CalEEMod Emission Summary

TO: EPD Solutions
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DATE: December 28, 2020

SUBJECT: Summary of CalEEMod Model Runs and Output for the Moreno Valley Residential Project (Revised)

SECTION 1: PROJECT INFORMATION

1.1 - Project Name

Moreno Valley Residential Project (Project)

1.2 - Project Location

The Project site is located at the intersection of Bradshaw Circle and Cactus Avenue in the City of Moreno Valley, CA.

1.3 - Project Description

The Project would construct 38 new single-family residences, onsite roadways with sidewalks, drainage infrastructure, and open space lots on the 4.81-acre project site. Overall, the Project proposes a total residential building footprint of 130,536 SF. The single-family residences would range in size from 3,096 square feet (SF) to 5,016 SF, with three to four-bedroom floor plans, private yards, and two-car garages. The Project also proposed to construct four lettered lots, which include the specific lots designated for open space and drainage purposes.

1.4 - Purpose of the Report

This report summarizes the results of the Project construction and operational criteria pollutant and greenhouse gas (GHG) emissions and energy usage estimates using the California Emissions Estimator Model (CalEEMod Version 2016.3.2) land use emission model for use in preparing CEQA regulatory documentation. The estimated Project emissions were compared to the recommended air quality and GHG significance thresholds recommended by the South Coast Air Quality Management District (SCAQMD).

1.5 - Conclusions

- The Project's construction and operation would not exceed any project-level criteria pollutant regional or localized emission significance threshold adopted by the SCAQMD.

- The Project's construction and operation would not result in a cumulatively significant impact on the region's air quality.

- The Project's construction and operation would not exceed the greenhouse gas significance

threshold adopted for this Project.

- The construction and operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with Project design, project location, the use of electricity and natural gas, and the use of fuel by vehicles anticipated to travel to and from the Project.

SECTION 2: CALEEMOD EMISSION ESTIMATES – CRITERIA POLLUTANTS

This section quantifies the Project construction and operational criteria pollutant emissions[1] for the Project design and compares the emissions to the regional and local emission significance thresholds adopted by the SCAQMD.

2.1 - Significance Thresholds-Criteria Pollutants

The City has not adopted its own set of criteria pollutant significance thresholds. Therefore, the respective significance thresholds recommended by the SCAQMD were applied to the Project in assessing the significance of the Project's emissions.

2.1.1 Regional Emission Significance Thresholds

The incremental regional air quality impacts of an individual project are generally very small and difficult to measure. However, the SCAQMD's regional significance thresholds define maximum daily emissions whose exceedance by a project's construction or operation may add to the overall emission burden within the SCAQMD and impact the attainment maintenance of ambient air quality standards.

The regional thresholds apply to criteria pollutant emissions of carbon monoxide (CO), oxides of nitrogen (NO_x), oxides of sulfur (SO_x), particulate matter (PM_{10} and $PM_{2.5}$), and reactive organic gases (ROG). The quantification of regional emissions includes those project emissions generated from onsite emission sources (i.e., offroad construction equipment, fugitive dust) and offsite emission sources (vehicle travel to and away from the Project). Table 1 shows the SCAQMD's regional significance thresholds.

Table 1: SCAQMD Regional Emission Significance Thresholds

Air Pollutant	Maximum Daily Emissions (pounds/day)	
	Construction	Operation
Carbon Monoxide	550	550
Oxides of Nitrogen	100	55
Sulfur Oxides	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Reactive Organic Gases	75	55
Source: SCAQMD[2]		

[1] Criteria pollutants are the only air pollutants with national air quality standards that define allowable concentrations of these substances in the ambient air. Criteria pollutants include carbon monoxide (CO), oxides of nitrogen (NO_x), sulfur dioxide (SO_x), and particulate matter (PM_{10} and $PM_{2.5}$). Note that ozone is another criteria pollutant; however, in terms of defining significance thresholds, ozone is represented by its precursor components, oxides of nitrogen (NO_x) and reactive organic gases.

[2] SCAQMD April 2019. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

2.1.2 Localized Significance Thresholds

Project-related construction or operational air emissions may have the potential to exceed the State and national air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact on the SCAQMD. As a result, the SCAQMD recommends the use of localized significance thresholds (LSTs) for assessing a project's local impact (generally within 500 meters (1,640 feet) from the project. The LSTs represent the maximum rates of daily construction or operational emissions from a project site that would not result in air pollutant levels that would exceed national or State ambient air quality standards (SCAQMD 2003[3],2008[4]). There are three principal differences between the regional thresholds and the LSTs.

- First, the regional thresholds include all sources of project construction and operational emissions generated from onsite and offsite emission sources, whereas the LSTs only consider the emissions generated from onsite emission sources.

- Second, the LSTs only apply to CO, NO_X, and particulate matter (PM_{10} and $PM_{2.5}$), while the regional thresholds also include ROG and SO_x.

- Third, the regional thresholds apply to emission sources regardless of where the source is located within the SCAQMD; in contrast, the LSTs are location-dependent and depend on the project's size and emission location relative to the nearest sensitive receptor[5].

For purposes of this localized assessment, the SCAQMD provides screening emission look-up tables for projects that disturb a maximum of 5 acres in size in a day. The look-up tables were developed by the SCAQMD to readily determine if the daily emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ from a project could result in a significant impact on the local air quality. The appropriate LSTs can be determined based on a project's source receptor area (SRA)[6], size, and distance to the nearest sensitive receptor. The SCAQMD has divided the SCAQMD into 37 SRAs, each with a set of LSTs that depend on the air pollutant, project size, and distance to the nearest sensitive receptor. The project site is located within SRA 24, Perris Valley. The LSTs for this SRA were applied to the Project.

LSTs for Construction

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011)[7]. The CalEEMod model calculates construction emissions based on the number and types of construction equipment, equipment hours, emission rates, the maximum daily disturbance activity possible for each piece of equipment for several land-use projects, and their developmental intensity. During construction, the daily maximum disturbed area serves as a factor in determining the LSTs' project size value

[3] SCAQMD 2003. Final Localized Significance Threshold Methodology. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

[4] SCAQMD 2008: Final Localized Significance Threshold Methodology. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf

[5] The SCAQMD defines a sensitive receptor as an individual who is most health-wise susceptible to exposures to air pollutants including children the elderly, and adults with chronic health issues. Such receptors include residences, schools, elderly care centers, and hospitals where such receptors could be exposed to air pollutants for at least 24 hours.

[6] A source-receptor area (SRA) is a geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts

[7] SCAQMD 2011: Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf

for construction. Table 2 shows the maximum daily disturbed acreage during site preparation and grading, the construction activities with the largest number of earth-moving equipment, and the highest construction emissions as identified by the CalEEMod model. Table 2 shows that the maximum daily area disturbed during construction is 3.5 acres during the site preparation activity. Therefore, the maximum daily disturbed area during construction was set as 3.5 acres for the localized assessment of construction impacts.

Table 2: Equipment Specific Site Preparation and Grading Disturbed Area Rates

Activity	Equipment Type	Equipment Quantity	Acres Graded per 8-hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Rubber Tired Dozer	3	0.5	8	1.5
	Crawler Tractor	4	0.5	8	2.0
					Total 3.5 acres
Grading	Excavators	1	0	8	0
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Crawler Tractor	3	0.5	8	1.5
					Total 2.5 acres
Source: Table 6 shows the construction inventory developed for the Site Preparation and Grading activities as derived from the CalEEMod model.					

The specification of LSTs is also dependent on the distance to the nearest sensitive receptor. The nearest sensitive receptor location depends not only on the distance to the Project but also on the duration for which a receptor may be exposed to air pollution. The SCAQMD considers a sensitive receptor to be a location such as a residence, hospital, convalescent facility where it is possible that an individual could remain for 24 hours or longer. Commercial and industrial facilities are not included in the definition of a sensitive receptor because employees do not typically remain onsite for a full 24 hours, but are present for shorter periods, such as up to eight hours[8].

The Project location is surrounded by several adjacent residential areas to the north, south, and west, with vacant land to the east. The closest sensitive receptors that could reside for 24 hours or longer are located at existing residences to the adjacent residential land uses. Therefore, the distance for sensitive receptors in the LST assessment was set at 25 meters, the shortest distance in the SCAQMD LST emission look-up tables. Table 3 provides the applicable construction LSTs for this Project.

[8] SCAQMD 2003. Final Localized Significance Threshold Methodology. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

Table 3: Construction Localized Significance Thresholds

NOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
224	1,230	10	6
LSTs for SRA 24, project area of 3.5 acres and a receptor distance of 25 meters. The LSTs were interpolated from the 2 and 5 acre LSTs provided in the LST look-up tables.			

LST for Operation

As noted earlier, the SCAQMD has defined LSTs for project areas up to 5 acres in size. The Project is approximately 4.8 acres in size. Therefore, the use of the LSTs for a 5-acre project were used in this assessment. Table 4 presents the operational LSTs for this Project.

Table 4: Operational Localized Significance Thresholds

NOx (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
270	1,577	4	2
LSTs for SRA 24, project area of 5 acres and a receptor distance of 25 meters			

2.1.3 Cumulative Significance Thresholds

The SCAQMD has published the following report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (SCAQMD 2003)[9]. The SCAQMD considers projects that exceed the project-specific significance thresholds to be cumulatively considerable. Therefore, the project-specific and cumulative significance thresholds are the same. As a result, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

The US Environmental Protection Agency currently designates the South Coast Air Basin, where the Project is located as nonattainment for ozone, PM_{10}, and $PM_{2.5}$. By its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region by numerous sources. The nonattainment status of regional pollutants results from past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed Project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

Therefore, the determination of cumulative air quality impacts for construction and operational emissions was based on whether the Project would result in regional emissions that exceed SCAQMD regional thresholds of significance for construction and operations on a project level. Projects that generate

[9] SCAQMD 2003. White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution

emissions below the SCAQMD regional significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable impact.

2.2 - Criteria Pollutant Emission and Impact Estimates

2.2.1 Project Emissions

Construction

Assumption***s***

- Construction Schedule: Construction is anticipated to commence in January 2021 and last for approximately 14 months. The Project occupancy is expected in early 2022
- The project site is currently vacant.
- 8,097 cubic yards of material to be exported
- Fugitive dust mitigation applied as per SCAQMD Rule 403 – Fugitive Dust
- Construction equipment inventory derived from the CalEEMod model equipment

Construction Emissions

The Project's conceptual construction schedule and equipment inventory are provided in Table 5 and Table 6, respectively, based on the default schedule and equipment provided in the CalEEMod model for the project size and land uses. Table 7 presents the Project's construction vehicle trips.

Table 5: Construction Schedule

Activity	Start Date	End Date	Total Days
Site Preparation	01/02/2021	01/08/2021	5
Grading	01/09/2021	01/20/2021	8
Building Construction	01/21/2021	12/08/2021	230
Paving	12/09/2022	01/03/2022	18
Architectural Coating	01/04/2022	01/27/2022	18
Source: see CalEEMod output			

Table 6: Construction Equipment Inventory

Activity	Equipment	Project Number	Project Hours per day	Default Horse-power	Default Load Factor
Site Preparation	Rubber Tired Dozer	3	8	247	0.40
	Crawler Tractor	4	8	212	0.43
Grading	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.40
	Crawler Tractor	3	8	212	0.43
Building Construction	Crane	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
	Generator Set	1	8	84	0.74
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressor	1	6	78	0.48
Source: see CalEEMod output					

Table 7: Construction Vehicle Trips

Activity	Construction Trips per Day		Total Trips
	Worker	Vendor	Haul
Site Preparation	18	0	0
Grading	15	0	1,012
Building Construction	41	15	0
Paving	20	0	0
Architectural Coating	8	0	0
Source: see CalEEMod output			

Table 8 presents the Project's estimated maximum daily regional construction emissions. As noted in Table 8, the Project's construction would not exceed the SCAQMD's regional emission significance thresholds. Table 9 presents the results of the Project's localized construction impact assessment. As noted in Table 9, the Project's construction would not exceed the SCAQMD's construction localized emission significance thresholds.

Table 8: Estimated Maximum Daily Regional Construction Emissions

Construction Activity	Maximum Daily Regional Emissions[1] (pounds/day)					
	ROG	NO_X	C0	SO_x	PM_{10}	$PM_{2.5}$
2021						
Site Preparation	5.4	60.8	22.6	0.1	7.5	5.1
Grading	4.1	67.5	20.6	0.1	5.8	3.2
Building Construction	2.1	18.9	18.4	0.0	1.6	1.0
Maximum Daily Emission	5.4	67.5	22.6	0.1	7.5	5.1
2022						
Paving	1.4	10.8	13.0	0.0	0.8	0.6
Architectural Coating	49.1	1.5	2.1	0.0	0.2	0.1
Maximum Daily Emission	49.1	10.8	13.0	0.0	0.8	0.6
2021 to 2022 Maximum Daily Emissions	**49.1**	**67.5**	**22.6**	**0.1**	**7.5**	**5.1**
SCAQMD Significance Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Emissions Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
ROG = reactive organic gases NOx = oxides of nitrogen PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter CO = carbon monoxide SO_x = sulfur oxides
PM emissions reflect SCAQMD Rule 403 reductions
Source: see CalEEMod model output

Table 9: Estimated Maximum Daily Localized Construction Emissions

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
2021				
Site Preparation	60.8	21.9	7.3	5.0
Grading	40.0	16.4	3.3	2.4
Building Construction	17.4	16.6	1.0	0.9
Maximum Daily Emission	60.8	21.9	7.3	5.0
2022				
Paving	10.8	12.3	0.6	0.5
Architectural Coating	1.5	1.8	0.1	0.1
Maximum Daily Emission	10.8	12.3	0.6	0.5
2021 to 2022 Maximum Daily Emissions	**60.8**	**21.9**	**7.3**	**5.0**

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
SCAQMD Significance Thresholds	**224**	**1,250**	**10**	**6**
Emissions Exceed Thresholds?	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
PM emissions reflect SCAQMD Rule 403 emission reductions
Source: see CalEEMod model output

Project Operational Emissions

The Project's day-to-day operations would generate the Project's long-term emissions. Operational emissions for land use development projects are typically distinguished as mobile, area, and energy-source emissions. Mobile-source emissions are associated with Project-related automobiles and other motor vehicles that would travel to and from the Project site. According to the Project's traffic impact memorandum[10], the Project is expected to generate 359 daily weekday trips. The CalEEMod model default vehicle fleet mix, trip purpose, and trip lengths were assumed in estimating the Project's mobile source emissions. Area-source emissions are associated with landscape maintenance activities and periodic architectural coatings. Energy-source emissions are associated with natural gas consumption. For the localized assessment, an average onsite vehicle trip travel distance for the project was assumed to be 0.15 miles based on the site plan's layout (since the LST assessment only counts onsite emissions).

Table 10 summarizes the Project's regional operational emissions and a comparison to the SCAQMD's regional significance thresholds. As noted in Table 10, the p=Project's regional operational emissions are less than the regional significance thresholds. Table 11 provides the localized operational emissions results along with a comparison to the SCAQMD localized significance thresholds. As noted in Table 11, the Project's localized operational emissions as substantially less than the SCAQMD localized significance thresholds.

Table 10: Estimated Maximum Daily Regional Operational Emissions

Operational Activity	Maximum Daily Regional Emissions (pounds/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	2.9	<0.1	3.1	<0.1	<0.1
Energy	<0.1	0.3	0.1	<0.1	<0.1
Mobile –	0.7	5.1	8.4	2.8	0.8
Total Project Operational Emissions	3.7	5.4	11.7	2.8	0.8

[10] EPD Solutions 2020. Project Traffic Trip Generation Memorandum

Operational Activity	Maximum Daily Regional Emissions (pounds/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
SCAQMD Significance Threshold	**55**	**55**	**550**	**150**	**55**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter ROG = reactive organic gases
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
Source: see CalEEMod model output

Table 11: Estimated Maximum Daily Localized Operational Emissions

Operational Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<0.1	3.1	<0.1	<0.1
Energy	0.3	0.1	<0.1	<0.1
Mobile	3.0	1.4	0.1	<0.1
Total Project Operational Emissions	3.3	4.7	0.1	0.1
SCAQMD Significance Threshold	270	1,577	4	2
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
Emissions shown as 0.0 pounds/day are less than 0.1 pounds/day
Source: see CalEEMod model output

2.2.2 Cumulative Impacts

Construction

As shown above, the Project's maximum daily regional construction emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the Project's construction emissions would not result in a cumulatively considerable incremental contribution to the existing air quality. Furthermore, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 403, to minimize fugitive PM dust emissions. Therefore, the cumulative impact of the construction of the Project would be less than significant.

Operations

As shown in Table 10 above, the Project's maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the Project's operational emissions would not

result in a cumulatively considerable incremental contribution to the existing air quality. The cumulative impact of the long-term operation of the Project would be less than significant.

2.3 - Conclusion

The Project's construction and operational emissions would not exceed the SCAQMD's established project level or cumulative regional or localized pollutant significance thresholds during either construction or operation.

SECTION 3: CALEEMOD EMISSION ESTIMATES - GREENHOUSE GAS EMISSIONS

This section analyzes the potential impacts on climate change from the Project's emissions of various greenhouses (GHG).

3.1 - Significance Threshold

The City of Moreno Valley has not adopted its own numeric threshold of significance for determining impacts concerning greenhouse gas (GHG) emissions. To guide local lead agencies on assessing GHG emissions' significance in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, SCAQMD identified a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010).

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

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

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

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The SCAQMD Working Group identified that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame since this is a typical interval before a building requires the first major renovation. SCAQMD identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land-use types or the following land-use specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, and 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their 711 CEQA projects review, 90 percent of CEQA projects would exceed the bright-line thresholds. For purposes of this assessment, a significance threshold of 3,000 $MTCO_2e$ was used as the threshold for this assessment. Based on guidance from the SCAQMD, if a non-industrial project would emit GHGs less than 3,000 $MTCO_2e$ per year, the project is not considered a substantial GHG emitter, and the GHG impact is less than significant, requiring no additional analysis and no mitigation. The SCAQMD's interim thresholds use the Executive Order S-3-05 goal as the basis for the Tier 3 screening levels. Achieving the Executive Order's objectives would contribute to worldwide efforts to cap CO2 concentrations at 450 ppm, stabilizing global climate change.

3.2.1 Construction

Table 12 summarizes the Project's construction GHG emissions. As per SCAQMD guidance, the Project's construction emissions are amortized over 30 years and added to the operational emissions to quantify the Project's total GHG emissions.

Table 12: Project Construction GHG Emissions

Activity	Annual GHG Emissions ($MTCO_2e$)
2021	433
2022	4
Total Emissions	437
Total Emissions Amortized Over 30 years	15
Source: see CalEEMod output	

3.2.2 Operations

Table 13 summarizes the Project's operational GHG emissions, the construction GHG emissions, and the total Project GHG emissions. The Project would result in GHG emissions of 754 $MTCO_2e$ per year. This level of emissions does not exceed the 3,000 $MTCO_2e$ per year significance threshold adopted for this Project. Therefore, the Project would have a less than significant individual and cumulative impact on GHG emissions.

Table 13: Project Operational GHG Emissions

Activity	Annual GHG Emissions ($MTCO_2e$)
Project Operational Emissions Area Energy Mobile Waste Water Total	 1 142 555 24 16 739
Project Construction Emissions	15
Project Construction and Operation	754
Significance Threshold	**3,000**
Project Exceeds Threshold?	**NO**
Source: see CalEEMod output	

3.2 - Conclusion

The Project's construction and operational GHG emissions would have a less than significant individual and cumulative impact for GHG emissions.

SECTION 4: PROJECT FUEL AND ENERGY CONSUMPTION

4.1 - Assumptions

- Construction equipment fuel consumption derived from ARB Offroad2017 emission model and the CalEEMod construction equipment
- Fuel Consumption from vehicle travel derived from ARB EMFAC2017 emission model
- Electrical and natural gas usage derived from the CalEEMod model

4.2 - Significance Thresholds

Neither Appendix F of the State CEQA Guidelines nor PRC Section 21100(b)(3)) provides a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a proposed project. Instead, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy" Based on this focus of the guidelines, for purposes of this report, the Project would have a significant impact related to energy consumption if it would:

- Involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and natural gas, and the use of fuel by vehicles anticipated to travel to and from the Project.

