	8.00	0.00
tbiTripsAndVMT	WorkerTripNumber	3.00	0.00
tbiTripsAndVMT	WorkerTripNumber	1.00	0.00
tbiTripsAndVMT	WorkerTripNumber	1.00	0.00
tbiTripsAndVMT	WorkerTripNumber	3.00	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					
2025	1.6254	13.7742	14.9471	0.0294	2.1000e-003	0.6005	0.6005	3.2000e-004	0.5590	0.5590						
Maximum	1.6254	13.7742	14.9471	0.0294	2.1000e-003	0.6005	0.6005	3.2000e-004	0.5590	0.5590						

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					
2025	0.7761	4.8315	18.0008	0.0294	8.2000e-004	0.1216	0.1216	1.2000e-004	0.1216	0.1216						
Maximum	0.7761	4.8315	18.0008	0.0294	8.2000e-004	0.1216	0.1216	1.2000e-004	0.1216	0.1216						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	52.25	64.92	-20.43	0.00	60.95	79.75	79.76	62.50	78.25	78.25	0.00	0.00	0.00	0.00	0.00	0.00

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**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	4/4/2025	4/4/2025	5	1	
2	Grading/Excavation	Grading	4/6/2025	4/11/2025	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2025	4/15/2025	5	2	
4	TCN Structure Construction	Building Construction	4/17/2025	4/24/2025	5	6	
5	Paving/Landscaping	Paving	4/20/2025	4/23/2025	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

**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	0.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	0.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TCN Structure Construction	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Landscaping	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

**3.2 Demolition - 2025**

**Unmitigated Construction On-Site**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4613	4.1248	6.9655	0.0111		0.1558	0.1558		0.1508	0.1508						
<b>Total</b>	<b>0.4613</b>	<b>4.1248</b>	<b>6.9655</b>	<b>0.0111</b>		<b>0.1558</b>	<b>0.1558</b>		<b>0.1508</b>	<b>0.1508</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.1419	1.3795	7.4752	0.0111		0.0162	0.0162		0.0162	0.0162						
<b>Total</b>	<b>0.1419</b>	<b>1.3795</b>	<b>7.4752</b>	<b>0.0111</b>		<b>0.0162</b>	<b>0.0162</b>		<b>0.0162</b>	<b>0.0162</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading/Excavation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1000e-003	0.0000	2.1000e-003	3.2000e-004	0.0000	3.2000e-004						
Off-Road	0.1321	1.3351	2.2297	3.1200e-003		0.0541	0.0541		0.0498	0.0498						
<b>Total</b>	<b>0.1321</b>	<b>1.3351</b>	<b>2.2297</b>	<b>3.1200e-003</b>	<b>2.1000e-003</b>	<b>0.0541</b>	<b>0.0562</b>	<b>3.2000e-004</b>	<b>0.0498</b>	<b>0.0501</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004						
Off-Road	0.0380	0.1646	2.3421	3.1200e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003						
<b>Total</b>	<b>0.0380</b>	<b>0.1646</b>	<b>2.3421</b>	<b>3.1200e-003</b>	<b>8.2000e-004</b>	<b>5.0600e-003</b>	<b>5.8800e-003</b>	<b>1.2000e-004</b>	<b>5.0600e-003</b>	<b>5.1800e-003</b>						

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					

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

**3.4 TCN Structure Foundation - 2025**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5632	4.5029	5.9895	0.0165		0.1684	0.1684		0.1635	0.1635						
<b>Total</b>	<b>0.5632</b>	<b>4.5029</b>	<b>5.9895</b>	<b>0.0165</b>		<b>0.1684</b>	<b>0.1684</b>		<b>0.1635</b>	<b>0.1635</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.2383	1.1460	8.4546	0.0165		0.0383	0.0383		0.0383	0.0383						
<b>Total</b>	<b>0.2383</b>	<b>1.1460</b>	<b>8.4546</b>	<b>0.0165</b>		<b>0.0383</b>	<b>0.0383</b>		<b>0.0383</b>	<b>0.0383</b>						

Mitigated Construction Off-Site

Metro TCN - Construction - South Coast Air Basin, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