4.3 - Construction

4.3.1 Electricity and Natural Gas Usage

Southern California Edison Company would provide temporary electric power for lighting, air conditioning, and electronic equipment such as computers inside temporary construction trailers, as well as small tools including saws, drills, pumps, and compressors. The electricity used for such activities would be temporary and would be substantially less than required for project operation, and would have a negligible contribution to the Project's overall energy consumption.

Natural gas is not anticipated to be required during the construction of the Project. During the construction, fuels would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed due to Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

4.3.2 Petroleum Fuel Usage

Off-road heavy-duty construction equipment associated with construction activities would rely on diesel fuel, as would vendor and haul trucks involved in delivering building materials to the Project site. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered passenger vehicles. Table 14 presents the fuel usage for the off-road construction equipment. These estimates are based on the total fuel consumption and horsepower-hour data within the ARB

OFFROAD2017 emission model for specific types of diesel construction equipment employed in the project construction. Note that the total fuel consumption during construction computed below likely substantially overstates the amount of fuel usage. Although construction equipment and their duration are listed under a particular construction activity, there is a likelihood that all of the inventoried equipment would not operate over the entire duration of the construction activity. For example, during building construction, a crane is listed as one of the equipment's operational pieces. However, it is highly unlikely that the crane would operate over the entire duration of 230 days assumed during the building construction activity.

Table 15 summarizes the Project's construction vehicle fuel usage. The fuel usage is based on the vehicle type (worker vehicle, vendor vehicle, and haul truck), vehicle miles traveled, and fuel usage factors contained in the ARB EMFAC2017 mobile source emission model. Table 16 summarizes the total fuel construction during construction.

4.4 - Operational Energy Requirements

Table 17 summarizes the Project's operational energy requirements.

4.5 - Conclusion

Construction of the Project would result in fuel consumption from construction tools and equipment, vendor and haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Construction activities and corresponding fuel energy consumption would be temporary and localized, as the use of diesel fuel and heavy-duty equipment would not be a typical operational condition of the Project. Also, there are no unusual project characteristics that would cause construction equipment that would be less energy efficient than other similar construction sites in other parts of the State. Whether it be for a household task or construction project such as the Project, any construction job's rational goal is to minimize construction costs while meeting all legal requirements for doing so. Therefore, the Project's construction-related fuel consumption would not result in inefficient, wasteful, or unnecessary energy use compared with other construction sites in the region.

The operation of the project would involve the development of 38 single-family housing units. According to CEQA Guidelines Appendix F, the goal of conserving energy implies the wise and efficient use of energy, including decreasing overall per capita energy consumption, reducing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The Project would comply with all of the energy efficiency requirements under all applicable State, county, and local business and energy code ordinances. As a result, the Project's operation would not result in inefficient, wasteful, or unnecessary energy use compared with other similar residential projects in the region.

Table 14: Construction Equipment Fuel Usage

Activity	Equipment	Project Number	Project Hours per day	Default Horse-power	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Site Preparation	Rubber Tired Dozer	3	8	247	0.4	5	11,856	0.020461	243
	Crawler Tractor	4	8	212	0.43	5	14,586	0.022173	323
Grading	Excavators	1	8	158	0.38	8	3,843	0.019763	76
	Graders	1	8	187	0.41	8	4,907	0.021143	104
	Rubber Tired Dozers	1	8	247	0.4	8	6,323	0.020461	129
	Crawler Tractor	3	8	212	0.43	8	17,503	0.022173	388
Building Construction	Crane	1	7	231	0.29	230	107,854	0.014896	1,607
	Forklifts	3	8	89	0.2	230	98,256	0.019105	1,877
	Tractors/Loaders/Backhoes	3	7	97	0.37	230	173,349	0.023965	4,154
	Welders	1	8	46	0.45	230	38,088	0.023965	913
	Generator Set	1	8	84	0.74	230	114,374	0.023965	2,741
Paving	Pavers	2	8	130	0.42	18	15,725	0.021525	338
	Paving Equipment	2	8	132	0.36	18	13,686	0.018334	251
	Rollers	2	8	80	0.38	18	8,755	0.019412	170
Architectural Coating	Air Compressor	1	6	78	0.48	18	4,044	0.023965	97
Fuel Consumption rates derived from the ARB OFFROAD2017 - Orion Web Database								Total	13,411

Table 15: Estimated Project Construction Vehicle Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	2,902	0
Vendor Trucks	2,352	0
Worker Vehicles	0	5,278
Construction Vehicles Total	5,254	5,278
Source: see Construction Fuel Usage Spreadsheet		

Table 16: Total Construction Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Construction Vehicles	5,254	5,278
Off-road Construction Equipment	13,411	0
Construction Total	18,665	5,278
Source: see Construction Fuel Usage Spreadsheet		

Table 17: Project Annual Operational Energy Requirements

Operational Source (value per year)		
Energy Source	**Annual VMT**	**Annual Gallons of Fuel**
Transportation – Project	130,635 (DSL) 1,088,673 (GAS) 1,219,308 (Total)	14,728 (DSL) 40,007 (GAS)
	Thousands Kilowatt-Hours	
Electricity – Project	331,226	
	Thousands British Thermal Units	
Natural Gas – Project	1,162,650	
Source: see Fuel Usage Spreadsheet and CalEEMod output		

CalEEMod Model Spreadsheet Output

Moreno Valley Residential Project (20-013)

Estimate of Construction and Operational Local Significance Thresholds

Size of Maximum Daily Disturbed Construction Area: 3.5 acres
Size of Maximum Daily Disturbed Operation Area: 5 acres (actual projet area is approximately 5 acres)

Source Receptor Area: 24

Distance to Sensitive Receptor 25 meters for PM10 and PM2.5
Distance to Worker Receptor: 25 meters for NO2 and CO

Construction LST

	Distance = 25 meters			
Size (acres)	**NOx (lbs/day)**	**CO (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**
2	177	883	7	4
5	270	1577	13	8
3.5	224	1230	10	6

Estimation of Operational LSTs

	Distance = 25 meters			
Size (acres)	**NOx (lbs/day)**	**CO (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**
5	270	1577	4	2

Moreno Valley Residential Project

CalEEMod Construction Emission Summary

	Maximum Daily Emissions (pounds/day)									
2021	**ROG**	**NOx**	**CO**	**SOx**	**PM10F**	**PM10Exh**	**PM10Total**	**PM2.5Fug**	**PM2.5 Exh**	**PM2.5Total**
Site Prep										
Onsite	5.3	60.8	21.9	0.1	4.7	2.6	7.3	2.6	2.4	5.0
Offsite	0.1	0.0	0.7	0.0	0.2	0.0	0.2	0.1	0.0	0.1
Total	5.4	60.8	22.6	0.1	4.9	2.6	7.5	2.7	2.4	5.1
Grading										
Onsite	3.4	40.0	16.4	0.0	1.7	1.6	3.3	0.9	1.5	2.4
Offsite	0.7	27.5	4.2	0.1	2.4	0.1	2.5	0.7	0.1	0.8
Total	4.1	67.5	20.6	0.1	4.1	1.7	5.8	1.6	1.6	3.2
Building Construction										
Onsite	1.9	17.4	16.6	0.0	0.0	1.0	1.0	0.0	0.9	0.9
Offsite	0.2	1.5	1.8	0.0	0.6	0.0	0.6	0.1	0.0	0.1
Total	2.1	18.9	18.4	0.0	0.6	1.0	1.6	0.1	0.9	1.0
2021 Max Onsite	**5.3**	**60.8**	**21.9**	**0.1**	**4.7**	**2.6**	**7.3**	**2.6**	**2.4**	**5.0**
2021 Max Total	**5.4**	**67.5**	**22.6**	**0.1**	**4.9**	**2.6**	**7.5**	**2.7**	**2.4**	**5.1**

2022	**ROG**	**NOx**	**CO**	**SOx**	**PM10F**	**PM10Exh**	**PM10Total**	**PM2.5Fug**	**PM2.5 Exh**	**PM2.5Total**
Paving										
Onsite	1.3	10.8	12.3	0.0	0.0	0.6	0.6	0.0	0.5	0.5
Offsite	0.1	0.0	0.7	0.0	0.2	0.0	0.2	0.1	0.0	0.1
Total	1.4	10.8	13.0	0.0	0.2	0.6	0.8	0.1	0.5	0.6
Architectural Coating										
Onsite	49.1	1.5	1.8	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Offsite	0.0	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Total	49.1	1.5	2.1	0.0	0.1	0.1	0.2	0.0	0.1	0.1
2022 Max Onsite	**49.1**	**10.8**	**12.3**	**0.0**	**0.0**	**0.6**	**0.6**	**0.0**	**0.5**	**0.5**
2022 Max Total	**49.1**	**10.8**	**13.0**	**0.0**	**0.2**	**0.6**	**0.8**	**0.1**	**0.5**	**0.6**
2021-2022 Max Onsite	**49.1**	**60.8**	**21.9**	**0.1**	**4.7**	**2.6**	**7.3**	**2.6**	**2.4**	**5.0**
2021-2022 Max Total	**49.1**	**67.5**	**22.6**	**0.1**	**4.9**	**2.6**	**7.5**	**2.7**	**2.4**	**5.1**
Regional Threshold	75	100	550	150			150			55
Exceeds Threshold	NO	NO	NO	NO			NO			NO
LST Threshold		225	1250				10			6
Exceeds LST		NO	NO				NO			NO

Moreno Valley Residential Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,714.00	0
Other Non-Asphalt Surfaces	0.33	Acre	0.33	14,374.80	0
Single Family Housing	38.00	Dwelling Unit	3.00	130,168.00	109

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	530	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Moreno Valley Residential Project - Riverside-South Coast County, Summer

Project Characteristics - SCE CO2 INtensity FActor for 2020 to 2029

Land Use - Project land uses as per the revised project description

Construction Phase -

Off-road Equipment - Larger equipment used

Off-road Equipment - Use of larger equipment

Grading - 8,097 cubic yards of soik to be exported

Vehicle Trips - .Weekday trip rate derived from the project traffic memorandum

Woodstoves - NO fireplaces or hearths

Construction Off-road Equipment Mitigation - Watering at 2 hour intervals WRAP Fugitive Dust Handbook

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	4,085.00	3,832.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	87,863.00	92,966.00
tblArchitecturalCoating	ConstArea_Residential_Interior	263,590.00	278,899.00
tblAreaCoating	Area_Parking	4085	3832
tblAreaCoating	Area_Residential_Exterior	87863	92966
tblAreaCoating	Area_Residential_Interior	263590	278899
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	32.30	0.00
tblFireplaces	NumberNoFireplace	3.80	0.00
tblFireplaces	NumberWood	1.90	0.00

tblGrading	AcresOfGrading	16.00	4.00
tblGrading	AcresOfGrading	10.00	0.00
tblGrading	MaterialExported	0.00	8,097.00
tblLandUse	LandUseSquareFeet	53,578.80	53,714.00
tblLandUse	LandUseSquareFeet	68,400.00	130,168.00
tblLandUse	LotAcreage	12.34	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	530
tblSolidWaste	SolidWasteGenerationRate	44.69	46.74
tblTripsAndVMT	WorkerTripNumber	42.00	41.00
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	IndoorWaterUseRate	2,475,852.97	2,606,161.02
tblWater	OutdoorWaterUseRate	1,560,863.83	1,643,014.56
tblWoodstoves	NumberCatalytic	1.90	0.00
tblWoodstoves	NumberNoncatalytic	1.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4281	67.4895	22.5191	0.1407	18.2675	2.6472	20.9146	9.9840	2.4354	12.4195	0.0000	14,521.6153	14,521.6153	1.9658	0.0000	14,570.7593
2022	49.1044	9.5707	12.8760	0.0210	0.2236	0.4889	0.7125	0.0593	0.4515	0.5108	0.0000	2,010.2989	2,010.2989	0.5717	0.0000	2,024.5923
Maximum	**49.1044**	**67.4895**	**22.5191**	**0.1407**	**18.2675**	**2.6472**	**20.9146**	**9.9840**	**2.4354**	**12.4195**	**0.0000**	**14,521.6153**	**14,521.6153**	**1.9658**	**0.0000**	**14,570.7593**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4281	67.4895	22.5191	0.1407	4.8984	2.6472	7.5456	2.6353	2.4354	5.0708	0.0000	14,521.6153	14,521.6153	1.9658	0.0000	14,570.7593
2022	49.1044	9.5707	12.8760	0.0210	0.2236	0.4889	0.7125	0.0593	0.4515	0.5108	0.0000	2,010.2989	2,010.2989	0.5717	0.0000	2,024.5923
Maximum	**49.1044**	**67.4895**	**22.5191**	**0.1407**	**4.8984**	**2.6472**	**7.5456**	**2.6353**	**2.4354**	**5.0708**	**0.0000**	**14,521.6153**	**14,521.6153**	**1.9658**	**0.0000**	**14,570.7593**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**72.30**	**0.00**	**61.82**	**73.17**	**0.00**	**56.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Energy	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Mobile	0.7065	5.0907	8.4486	0.0368	2.7443	0.0239	2.7682	0.7342	0.0224	0.7566		3,756.3717	3,756.3717	0.1743		3,760.7301
Total	**3.6781**	**5.4205**	**11.7121**	**0.0388**	**2.7443**	**0.0650**	**2.8093**	**0.7342**	**0.0635**	**0.7977**	**0.0000**	**4,136.7644**	**4,136.7644**	**0.1870**	**6.8700e-003**	**4,143.4859**

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Energy	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Mobile	0.7065	5.0907	8.4486	0.0368	2.7443	0.0239	2.7682	0.7342	0.0224	0.7566		3,756.3717	3,756.3717	0.1743		3,760.7301
Total	**3.6781**	**5.4205**	**11.7121**	**0.0388**	**2.7443**	**0.0650**	**2.8093**	**0.7342**	**0.0635**	**0.7977**	**0.0000**	**4,136.7644**	**4,136.7644**	**0.1870**	**6.8700e-003**	**4,143.4859**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/8/2021	5	5	
2	Grading	Grading	1/9/2021	1/20/2021	5	8	
3	Building Construction	Building Construction	1/21/2021	12/8/2021	5	230	
4	Paving	Paving	12/9/2021	1/3/2022	5	18	
5	Architectural Coating	Architectural Coating	1/4/2022	1/27/2022	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.56

Residential Indoor: 278,899; Residential Outdoor: 92,966; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,832 (Architectural Coating – sqft)

OffRoad Equipment

Moreno Valley Residential Project - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Moreno Valley Residential Project - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,012.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	41.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343		5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**18.0663**	**2.6460**	**20.7123**	**9.9307**	**2.4343**	**12.3650**		**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	**0.0853**	**0.0486**	**0.6655**	**1.9200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**191.6552**	**191.6552**	**4.5700e-003**		**191.7694**

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					4.6972	0.0000	4.6972	2.5820	0.0000	2.5820			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**4.6972**	**2.6460**	**7.3432**	**2.5820**	**2.4343**	**5.0163**	**0.0000**	**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	**0.0853**	**0.0486**	**0.6655**	**1.9200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**191.6552**	**191.6552**	**4.5700e-003**		**191.7694**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6805	0.0000	6.6805	3.3869	0.0000	3.3869			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822		4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**6.6805**	**1.6111**	**8.2916**	**3.3869**	**1.4822**	**4.8691**		**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6158	27.4956	3.6157	0.0953	2.2128	0.0837	2.2965	0.6066	0.0801	0.6867		10,111.5883	10,111.5883	0.5873		10,126.2712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	**0.6869**	**27.5361**	**4.1702**	**0.0969**	**2.3804**	**0.0847**	**2.4652**	**0.6510**	**0.0810**	**0.7320**		**10,271.3009**	**10,271.3009**	**0.5911**		**10,286.0790**

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					1.7369	0.0000	1.7369	0.8806	0.0000	0.8806			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822	0.0000	4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**1.7369**	**1.6111**	**3.3480**	**0.8806**	**1.4822**	**2.3628**	**0.0000**	**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6158	27.4956	3.6157	0.0953	2.2128	0.0837	2.2965	0.6066	0.0801	0.6867		10,111.5883	10,111.5883	0.5873		10,126.2712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	**0.6869**	**27.5361**	**4.1702**	**0.0969**	**2.3804**	**0.0847**	**2.4652**	**0.6510**	**0.0810**	**0.7320**		**10,271.3009**	**10,271.3009**	**0.5911**		**10,286.0790**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

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

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0350	1.3881	0.2477	3.8900e-003	0.0961	2.6400e-003	0.0987	0.0277	2.5300e-003	0.0302		409.8765	409.8765	0.0293		410.6096
Worker	0.1944	0.1107	1.5158	4.3800e-003	0.4583	2.7000e-003	0.4610	0.1215	2.4900e-003	0.1240		436.5479	436.5479	0.0104		436.8081
Total	**0.2294**	**1.4988**	**1.7635**	**8.2700e-003**	**0.5543**	**5.3400e-003**	**0.5597**	**0.1492**	**5.0200e-003**	**0.1542**		**846.4244**	**846.4244**	**0.0397**		**847.4177**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0350	1.3881	0.2477	3.8900e-003	0.0961	2.6400e-003	0.0987	0.0277	2.5300e-003	0.0302		409.8765	409.8765	0.0293		410.6096
Worker	0.1944	0.1107	1.5158	4.3800e-003	0.4583	2.7000e-003	0.4610	0.1215	2.4900e-003	0.1240		436.5479	436.5479	0.0104		436.8081
Total	**0.2294**	**1.4988**	**1.7635**	**8.2700e-003**	**0.5543**	**5.3400e-003**	**0.5597**	**0.1492**	**5.0200e-003**	**0.1542**		**846.4244**	**846.4244**	**0.0397**		**847.4177**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2730**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**		**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771
Total	**0.0948**	**0.0540**	**0.7394**	**2.1400e-003**	**0.2236**	**1.3200e-003**	**0.2249**	**0.0593**	**1.2100e-003**	**0.0605**		**212.9502**	**212.9502**	**5.0800e-003**		**213.0771**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2730**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**	**0.0000**	**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771
Total	**0.0948**	**0.0540**	**0.7394**	**2.1400e-003**	**0.2236**	**1.3200e-003**	**0.2249**	**0.0593**	**1.2100e-003**	**0.0605**		**212.9502**	**212.9502**	**5.0800e-003**		**213.0771**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1555**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**		**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0887	0.0486	0.6820	2.0600e-003	0.2236	1.2800e-003	0.2248	0.0593	1.1800e-003	0.0605		205.1692	205.1692	4.5600e-003		205.2832
Total	**0.0887**	**0.0486**	**0.6820**	**2.0600e-003**	**0.2236**	**1.2800e-003**	**0.2248**	**0.0593**	**1.1800e-003**	**0.0605**		**205.1692**	**205.1692**	**4.5600e-003**		**205.2832**

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1555**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**	**0.0000**	**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0887	0.0486	0.6820	2.0600e-003	0.2236	1.2800e-003	0.2248	0.0593	1.1800e-003	0.0605		205.1692	205.1692	4.5600e-003		205.2832
Total	**0.0887**	**0.0486**	**0.6820**	**2.0600e-003**	**0.2236**	**1.2800e-003**	**0.2248**	**0.0593**	**1.1800e-003**	**0.0605**		**205.1692**	**205.1692**	**4.5600e-003**		**205.2832**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.8644					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**49.0689**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0194	0.2728	8.2000e-004	0.0894	5.1000e-004	0.0899	0.0237	4.7000e-004	0.0242		82.0677	82.0677	1.8200e-003		82.1133
Total	**0.0355**	**0.0194**	**0.2728**	**8.2000e-004**	**0.0894**	**5.1000e-004**	**0.0899**	**0.0237**	**4.7000e-004**	**0.0242**		**82.0677**	**82.0677**	**1.8200e-003**		**82.1133**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.8644					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**49.0689**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0194	0.2728	8.2000e-004	0.0894	5.1000e-004	0.0899	0.0237	4.7000e-004	0.0242		82.0677	82.0677	1.8200e-003		82.1133
Total	**0.0355**	**0.0194**	**0.2728**	**8.2000e-004**	**0.0894**	**5.1000e-004**	**0.0899**	**0.0237**	**4.7000e-004**	**0.0242**		**82.0677**	**82.0677**	**1.8200e-003**		**82.1133**

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	0.7065	5.0907	8.4486	0.0368	2.7443	0.0239	2.7682	0.7342	0.0224	0.7566		3,756.3717	3,756.3717	0.1743		3,760.7301
Unmitigated	0.7065	5.0907	8.4486	0.0368	2.7443	0.0239	2.7682	0.7342	0.0224	0.7566		3,756.3717	3,756.3717	0.1743		3,760.7301

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	358.72	376.58	327.56	1,219,308	1,219,308
Total	358.72	376.58	327.56	1,219,308	1,219,308

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
NaturalGas Unmitigated	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3185.35	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Total		**0.0344**	**0.2936**	**0.1249**	**1.8700e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**		**374.7474**	**374.7474**	**7.1800e-003**	**6.8700e-003**	**376.9743**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.18535	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Total		**0.0344**	**0.2936**	**0.1249**	**1.8700e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**		**374.7474**	**374.7474**	**7.1800e-003**	**6.8700e-003**	**376.9743**

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Unmitigated	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0948	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173		5.6453	5.6453	5.4500e-003		5.7815
Total	**2.9372**	**0.0362**	**3.1386**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.6453**	**5.6453**	**5.4500e-003**	**0.0000**	**5.7815**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0948	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173		5.6453	5.6453	5.4500e-003		5.7815
Total	**2.9372**	**0.0362**	**3.1386**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.6453**	**5.6453**	**5.4500e-003**	**0.0000**	**5.7815**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Moreno Valley Residential Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,714.00	0
Other Non-Asphalt Surfaces	0.33	Acre	0.33	14,374.80	0
Single Family Housing	38.00	Dwelling Unit	3.00	130,168.00	109

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	530	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Moreno Valley Residential Project - Riverside-South Coast County, Winter

Project Characteristics - SCE CO2 INtensity FActor for 2020 to 2029

Land Use - Project land uses as per the revised project description

Construction Phase -

Off-road Equipment - Larger equipment used

Off-road Equipment - Use of larger equipment

Grading - 8,097 cubic yards of soik to be exported

Vehicle Trips - .Weekday trip rate derived from the project traffic memorandum

Woodstoves - NO fireplaces or hearths

Construction Off-road Equipment Mitigation - Watering at 2 hour intervals WRAP Fugitive Dust Handbook

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	4,085.00	3,832.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	87,863.00	92,966.00
tblArchitecturalCoating	ConstArea_Residential_Interior	263,590.00	278,899.00
tblAreaCoating	Area_Parking	4085	3832
tblAreaCoating	Area_Residential_Exterior	87863	92966
tblAreaCoating	Area_Residential_Interior	263590	278899
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	32.30	0.00
tblFireplaces	NumberNoFireplace	3.80	0.00
tblFireplaces	NumberWood	1.90	0.00

tblGrading	AcresOfGrading	16.00	4.00
tblGrading	AcresOfGrading	10.00	0.00
tblGrading	MaterialExported	0.00	8,097.00
tblLandUse	LandUseSquareFeet	53,578.80	53,714.00
tblLandUse	LandUseSquareFeet	68,400.00	130,168.00
tblLandUse	LotAcreage	12.34	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	530
tblSolidWaste	SolidWasteGenerationRate	44.69	46.74
tblTripsAndVMT	WorkerTripNumber	42.00	41.00
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	IndoorWaterUseRate	2,475,852.97	2,606,161.02
tblWater	OutdoorWaterUseRate	1,560,863.83	1,643,014.56
tblWoodstoves	NumberCatalytic	1.90	0.00
tblWoodstoves	NumberNoncatalytic	1.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4265	67.6772	22.3908	0.1382	18.2675	2.6472	20.9146	9.9840	2.4354	12.4195	0.0000	14,251.1314	14,251.1314	2.0205	0.0000	14,301.6434
2022	49.1038	9.5724	12.7437	0.0208	0.2236	0.4889	0.7125	0.0593	0.4515	0.5108	0.0000	1,989.1975	1,989.1975	0.5712	0.0000	2,003.4761
Maximum	**49.1038**	**67.6772**	**22.3908**	**0.1382**	**18.2675**	**2.6472**	**20.9146**	**9.9840**	**2.4354**	**12.4195**	**0.0000**	**14,251.1314**	**14,251.1314**	**2.0205**	**0.0000**	**14,301.6434**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4265	67.6772	22.3908	0.1382	4.8984	2.6472	7.5456	2.6353	2.4354	5.0708	0.0000	14,251.1314	14,251.1314	2.0205	0.0000	14,301.6434
2022	49.1038	9.5724	12.7437	0.0208	0.2236	0.4889	0.7125	0.0593	0.4515	0.5108	0.0000	1,989.1975	1,989.1975	0.5712	0.0000	2,003.4761
Maximum	**49.1038**	**67.6772**	**22.3908**	**0.1382**	**4.8984**	**2.6472**	**7.5456**	**2.6353**	**2.4354**	**5.0708**	**0.0000**	**14,251.1314**	**14,251.1314**	**2.0205**	**0.0000**	**14,301.6434**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**72.30**	**0.00**	**61.82**	**73.17**	**0.00**	**56.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Energy	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Mobile	0.5994	5.0893	7.3010	0.0340	2.7443	0.0242	2.7684	0.7342	0.0227	0.7569		3,470.7430	3,470.7430	0.1800		3,475.2440
Total	**3.5710**	**5.4191**	**10.5645**	**0.0360**	**2.7443**	**0.0652**	**2.8095**	**0.7342**	**0.0637**	**0.7979**	**0.0000**	**3,851.1357**	**3,851.1357**	**0.1927**	**6.8700e-003**	**3,857.9998**

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Energy	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Mobile	0.5994	5.0893	7.3010	0.0340	2.7443	0.0242	2.7684	0.7342	0.0227	0.7569		3,470.7430	3,470.7430	0.1800		3,475.2440
Total	**3.5710**	**5.4191**	**10.5645**	**0.0360**	**2.7443**	**0.0652**	**2.8095**	**0.7342**	**0.0637**	**0.7979**	**0.0000**	**3,851.1357**	**3,851.1357**	**0.1927**	**6.8700e-003**	**3,857.9998**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/8/2021	5	5	
2	Grading	Grading	1/9/2021	1/20/2021	5	8	
3	Building Construction	Building Construction	1/21/2021	12/8/2021	5	230	
4	Paving	Paving	12/9/2021	1/3/2022	5	18	
5	Architectural Coating	Architectural Coating	1/4/2022	1/27/2022	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.56

Residential Indoor: 278,899; Residential Outdoor: 92,966; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,832 (Architectural Coating – sqft)

OffRoad Equipment

Moreno Valley Residential Project - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,012.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	41.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343		5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**18.0663**	**2.6460**	**20.7123**	**9.9307**	**2.4343**	**12.3650**		**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	**0.0838**	**0.0503**	**0.5372**	**1.7200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**171.9348**	**171.9348**	**3.9700e-003**		**172.0342**

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					4.6972	0.0000	4.6972	2.5820	0.0000	2.5820			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**4.6972**	**2.6460**	**7.3432**	**2.5820**	**2.4343**	**5.0163**	**0.0000**	**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	**0.0838**	**0.0503**	**0.5372**	**1.7200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**171.9348**	**171.9348**	**3.9700e-003**		**172.0342**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6805	0.0000	6.6805	3.3869	0.0000	3.3869			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822		4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**6.6805**	**1.6111**	**8.2916**	**3.3869**	**1.4822**	**4.8691**		**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6480	27.6819	4.2177	0.0929	2.2128	0.0849	2.2977	0.6066	0.0813	0.6878		9,857.5380	9,857.5380	0.6425		9,873.6013
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	**0.7177**	**27.7238**	**4.6653**	**0.0943**	**2.3804**	**0.0859**	**2.4664**	**0.6510**	**0.0822**	**0.7332**		**10,000.8170**	**10,000.8170**	**0.6458**		**10,016.9631**

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					1.7369	0.0000	1.7369	0.8806	0.0000	0.8806			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822	0.0000	4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**1.7369**	**1.6111**	**3.3480**	**0.8806**	**1.4822**	**2.3628**	**0.0000**	**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6480	27.6819	4.2177	0.0929	2.2128	0.0849	2.2977	0.6066	0.0813	0.6878		9,857.5380	9,857.5380	0.6425		9,873.6013
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	**0.7177**	**27.7238**	**4.6653**	**0.0943**	**2.3804**	**0.0859**	**2.4664**	**0.6510**	**0.0822**	**0.7332**		**10,000.8170**	**10,000.8170**	**0.6458**		**10,016.9631**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

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

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.3761	0.2930	3.7400e-003	0.0961	2.7200e-003	0.0988	0.0277	2.6000e-003	0.0303		394.4598	394.4598	0.0327		395.2767
Worker	0.1908	0.1145	1.2236	3.9300e-003	0.4583	2.7000e-003	0.4610	0.1215	2.4900e-003	0.1240		391.6294	391.6294	9.0500e-003		391.8556
Total	**0.2279**	**1.4907**	**1.5165**	**7.6700e-003**	**0.5543**	**5.4200e-003**	**0.5598**	**0.1492**	**5.0900e-003**	**0.1543**		**786.0892**	**786.0892**	**0.0417**		**787.1323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.3761	0.2930	3.7400e-003	0.0961	2.7200e-003	0.0988	0.0277	2.6000e-003	0.0303		394.4598	394.4598	0.0327		395.2767
Worker	0.1908	0.1145	1.2236	3.9300e-003	0.4583	2.7000e-003	0.4610	0.1215	2.4900e-003	0.1240		391.6294	391.6294	9.0500e-003		391.8556
Total	**0.2279**	**1.4907**	**1.5165**	**7.6700e-003**	**0.5543**	**5.4200e-003**	**0.5598**	**0.1492**	**5.0900e-003**	**0.1543**		**786.0892**	**786.0892**	**0.0417**		**787.1323**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2730**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**		**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491
Total	**0.0931**	**0.0559**	**0.5969**	**1.9200e-003**	**0.2236**	**1.3200e-003**	**0.2249**	**0.0593**	**1.2100e-003**	**0.0605**		**191.0387**	**191.0387**	**4.4100e-003**		**191.1491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2730**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**	**0.0000**	**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491
Total	**0.0931**	**0.0559**	**0.5969**	**1.9200e-003**	**0.2236**	**1.3200e-003**	**0.2249**	**0.0593**	**1.2100e-003**	**0.0605**		**191.0387**	**191.0387**	**4.4100e-003**		**191.1491**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1555**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**		**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0873	0.0503	0.5497	1.8500e-003	0.2236	1.2800e-003	0.2248	0.0593	1.1800e-003	0.0605		184.0678	184.0678	3.9700e-003		184.1670
Total	**0.0873**	**0.0503**	**0.5497**	**1.8500e-003**	**0.2236**	**1.2800e-003**	**0.2248**	**0.0593**	**1.1800e-003**	**0.0605**		**184.0678**	**184.0678**	**3.9700e-003**		**184.1670**

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1555**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**	**0.0000**	**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0873	0.0503	0.5497	1.8500e-003	0.2236	1.2800e-003	0.2248	0.0593	1.1800e-003	0.0605		184.0678	184.0678	3.9700e-003		184.1670
Total	**0.0873**	**0.0503**	**0.5497**	**1.8500e-003**	**0.2236**	**1.2800e-003**	**0.2248**	**0.0593**	**1.1800e-003**	**0.0605**		**184.0678**	**184.0678**	**3.9700e-003**		**184.1670**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.8644					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**49.0689**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0349	0.0201	0.2199	7.4000e-004	0.0894	5.1000e-004	0.0899	0.0237	4.7000e-004	0.0242		73.6271	73.6271	1.5900e-003		73.6668
Total	**0.0349**	**0.0201**	**0.2199**	**7.4000e-004**	**0.0894**	**5.1000e-004**	**0.0899**	**0.0237**	**4.7000e-004**	**0.0242**		**73.6271**	**73.6271**	**1.5900e-003**		**73.6668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.8644					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**49.0689**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0349	0.0201	0.2199	7.4000e-004	0.0894	5.1000e-004	0.0899	0.0237	4.7000e-004	0.0242		73.6271	73.6271	1.5900e-003		73.6668
Total	**0.0349**	**0.0201**	**0.2199**	**7.4000e-004**	**0.0894**	**5.1000e-004**	**0.0899**	**0.0237**	**4.7000e-004**	**0.0242**		**73.6271**	**73.6271**	**1.5900e-003**		**73.6668**

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	0.5994	5.0893	7.3010	0.0340	2.7443	0.0242	2.7684	0.7342	0.0227	0.7569		3,470.7430	3,470.7430	0.1800		3,475.2440
Unmitigated	0.5994	5.0893	7.3010	0.0340	2.7443	0.0242	2.7684	0.7342	0.0227	0.7569		3,470.7430	3,470.7430	0.1800		3,475.2440

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	358.72	376.58	327.56	1,219,308	1,219,308
Total	358.72	376.58	327.56	1,219,308	1,219,308

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
NaturalGas Unmitigated	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3185.35	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Total		**0.0344**	**0.2936**	**0.1249**	**1.8700e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**		**374.7474**	**374.7474**	**7.1800e-003**	**6.8700e-003**	**376.9743**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.18535	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Total		**0.0344**	**0.2936**	**0.1249**	**1.8700e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**		**374.7474**	**374.7474**	**7.1800e-003**	**6.8700e-003**	**376.9743**

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Unmitigated	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0948	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173		5.6453	5.6453	5.4500e-003		5.7815
Total	**2.9372**	**0.0362**	**3.1386**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.6453**	**5.6453**	**5.4500e-003**	**0.0000**	**5.7815**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0948	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173		5.6453	5.6453	5.4500e-003		5.7815
Total	**2.9372**	**0.0362**	**3.1386**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.6453**	**5.6453**	**5.4500e-003**	**0.0000**	**5.7815**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Moreno Valley Residential Project

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,714.00	0
Other Non-Asphalt Surfaces	0.33	Acre	0.33	14,374.80	0
Single Family Housing	38.00	Dwelling Unit	3.00	130,168.00	109

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	530	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Moreno Valley Residential Project - Riverside-South Coast County, Annual

Project Characteristics - SCE CO2 INtensity FActor for 2020 to 2029

Land Use - Project land uses as per the revised project description

Construction Phase -

Off-road Equipment - Larger equipment used

Off-road Equipment - Use of larger equipment

Grading - 8,097 cubic yards of soik to be exported

Vehicle Trips - .Weekday trip rate derived from the project traffic memorandum

Woodstoves - NO fireplaces or hearths

Construction Off-road Equipment Mitigation - Watering at 2 hour intervals WRAP Fugitive Dust Handbook

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	4,085.00	3,832.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	87,863.00	92,966.00
tblArchitecturalCoating	ConstArea_Residential_Interior	263,590.00	278,899.00
tblAreaCoating	Area_Parking	4085	3832
tblAreaCoating	Area_Residential_Exterior	87863	92966
tblAreaCoating	Area_Residential_Interior	263590	278899
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	32.30	0.00
tblFireplaces	NumberNoFireplace	3.80	0.00
tblFireplaces	NumberWood	1.90	0.00

tblGrading	AcresOfGrading	16.00	4.00
tblGrading	AcresOfGrading	10.00	0.00
tblGrading	MaterialExported	0.00	8,097.00
tblLandUse	LandUseSquareFeet	53,578.80	53,714.00
tblLandUse	LandUseSquareFeet	68,400.00	130,168.00
tblLandUse	LotAcreage	12.34	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	530
tblSolidWaste	SolidWasteGenerationRate	44.69	46.74
tblTripsAndVMT	WorkerTripNumber	42.00	41.00
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	IndoorWaterUseRate	2,475,852.97	2,606,161.02
tblWater	OutdoorWaterUseRate	1,560,863.83	1,643,014.56
tblWoodstoves	NumberCatalytic	1.90	0.00
tblWoodstoves	NumberNoncatalytic	1.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2843	2.6963	2.3341	4.8800e-003	0.1464	0.1292	0.2756	0.0585	0.1211	0.1796	0.0000	430.9922	430.9922	0.0841	0.0000	433.0957
2022	0.4425	0.0177	0.0248	4.0000e-005	9.0000e-004	9.8000e-004	1.8900e-003	2.4000e-004	9.7000e-004	1.2000e-003	0.0000	3.8190	3.8190	4.2000e-004	0.0000	3.8295
Maximum	**0.4425**	**2.6963**	**2.3341**	**4.8800e-003**	**0.1464**	**0.1292**	**0.2756**	**0.0585**	**0.1211**	**0.1796**	**0.0000**	**430.9922**	**430.9922**	**0.0841**	**0.0000**	**433.0957**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2843	2.6963	2.3341	4.8800e-003	0.0932	0.1292	0.2224	0.0301	0.1211	0.1512	0.0000	430.9918	430.9918	0.0841	0.0000	433.0953
2022	0.4425	0.0177	0.0248	4.0000e-005	9.0000e-004	9.8000e-004	1.8900e-003	2.4000e-004	9.7000e-004	1.2000e-003	0.0000	3.8190	3.8190	4.2000e-004	0.0000	3.8295
Maximum	**0.4425**	**2.6963**	**2.3341**	**4.8800e-003**	**0.0932**	**0.1292**	**0.2224**	**0.0301**	**0.1211**	**0.1512**	**0.0000**	**430.9918**	**430.9918**	**0.0841**	**0.0000**	**433.0953**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**36.13**	**0.00**	**19.18**	**48.37**	**0.00**	**15.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	0.9748	0.9748
2	4-4-2021	7-3-2021	0.6845	0.6845
3	7-4-2021	10-3-2021	0.6920	0.6920
4	10-4-2021	1-3-2022	0.6085	0.6085
5	1-4-2022	4-3-2022	0.4331	0.4331
		Highest	0.9748	0.9748

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5306	4.5200e-003	0.3923	2.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	0.6402	0.6402	6.2000e-004	0.0000	0.6556
Energy	6.2700e-003	0.0536	0.0228	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	141.6717	141.6717	5.5500e-003	2.0400e-003	142.4180
Mobile	0.1036	0.8931	1.2972	5.9900e-003	0.4655	4.1400e-003	0.4697	0.1247	3.8800e-003	0.1286	0.0000	555.2543	555.2543	0.0274	0.0000	555.9379
Waste						0.0000	0.0000		0.0000	0.0000	9.4878	0.0000	9.4878	0.5607	0.0000	23.5056
Water						0.0000	0.0000		0.0000	0.0000	0.8268	12.5464	13.3732	0.0856	2.1500e-003	16.1533
Total	**0.6404**	**0.9512**	**1.7123**	**6.3500e-003**	**0.4655**	**0.0106**	**0.4762**	**0.1247**	**0.0104**	**0.1351**	**10.3146**	**710.1126**	**720.4272**	**0.6798**	**4.1900e-003**	**738.6704**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5306	4.5200e-003	0.3923	2.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	0.6402	0.6402	6.2000e-004	0.0000	0.6556
Energy	6.2700e-003	0.0536	0.0228	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	141.6717	141.6717	5.5500e-003	2.0400e-003	142.4180
Mobile	0.1036	0.8931	1.2972	5.9900e-003	0.4655	4.1400e-003	0.4697	0.1247	3.8800e-003	0.1286	0.0000	555.2543	555.2543	0.0274	0.0000	555.9379
Waste						0.0000	0.0000		0.0000	0.0000	9.4878	0.0000	9.4878	0.5607	0.0000	23.5056
Water						0.0000	0.0000		0.0000	0.0000	0.8268	12.5464	13.3732	0.0856	2.1500e-003	16.1533
Total	**0.6404**	**0.9512**	**1.7123**	**6.3500e-003**	**0.4655**	**0.0106**	**0.4762**	**0.1247**	**0.0104**	**0.1351**	**10.3146**	**710.1126**	**720.4272**	**0.6798**	**4.1900e-003**	**738.6704**