**3.5 TCN Structure Construction - 2025**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4612	12.5095	12.4006	0.0253		0.5379	0.5379		0.5014	0.5014						
<b>Total</b>	<b>1.4612</b>	<b>12.5095</b>	<b>12.4006</b>	<b>0.0253</b>		<b>0.5379</b>	<b>0.5379</b>		<b>0.5014</b>	<b>0.5014</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.7084	4.6136	14.8998	0.0253		0.1149	0.1149		0.1149	0.1149						
<b>Total</b>	<b>0.7084</b>	<b>4.6136</b>	<b>14.8998</b>	<b>0.0253</b>		<b>0.1149</b>	<b>0.1149</b>		<b>0.1149</b>	<b>0.1149</b>						

Metro TCN  
Construction Onsite 2025 - Winter

CalEEMod Version: CalEEMod.2020.4.0

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Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

**3.6 Paving/Landscaping - 2025**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1468	1.2647	2.5465	4.0700e-003		0.0626	0.0626		0.0575	0.0575						
Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1643</b>	<b>1.2647</b>	<b>2.5465</b>	<b>4.0700e-003</b>		<b>0.0626</b>	<b>0.0626</b>		<b>0.0575</b>	<b>0.0575</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

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	0.0503	0.2179	3.1010	4.0700e-003		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003						



Metro TCN - Construction - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	0.0175					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.0678</b>	<b>0.2179</b>	<b>3.1010</b>	<b>4.0700e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>						

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						
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>						

# Metro TCN

## 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
      - Modeling Parameters
      - SB 100
  - Appendix B-3.2: CalEEMod Outputs
    - Baseline (Existing Year)
    - Baseline (Buildout Year)
    - Project Operations
    - Demolition
    - Project Construction (2023-2025)

## Metro TCN

### Operational Emissions Summary (GHG)

CalEEMod Output Summary	Project with no PDFs	Project with PDFs	
<b>Baseline (Buildout Year)<sup>a</sup></b>	<b>CO<sub>2</sub>e</b>	<b>CO<sub>2</sub>e</b>	
Energy (Electricity)	220	220	
Mobile	32	32	
Off-Road Equipment	17	17	
Total	269	269	
<b>Buildout (Buildout Year)<sup>a</sup></b>			
Energy (Electricity) <sup>b</sup>	725	725	
Mobile	6	6	
Off-Road Equipment	17	17	
Construction	35	35	
Total	<b>783</b>	<b>783</b>	
<b>Project (Buildout less Baseline)</b>			
Energy (Electricity)	505	505	
Mobile	(26)	(26)	
Off-Road Equipment	0	0	
Construction	35	35	
<b>Total</b>	<b>514</b>	<b>514</b>	0

<sup>a</sup> Existing Uses

<sup>a</sup> Please refer to CalEEMod outputs for Future uses

**ENERGY**

**Energy Reduction Measures Included in CalEEMod Run:**  
High Efficiency Lighting (25%)

**Water Reduction Measures Included in CalEEMod Run:**  
20 Percent Reduction Beyond Code Requirements

**Waste Diversion Rate Reduction Measures Included in CalEEMod Run:**  
[Project assumes a 76.4% Diversion Rate \(Los Angeles, 2011\)](#)

## AllVision

### SB100 - Renewable Portfolio Standards

Year	% RPS	RPS Reduction (%)	Carbon Intensity (lbs/MWh)
2020	36.7	-16%	579
2026	46	-21%	457
2030	60	-23%	354
2036	65	-8%	327
2045	100	-35%	0

Build Out Year	Carbon Intensity (lbs/MWh)
2025	484

Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Allvision - Operations**  
**South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	550	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

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

- Project Characteristics - SB 100
- Land Use -
- Construction Phase -
- Vehicle Trips - One trip per day for maintenance of signs
- Energy Use - sign energy usage
- Water And Wastewater - no water usage
- Waste Mitigation -
- Operational Off-Road Equipment - crane for maintenance
- Fleet Mix - All vehicles for maintenance are MHD

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	1,000.00
tblEnergyUse	T24NG	13.51	0.00
tblFleetMix	HHD	8.6030e-003	0.00
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2270e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.8450e-003	0.00
tblFleetMix	MHD	0.01	1.00
tblFleetMix	OBUS	8.2900e-004	0.00
tblFleetMix	SBUS	7.4100e-004	0.00
tblFleetMix	UBUS	5.2100e-004	0.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	550

Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	10.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

2.0 Emissions Summary

2.2 Overall Operational  
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																5.0000e-005
Energy																250.3907
Mobile																34.4153
Offroad																16.6095
Waste																0.6236
Water																0.0000
<b>Total</b>																<b>302.0392</b>