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

3.0 Construction Detail

Construction Phase

Moreno Valley Residential Project - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/8/2021	5	5	
2	Grading	Grading	1/9/2021	1/20/2021	5	8	
3	Building Construction	Building Construction	1/21/2021	12/8/2021	5	230	
4	Paving	Paving	12/9/2021	1/3/2022	5	18	
5	Architectural Coating	Architectural Coating	1/4/2022	1/27/2022	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.56

Residential Indoor: 278,899; Residential Outdoor: 92,966; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,832 (Architectural Coating – sqft)

OffRoad Equipment

Moreno Valley Residential Project - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,012.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	41.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0134	0.1520	0.0546	1.4000e-004		6.6100e-003	6.6100e-003		6.0900e-003	6.0900e-003	0.0000	12.5271	12.5271	4.0500e-003	0.0000	12.6284
Total	**0.0134**	**0.1520**	**0.0546**	**1.4000e-004**	**0.0452**	**6.6100e-003**	**0.0518**	**0.0248**	**6.0900e-003**	**0.0309**	**0.0000**	**12.5271**	**12.5271**	**4.0500e-003**	**0.0000**	**12.6284**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4200e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4000	0.4000	1.0000e-005	0.0000	0.4002
Total	**1.9000e-004**	**1.3000e-004**	**1.4200e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4000**	**0.4000**	**1.0000e-005**	**0.0000**	**0.4002**

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					0.0117	0.0000	0.0117	6.4500e-003	0.0000	6.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0134	0.1520	0.0546	1.4000e-004		6.6100e-003	6.6100e-003		6.0900e-003	6.0900e-003	0.0000	12.5271	12.5271	4.0500e-003	0.0000	12.6284
Total	**0.0134**	**0.1520**	**0.0546**	**1.4000e-004**	**0.0117**	**6.6100e-003**	**0.0184**	**6.4500e-003**	**6.0900e-003**	**0.0125**	**0.0000**	**12.5271**	**12.5271**	**4.0500e-003**	**0.0000**	**12.6284**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4200e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4000	0.4000	1.0000e-005	0.0000	0.4002
Total	**1.9000e-004**	**1.3000e-004**	**1.4200e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4000**	**0.4000**	**1.0000e-005**	**0.0000**	**0.4002**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0267	0.0000	0.0267	0.0136	0.0000	0.0136	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0135	0.1598	0.0655	1.8000e-004		6.4400e-003	6.4400e-003		5.9300e-003	5.9300e-003	0.0000	15.4233	15.4233	4.9900e-003	0.0000	15.5480
Total	**0.0135**	**0.1598**	**0.0655**	**1.8000e-004**	**0.0267**	**6.4400e-003**	**0.0332**	**0.0136**	**5.9300e-003**	**0.0195**	**0.0000**	**15.4233**	**15.4233**	**4.9900e-003**	**0.0000**	**15.5480**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5200e-003	0.1124	0.0155	3.8000e-004	8.7200e-003	3.4000e-004	9.0600e-003	2.3900e-003	3.2000e-004	2.7200e-003	0.0000	36.3051	36.3051	2.2200e-003	0.0000	36.3606
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	1.8900e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5333	0.5333	1.0000e-005	0.0000	0.5336
Total	**2.7800e-003**	**0.1126**	**0.0174**	**3.9000e-004**	**9.3800e-003**	**3.4000e-004**	**9.7200e-003**	**2.5700e-003**	**3.2000e-004**	**2.9000e-003**	**0.0000**	**36.8384**	**36.8384**	**2.2300e-003**	**0.0000**	**36.8942**

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					6.9500e-003	0.0000	6.9500e-003	3.5200e-003	0.0000	3.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0135	0.1598	0.0655	1.8000e-004		6.4400e-003	6.4400e-003		5.9300e-003	5.9300e-003	0.0000	15.4233	15.4233	4.9900e-003	0.0000	15.5480
Total	**0.0135**	**0.1598**	**0.0655**	**1.8000e-004**	**6.9500e-003**	**6.4400e-003**	**0.0134**	**3.5200e-003**	**5.9300e-003**	**9.4500e-003**	**0.0000**	**15.4233**	**15.4233**	**4.9900e-003**	**0.0000**	**15.5480**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5200e-003	0.1124	0.0155	3.8000e-004	8.7200e-003	3.4000e-004	9.0600e-003	2.3900e-003	3.2000e-004	2.7200e-003	0.0000	36.3051	36.3051	2.2200e-003	0.0000	36.3606
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	1.8900e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5333	0.5333	1.0000e-005	0.0000	0.5336
Total	**2.7800e-003**	**0.1126**	**0.0174**	**3.9000e-004**	**9.3800e-003**	**3.4000e-004**	**9.7200e-003**	**2.5700e-003**	**3.2000e-004**	**2.9000e-003**	**0.0000**	**36.8384**	**36.8384**	**2.2300e-003**	**0.0000**	**36.8942**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2186	2.0047	1.9062	3.1000e-003		0.1102	0.1102		0.1037	0.1037	0.0000	266.3829	266.3829	0.0643	0.0000	267.9895
Total	**0.2186**	**2.0047**	**1.9062**	**3.1000e-003**		**0.1102**	**0.1102**		**0.1037**	**0.1037**	**0.0000**	**266.3829**	**266.3829**	**0.0643**	**0.0000**	**267.9895**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1200e-003	0.1608	0.0310	4.4000e-004	0.0109	3.1000e-004	0.0112	3.1400e-003	2.9000e-004	3.4400e-003	0.0000	42.0854	42.0854	3.2100e-003	0.0000	42.1656
Worker	0.0202	0.0136	0.1484	4.6000e-004	0.0518	3.1000e-004	0.0521	0.0138	2.9000e-004	0.0141	0.0000	41.9091	41.9091	9.8000e-004	0.0000	41.9335
Total	**0.0243**	**0.1745**	**0.1794**	**9.0000e-004**	**0.0627**	**6.2000e-004**	**0.0633**	**0.0169**	**5.8000e-004**	**0.0175**	**0.0000**	**83.9945**	**83.9945**	**4.1900e-003**	**0.0000**	**84.0992**

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	0.2186	2.0047	1.9062	3.1000e-003		0.1102	0.1102		0.1037	0.1037	0.0000	266.3826	266.3826	0.0643	0.0000	267.9892
Total	**0.2186**	**2.0047**	**1.9062**	**3.1000e-003**		**0.1102**	**0.1102**		**0.1037**	**0.1037**	**0.0000**	**266.3826**	**266.3826**	**0.0643**	**0.0000**	**267.9892**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1200e-003	0.1608	0.0310	4.4000e-004	0.0109	3.1000e-004	0.0112	3.1400e-003	2.9000e-004	3.4400e-003	0.0000	42.0854	42.0854	3.2100e-003	0.0000	42.1656
Worker	0.0202	0.0136	0.1484	4.6000e-004	0.0518	3.1000e-004	0.0521	0.0138	2.9000e-004	0.0141	0.0000	41.9091	41.9091	9.8000e-004	0.0000	41.9335
Total	**0.0243**	**0.1745**	**0.1794**	**9.0000e-004**	**0.0627**	**6.2000e-004**	**0.0633**	**0.0169**	**5.8000e-004**	**0.0175**	**0.0000**	**83.9945**	**83.9945**	**4.1900e-003**	**0.0000**	**84.0992**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.3000e-003	0.0921	0.1042	1.6000e-004		4.9200e-003	4.9200e-003		4.5400e-003	4.5400e-003	0.0000	13.9150	13.9150	4.3700e-003	0.0000	14.0243
Paving	1.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0108**	**0.0921**	**0.1042**	**1.6000e-004**		**4.9200e-003**	**4.9200e-003**		**4.5400e-003**	**4.5400e-003**	**0.0000**	**13.9150**	**13.9150**	**4.3700e-003**	**0.0000**	**14.0243**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	4.9000e-004	5.3500e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.5110	1.5110	4.0000e-005	0.0000	1.5119
Total	**7.3000e-004**	**4.9000e-004**	**5.3500e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5110**	**1.5110**	**4.0000e-005**	**0.0000**	**1.5119**

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	9.3000e-003	0.0921	0.1042	1.6000e-004		4.9200e-003	4.9200e-003		4.5400e-003	4.5400e-003	0.0000	13.9150	13.9150	4.3700e-003	0.0000	14.0243
Paving	1.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0108**	**0.0921**	**0.1042**	**1.6000e-004**		**4.9200e-003**	**4.9200e-003**		**4.5400e-003**	**4.5400e-003**	**0.0000**	**13.9150**	**13.9150**	**4.3700e-003**	**0.0000**	**14.0243**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	4.9000e-004	5.3500e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.5110	1.5110	4.0000e-005	0.0000	1.5119
Total	**7.3000e-004**	**4.9000e-004**	**5.3500e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5110**	**1.5110**	**4.0000e-005**	**0.0000**	**1.5119**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9000e-004	4.7600e-003	6.1000e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.3000e-004	2.3000e-004	0.0000	0.8188	0.8188	2.6000e-004	0.0000	0.8252
Paving	9.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-004**	**4.7600e-003**	**6.1000e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**0.8188**	**0.8188**	**2.6000e-004**	**0.0000**	**0.8252**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0856	0.0856	0.0000	0.0000	0.0857
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0856**	**0.0856**	**0.0000**	**0.0000**	**0.0857**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9000e-004	4.7600e-003	6.1000e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.3000e-004	2.3000e-004	0.0000	0.8188	0.8188	2.6000e-004	0.0000	0.8252
Paving	9.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-004**	**4.7600e-003**	**6.1000e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**0.8188**	**0.8188**	**2.6000e-004**	**0.0000**	**0.8252**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0856	0.0856	0.0000	0.0000	0.0857
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0856**	**0.0856**	**0.0000**	**0.0000**	**0.0857**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4398					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0127	0.0163	3.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	2.2979	2.2979	1.5000e-004	0.0000	2.3017
Total	**0.4416**	**0.0127**	**0.0163**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.5000e-004**	**0.0000**	**2.3017**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.9000e-004	2.0900e-003	1.0000e-005	7.9000e-004	0.0000	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6166	0.6166	1.0000e-005	0.0000	0.6170
Total	**2.9000e-004**	**1.9000e-004**	**2.0900e-003**	**1.0000e-005**	**7.9000e-004**	**0.0000**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6166**	**0.6166**	**1.0000e-005**	**0.0000**	**0.6170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4398					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0127	0.0163	3.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	2.2979	2.2979	1.5000e-004	0.0000	2.3017
Total	**0.4416**	**0.0127**	**0.0163**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.5000e-004**	**0.0000**	**2.3017**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.9000e-004	2.0900e-003	1.0000e-005	7.9000e-004	0.0000	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6166	0.6166	1.0000e-005	0.0000	0.6170
Total	**2.9000e-004**	**1.9000e-004**	**2.0900e-003**	**1.0000e-005**	**7.9000e-004**	**0.0000**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6166**	**0.6166**	**1.0000e-005**	**0.0000**	**0.6170**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1036	0.8931	1.2972	5.9900e-003	0.4655	4.1400e-003	0.4697	0.1247	3.8800e-003	0.1286	0.0000	555.2543	555.2543	0.0274	0.0000	555.9379
Unmitigated	0.1036	0.8931	1.2972	5.9900e-003	0.4655	4.1400e-003	0.4697	0.1247	3.8800e-003	0.1286	0.0000	555.2543	555.2543	0.0274	0.0000	555.9379

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	358.72	376.58	327.56	1,219,308	1,219,308
Total	358.72	376.58	327.56	1,219,308	1,219,308

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	79.6281	79.6281	4.3600e-003	9.0000e-004	80.0057
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	79.6281	79.6281	4.3600e-003	9.0000e-004	80.0057
NaturalGas Mitigated	6.2700e-003	0.0536	0.0228	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	62.0436	62.0436	1.1900e-003	1.1400e-003	62.4123
NaturalGas Unmitigated	6.2700e-003	0.0536	0.0228	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	62.0436	62.0436	1.1900e-003	1.1400e-003	62.4123

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.16265e+006	6.2700e-003	0.0536	0.0228	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	62.0436	62.0436	1.1900e-003	1.1400e-003	62.4123
Total		**6.2700e-003**	**0.0536**	**0.0228**	**3.4000e-004**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**62.0436**	**62.0436**	**1.1900e-003**	**1.1400e-003**	**62.4123**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.16265e+006	6.2700e-003	0.0536	0.0228	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	62.0436	62.0436	1.1900e-003	1.1400e-003	62.4123
Total		**6.2700e-003**	**0.0536**	**0.0228**	**3.4000e-004**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**62.0436**	**62.0436**	**1.1900e-003**	**1.1400e-003**	**62.4123**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	331226	79.6281	4.3600e-003	9.0000e-004	80.0057
Total		**79.6281**	**4.3600e-003**	**9.0000e-004**	**80.0057**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	331226	79.6281	4.3600e-003	9.0000e-004	80.0057
Total		**79.6281**	**4.3600e-003**	**9.0000e-004**	**80.0057**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5306	4.5200e-003	0.3923	2.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	0.6402	0.6402	6.2000e-004	0.0000	0.6556
Unmitigated	0.5306	4.5200e-003	0.3923	2.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	0.6402	0.6402	6.2000e-004	0.0000	0.6556

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	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4748					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0119	4.5200e-003	0.3923	2.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	0.6402	0.6402	6.2000e-004	0.0000	0.6556
Total	**0.5306**	**4.5200e-003**	**0.3923**	**2.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**0.6402**	**0.6402**	**6.2000e-004**	**0.0000**	**0.6556**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4748					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0119	4.5200e-003	0.3923	2.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	0.6402	0.6402	6.2000e-004	0.0000	0.6556
Total	**0.5306**	**4.5200e-003**	**0.3923**	**2.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**0.6402**	**0.6402**	**6.2000e-004**	**0.0000**	**0.6556**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.3732	0.0856	2.1500e-003	16.1533
Unmitigated	13.3732	0.0856	2.1500e-003	16.1533

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.60616 / 1.64301	13.3732	0.0856	2.1500e-003	16.1533
Total		**13.3732**	**0.0856**	**2.1500e-003**	**16.1533**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.60616 / 1.64301	13.3732	0.0856	2.1500e-003	16.1533
Total		**13.3732**	**0.0856**	**2.1500e-003**	**16.1533**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.4878	0.5607	0.0000	23.5056
Unmitigated	9.4878	0.5607	0.0000	23.5056

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	46.74	9.4878	0.5607	0.0000	23.5056
Total		**9.4878**	**0.5607**	**0.0000**	**23.5056**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	46.74	9.4878	0.5607	0.0000	23.5056
Total		**9.4878**	**0.5607**	**0.0000**	**23.5056**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Moreno Valley Residential Project Operational LST

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,714.00	0
Other Non-Asphalt Surfaces	0.33	Acre	0.33	14,374.80	0
Single Family Housing	38.00	Dwelling Unit	3.00	130,168.00	109

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	530	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Moreno Valley Residential Project Operational LST - Riverside-South Coast County, Summer

Project Characteristics - SCE CO@ Intensity FActor for the years 2020 to 2029

Land Use - Project land uses as per the revised project description

Construction Phase - Operations Only

Off-road Equipment - Larger equipment used

Off-road Equipment - Operations Only

Grading - Operations Only

Vehicle Trips - .Weekday trip rate derived from the project traffic memorandum
Onsite trip rate = 0.15 miles

Woodstoves - NO fireplaces or hearths

Construction Off-road Equipment Mitigation - Watering at 2 hour intervals WRAP Fugitive Dust Handbook

Trips and VMT - Operations Only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	4085	3832
tblAreaCoating	Area_Residential_Exterior	87863	92966
tblAreaCoating	Area_Residential_Interior	263590	278899
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	1.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	32.30	0.00
tblFireplaces	NumberNoFireplace	3.80	0.00
tblFireplaces	NumberWood	1.90	0.00

tblLandUse	LandUseSquareFeet	53,578.80	53,714.00
tblLandUse	LandUseSquareFeet	68,400.00	130,168.00
tblLandUse	LotAcreage	12.34	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	530
tblSolidWaste	SolidWasteGenerationRate	44.69	46.74
tblVehicleTrips	HO_TL	8.70	0.15
tblVehicleTrips	HS_TL	5.90	0.15
tblVehicleTrips	HW_TL	14.70	0.15
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	IndoorWaterUseRate	2,475,852.97	2,606,161.02
tblWater	OutdoorWaterUseRate	1,560,863.83	1,643,014.56
tblWoodstoves	NumberCatalytic	1.90	0.00
tblWoodstoves	NumberNoncatalytic	1.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Energy	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Mobile	0.4780	2.9863	1.4268	4.7600e-003	0.0398	2.6500e-003	0.0424	0.0107	2.4600e-003	0.0131		496.5625	496.5625	0.0871		498.7402
Total	**3.4496**	**3.3160**	**4.6903**	**6.8000e-003**	**0.0398**	**0.0437**	**0.0835**	**0.0107**	**0.0435**	**0.0542**	**0.0000**	**876.9552**	**876.9552**	**0.0997**	**6.8700e-003**	**881.4960**

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Energy	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Mobile	0.4780	2.9863	1.4268	4.7600e-003	0.0398	2.6500e-003	0.0424	0.0107	2.4600e-003	0.0131		496.5625	496.5625	0.0871		498.7402
Total	**3.4496**	**3.3160**	**4.6903**	**6.8000e-003**	**0.0398**	**0.0437**	**0.0835**	**0.0107**	**0.0435**	**0.0542**	**0.0000**	**876.9552**	**876.9552**	**0.0997**	**6.8700e-003**	**881.4960**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/4/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.56

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
Site Preparation	Crawler Tractors	0	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4780	2.9863	1.4268	4.7600e-003	0.0398	2.6500e-003	0.0424	0.0107	2.4600e-003	0.0131		496.5625	496.5625	0.0871		498.7402
Unmitigated	0.4780	2.9863	1.4268	4.7600e-003	0.0398	2.6500e-003	0.0424	0.0107	2.4600e-003	0.0131		496.5625	496.5625	0.0871		498.7402

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	358.72	376.58	327.56	17,680	17,680
Total	358.72	376.58	327.56	17,680	17,680

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	0.15	0.15	0.15	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
NaturalGas Unmitigated	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3185.35	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Total		**0.0344**	**0.2936**	**0.1249**	**1.8700e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**		**374.7474**	**374.7474**	**7.1800e-003**	**6.8700e-003**	**376.9743**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.18535	0.0344	0.2936	0.1249	1.8700e-003		0.0237	0.0237		0.0237	0.0237		374.7474	374.7474	7.1800e-003	6.8700e-003	376.9743
Total		**0.0344**	**0.2936**	**0.1249**	**1.8700e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**		**374.7474**	**374.7474**	**7.1800e-003**	**6.8700e-003**	**376.9743**

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	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815
Unmitigated	2.9372	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.6453	5.6453	5.4500e-003	0.0000	5.7815

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0948	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173		5.6453	5.6453	5.4500e-003		5.7815
Total	**2.9372**	**0.0362**	**3.1386**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.6453**	**5.6453**	**5.4500e-003**	**0.0000**	**5.7815**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0948	0.0362	3.1386	1.7000e-004		0.0173	0.0173		0.0173	0.0173		5.6453	5.6453	5.4500e-003		5.7815
Total	**2.9372**	**0.0362**	**3.1386**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.6453**	**5.6453**	**5.4500e-003**	**0.0000**	**5.7815**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Moreno Valley Residential Project

Construction Equipment Fuel Usage

Activity	Equipment	Project Number	Project Hours per day	Default Horse-power	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Site Preparation	Rubber Tired Dozer	3	8	247	0.4	5	11,856	0.020461	243
	Crawler Tractor	4	8	212	0.43	5	14,586	0.022173	323
Grading	Excavators	1	8	158	0.38	8	3,843	0.019763	76
	Graders	1	8	187	0.41	8	4,907	0.021143	104
	Rubber Tired Dozers	1	8	247	0.4	8	6,323	0.020461	129
	Crawler Tractor	3	8	212	0.43	8	17,503	0.022173	388
Building Construction	Crane	1	7	231	0.29	230	107,854	0.014896	1,607
	Forklifts	3	8	89	0.2	230	98,256	0.019105	1,877
	Tractors/Loaders/Backhoes	3	7	97	0.37	230	173,349	0.023965	4,154
	Welders	1	8	46	0.45	230	38,088	0.023965	913
	Generator Set	1	8	84	0.74	230	114,374	0.023965	2,741
Paving	Pavers	2	8	130	0.42	18	15,725	0.021525	338
	Paving Equipment	2	8	132	0.36	18	13,686	0.018334	251
	Rollers	2	8	80	0.38	18	8,755	0.019412	170
Architectural Coating	Air Compressor	1	6	78	0.48	18	4,044	0.023965	97

Fuel Consumption rates derived from the ARB OFFROAD2017 - Orion Web Database

Total 13,411

Moreno Valley Residential Project

Fuel Consumption from Construction Vehicles (Derived from the ARB EMFAC2017 Mobile Source Emission Model)

Emission Factors

Region (County)	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT (miles/day)	Fuel Consumption (1000 gallons/day)	Fuel Rate (miles/gallon)
RIVERSIDE	2021	MHDT-T6	Aggregated	Aggregated	DSL	1186652	89.4	13.3
RIVERSIDE	2021	HHDT-T7	Aggregated	Aggregated	DSL	3825933	548.6	7.0
							Average (50%/50%)	**10.1**
RIVERSIDE	2021	LDA	Aggregated	Aggregated	GAS	29816029	960	31.1
RIVERSIDE	2021	LDT1	Aggregated	Aggregated	GAS	3017206	115	26.3
RIVERSIDE	2021	LDT2	Aggregated	Aggregated	GAS	9631964	392	24.6
							Average (50%/25%/25%)	**28**

Vehicle Assumptions (CalEEMod)
Haul trucks represented by HHDT-T7 (heavy -heavy duty haul truck)
MHDT-T6 (medium heavy duty haul truck)
Vendor trucks assu ed to be 50% HHDT-T7 and MHDT-T6)
LDA (light duty automobile for worker vehicles)
LDT1 (light duty truck 1 for wortker vehicles)
LDT2 (light duty truck 2 for worker vehicles)
Worker vehicles represented as 50% LDT, 25% LHT1, and 25% LDT2

Construction Vehicle Use (Derived from the CalEEMod model output)

Fuel Consumption for Haul Trucks

Construction Activity	No Haul Truck Trips	Trip Length	VMT (miles)	DSL Fuel (gallons)
Site Preparation	0	20	0	0
Grading	1012	20	20240	2902
Building Construction	0	20	0	0
Paving -	0	20	0	0
Architectural Coating	0	20	0	0
Total	**1012**		**20240**	**2902**

Construction Activity	No Vendor Truck Trips/day	Duration (days)	Trip Length (miles)	VMT (miles)	Fuel	Fuel Rate (miles/gallon)	DSL Fuel (gallons)
Site Preparation	0	5	6.9	0	DSL	10.1	0
Grading	0	8	6.9	0	DSL	10.1	0
Building Construction	15	230	6.9	23805	DSL	10.1	2352
Paving	0	18	6.9	0	DSL	10.1	0
Architectural Coating	0	18	6.9	0	DSL	10.1	0
						Total	**2352**

Activity	No Worker Vehicles Trips/day	Duration (days)	Trip Length (miles)	VMT (miles)	Fuel	Fuel Rate (miles/gallon)	Gas Fuel (gallons)
Site Preparation	18	5	14.7	1323	GAS	28	47
Grading	15	8	14.7	1764	GAS	28	62
Building Construction	41	230	14.7	138621	GAS	28	4906
Paving	20	18	14.7	5292	GAS	28	187
Architectural Coating	8	18	14.7	2116.8	GAS	28	75
						Total	**5278**

Summary	Gallons
Total -DSL	5254
Ttal - GAS	5278
	10532

Moreno Valley Residential Project

Estimation of Operational Vehicle Fuel Use

Total Annual VMT **1,219,308**

Vehicle Class	CalEEmod Fleet Mix	Annual VMT	EMFAC2017 % DSL	Annual DSL VMT	EMFAC2017 %GAS	Annual GAS VMT	EMFAC2017 Fuel Rate -DSL (mi/gal)	EMFAC2017 Fuel Rate-GAS (mi/gal)	Fuel Consumption DSL-(gal/year)	GAS-(gal/year)
LDA	54.550%	665,133	1.0%	6550	99.0%	658583	52.1	31.9	126	20,658
LDT1	3.800%	46,334	0.0%	13	100.0%	46321	25.9	27.0	1	1,714
LDT2	18.600%	226,791	0.7%	1492	99.3%	225300	39.0	25.4	38	8,859
LHDT1	1.520%	18,533	50.4%	9339	49.6%	9194	21.0	10.8	444	854
LHDT2	0.500%	6,097	71.3%	4347	28.7%	1750	19.3	9.4	226	186
Motor Cycle	0.450%	5,487	0.0%	0	100.0%	5487	0	38.3	-	143
MDT	11.530%	140,586	2.3%	3285	97.7%	137301	28.7	20.3	114	6,751
Motor Home	0.010%	122	30.2%	37	69.8%	85	10.9	5.2	3	17
Other Bus	0.140%	1,707	49.1%	838	50.9%	869	9.1	5.1	92	169
School Bus	0.100%	1,219	65.0%	793	35.0%	427	7.6	9.0	104	47
MHDT	1.750%	21,338	90.0%	19211	10.0%	2127	11.1	5.2	1,725	408
HHDT	6.950%	84,742	100.0%	84727	0.0%	14	7.1	4.3	11,854	3
Urban Bus	0.100%	1,219	0.3%	3	99.7%	1216	8.9	6.2	0	197
	100.000%	1,219,308							14,728	40,007

Total VMT-DSL	130,635	VMT
Total VMT-Gas	1,088,673	VMT
	1,219,308	VMT

Total Fuel - DSL	14,728	gal/year
Total Fuel - GAS	40,007	gal/year

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: RIVERSIDE
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	VMT	Fuel Consumption	Fuel Mileage
RIVERSIDE	2022	LDA	Aggregate	Aggregate	DSL	301308.5	5.779941	52.13004
RIVERSIDE	2022	LDT1	Aggregate	Aggregate	DSL	864.4774	0.033397	25.88499
RIVERSIDE	2022	LDT2	Aggregate	Aggregate	DSL	64682.45	1.659413	38.97911
RIVERSIDE	2022	LHDT1	Aggregate	Aggregate	DSL	691058.9	32.89019	21.01109
RIVERSIDE	2022	LHDT2	Aggregate	Aggregate	DSL	266862.2	13.86115	19.25253
RIVERSIDE	2022	MDV	Aggregate	Aggregate	DSL	181512.8	6.313518	28.74986
RIVERSIDE	2022	MH	Aggregate	Aggregate	DSL	20890.51	1.91881	10.88722
RIVERSIDE	2022	OBUS	Aggregate	Aggregate	DSL	25723.78	2.818941	9.125334
RIVERSIDE	2022	SBUS	Aggregate	Aggregate	DSL	36548.66	4.808897	7.600218
RIVERSIDE	2022	T6-MHDT	Aggregate	Aggregate	DSL	974620.3	87.49604	11.13902
RIVERSIDE	2022	T7-HHDT	Aggregate	Aggregate	DSL	3904544	546.2827	7.147479
RIVERSIDE	2022	UBUS	Aggregate	Aggregate	DSL	58.5719	0.006566	8.920015
RIVERSIDE	2022	LDA	Aggregate	Aggregate	GAS	30295680	950.2947	31.8803
RIVERSIDE	2022	LDT1	Aggregate	Aggregate	GAS	3076688	113.8536	27.0232
RIVERSIDE	2022	LDT2	Aggregate	Aggregate	GAS	9768782	384.1061	25.43251
RIVERSIDE	2022	LHDT1	Aggregate	Aggregate	GAS	680334.7	63.19982	10.76482
RIVERSIDE	2022	LHDT2	Aggregate	Aggregate	GAS	107419.4	11.44267	9.387617
RIVERSIDE	2022	MCY	Aggregate	Aggregate	GAS	267199.3	6.981836	38.27064
RIVERSIDE	2022	MDV	Aggregate	Aggregate	GAS	7586688	373.0302	20.338
RIVERSIDE	2022	MH	Aggregate	Aggregate	GAS	48243.07	9.356651	5.156019
RIVERSIDE	2022	OBUS	Aggregate	Aggregate	GAS	26677.79	5.181783	5.14838
RIVERSIDE	2022	SBUS	Aggregate	Aggregate	GAS	19662.48	2.188357	8.985041
RIVERSIDE	2022	T6-MHDT	Aggregate	Aggregate	GAS	107896.5	20.67464	5.218783
RIVERSIDE	2022	T7-HHDT	Aggregate	Aggregate	GAS	664.5949	0.153527	4.328848
RIVERSIDE	2022	UBUS	Aggregate	Aggregate	GAS	23154.43	3.75606	6.164554

	GAS-VMT	DSL-VMT	Sum	%GAS	%DSL
LDA	30295680.3	301308.5	30596989	0.990152	0.009848
LDT1	3076687.96	864.4774	3077552	0.999719	0.000281
LDT2	9768781.98	64682.45	9833464	0.993422	0.006578
LHDT1	680334.705	691058.9	1371394	0.49609	0.50391
LHDT2	107419.448	266862.2	374281.6	0.287002	0.712998
MCY	267199.306	0	267199.3	1	0
MDV	7586687.89	181512.8	7768201	0.976634	0.023366
MH	48243.0675	20890.51	69133.58	0.697824	0.302176
OBUS	26677.787	25723.78	52401.56	0.509103	0.490897
SBUS	19662.4758	36548.66	56211.14	0.349797	0.650203
T6-MHDT	107896.49	974620.3	1082517	0.099672	0.900328
T7-HHDT	664.594894	3904544	3905209	0.00017	0.99983
UBUS	23154.4335	58.5719	23213.01	0.997477	0.002523

CalEEMod Emission Summary

TO: Meghan Truman, EPDS
FROM: Vince Mirabella
DATE: September 5, 2022

SUBJECT: Comparison of CalEEMod Model Air Quality and Greenhouse Gas Analyses (CalEEMod Version 2020.4 and CalEEMod Version 2022.1) for the Cactus Avenue and Bradshaw Circle Residential Project, Moreno Valley, CA

SECTION 1: PROJECT INFORMATION

1.1 - Project Name

Cactus Avenue and Bradshaw Circle Residential Project (Project)

1.2 - Purpose of the Report

This memorandum estimates the construction and operational emissions and their subsequent regulatory significance resulting from applying the newly updated CalEEMod Version 2022.1 model (V2022.1) and compares these results to the emissions estimated using CalEEMod Version 2020.4 (V2020.4). The latter model version was used in estimating the Project's construction and operational emissions in a previous report[1] dated December 28, 2020. Note that the previous V2020.4 analysis was updated to reflect a new Project motor vehicle trip generation.

The express purpose of this memorandum is to determine if the emissions estimated with the updated CalEEMod (V2022.1) result in a significant impact not previously determined in the earlier V2020.4 analysis. The earlier report concluded the following with regards to air quality and greenhouse gas (GHG) emissions:

- The Project's construction and operation would not exceed any project-level criteria pollutant regional or localized emission significance threshold adopted by the SCAQMD.

- The Project's construction and operation would not result in a cumulatively significant impact on the region's air quality.

- The Project's construction and operation would not exceed the greenhouse gas significance threshold adopted for this Project.

[1] Summary of CalEEMod Model Runs and Output for the Moreno Valley Residential Project (Revised), prepared by VA Mirabella; December 28, 2020.

1.3 - Conclusions

Applying the updated CalEEMod model (V2022.1) would not result in any new significance finding not previously calculated using the older CalEEMod Version 2022.4. All Project construction and operational impacts would result in less than significant project-level and cumulative air quality and GHG impacts.

SECTION 2: METHODOLOGY

The Project significance analysis was based on comparing the respective model construction and operational emissions (V2020.4 vs V2022.1) with the air quality and greenhouse gas emissions significance thresholds recommended by the South Coast Air Quality Management District (SCAQMD). The emission comparison applied the same assumptions in both models dealing with:

- Land Use
- Construction schedule
- Construction equipment inventory
- Soil export
- Level of fugitive dust control
- Motor vehicle trip generation rate
- Motor vehicle fleet mix

All other assumptions built into the respective models were based on the model's default values.

2.1 - Comparison of CalEEMod Model Results – Criteria Pollutants

The following tables compare the Project construction and operational air quality criteria pollutant emissions using the two CalEEMod versions.

2.1.1 Project Construction

Table 1 compares the Project's regional air quality emissions using the V2020.4 and V2022.1.

Table 1: Comparison of Regional Construction Emissions

Construction Year[1]	Maximum Daily Regional Emissions[1] (pounds/day)					
	ROG	NO_X	C0	SO_x	PM_{10}	$PM_{2.5}$
2023 – V2020.4	3.9	42.1	19.0	0.1	7.7	4.4
2023 – V2022.1	5.7	58.4	41.3	0.1	8.2	5.0
2024 - V2020.4	48.6	14.0	17.9	<0.1	1.2	0.8
2024 – V2022.1	50.5	58.4	41.3	0.1	8.2	5.0
Max: 2023 to 2024 – V2020.4	**48.6**	**42.1**	**19.0**	**0.1**	**7.7**	**4.4**
Max: 2023 to 2024 – V2022.1	**50.5**	**58.4**	**41.3**	**0.1**	**8.2**	**5.0**
SCAQMD Significance Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Emissions Exceed Thresholds (V2020.4)?	**No**	**No**	**No**	**No**	**No**	**No**

Emissions Exceed Thresholds (V2022.1)?	**No**	**No**	**No**	**No**	**No**	**No**

Note:
(1) V2020.4 = CalEEMod Version 2020.4.0 V2022.1 = CalEEMod Version 2022.1
ROG = reactive organic gases NOx = oxides of nitrogen PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter CO = carbon monoxide SO_x = sulfur oxides
PM emissions reflect SCAQMD Rule 403 reductions
Source; see Data Attachment

Conclusion: Table 1

The application of V2022.1 in estimating regional construction emissions does not alter the conclusions drawn from V2020.4. The emissions from both CalEEMod versions are less than the SCAQMD regional construction significance thresholds and would, therefore, result in a less than significant project-level and cumulative construction air quality impact.

Table 2 compares the Project's localized construction emission estimates.

Table 2: Estimated Maximum Daily Localized Construction Emissions

Construction Year(1)	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
2023 - V2020.4	41.9	18.3	7.5	4.3
2023 - V2022.1	58.3	40.1	8.2	5.0
2024 - V2020.4	13.4	16.2	0.6	0.6
2024 – 2022.1	58.3	40.1	8.2	5.0
Max: 2023 - 2024 V2020.4	41.9	18.3	7.5	4.3
Max: 2023 -2024 V2022.1	58.3	40.1	8.2	5.0
SCAQMD Significance Thresholds	**224**	**1,230**	**10**	**6**
Emissions Exceed Thresholds? (V2020.4)	**No**	**No**	**No**	**No**
Emissions Exceed Thresholds (V2022.1)	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
PM emissions reflect SCAQMD Rule 403 emission reductions
Source: see Data Attachment

Conclusion Table 2

The application of V2022.1 in estimating local construction emissions does not alter the conclusions drawn from V2020.4. The emissions from both CalEEMod versions are less than the SCAQMD localized construction significance thresholds and would, therefore, result in a less than significant project-level localized construction air quality impact.

2.1.2 Project Operation

Table 3 compares the V2020.4 regional operational emissions to the V2022.1 operational emissions.

Table 3: Comparison of the Regional Operational Emissions

Construction Year[(1)]	Maximum Daily Regional Emissions[(1)] (pounds/day)					
	ROG	NO_X	C0	SO_x	PM_{10}	$PM_{2.5}$
V2020.4	4.7	1.8	14.0	0.0	2.6	0.7
V2022.1	1.5	1.4	11.8	0.0	0.2	0.1
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Emissions Exceed Thresholds (V2020.4)?	**No**	**No**	**No**	**No**	**No**	**No**
Emissions Exceed Thresholds (V2022.1)?	**No**	**No**	**No**	**No**	**No**	**No**

Note:
[(1)] V2020.4 = CalEEMod Version 2020.4.0 V2022.1 = CalEEMod Version 2022.1
ROG = reactive organic gases NOx = oxides of nitrogen PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter CO = carbon monoxide SO_x = sulfur oxides
PM emissions reflect SCAQMD Rule 403 reductions
Source; see Data Attachment

Conclusion Table 3

The application of V2022.1 in estimating regional operational emissions does not alter the conclusions drawn from V2020.4. The emissions from both CalEEMod versions are less than the SCAQMD regional operational significance thresholds. and would therefore result in a less than significant project-level and cumulative regional operational air quality impact.

Table 4 compares the localized operational emissions. Note that in estimating the local operational emissions, the trip distance assumed in each model version was set at 0.15 miles as the average distance a motor vehicle would travel within the Project site[2].

[2] Note that the localized analysis only considered emissions generated from onsite emission sources.

Table 4: Comparison of Local Operational Emissions

Operational Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
V2020.4	0.6	5.2	0.1	<0.1
V2022.1	1.8	14.0	0.9	0.2
SCAQMD Regional Emission Significance Threshold	**270**	**1,577**	**4**	**2**
Emissions Exceed Thresholds (V2020.4)?	**No**	**No**	**No**	**No**
Emissions Exceed Thresholds (V2022.1)?	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
Source: see Data Attachment

Conclusion Table 4

The application of V2022.1 in estimating local operational emissions does not alter the conclusions drawn from V2020.4. The emissions from both CalEEMod versions are less than the SCAQMD local operational significance thresholds. and would therefore result in a less than significant project-level local operational air quality impact.

2.2 - Greenhouse Gas Impacts

Table 5 compares the construction GHG impact applying the V202.4 and V2022.1 CalEEMod versions.

Table 5: Comparison of Construction GHG Emissions

CalEEMod Model Version	Annual GHG Emissions (MtCO2e)	AAmortized GHG Emissions[(1)] (MTCO2e)
V2020.4	419	14
V2022.1	365	12

Note:
[(1)] Total annual emissions amortized over a 30-year timeframe
Source: see Data Attachment

As noted in Table 5, the amortized construction GHG emissions are essentially the same between the two CalEEMod Versions.

Table 6 compares the total Project construction and operational GHG emissions estimated by V2020.4 and 2022.1. Note that the GHG emissions for V2022.1 are slightly higher than the estimated GHG emissions using V2020.4. This is attributable to the use of the CO_2 emission factor in V2020.4 for Southern California Edison versus the use of a higher CO_2 emission factor for the Moreno Valley Utility in V2022.1

Table 6:Comparison of Total Project GHG Emissions

CalEEMod Model Version	Total Annual GHG Emissions (MtCO2e)
V2020.4	
Construction ….Operation Total	14 543 557
V2022.1	
Construction ….Operation Total	12 585 597
SCAQMD GHG Emission Significance Threshold	**3,000**
Emissions Exceed Thresholds (V2020.4)?	**No**
Emissions Exceed Thresholds (V2022.1)?	**No**
Source: see Data Attachment	

Conclusion Table 6

The application of V2022.1 in estimating GHG emissions does not alter the conclusions drawn from V2020.4. The emissions from both CalEEMod versions are less than the recommended SCAQMD GHG significance threshold and would, therefore result in a less than significant project-level and cumulative GHG impact.