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																5.0000e-005
Energy																250.3907
Mobile																34.4153
Offroad																16.6095
Waste																0.1472
Water																0.0000
<b>Total</b>																<b>301.5627</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

4.0 Operational Detail - Mobile

Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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																34.4153
Unmitigated																34.4153

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	10.00	0.00	0.00	31,631	31,631
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	10.00	0.00	0.00	31,631	31,631

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.544368	0.059978	0.184244	0.130791	0.023854	0.006227	0.012011	0.008603	0.000829	0.000521	0.023988	0.000741	0.003845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																250.3907
Electricity Unmitigated																250.3907
NaturalGas Mitigated																0.0000
NaturalGas Unmitigated																0.0000



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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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						
General Light Industry	0																	0.0000
Other Asphalt Surfaces	0																	0.0000
<b>Total</b>																		<b>0.0000</b>

Mitigated

	Natural Gas 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						
General Light Industry	0																	0.0000
Other Asphalt Surfaces	0																	0.0000
<b>Total</b>																		<b>0.0000</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1e+006				250.3907
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>250.3907</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

General Light Industry	1e+006	250.3907
Other Asphalt Surfaces	0	0.0000
<b>Total</b>		<b>250.3907</b>

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																5.0000e-005
Unmitigated																5.0000e-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	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																5.0000e-005
<b>Total</b>																<b>5.0000e-005</b>

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
Consumer Products																0.0000
Landscaping																5.0000e-005
<b>Total</b>																<b>5.0000e-005</b>

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0				0.0000
Other Asphalt Surfaces	0 / 0				0.0000
<b>Total</b>					<b>0.0000</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0				0.0000
Other Asphalt Surfaces	0 / 0				0.0000
<b>Total</b>					<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				0.1472
Unmitigated				0.6236

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24				0.6236
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>0.6236</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0.29264				0.1472
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>0.1472</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Cranes	1	2.00	260	231	0.29	Diesel

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					



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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Allvision - Operations**  
**South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11	Operational Year	2025		
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	484	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

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

- Project Characteristics - SB 100
- Land Use -
- Construction Phase -
- Vehicle Trips - One trip per day for maintenance of signs
- Energy Use - sign energy usage
- Water And Wastewater - no water usage
- Waste Mitigation -
- Operational Off-Road Equipment - crane for maintenance
- Fleet Mix - All vehicles for maintenance are MHD

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	1,000.00
tblEnergyUse	T24NG	13.51	0.00
tblFleetMix	HHD	8.6600e-003	0.00
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.5260e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.6440e-003	0.00
tblFleetMix	MHD	0.01	1.00
tblFleetMix	OBUS	8.1600e-004	0.00
tblFleetMix	SBUS	7.4600e-004	0.00
tblFleetMix	UBUS	5.0200e-004	0.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	484

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	10.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																5.0000e-005
Energy																220.4536
Mobile																32.0000
Offroad																16.6094
Waste																0.6236
Water																0.0000
<b>Total</b>																<b>269.6866</b>

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																5.0000e-005
Energy																220.4536
Mobile																32.0000
Offroad																16.6094
Waste																0.1472
Water																0.0000
<b>Total</b>																<b>269.2102</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

4.0 Operational Detail - Mobile

Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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																32.0000
Unmitigated																32.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	10.00	0.00	0.00	31,631	31,631
Other Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>10.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31,631</b>	<b>31,631</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																220.4536
Electricity Unmitigated																220.4536
NaturalGas Mitigated																0.0000
NaturalGas Unmitigated																0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	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						
General Light Industry	0																	0.0000
Other Asphalt Surfaces	0																	0.0000
<b>Total</b>																		<b>0.0000</b>

**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						
General Light Industry	0																	0.0000
Other Asphalt Surfaces	0																	0.0000
<b>Total</b>																		<b>0.0000</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1e+006				220.4536
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>220.4536</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1e+006				220.4536
Other Asphalt Surfaces	0				0.0000

AllVision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total		220.4536
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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																5.0000e-005
Unmitigated																5.0000e-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	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																5.0000e-005
<b>Total</b>																<b>5.0000e-005</b>

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
Consumer Products																0.0000
Landscaping																5.0000e-005
<b>Total</b>																<b>5.0000e-005</b>

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0				0.0000
Other Asphalt Surfaces	0 / 0				0.0000
<b>Total</b>					<b>0.0000</b>

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0				0.0000
Other Asphalt Surfaces	0 / 0				0.0000
<b>Total</b>					<b>0.0000</b>