Data Attachment

Cactus Ave and Bradshaw Circle Residential Project V2020.4

CalEEMod Construction Emission Summary

	Maximum Daily Emissions (pounds/day)									
2023	**ROG**	**NOx**	**CO**	**SOx**	**PM10F**	**PM10Exh**	**PM10Total**	**PM2.5Fug**	**PM2.5 Exh**	**PM2.5Total**
Site Prep										
Onsite	3.8	41.9	18.3	0.1	5.7	1.8	7.5	2.7	1.6	4.3
Offsite	0.1	0.0	0.7	0.0	0.2	0.0	0.2	0.1	0.0	0.1
Total	3.9	41.9	19.0	0.1	5.9	1.8	7.7	2.8	1.6	4.4
Grading										
Onsite	2.6	28.7	14.8	0.0	2.3	1.1	3.4	0.9	1.1	2.0
Offsite	0.3	13.4	4.0	0.1	2.4	0.2	2.6	0.7	0.1	0.8
Total	2.9	42.1	18.8	0.1	4.7	1.3	6.0	1.6	1.2	2.8
Building Construction										
Onsite	1.6	14.4	16.2	0.0	0.0	0.7	0.7	0.0	0.7	0.7
Offsite	0.2	0.7	1.8	0.0	0.6	0.0	0.6	0.2	0.0	0.2
Total	1.8	15.1	18.0	0.0	0.6	0.7	1.3	0.2	0.7	0.9
2023 Max Onsite	**3.8**	**41.9**	**18.3**	**0.1**	**5.7**	**1.8**	**7.5**	**2.7**	**1.6**	**4.3**
2023 Max Total	**3.9**	**42.1**	**19.0**	**0.1**	**5.9**	**1.8**	**7.7**	**2.8**	**1.6**	**4.4**

2024	**ROG**	**NOx**	**CO**	**SOx**	**PM10F**	**PM10Exh**	**PM10Total**	**PM2.5Fug**	**PM2.5 Exh**	**PM2.5Total**
Building Construction										
Onsite	1.5	13.4	16.2	0.0	0.0	0.6	0.6	0.0	0.6	0.6
Offsite	0.2	0.6	1.7	0.0	0.6	0.0	0.6	0.2	0.0	0.2
Total	1.7	14.0	17.9	0.0	0.6	0.6	1.2	0.2	0.6	0.8
Paving										
Onsite	1.1	8.3	12.2	0.0	0.0	0.4	0.4	0.0	0.4	0.4
Offsite	0.1	0.0	0.7	0.0	0.2	0.0	0.2	0.1	0.0	0.1
Total	1.2	8.3	12.9	0.0	0.2	0.4	0.6	0.1	0.4	0.5
Architectural Coating										
Onsite	48.6	1.2	1.8	9.0	0.0	0.1	0.1	0.0	0.1	0.1
Offsite	0.0	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Total	48.6	1.2	2.1	9.0	0.1	0.1	0.2	0.0	0.1	0.1
2024 Max Onsite	**48.6**	**13.4**	**16.2**	**9.0**	**0.0**	**0.6**	**0.6**	**0.0**	**0.6**	**0.6**
2024 Max Total	**48.6**	**14.0**	**17.9**	**9.0**	**0.6**	**0.6**	**1.2**	**0.2**	**0.6**	**0.8**
2023-2024 Max Onsite	**48.6**	**41.9**	**18.3**	**9.0**	**5.7**	**1.8**	**7.5**	**2.7**	**1.6**	**4.3**
2023-2024 Max Total	**48.6**	**42.1**	**19.0**	**9.0**	**5.9**	**1.8**	**7.7**	**2.8**	**1.6**	**4.4**
Regional Threshold	75	100	550	150			150			55
Exceeds Threshold	NO	NO	NO	NO			NO			NO
LST Threshold		225	1250				10			6
Exceeds LST		NO	NO				NO			NO

Regional Emission Summary

	ROG	NOx	CO	SOx	PM10	PM2.5
2023						
Site Preparation	3.9	41.9	19.0	0.1	7.7	4.4
Grading	2.9	42.1	18.8	0.1	6.0	2.8
Building Construction	1.8	15.1	18.0	0.0	1.3	0.9
Max Daily 2023	3.9	42.1	19.0	0.1	7.7	4.4
2024						
Buildiong Construction	1.7	14	17.9	0	1.2	0.8
Paving	1.2	8.3	12.9	0.0	0.6	0.5
Architectural Coating	48.6	1.2	2.1	0.0	0.2	0.1
Max Daily 2024	48.6	14	17.9	0	1.2	0.8
Max Daily 2023-2024	48.6	42.1	19.0	0.1	7.7	4.4

Local Emission Summary

2023	NOx	CO	PM10	PM2.5
Site Preparation	41.9	18.3	7.5	4.3
Grading	28.7	14.8	3.4	2.0
Building Construction	14.4	16.2	0.7	0.7
Max Daily 2023	41.9	18.3	7.5	4.3
2024				
Buildiong Construction	13.4	16.2	0.6	0.6
Paving	8.3	12.2	0.4	0.4
Architectural Coating	1.2	1.8	0.1	0.1
Max Daily 2024	13.4	16.2	0.6	0.6
Max Daily 2023-2024	41.9	18.3	7.5	4.3

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Cactus Avenue and Bradshaw Circle Residential Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,578.80	0
Other Non-Asphalt Surfaces	33.00	Acre	33.00	1,437,480.00	0
Single Family Housing	37.00	Dwelling Unit	3.00	136,045.00	106

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - .

Off-road Equipment - .

Off-road Equipment - .

Trips and VMT - .

Grading -

Vehicle Trips - Weekday trip rate from the Project Trip Generation Analysis

Woodstoves - No fireplaces or hearths assumed

Construction Off-road Equipment Mitigation - Watering at 2-hour intervals as per the WRAP Handbook

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	89,464.00	4,355.00
tblAreaCoating	Area_Parking	89464	4355
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	55.00	18.00
tblConstructionPhase	NumDays	740.00	230.00
tblConstructionPhase	NumDays	75.00	8.00
tblConstructionPhase	NumDays	55.00	18.00
tblConstructionPhase	NumDays	30.00	5.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	31.45	0.00
tblFireplaces	NumberNoFireplace	3.70	0.00
tblFireplaces	NumberWood	1.85	0.00
tblGrading	MaterialExported	0.00	8,097.00
tblLandUse	LandUseSquareFeet	66,600.00	136,045.00
tblLandUse	LotAcreage	12.01	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	VendorTripNumber	248.00	16.00

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	640.00	44.00
tblTripsAndVMT	WorkerTripNumber	128.00	9.00
tblVehicleTrips	WD_TR	9.44	9.43
tblWoodstoves	NumberCatalytic	1.85	0.00
tblWoodstoves	NumberNoncatalytic	1.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.8964	41.9204	18.9540	0.1148	21.9792	1.7587	23.7379	10.3848	1.6180	12.0028	0.0000	11,816.6726	11,816.6726	1.7875	1.1732	12,203.3055
2024	48.6254	14.0551	17.8910	0.0339	0.5943	0.6200	1.2143	0.1599	0.5833	0.7432	0.0000	3,279.6110	3,279.6110	0.6166	0.0527	3,310.7178
Maximum	**48.6254**	**41.9204**	**18.9540**	**0.1148**	**21.9792**	**1.7587**	**23.7379**	**10.3848**	**1.6180**	**12.0028**	**0.0000**	**11,816.6726**	**11,816.6726**	**1.7875**	**1.1732**	**12,203.3055**

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	3.8964	41.9204	18.9540	0.1148	5.8635	1.7587	7.6221	2.7395	1.6180	4.3575	0.0000	11,816.6726	11,816.6726	1.7875	1.1732	12,203.3054
2024	48.6254	14.0551	17.8910	0.0339	0.5943	0.6200	1.2143	0.1599	0.5833	0.7432	0.0000	3,279.6110	3,279.6110	0.6166	0.0527	3,310.7178
Maximum	**48.6254**	**41.9204**	**18.9540**	**0.1148**	**5.8635**	**1.7587**	**7.6221**	**2.7395**	**1.6180**	**4.3575**	**0.0000**	**11,816.6726**	**11,816.6726**	**1.7875**	**1.1732**	**12,203.3054**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	71.39	0.00	64.59	72.50	0.00	59.98	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	1.0994	1.4366	10.8130	0.0250	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,589.5084	2,589.5084	0.1216	0.1165	2,627.2681
Total	**4.6829**	**1.7360**	**13.9802**	**0.0269**	**2.5485**	**0.0574**	**2.6059**	**0.6799**	**0.0562**	**0.7361**	**0.0000**	**2,932.3585**	**2,932.3585**	**0.1334**	**0.1227**	**2,972.2553**

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	1.0994	1.4366	10.8130	0.0250	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,589.5084	2,589.5084	0.1216	0.1165	2,627.2681
Total	**4.6829**	**1.7360**	**13.9802**	**0.0269**	**2.5485**	**0.0574**	**2.6059**	**0.6799**	**0.0562**	**0.7361**	**0.0000**	**2,932.3585**	**2,932.3585**	**0.1334**	**0.1227**	**2,972.2553**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/2/2023	10/6/2023	5	5	
2	Grading	Grading	10/7/2023	10/18/2023	5	8	
3	Building Construction	Building Construction	10/19/2023	9/4/2024	5	230	
4	Paving	Paving	9/5/2024	9/30/2024	5	18	
5	Architectural Coating	Architectural Coating	10/1/2024	10/24/2024	5	18	

Acres of Grading (Site Preparation Phase): 17.5

Acres of Grading (Grading Phase): 20

Acres of Paving: 34.23

Residential Indoor: 275,491; Residential Outdoor: 91,830; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,355 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,012.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	44.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	3.8307	41.8798	18.2937	0.0569		1.7577	1.7577		1.6171	1.6171		5,514.0891	5,514.0891	1.7834		5,558.6733
Total	**3.8307**	**41.8798**	**18.2937**	**0.0569**	**21.7780**	**1.7577**	**23.5357**	**10.3315**	**1.6171**	**11.9486**		**5,514.0891**	**5,514.0891**	**1.7834**		**5,558.6733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0658	0.0406	0.6603	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		181.1165	181.1165	4.1400e-003	4.2200e-003	182.4783
Total	**0.0658**	**0.0406**	**0.6603**	**1.7700e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**181.1165**	**181.1165**	**4.1400e-003**	**4.2200e-003**	**182.4783**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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					5.6623	0.0000	5.6623	2.6862	0.0000	2.6862			0.0000			0.0000
Off-Road	3.8307	41.8798	18.2937	0.0569		1.7577	1.7577		1.6171	1.6171	0.0000	5,514.0891	5,514.0891	1.7834		5,558.6733
Total	**3.8307**	**41.8798**	**18.2937**	**0.0569**	**5.6623**	**1.7577**	**7.4200**	**2.6862**	**1.6171**	**4.3033**	**0.0000**	**5,514.0891**	**5,514.0891**	**1.7834**		**5,558.6733**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0658	0.0406	0.6603	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		181.1165	181.1165	4.1400e-003	4.2200e-003	182.4783
Total	**0.0658**	**0.0406**	**0.6603**	**1.7700e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**181.1165**	**181.1165**	**4.1400e-003**	**4.2200e-003**	**182.4783**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					8.8015	0.0000	8.8015	3.6159	0.0000	3.6159			0.0000			0.0000
Off-Road	2.5893	28.7025	14.7877	0.0438		1.1437	1.1437		1.0522	1.0522		4,242.7767	4,242.7767	1.3722		4,277.0817
Total	**2.5893**	**28.7025**	**14.7877**	**0.0438**	**8.8015**	**1.1437**	**9.9452**	**3.6159**	**1.0522**	**4.6681**		**4,242.7767**	**4,242.7767**	**1.3722**		**4,277.0817**

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	0.2768	12.6328	3.4738	0.0695	2.2140	0.1525	2.3665	0.6070	0.1459	0.7529		7,422.9654	7,422.9654	0.1053	1.1697	7,774.1585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.3316**	**12.6667**	**4.0241**	**0.0710**	**2.3816**	**0.1533**	**2.5349**	**0.6515**	**0.1466**	**0.7980**		**7,573.8959**	**7,573.8959**	**0.1087**	**1.1732**	**7,926.2237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2884	0.0000	2.2884	0.9401	0.0000	0.9401			0.0000			0.0000
Off-Road	2.5893	28.7025	14.7877	0.0438		1.1437	1.1437		1.0522	1.0522	0.0000	4,242.7767	4,242.7767	1.3722		4,277.0817
Total	**2.5893**	**28.7025**	**14.7877**	**0.0438**	**2.2884**	**1.1437**	**3.4321**	**0.9401**	**1.0522**	**1.9923**	**0.0000**	**4,242.7767**	**4,242.7767**	**1.3722**		**4,277.0817**

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	0.2768	12.6328	3.4738	0.0695	2.2140	0.1525	2.3665	0.6070	0.1459	0.7529		7,422.9654	7,422.9654	0.1053	1.1697	7,774.1585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.3316**	**12.6667**	**4.0241**	**0.0710**	**2.3816**	**0.1533**	**2.5349**	**0.6515**	**0.1466**	**0.7980**		**7,573.8959**	**7,573.8959**	**0.1087**	**1.1732**	**7,926.2237**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0180	0.5227	0.2152	2.8000e-003	0.1025	4.5500e-003	0.1070	0.0295	4.3600e-003	0.0339		296.4336	296.4336	3.0200e-003	0.0438	309.5628
Worker	0.1608	0.0993	1.6142	4.3300e-003	0.4918	2.3100e-003	0.4941	0.1304	2.1200e-003	0.1326		442.7293	442.7293	0.0101	0.0103	446.0581
Total	**0.1788**	**0.6221**	**1.8294**	**7.1300e-003**	**0.5943**	**6.8600e-003**	**0.6012**	**0.1599**	**6.4800e-003**	**0.1664**		**739.1629**	**739.1629**	**0.0131**	**0.0541**	**755.6209**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0180	0.5227	0.2152	2.8000e-003	0.1025	4.5500e-003	0.1070	0.0295	4.3600e-003	0.0339		296.4336	296.4336	3.0200e-003	0.0438	309.5628
Worker	0.1608	0.0993	1.6142	4.3300e-003	0.4918	2.3100e-003	0.4941	0.1304	2.1200e-003	0.1326		442.7293	442.7293	0.0101	0.0103	446.0581
Total	**0.1788**	**0.6221**	**1.8294**	**7.1300e-003**	**0.5943**	**6.8600e-003**	**0.6012**	**0.1599**	**6.4800e-003**	**0.1664**		**739.1629**	**739.1629**	**0.0131**	**0.0541**	**755.6209**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.5228	0.2128	2.7500e-003	0.1025	4.5200e-003	0.1070	0.0295	4.3300e-003	0.0338		291.8649	291.8649	3.1300e-003	0.0431	304.7762
Worker	0.1499	0.0885	1.5115	4.1900e-003	0.4918	2.2000e-003	0.4940	0.1304	2.0300e-003	0.1325		432.0472	432.0472	9.1500e-003	9.5900e-003	435.1339
Total	**0.1676**	**0.6113**	**1.7242**	**6.9400e-003**	**0.5943**	**6.7200e-003**	**0.6010**	**0.1599**	**6.3600e-003**	**0.1663**		**723.9121**	**723.9121**	**0.0123**	**0.0527**	**739.9101**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.5228	0.2128	2.7500e-003	0.1025	4.5200e-003	0.1070	0.0295	4.3300e-003	0.0338		291.8649	291.8649	3.1300e-003	0.0431	304.7762
Worker	0.1499	0.0885	1.5115	4.1900e-003	0.4918	2.2000e-003	0.4940	0.1304	2.0300e-003	0.1325		432.0472	432.0472	9.1500e-003	9.5900e-003	435.1339
Total	**0.1676**	**0.6113**	**1.7242**	**6.9400e-003**	**0.5943**	**6.7200e-003**	**0.6010**	**0.1599**	**6.3600e-003**	**0.1663**		**723.9121**	**723.9121**	**0.0123**	**0.0527**	**739.9101**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0604**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0681	0.0402	0.6870	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		196.3851	196.3851	4.1600e-003	4.3600e-003	197.7882
Total	**0.0681**	**0.0402**	**0.6870**	**1.9000e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**196.3851**	**196.3851**	**4.1600e-003**	**4.3600e-003**	**197.7882**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0604**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0681	0.0402	0.6870	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		196.3851	196.3851	4.1600e-003	4.3600e-003	197.7882
Total	**0.0681**	**0.0402**	**0.6870**	**1.9000e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**196.3851**	**196.3851**	**4.1600e-003**	**4.3600e-003**	**197.7882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**48.5948**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0307	0.0181	0.3092	8.6000e-004	0.1006	4.5000e-004	0.1011	0.0267	4.2000e-004	0.0271		88.3733	88.3733	1.8700e-003	1.9600e-003	89.0047
Total	**0.0307**	**0.0181**	**0.3092**	**8.6000e-004**	**0.1006**	**4.5000e-004**	**0.1011**	**0.0267**	**4.2000e-004**	**0.0271**		**88.3733**	**88.3733**	**1.8700e-003**	**1.9600e-003**	**89.0047**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**48.5948**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0307	0.0181	0.3092	8.6000e-004	0.1006	4.5000e-004	0.1011	0.0267	4.2000e-004	0.0271		88.3733	88.3733	1.8700e-003	1.9600e-003	89.0047
Total	**0.0307**	**0.0181**	**0.3092**	**8.6000e-004**	**0.1006**	**4.5000e-004**	**0.1011**	**0.0267**	**4.2000e-004**	**0.0271**		**88.3733**	**88.3733**	**1.8700e-003**	**1.9600e-003**	**89.0047**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.0994	1.4366	10.8130	0.0250	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,589.5084	2,589.5084	0.1216	0.1165	2,627.2681
Unmitigated	1.0994	1.4366	10.8130	0.0250	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,589.5084	2,589.5084	0.1216	0.1165	2,627.2681

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	348.91	352.98	316.35	1,178,371	1,178,371
Total	348.91	352.98	316.35	1,178,371	1,178,371

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Single Family Housing	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
NaturalGas Unmitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2867.44	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.86744	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

6.0 Area Detail

6.1 Mitigation Measures Area

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Unmitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Cactus Avenue and Bradshaw Circle Residential Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,578.80	0
Other Non-Asphalt Surfaces	33.00	Acre	33.00	1,437,480.00	0
Single Family Housing	37.00	Dwelling Unit	3.00	136,045.00	106

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - .

Off-road Equipment - .

Off-road Equipment - .

Trips and VMT - .