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				0.1472
Unmitigated				0.6236

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24				0.6236
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>0.6236</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0.29264				0.1472
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>0.1472</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Cranes	1	2.00	260	231	0.29	Diesel

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					



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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Allvision - Operations**  
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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2025
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	484	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

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

- Project Characteristics - SB 100
- Land Use -
- Construction Phase -
- Vehicle Trips - One trip per day for maintenance of signs
- Energy Use - sign energy usage
- Water And Wastewater - no water usage
- Waste Mitigation -
- Operational Off-Road Equipment - crane for maintenance
- Fleet Mix - All vehicles for maintenance are MHD

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	3,288.69
tblEnergyUse	T24NG	13.51	0.00
tblFleetMix	HHD	8.6600e-003	0.00
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.5260e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.6440e-003	0.00
tblFleetMix	MHD	0.01	1.00
tblFleetMix	OBUS	8.1600e-004	0.00
tblFleetMix	SBUS	7.4600e-004	0.00
tblFleetMix	UBUS	5.0200e-004	0.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	484

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	2.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																5.0000e-005
Energy																725.0036
Mobile																6.4000
Offroad																16.6094
Waste																0.6236
Water																0.0000
<b>Total</b>																<b>748.6366</b>

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																5.0000e-005
Energy																725.0036
Mobile																6.4000
Offroad																16.6094
Waste																0.1472
Water																0.0000
<b>Total</b>																<b>748.1601</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06

4.0 Operational Detail - Mobile

AllVision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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																	6.4000
Unmitigated																	6.4000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
General Light Industry	2.00	0.00	0.00	6,326	6,326
Other Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6,326</b>	<b>6,326</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																725.0036
Electricity Unmitigated																725.0036
NaturalGas Mitigated																0.0000
NaturalGas Unmitigated																0.0000



Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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						
General Light Industry	0																	0.0000
Other Asphalt Surfaces	0																	0.0000
<b>Total</b>																		<b>0.0000</b>

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						
General Light Industry	0																	0.0000
Other Asphalt Surfaces	0																	0.0000
<b>Total</b>																		<b>0.0000</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	3.28869e+006				725.0036
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>725.0036</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	3.28869e+006				725.0036
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>725.0036</b>

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Asphalt Surfaces	0	0.0000
<b>Total</b>		<b>725.0036</b>

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																5.0000e-005
Unmitigated																5.0000e-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	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																5.0000e-005
<b>Total</b>																<b>5.0000e-005</b>

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
Consumer Products																0.0000
Landscaping																5.0000e-005
<b>Total</b>																<b>5.0000e-005</b>

Allvision - Operations - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0				0.0000
Other Asphalt Surfaces	0 / 0				0.0000
<b>Total</b>					<b>0.0000</b>

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0				0.0000
Other Asphalt Surfaces	0 / 0				0.0000
<b>Total</b>					<b>0.0000</b>

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

Allvision - Operations - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				0.1472
Unmitigated				0.6236

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24				0.6236
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>0.6236</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0.29264				0.1472
Other Asphalt Surfaces	0				0.0000
<b>Total</b>					<b>0.1472</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Cranes	1	2.00	260	231	0.29	Diesel

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					



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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Demolition**  
**South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	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)	691.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumption

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	10.00	5.00

**2.0 Emissions Summary**

**2.1 Overall Construction**

Metro TCN - Demolition - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**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						
2023																	1.3431
Maximum																	1.3431

**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						
2023																	1.3431
Maximum																	1.3431

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

**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	4/5/2023	4/5/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37

**Trips and VMT**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

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	4	5.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

**3.2 Demolition - 2023**

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.7369
<b>Total</b>																<b>0.7369</b>

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive 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
Vendor																0.5846
Worker																0.0216
<b>Total</b>																<b>0.6062</b>

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.7369
<b>Total</b>																<b>0.7369</b>

Mitigated Construction Off-Site



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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
Vendor																	0.5846
Worker																	0.0216
<b>Total</b>																	<b>0.6062</b>

Metro TCN - Construction - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	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)	691.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumption

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	5.00	3.00
tblGrading	MaterialExported	0.00	93.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	8.00	2.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00

**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					
2023																13.7986
<b>Maximum</b>																<b>13.7986</b>

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					
2023																13.7986

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Metro TCN - Construction - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum																	13.7986
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	4/5/2023	4/5/2023	5	1	
2	Grading/Excavation	Grading	4/6/2023	4/12/2023	5	5	
3	TCN Structure Foundation	Building Construction	4/13/2023	4/14/2023	5	2	
4	TCN Structure Construction	Building Construction	4/17/2023	4/24/2023	5	6	
5	Paving/Landscaping	Paving	4/20/2023	4/24/2023	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	8.00	63	0.31
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Foundation	Bore/Drill Rigs	1	8.00	221	0.50
TCN Structure Foundation	Cement and Mortar Mixers	1	8.00	9	0.56
TCN Structure Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
TCN Structure Construction	Aerial Lifts	1	8.00	63	0.31
TCN Structure Construction	Cranes	1	8.00	231	0.29
TCN Structure Construction	Rubber Tired Loaders	1	8.00	203	0.36
TCN Structure Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TCN Structure Construction	Trenchers	1	8.00	78	0.50
TCN Structure Construction	Welders	2	8.00	46	0.45
Paving/Landscaping	Paving Equipment	1	8.00	132	0.36

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	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
Grading/Excavation	1	2.00	5.00	0.00	14.70	80.00	20.00	LD_Mix	HHDT	HHDT
TCN Structure Foundation	3	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Metro TCN - Construction - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

TCN Structure	7	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction Paving/Landscaping	1	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

**3.2 Demolition - 2023**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.4814
<b>Total</b>																<b>0.4814</b>

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
Vendor																0.5846
Worker																8.6800e-003
<b>Total</b>																<b>0.5932</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.4814
<b>Total</b>																<b>0.4814</b>

Mitigated Construction Off-Site

Metro TCN - Construction - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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
Vendor																0.5846
Worker																8.6600e-003
<b>Total</b>																<b>0.5932</b>

**3.3 Grading/Excavation - 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					
Fugitive Dust																0.0000
Off-Road																0.6895
<b>Total</b>																<b>0.6895</b>

**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
Vendor																2.9228
Worker																0.0433
<b>Total</b>																<b>2.9661</b>

**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

Metro TCN - Construction - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Off-Road																		0.6895
<b>Total</b>																		<b>0.6895</b>

**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
Vendor																	2.9228
Worker																	0.0433
<b>Total</b>																	<b>2.9661</b>

**3.4 TCN Structure Foundation - 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																	1.4214
<b>Total</b>																	<b>1.4214</b>

**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
Vendor																	0.0932
Worker																	0.0173
<b>Total</b>																	<b>0.1105</b>

**Mitigated Construction On-Site**

Metro TCN - Construction - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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																1.4214
<b>Total</b>																<b>1.4214</b>

**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
Vendor																0.0932
Worker																0.0173
<b>Total</b>																<b>0.1105</b>

**3.5 TCN Structure 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																6.4982
<b>Total</b>																<b>6.4982</b>

**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
Vendor																0.2795
Worker																0.0519



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Total																		0.3315
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**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																	6.4982
<b>Total</b>																	<b>6.4982</b>

**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
Vendor																	0.2795
Worker																	0.0519
<b>Total</b>																	<b>0.3315</b>

**3.6 Paving/Landscaping - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	0.5411
Paving																	0.0000
<b>Total</b>																	<b>0.5411</b>

**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
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Metro TCN - Construction - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Category	tons/yr										MT/yr						
Hauling																	0.0000
Vendor																	0.1398
Worker																	0.0260
<b>Total</b>																	<b>0.1657</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	0.5411
Paving																	0.0000
<b>Total</b>																	<b>0.5411</b>

**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
Vendor																	0.1398
Worker																	0.0260
<b>Total</b>																	<b>0.1657</b>

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Metro TCN - Construction**  
**South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2024
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumptions

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	5.00	3.00
tblGrading	MaterialExported	0.00	93.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	8.00	2.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00

**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					
2024																13.7425
<b>Maximum</b>																13.7425

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					
2024																13.7424



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

TCN Structure	7	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction Paving/Landscaping	1	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

**3.2 Demolition - 2024**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.4815
<b>Total</b>																<b>0.4815</b>

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
Vendor																0.5767
Worker																8.4000e-003
<b>Total</b>																<b>0.5851</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.4815
<b>Total</b>																<b>0.4815</b>

Mitigated Construction Off-Site

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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
Vendor																0.5767
Worker																8.4000e-003
<b>Total</b>																<b>0.5851</b>

**3.3 Grading/Excavation - 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					
Fugitive Dust																0.0000
Off-Road																0.6899
<b>Total</b>																<b>0.6899</b>