Grading -

Vehicle Trips - Weekday trip rate from the Project Trip Generation Analysis

Woodstoves - No fireplaces or hearths assumed

Construction Off-road Equipment Mitigation - Watering at 2-hour intervals as per the WRAP Handbook

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	89,464.00	4,355.00
tblAreaCoating	Area_Parking	89464	4355
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	55.00	18.00
tblConstructionPhase	NumDays	740.00	230.00
tblConstructionPhase	NumDays	75.00	8.00
tblConstructionPhase	NumDays	55.00	18.00
tblConstructionPhase	NumDays	30.00	5.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	31.45	0.00
tblFireplaces	NumberNoFireplace	3.70	0.00
tblFireplaces	NumberWood	1.85	0.00
tblGrading	MaterialExported	0.00	8,097.00
tblLandUse	LandUseSquareFeet	66,600.00	136,045.00
tblLandUse	LotAcreage	12.01	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	VendorTripNumber	248.00	16.00

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	640.00	44.00
tblTripsAndVMT	WorkerTripNumber	128.00	9.00
tblVehicleTrips	WD_TR	9.44	9.43
tblWoodstoves	NumberCatalytic	1.85	0.00
tblWoodstoves	NumberNoncatalytic	1.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.8923	42.1232	18.8299	0.1148	21.9792	1.7587	23.7379	10.3848	1.6180	12.0028	0.0000	11,814.1075	11,814.1075	1.7875	1.1751	12,201.2849
2024	48.6236	14.0900	17.6147	0.0335	0.5943	0.6201	1.2144	0.1599	0.5833	0.7432	0.0000	3,239.8398	3,239.8398	0.6166	0.0530	3,271.0534
Maximum	**48.6236**	**42.1232**	**18.8299**	**0.1148**	**21.9792**	**1.7587**	**23.7379**	**10.3848**	**1.6180**	**12.0028**	**0.0000**	**11,814.1075**	**11,814.1075**	**1.7875**	**1.1751**	**12,201.2849**

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	3.8923	42.1232	18.8299	0.1148	5.8635	1.7587	7.6221	2.7395	1.6180	4.3575	0.0000	11,814.1075	11,814.1075	1.7875	1.1751	12,201.2848
2024	48.6236	14.0900	17.6147	0.0335	0.5943	0.6201	1.2144	0.1599	0.5833	0.7432	0.0000	3,239.8398	3,239.8398	0.6166	0.0530	3,271.0534
Maximum	**48.6236**	**42.1232**	**18.8299**	**0.1148**	**5.8635**	**1.7587**	**7.6221**	**2.7395**	**1.6180**	**4.3575**	**0.0000**	**11,814.1075**	**11,814.1075**	**1.7875**	**1.1751**	**12,201.2848**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	71.39	0.00	64.59	72.50	0.00	59.98	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	0.9373	1.5236	9.5507	0.0232	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,404.3108	2,404.3108	0.1243	0.1189	2,442.8634
Total	**4.5209**	**1.8231**	**12.7179**	**0.0251**	**2.5485**	**0.0574**	**2.6059**	**0.6799**	**0.0562**	**0.7361**	**0.0000**	**2,747.1610**	**2,747.1610**	**0.1361**	**0.1251**	**2,787.8506**

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	0.9373	1.5236	9.5507	0.0232	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,404.3108	2,404.3108	0.1243	0.1189	2,442.8634
Total	**4.5209**	**1.8231**	**12.7179**	**0.0251**	**2.5485**	**0.0574**	**2.6059**	**0.6799**	**0.0562**	**0.7361**	**0.0000**	**2,747.1610**	**2,747.1610**	**0.1361**	**0.1251**	**2,787.8506**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/2/2023	10/6/2023	5	5	
2	Grading	Grading	10/7/2023	10/18/2023	5	8	
3	Building Construction	Building Construction	10/19/2023	9/4/2024	5	230	
4	Paving	Paving	9/5/2024	9/30/2024	5	18	
5	Architectural Coating	Architectural Coating	10/1/2024	10/24/2024	5	18	

Acres of Grading (Site Preparation Phase): 17.5

Acres of Grading (Grading Phase): 20

Acres of Paving: 34.23

Residential Indoor: 275,491; Residential Outdoor: 91,830; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,355 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,012.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	44.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	3.8307	41.8798	18.2937	0.0569		1.7577	1.7577		1.6171	1.6171		5,514.0891	5,514.0891	1.7834		5,558.6733
Total	**3.8307**	**41.8798**	**18.2937**	**0.0569**	**21.7780**	**1.7577**	**23.5357**	**10.3315**	**1.6171**	**11.9486**		**5,514.0891**	**5,514.0891**	**1.7834**		**5,558.6733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0422	0.5362	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		164.1079	164.1079	4.1200e-003	4.3200e-003	165.4988
Total	**0.0616**	**0.0422**	**0.5362**	**1.6000e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**164.1079**	**164.1079**	**4.1200e-003**	**4.3200e-003**	**165.4988**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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					5.6623	0.0000	5.6623	2.6862	0.0000	2.6862			0.0000			0.0000
Off-Road	3.8307	41.8798	18.2937	0.0569		1.7577	1.7577		1.6171	1.6171	0.0000	5,514.0891	5,514.0891	1.7834		5,558.6733
Total	**3.8307**	**41.8798**	**18.2937**	**0.0569**	**5.6623**	**1.7577**	**7.4200**	**2.6862**	**1.6171**	**4.3033**	**0.0000**	**5,514.0891**	**5,514.0891**	**1.7834**		**5,558.6733**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0422	0.5362	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		164.1079	164.1079	4.1200e-003	4.3200e-003	165.4988
Total	**0.0616**	**0.0422**	**0.5362**	**1.6000e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**164.1079**	**164.1079**	**4.1200e-003**	**4.3200e-003**	**165.4988**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					8.8015	0.0000	8.8015	3.6159	0.0000	3.6159			0.0000			0.0000
Off-Road	2.5893	28.7025	14.7877	0.0438		1.1437	1.1437		1.0522	1.0522		4,242.7767	4,242.7767	1.3722		4,277.0817
Total	**2.5893**	**28.7025**	**14.7877**	**0.0438**	**8.8015**	**1.1437**	**9.9452**	**3.6159**	**1.0522**	**4.6681**		**4,242.7767**	**4,242.7767**	**1.3722**		**4,277.0817**

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	0.2545	13.3855	3.5470	0.0696	2.2140	0.1527	2.3667	0.6070	0.1461	0.7531		7,434.5742	7,434.5742	0.1042	1.1715	7,786.2875
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.3058**	**13.4207**	**3.9938**	**0.0710**	**2.3816**	**0.1535**	**2.5351**	**0.6515**	**0.1468**	**0.7982**		**7,571.3308**	**7,571.3308**	**0.1076**	**1.1751**	**7,924.2031**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2884	0.0000	2.2884	0.9401	0.0000	0.9401			0.0000			0.0000
Off-Road	2.5893	28.7025	14.7877	0.0438		1.1437	1.1437		1.0522	1.0522	0.0000	4,242.7767	4,242.7767	1.3722		4,277.0817
Total	**2.5893**	**28.7025**	**14.7877**	**0.0438**	**2.2884**	**1.1437**	**3.4321**	**0.9401**	**1.0522**	**1.9923**	**0.0000**	**4,242.7767**	**4,242.7767**	**1.3722**		**4,277.0817**

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	0.2545	13.3855	3.5470	0.0696	2.2140	0.1527	2.3667	0.6070	0.1461	0.7531		7,434.5742	7,434.5742	0.1042	1.1715	7,786.2875
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.3058**	**13.4207**	**3.9938**	**0.0710**	**2.3816**	**0.1535**	**2.5351**	**0.6515**	**0.1468**	**0.7982**		**7,571.3308**	**7,571.3308**	**0.1076**	**1.1751**	**7,924.2031**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0167	0.5544	0.2225	2.8000e-003	0.1025	4.5700e-003	0.1071	0.0295	4.3700e-003	0.0339		297.1693	297.1693	2.9600e-003	0.0440	310.3404
Worker	0.1507	0.1031	1.3107	3.9200e-003	0.4918	2.3100e-003	0.4941	0.1304	2.1200e-003	0.1326		401.1525	401.1525	0.0101	0.0106	404.5526
Total	**0.1674**	**0.6574**	**1.5332**	**6.7200e-003**	**0.5943**	**6.8800e-003**	**0.6012**	**0.1599**	**6.4900e-003**	**0.1664**		**698.3218**	**698.3218**	**0.0130**	**0.0545**	**714.8930**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0167	0.5544	0.2225	2.8000e-003	0.1025	4.5700e-003	0.1071	0.0295	4.3700e-003	0.0339		297.1693	297.1693	2.9600e-003	0.0440	310.3404
Worker	0.1507	0.1031	1.3107	3.9200e-003	0.4918	2.3100e-003	0.4941	0.1304	2.1200e-003	0.1326		401.1525	401.1525	0.0101	0.0106	404.5526
Total	**0.1674**	**0.6574**	**1.5332**	**6.7200e-003**	**0.5943**	**6.8800e-003**	**0.6012**	**0.1599**	**6.4900e-003**	**0.1664**		**698.3218**	**698.3218**	**0.0130**	**0.0545**	**714.8930**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5544	0.2200	2.7600e-003	0.1025	4.5400e-003	0.1070	0.0295	4.3400e-003	0.0339		292.5943	292.5943	3.0700e-003	0.0432	305.5466
Worker	0.1409	0.0918	1.2279	3.8000e-003	0.4918	2.2000e-003	0.4940	0.1304	2.0300e-003	0.1325		391.5466	391.5466	9.1400e-003	9.8100e-003	394.6992
Total	**0.1573**	**0.6463**	**1.4479**	**6.5600e-003**	**0.5943**	**6.7400e-003**	**0.6010**	**0.1599**	**6.3700e-003**	**0.1663**		**684.1409**	**684.1409**	**0.0122**	**0.0530**	**700.2458**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5544	0.2200	2.7600e-003	0.1025	4.5400e-003	0.1070	0.0295	4.3400e-003	0.0339		292.5943	292.5943	3.0700e-003	0.0432	305.5466
Worker	0.1409	0.0918	1.2279	3.8000e-003	0.4918	2.2000e-003	0.4940	0.1304	2.0300e-003	0.1325		391.5466	391.5466	9.1400e-003	9.8100e-003	394.6992
Total	**0.1573**	**0.6463**	**1.4479**	**6.5600e-003**	**0.5943**	**6.7400e-003**	**0.6010**	**0.1599**	**6.3700e-003**	**0.1663**		**684.1409**	**684.1409**	**0.0122**	**0.0530**	**700.2458**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0604**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0641	0.0417	0.5581	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		177.9757	177.9757	4.1600e-003	4.4600e-003	179.4087
Total	**0.0641**	**0.0417**	**0.5581**	**1.7300e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**177.9757**	**177.9757**	**4.1600e-003**	**4.4600e-003**	**179.4087**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.1790					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0604**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0641	0.0417	0.5581	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		177.9757	177.9757	4.1600e-003	4.4600e-003	179.4087
Total	**0.0641**	**0.0417**	**0.5581**	**1.7300e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**177.9757**	**177.9757**	**4.1600e-003**	**4.4600e-003**	**179.4087**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**48.5948**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0288	0.0188	0.2512	7.8000e-004	0.1006	4.5000e-004	0.1011	0.0267	4.2000e-004	0.0271		80.0891	80.0891	1.8700e-003	2.0100e-003	80.7339
Total	**0.0288**	**0.0188**	**0.2512**	**7.8000e-004**	**0.1006**	**4.5000e-004**	**0.1011**	**0.0267**	**4.2000e-004**	**0.0271**		**80.0891**	**80.0891**	**1.8700e-003**	**2.0100e-003**	**80.7339**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**48.5948**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0288	0.0188	0.2512	7.8000e-004	0.1006	4.5000e-004	0.1011	0.0267	4.2000e-004	0.0271		80.0891	80.0891	1.8700e-003	2.0100e-003	80.7339
Total	**0.0288**	**0.0188**	**0.2512**	**7.8000e-004**	**0.1006**	**4.5000e-004**	**0.1011**	**0.0267**	**4.2000e-004**	**0.0271**		**80.0891**	**80.0891**	**1.8700e-003**	**2.0100e-003**	**80.7339**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.9373	1.5236	9.5507	0.0232	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,404.3108	2,404.3108	0.1243	0.1189	2,442.8634
Unmitigated	0.9373	1.5236	9.5507	0.0232	2.5485	0.0191	2.5676	0.6799	0.0179	0.6978		2,404.3108	2,404.3108	0.1243	0.1189	2,442.8634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	348.91	352.98	316.35	1,178,371	1,178,371
Total	348.91	352.98	316.35	1,178,371	1,178,371

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Single Family Housing	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
NaturalGas Unmitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2867.44	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.86744	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

6.0 Area Detail

6.1 Mitigation Measures Area

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Unmitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Cactus Avenue and Bradshaw Circle Residential Project

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,578.80	0
Other Non-Asphalt Surfaces	33.00	Acre	33.00	1,437,480.00	0
Single Family Housing	37.00	Dwelling Unit	3.00	136,045.00	106

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - .

Off-road Equipment - .

Off-road Equipment - .

Trips and VMT - .

Grading -

Vehicle Trips - Weekday trip rate from the Project Trip Generation Analysis

Woodstoves - No fireplaces or hearths assumed

Construction Off-road Equipment Mitigation - Watering at 2-hour intervals as per the WRAP Handbook

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	89,464.00	4,355.00
tblAreaCoating	Area_Parking	89464	4355
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	74
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	74
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	55.00	18.00
tblConstructionPhase	NumDays	740.00	230.00
tblConstructionPhase	NumDays	75.00	8.00
tblConstructionPhase	NumDays	55.00	18.00
tblConstructionPhase	NumDays	30.00	5.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	31.45	0.00
tblFireplaces	NumberNoFireplace	3.70	0.00
tblFireplaces	NumberWood	1.85	0.00
tblGrading	MaterialExported	0.00	8,097.00
tblLandUse	LandUseSquareFeet	66,600.00	136,045.00
tblLandUse	LotAcreage	12.01	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	VendorTripNumber	248.00	16.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	640.00	44.00
tblTripsAndVMT	WorkerTripNumber	128.00	9.00
tblVehicleTrips	WD_TR	9.44	9.43
tblWoodstoves	NumberCatalytic	1.85	0.00
tblWoodstoves	NumberNoncatalytic	1.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0664	0.6641	0.5861	1.4800e-003	0.1147	0.0280	0.1427	0.0471	0.0261	0.0732	0.0000	132.6945	132.6945	0.0241	5.5600e-003	134.9530
2024	0.5921	1.3397	1.7072	3.2100e-003	0.0549	0.0593	0.1142	0.0148	0.0558	0.0706	0.0000	281.4800	281.4800	0.0546	4.3400e-003	284.1393
Maximum	**0.5921**	**1.3397**	**1.7072**	**3.2100e-003**	**0.1147**	**0.0593**	**0.1427**	**0.0471**	**0.0558**	**0.0732**	**0.0000**	**281.4800**	**281.4800**	**0.0546**	**5.5600e-003**	**284.1393**

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	0.0664	0.6641	0.5861	1.4800e-003	0.0484	0.0280	0.0764	0.0173	0.0261	0.0434	0.0000	132.6944	132.6944	0.0241	5.5600e-003	134.9529
2024	0.5921	1.3397	1.7072	3.2100e-003	0.0549	0.0593	0.1142	0.0148	0.0558	0.0706	0.0000	281.4797	281.4797	0.0546	4.3400e-003	284.1391
Maximum	**0.5921**	**1.3397**	**1.7072**	**3.2100e-003**	**0.0549**	**0.0593**	**0.1142**	**0.0173**	**0.0558**	**0.0706**	**0.0000**	**281.4797**	**281.4797**	**0.0546**	**5.5600e-003**	**284.1391**

Cactus Avenue and Bradshaw Circle Residential Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**39.11**	**0.00**	**25.82**	**48.17**	**0.00**	**20.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-2-2023**	**1-1-2024**	0.7239	0.7239
2	**1-2-2024**	**4-1-2024**	0.5109	0.5109
3	**4-2-2024**	**7-1-2024**	0.5101	0.5101
4	**7-2-2024**	**9-30-2024**	0.4520	0.4520
		Highest	0.7239	0.7239

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6431	4.4000e-003	0.3818	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6241	0.6241	6.0000e-004	0.0000	0.6391
Energy	5.6400e-003	0.0482	0.0205	3.1000e-004		3.9000e-003	3.9000e-003		3.9000e-003	3.9000e-003	0.0000	108.1138	108.1138	5.4800e-003	1.5600e-003	108.7154
Mobile	0.1686	0.2725	1.7550	4.1900e-003	0.4457	3.3900e-003	0.4491	0.1191	3.1800e-003	0.1222	0.0000	393.9804	393.9804	0.0200	0.0193	400.2282
Waste						0.0000	0.0000		0.0000	0.0000	8.8220	0.0000	8.8220	0.5214	0.0000	21.8561
Water						0.0000	0.0000		0.0000	0.0000	0.7648	8.5613	9.3261	0.0793	1.9400e-003	11.8868
Total	**0.8173**	**0.3251**	**2.1574**	**4.5200e-003**	**0.4457**	**9.4100e-003**	**0.4551**	**0.1191**	**9.2000e-003**	**0.1283**	**9.5868**	**511.2797**	**520.8665**	**0.6267**	**0.0228**	**543.3256**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6431	4.4000e-003	0.3818	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6241	0.6241	6.0000e-004	0.0000	0.6391
Energy	5.6400e-003	0.0482	0.0205	3.1000e-004		3.9000e-003	3.9000e-003		3.9000e-003	3.9000e-003	0.0000	108.1138	108.1138	5.4800e-003	1.5600e-003	108.7154
Mobile	0.1686	0.2725	1.7550	4.1900e-003	0.4457	3.3900e-003	0.4491	0.1191	3.1800e-003	0.1222	0.0000	393.9804	393.9804	0.0200	0.0193	400.2282
Waste						0.0000	0.0000		0.0000	0.0000	8.8220	0.0000	8.8220	0.5214	0.0000	21.8561
Water						0.0000	0.0000		0.0000	0.0000	0.7648	8.5613	9.3261	0.0793	1.9400e-003	11.8868
Total	**0.8173**	**0.3251**	**2.1574**	**4.5200e-003**	**0.4457**	**9.4100e-003**	**0.4551**	**0.1191**	**9.2000e-003**	**0.1283**	**9.5868**	**511.2797**	**520.8665**	**0.6267**	**0.0228**	**543.3256**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/2/2023	10/6/2023	5	5	
2	Grading	Grading	10/7/2023	10/18/2023	5	8	
3	Building Construction	Building Construction	10/19/2023	9/4/2024	5	230	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Paving	Paving	9/5/2024	9/30/2024	5	18	
5	Architectural Coating	Architectural Coating	10/1/2024	10/24/2024	5	18	

Acres of Grading (Site Preparation Phase): 17.5

Acres of Grading (Grading Phase): 20

Acres of Paving: 34.23

Residential Indoor: 275,491; Residential Outdoor: 91,830; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,355 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,012.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	44.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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					0.0545	0.0000	0.0545	0.0258	0.0000	0.0258	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5800e-003	0.1047	0.0457	1.4000e-004		4.3900e-003	4.3900e-003		4.0400e-003	4.0400e-003	0.0000	12.5057	12.5057	4.0400e-003	0.0000	12.6069
Total	**9.5800e-003**	**0.1047**	**0.0457**	**1.4000e-004**	**0.0545**	**4.3900e-003**	**0.0588**	**0.0258**	**4.0400e-003**	**0.0299**	**0.0000**	**12.5057**	**12.5057**	**4.0400e-003**	**0.0000**	**12.6069**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	1.4100e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3809	0.3809	1.0000e-005	1.0000e-005	0.3841
Total	**1.5000e-004**	**1.1000e-004**	**1.4100e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3809**	**0.3809**	**1.0000e-005**	**1.0000e-005**	**0.3841**

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					0.0142	0.0000	0.0142	6.7200e-003	0.0000	6.7200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5800e-003	0.1047	0.0457	1.4000e-004		4.3900e-003	4.3900e-003		4.0400e-003	4.0400e-003	0.0000	12.5057	12.5057	4.0400e-003	0.0000	12.6068
Total	**9.5800e-003**	**0.1047**	**0.0457**	**1.4000e-004**	**0.0142**	**4.3900e-003**	**0.0186**	**6.7200e-003**	**4.0400e-003**	**0.0108**	**0.0000**	**12.5057**	**12.5057**	**4.0400e-003**	**0.0000**	**12.6068**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	1.4100e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3809	0.3809	1.0000e-005	1.0000e-005	0.3841
Total	**1.5000e-004**	**1.1000e-004**	**1.4100e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3809**	**0.3809**	**1.0000e-005**	**1.0000e-005**	**0.3841**

3.3 Grading - 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					0.0352	0.0000	0.0352	0.0145	0.0000	0.0145	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0104	0.1148	0.0592	1.8000e-004		4.5700e-003	4.5700e-003		4.2100e-003	4.2100e-003	0.0000	15.3959	15.3959	4.9800e-003	0.0000	15.5204
Total	**0.0104**	**0.1148**	**0.0592**	**1.8000e-004**	**0.0352**	**4.5700e-003**	**0.0398**	**0.0145**	**4.2100e-003**	**0.0187**	**0.0000**	**15.3959**	**15.3959**	**4.9800e-003**	**0.0000**	**15.5204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0700e-003	0.0533	0.0140	2.8000e-004	8.7300e-003	6.1000e-004	9.3400e-003	2.4000e-003	5.8000e-004	2.9800e-003	0.0000	26.9537	26.9537	3.8000e-004	4.2500e-003	28.2289
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.8800e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5078	0.5078	1.0000e-005	1.0000e-005	0.5121
Total	**1.2600e-003**	**0.0535**	**0.0159**	**2.9000e-004**	**9.3900e-003**	**6.1000e-004**	**1.0000e-002**	**2.5800e-003**	**5.8000e-004**	**3.1600e-003**	**0.0000**	**27.4615**	**27.4615**	**3.9000e-004**	**4.2600e-003**	**28.7410**