**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
Vendor																2.8837
Worker																0.0420
<b>Total</b>																<b>2.9257</b>

**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

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Off-Road																		0.6899
<b>Total</b>																		<b>0.6899</b>

**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
Vendor																	2.8837
Worker																	0.0420
<b>Total</b>																	<b>2.9257</b>

**3.4 TCN Structure Foundation - 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																	1.4232
<b>Total</b>																	<b>1.4232</b>

**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
Vendor																	0.0919
Worker																	0.0168
<b>Total</b>																	<b>0.1087</b>

**Mitigated Construction On-Site**



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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																1.4232
<b>Total</b>																<b>1.4232</b>

**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
Vendor																0.0919
Worker																0.0168
<b>Total</b>																<b>0.1087</b>

**3.5 TCN Structure 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																6.4983
<b>Total</b>																<b>6.4983</b>

**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
Vendor																0.2756
Worker																0.0504

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Total																		0.3260
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**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																	6.4982
<b>Total</b>																	<b>6.4982</b>

**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
Vendor																	0.2756
Worker																	0.0504
<b>Total</b>																	<b>0.3260</b>

**3.6 Paving/Landscaping - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	0.5411
Paving																	0.0000
<b>Total</b>																	<b>0.5411</b>

**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
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.1378
Worker																0.0252
<b>Total</b>																<b>0.1630</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	0.5411
Paving																	0.0000
<b>Total</b>																	<b>0.5411</b>

**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
Vendor																	0.1378
Worker																	0.0252
<b>Total</b>																	<b>0.1630</b>

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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**South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	11			<b>Operational Year</b>	2025
<b>Utility Company</b>	Los Angeles Department of Water & Power				
<b>CO2 Intensity (lb/MWhr)</b>	691.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

- Project Characteristics -
- Land Use -
- Construction Phase - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Off-road Equipment - see construction assumptions
- Trips and VMT - see construction assumptions
- Grading -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Construction Off-road Equipment Mitigation - see construction assumptions
- Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	5.00	3.00
tblGrading	MaterialExported	0.00	93.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	8.00	2.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00

**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					
2025																13.6699
Maximum																13.6699

**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					
2025																13.6699



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

TCN Structure	7	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction Paving/Landscaping	1	2.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment  
Water Exposed Area

**3.2 Demolition - 2025**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.4816
<b>Total</b>																<b>0.4816</b>

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
Vendor																0.5667
Worker																8.1100e-003
<b>Total</b>																<b>0.5748</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																0.4816
<b>Total</b>																<b>0.4816</b>

Mitigated Construction Off-Site

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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
Vendor																0.5667
Worker																8.1100e-003
<b>Total</b>																<b>0.5748</b>

**3.3 Grading/Excavation - 2025**  
**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																0.6906
<b>Total</b>																<b>0.6906</b>

**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
Vendor																2.8333
Worker																0.0406
<b>Total</b>																<b>2.8739</b>

**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



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Off-Road																		0.6906
<b>Total</b>																		<b>0.6906</b>

**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
Vendor																	2.8333
Worker																	0.0406
<b>Total</b>																	<b>2.8739</b>

**3.4 TCN Structure Foundation - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	1.4230
<b>Total</b>																	<b>1.4230</b>

**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
Vendor																	0.0902
Worker																	0.0162
<b>Total</b>																	<b>0.1064</b>

**Mitigated Construction On-Site**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive 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																1.4230
<b>Total</b>																<b>1.4230</b>

**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
Vendor																0.0902
Worker																0.0162
<b>Total</b>																<b>0.1064</b>

**3.5 TCN Structure Construction - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																6.4997
<b>Total</b>																<b>6.4997</b>

**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
Vendor																0.2706
Worker																0.0487

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Total																		0.3193
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**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																	6.4997
<b>Total</b>																	<b>6.4997</b>

**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
Vendor																	0.2706
Worker																	0.0487
<b>Total</b>																	<b>0.3193</b>

**3.6 Paving/Landscaping - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	0.5409
Paving																	0.0000
<b>Total</b>																	<b>0.5409</b>

**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
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Category	tons/yr										MT/yr						
Hauling																	0.0000
Vendor																	0.1353
Worker																	0.0243
<b>Total</b>																	<b>0.1597</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Off-Road																	0.5409
Paving																	0.0000
<b>Total</b>																	<b>0.5409</b>

**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
Vendor																	0.1353
Worker																	0.0243
<b>Total</b>																	<b>0.1597</b>