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					9.1500e-003	0.0000	9.1500e-003	3.7600e-003	0.0000	3.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0104	0.1148	0.0592	1.8000e-004		4.5700e-003	4.5700e-003		4.2100e-003	4.2100e-003	0.0000	15.3959	15.3959	4.9800e-003	0.0000	15.5204
Total	**0.0104**	**0.1148**	**0.0592**	**1.8000e-004**	**9.1500e-003**	**4.5700e-003**	**0.0137**	**3.7600e-003**	**4.2100e-003**	**7.9700e-003**	**0.0000**	**15.3959**	**15.3959**	**4.9800e-003**	**0.0000**	**15.5204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0700e-003	0.0533	0.0140	2.8000e-004	8.7300e-003	6.1000e-004	9.3400e-003	2.4000e-003	5.8000e-004	2.9800e-003	0.0000	26.9537	26.9537	3.8000e-004	4.2500e-003	28.2289
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.8800e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5078	0.5078	1.0000e-005	1.0000e-005	0.5121
Total	**1.2600e-003**	**0.0535**	**0.0159**	**2.9000e-004**	**9.3900e-003**	**6.1000e-004**	**1.0000e-002**	**2.5800e-003**	**5.8000e-004**	**3.1600e-003**	**0.0000**	**27.4615**	**27.4615**	**3.9000e-004**	**4.2600e-003**	**28.7410**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0409	0.3740	0.4223	7.0000e-004		0.0182	0.0182		0.0171	0.0171	0.0000	60.2692	60.2692	0.0143	0.0000	60.6277
Total	**0.0409**	**0.3740**	**0.4223**	**7.0000e-004**		**0.0182**	**0.0182**		**0.0171**	**0.0171**	**0.0000**	**60.2692**	**60.2692**	**0.0143**	**0.0000**	**60.6277**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5000e-004	0.0143	5.6800e-003	7.0000e-005	2.6300e-003	1.2000e-004	2.7500e-003	7.6000e-004	1.1000e-004	8.7000e-004	0.0000	6.9992	6.9992	7.0000e-005	1.0300e-003	7.3094
Worker	3.7100e-003	2.7500e-003	0.0359	1.0000e-004	0.0126	6.0000e-005	0.0126	3.3400e-003	6.0000e-005	3.3900e-003	0.0000	9.6820	9.6820	2.4000e-004	2.5000e-004	9.7637
Total	**4.1600e-003**	**0.0170**	**0.0416**	**1.7000e-004**	**0.0152**	**1.8000e-004**	**0.0154**	**4.1000e-003**	**1.7000e-004**	**4.2600e-003**	**0.0000**	**16.6813**	**16.6813**	**3.1000e-004**	**1.2800e-003**	**17.0731**

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	0.0409	0.3740	0.4223	7.0000e-004		0.0182	0.0182		0.0171	0.0171	0.0000	60.2692	60.2692	0.0143	0.0000	60.6276
Total	**0.0409**	**0.3740**	**0.4223**	**7.0000e-004**		**0.0182**	**0.0182**		**0.0171**	**0.0171**	**0.0000**	**60.2692**	**60.2692**	**0.0143**	**0.0000**	**60.6276**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5000e-004	0.0143	5.6800e-003	7.0000e-005	2.6300e-003	1.2000e-004	2.7500e-003	7.6000e-004	1.1000e-004	8.7000e-004	0.0000	6.9992	6.9992	7.0000e-005	1.0300e-003	7.3094
Worker	3.7100e-003	2.7500e-003	0.0359	1.0000e-004	0.0126	6.0000e-005	0.0126	3.3400e-003	6.0000e-005	3.3900e-003	0.0000	9.6820	9.6820	2.4000e-004	2.5000e-004	9.7637
Total	**4.1600e-003**	**0.0170**	**0.0416**	**1.7000e-004**	**0.0152**	**1.8000e-004**	**0.0154**	**4.1000e-003**	**1.7000e-004**	**4.2600e-003**	**0.0000**	**16.6813**	**16.6813**	**3.1000e-004**	**1.2800e-003**	**17.0731**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1310	1.1965	1.4389	2.4000e-003		0.0546	0.0546		0.0513	0.0513	0.0000	206.3457	206.3457	0.0488	0.0000	207.5656
Total	**0.1310**	**1.1965**	**1.4389**	**2.4000e-003**		**0.0546**	**0.0546**		**0.0513**	**0.0513**	**0.0000**	**206.3457**	**206.3457**	**0.0488**	**0.0000**	**207.5656**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0488	0.0192	2.5000e-004	9.0000e-003	4.0000e-004	9.4000e-003	2.6000e-003	3.9000e-004	2.9800e-003	0.0000	23.5898	23.5898	2.5000e-004	3.4800e-003	24.6339
Worker	0.0119	8.3900e-003	0.1152	3.5000e-004	0.0430	2.0000e-004	0.0432	0.0114	1.8000e-004	0.0116	0.0000	32.3483	32.3483	7.4000e-004	8.1000e-004	32.6073
Total	**0.0134**	**0.0572**	**0.1344**	**6.0000e-004**	**0.0520**	**6.0000e-004**	**0.0526**	**0.0140**	**5.7000e-004**	**0.0146**	**0.0000**	**55.9381**	**55.9381**	**9.9000e-004**	**4.2900e-003**	**57.2412**

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	0.1310	1.1965	1.4388	2.4000e-003		0.0546	0.0546		0.0513	0.0513	0.0000	206.3455	206.3455	0.0488	0.0000	207.5653
Total	**0.1310**	**1.1965**	**1.4388**	**2.4000e-003**		**0.0546**	**0.0546**		**0.0513**	**0.0513**	**0.0000**	**206.3455**	**206.3455**	**0.0488**	**0.0000**	**207.5653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0488	0.0192	2.5000e-004	9.0000e-003	4.0000e-004	9.4000e-003	2.6000e-003	3.9000e-004	2.9800e-003	0.0000	23.5898	23.5898	2.5000e-004	3.4800e-003	24.6339
Worker	0.0119	8.3900e-003	0.1152	3.5000e-004	0.0430	2.0000e-004	0.0432	0.0114	1.8000e-004	0.0116	0.0000	32.3483	32.3483	7.4000e-004	8.1000e-004	32.6073
Total	**0.0134**	**0.0572**	**0.1344**	**6.0000e-004**	**0.0520**	**6.0000e-004**	**0.0526**	**0.0140**	**5.7000e-004**	**0.0146**	**0.0000**	**55.9381**	**55.9381**	**9.9000e-004**	**4.2900e-003**	**57.2412**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	1.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.5400e-003**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**14.7423**	**14.7423**	**4.6300e-003**	**0.0000**	**14.8581**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.9000e-004	5.2900e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.3000e-004	1.0000e-005	5.3000e-004	0.0000	1.4869	1.4869	3.0000e-005	4.0000e-005	1.4988
Total	**5.5000e-004**	**3.9000e-004**	**5.2900e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.3000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.4869**	**1.4869**	**3.0000e-005**	**4.0000e-005**	**1.4988**

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	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	1.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.5400e-003**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**14.7423**	**14.7423**	**4.6300e-003**	**0.0000**	**14.8581**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.9000e-004	5.2900e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.3000e-004	1.0000e-005	5.3000e-004	0.0000	1.4869	1.4869	3.0000e-005	4.0000e-005	1.4988
Total	**5.5000e-004**	**3.9000e-004**	**5.2900e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.3000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.4869**	**1.4869**	**3.0000e-005**	**4.0000e-005**	**1.4988**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4357					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.4374**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.7000e-004	2.3800e-003	1.0000e-005	8.9000e-004	0.0000	8.9000e-004	2.4000e-004	0.0000	2.4000e-004	0.0000	0.6691	0.6691	2.0000e-005	2.0000e-005	0.6745
Total	**2.5000e-004**	**1.7000e-004**	**2.3800e-003**	**1.0000e-005**	**8.9000e-004**	**0.0000**	**8.9000e-004**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**0.6691**	**0.6691**	**2.0000e-005**	**2.0000e-005**	**0.6745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4357					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.4374**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.7000e-004	2.3800e-003	1.0000e-005	8.9000e-004	0.0000	8.9000e-004	2.4000e-004	0.0000	2.4000e-004	0.0000	0.6691	0.6691	2.0000e-005	2.0000e-005	0.6745
Total	**2.5000e-004**	**1.7000e-004**	**2.3800e-003**	**1.0000e-005**	**8.9000e-004**	**0.0000**	**8.9000e-004**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**0.6691**	**0.6691**	**2.0000e-005**	**2.0000e-005**	**0.6745**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	0.1686	0.2725	1.7550	4.1900e-003	0.4457	3.3900e-003	0.4491	0.1191	3.1800e-003	0.1222	0.0000	393.9804	393.9804	0.0200	0.0193	400.2282
Unmitigated	0.1686	0.2725	1.7550	4.1900e-003	0.4457	3.3900e-003	0.4491	0.1191	3.1800e-003	0.1222	0.0000	393.9804	393.9804	0.0200	0.0193	400.2282

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	348.91	352.98	316.35	1,178,371	1,178,371
Total	348.91	352.98	316.35	1,178,371	1,178,371

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Single Family Housing	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.2624	52.2624	4.4100e-003	5.3000e-004	52.5320
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.2624	52.2624	4.4100e-003	5.3000e-004	52.5320
NaturalGas Mitigated	5.6400e-003	0.0482	0.0205	3.1000e-004		3.9000e-003	3.9000e-003		3.9000e-003	3.9000e-003	0.0000	55.8515	55.8515	1.0700e-003	1.0200e-003	56.1834
NaturalGas Unmitigated	5.6400e-003	0.0482	0.0205	3.1000e-004		3.9000e-003	3.9000e-003		3.9000e-003	3.9000e-003	0.0000	55.8515	55.8515	1.0700e-003	1.0200e-003	56.1834

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.04662e+006	5.6400e-003	0.0482	0.0205	3.1000e-004		3.9000e-003	3.9000e-003		3.9000e-003	3.9000e-003	0.0000	55.8515	55.8515	1.0700e-003	1.0200e-003	56.1834
Total		**5.6400e-003**	**0.0482**	**0.0205**	**3.1000e-004**		**3.9000e-003**	**3.9000e-003**		**3.9000e-003**	**3.9000e-003**	**0.0000**	**55.8515**	**55.8515**	**1.0700e-003**	**1.0200e-003**	**56.1834**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.04662e+006	5.6400e-003	0.0482	0.0205	3.1000e-004		3.9000e-003	3.9000e-003		3.9000e-003	3.9000e-003	0.0000	55.8515	55.8515	1.0700e-003	1.0200e-003	56.1834
Total		**5.6400e-003**	**0.0482**	**0.0205**	**3.1000e-004**		**3.9000e-003**	**3.9000e-003**		**3.9000e-003**	**3.9000e-003**	**0.0000**	**55.8515**	**55.8515**	**1.0700e-003**	**1.0200e-003**	**56.1834**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	294692	52.2624	4.4100e-003	5.3000e-004	52.5320
Total		**52.2624**	**4.4100e-003**	**5.3000e-004**	**52.5320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	294692	52.2624	4.4100e-003	5.3000e-004	52.5320
Total		**52.2624**	**4.4100e-003**	**5.3000e-004**	**52.5320**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	0.6431	4.4000e-003	0.3818	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6241	0.6241	6.0000e-004	0.0000	0.6391
Unmitigated	0.6431	4.4000e-003	0.3818	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6241	0.6241	6.0000e-004	0.0000	0.6391

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	0.0436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5880					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0115	4.4000e-003	0.3818	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6241	0.6241	6.0000e-004	0.0000	0.6391
Total	**0.6431**	**4.4000e-003**	**0.3818**	**2.0000e-005**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**0.6241**	**0.6241**	**6.0000e-004**	**0.0000**	**0.6391**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5880					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0115	4.4000e-003	0.3818	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6241	0.6241	6.0000e-004	0.0000	0.6391
Total	**0.6431**	**4.4000e-003**	**0.3818**	**2.0000e-005**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**0.6241**	**0.6241**	**6.0000e-004**	**0.0000**	**0.6391**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.3261	0.0793	1.9400e-003	11.8868
Unmitigated	9.3261	0.0793	1.9400e-003	11.8868

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.4107 / 1.51979	9.3261	0.0793	1.9400e-003	11.8868
Total		**9.3261**	**0.0793**	**1.9400e-003**	**11.8868**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.4107 / 1.51979	9.3261	0.0793	1.9400e-003	11.8868
Total		**9.3261**	**0.0793**	**1.9400e-003**	**11.8868**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.8220	0.5214	0.0000	21.8561
Unmitigated	8.8220	0.5214	0.0000	21.8561

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	43.46	8.8220	0.5214	0.0000	21.8561
Total		**8.8220**	**0.5214**	**0.0000**	**21.8561**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	43.46	8.8220	0.5214	0.0000	21.8561
Total		**8.8220**	**0.5214**	**0.0000**	**21.8561**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Cactus Avenue and Bradshaw Circle Residential Project OPLST

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,578.80	0
Other Non-Asphalt Surfaces	33.00	Acre	33.00	1,437,480.00	0
Single Family Housing	37.00	Dwelling Unit	3.00	136,045.00	106

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Operations Only

Off-road Equipment - .

Off-road Equipment - .Operations Only

Trips and VMT - .

Grading -

Vehicle Trips - Weekday trip rate from the Project Trip Generation Analysis
Onsite Trip Distance = 0.15 miles

Woodstoves - No fireplaces or hearths assumed.

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - Watering at 2-hour intervals as per the WRAP Handbook

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	89464	4355
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	30.00	0.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	31.45	0.00
tblFireplaces	NumberNoFireplace	3.70	0.00
tblFireplaces	NumberWood	1.85	0.00
tblLandUse	LandUseSquareFeet	66,600.00	136,045.00
tblLandUse	LotAcreage	12.01	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	HO_TL	8.70	0.15
tblVehicleTrips	HS_TL	5.90	0.15
tblVehicleTrips	HW_TL	14.70	0.15
tblVehicleTrips	WD_TR	9.44	9.43
tblWoodstoves	NumberCatalytic	1.85	0.00
tblWoodstoves	NumberNoncatalytic	1.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	0.6477	0.3168	1.8097	9.6000e-004	0.0370	1.6200e-003	0.0386	9.8600e-003	1.5000e-003	0.0114		100.0863	100.0863	0.0374	0.0232	107.9435
Total	**4.2313**	**0.6162**	**4.9769**	**2.8100e-003**	**0.0370**	**0.0399**	**0.0769**	**9.8600e-003**	**0.0398**	**0.0497**	**0.0000**	**442.9365**	**442.9365**	**0.0492**	**0.0294**	**452.9307**

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	0.6477	0.3168	1.8097	9.6000e-004	0.0370	1.6200e-003	0.0386	9.8600e-003	1.5000e-003	0.0114		100.0863	100.0863	0.0374	0.0232	107.9435
Total	**4.2313**	**0.6162**	**4.9769**	**2.8100e-003**	**0.0370**	**0.0399**	**0.0769**	**9.8600e-003**	**0.0398**	**0.0497**	**0.0000**	**442.9365**	**442.9365**	**0.0492**	**0.0294**	**452.9307**

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/2/2023	10/1/2023	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 34.23

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
Site Preparation	Crawler Tractors	0	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	0.6477	0.3168	1.8097	9.6000e-004	0.0370	1.6200e-003	0.0386	9.8600e-003	1.5000e-003	0.0114		100.0863	100.0863	0.0374	0.0232	107.9435
Unmitigated	0.6477	0.3168	1.8097	9.6000e-004	0.0370	1.6200e-003	0.0386	9.8600e-003	1.5000e-003	0.0114		100.0863	100.0863	0.0374	0.0232	107.9435

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	348.91	352.98	316.35	17,087	17,087
Total	348.91	352.98	316.35	17,087	17,087

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	0.15	0.15	0.15	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Single Family Housing	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
NaturalGas Unmitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2867.44	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.86744	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

6.0 Area Detail

6.1 Mitigation Measures Area

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Unmitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Cactus Avenue and Bradshaw Circle Residential Project OPLST

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.23	Acre	1.23	53,578.80	0
Other Non-Asphalt Surfaces	33.00	Acre	33.00	1,437,480.00	0
Single Family Housing	37.00	Dwelling Unit	3.00	136,045.00	106

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Operations Only

Off-road Equipment - .

Off-road Equipment - .Operations Only

Trips and VMT - .

Grading -

Vehicle Trips - Weekday trip rate from the Project Trip Generation Analysis
Onsite Trip Distance = 0.15 miles

Woodstoves - No fireplaces or hearths assumed.

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - Watering at 2-hour intervals as per the WRAP Handbook

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	89464	4355
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	30.00	0.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	31.45	0.00
tblFireplaces	NumberNoFireplace	3.70	0.00
tblFireplaces	NumberWood	1.85	0.00
tblLandUse	LandUseSquareFeet	66,600.00	136,045.00
tblLandUse	LotAcreage	12.01	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	HO_TL	8.70	0.15
tblVehicleTrips	HS_TL	5.90	0.15
tblVehicleTrips	HW_TL	14.70	0.15
tblVehicleTrips	WD_TR	9.44	9.43
tblWoodstoves	NumberCatalytic	1.85	0.00
tblWoodstoves	NumberNoncatalytic	1.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	0.4943	0.3353	2.0183	9.5000e-004	0.0370	1.6300e-003	0.0386	9.8600e-003	1.5100e-003	0.0114		98.4289	98.4289	0.0429	0.0239	106.6229
Total	**4.0779**	**0.6347**	**5.1855**	**2.8000e-003**	**0.0370**	**0.0399**	**0.0769**	**9.8600e-003**	**0.0398**	**0.0497**	**0.0000**	**441.2791**	**441.2791**	**0.0547**	**0.0301**	**451.6101**

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	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Energy	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Mobile	0.4943	0.3353	2.0183	9.5000e-004	0.0370	1.6300e-003	0.0386	9.8600e-003	1.5100e-003	0.0114		98.4289	98.4289	0.0429	0.0239	106.6229
Total	**4.0779**	**0.6347**	**5.1855**	**2.8000e-003**	**0.0370**	**0.0399**	**0.0769**	**9.8600e-003**	**0.0398**	**0.0497**	**0.0000**	**441.2791**	**441.2791**	**0.0547**	**0.0301**	**451.6101**

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/2/2023	10/1/2023	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 34.23

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
Site Preparation	Crawler Tractors	0	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	0.4943	0.3353	2.0183	9.5000e-004	0.0370	1.6300e-003	0.0386	9.8600e-003	1.5100e-003	0.0114		98.4289	98.4289	0.0429	0.0239	106.6229
Unmitigated	0.4943	0.3353	2.0183	9.5000e-004	0.0370	1.6300e-003	0.0386	9.8600e-003	1.5100e-003	0.0114		98.4289	98.4289	0.0429	0.0239	106.6229

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	348.91	352.98	316.35	17,087	17,087
Total	348.91	352.98	316.35	17,087	17,087

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	0.15	0.15	0.15	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Single Family Housing	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
NaturalGas Unmitigated	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2867.44	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.86744	0.0309	0.2643	0.1125	1.6900e-003		0.0214	0.0214		0.0214	0.0214		337.3463	337.3463	6.4700e-003	6.1800e-003	339.3509
Total		**0.0309**	**0.2643**	**0.1125**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.3463**	**337.3463**	**6.4700e-003**	**6.1800e-003**	**339.3509**

6.0 Area Detail

6.1 Mitigation Measures Area

Cactus Avenue and Bradshaw Circle Residential Project OPLST - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363
Unmitigated	3.5526	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	5.5039	5.5039	5.2900e-003	0.0000	5.6363

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0921	0.0352	3.0548	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5039	5.5039	5.2900e-003		5.6363
Total	**3.5526**	**0.0352**	**3.0548**	**1.6000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**5.5039**	**5.5039**	**5.2900e-003**	**0.0000**	**5.6363**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cactus Ave and Bradshaw Circle Residential Project V2022.1

CalEEMod Construction Emission Summary

	Maximum Daily Emissions (pounds/day)									
2023	**ROG**	**NOx**	**CO**	**SOx**	**PM10F**	**PM10Exh**	**PM10Total**	**PM2.5Fug**	**PM2.5 Exh**	**PM2.5Total**
Site Prep										
Onsite	5.6	58.3	40.1	0.1	5.7	2.5	8.2	2.7	2.3	5.0
Offsite	0.1	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.7	58.4	41.3	0.1	5.7	2.5	8.2	2.7	2.3	5.0
Grading										
Onsite	3.2	33.9	23.2	0.0	2.3	1.5	3.8	0.9	1.4	2.3
Offsite	0.2	11.7	3.5	0.1	0.6	0.2	0.8	0.2	0.2	0.4
Total	3.4	45.6	26.7	0.1	2.9	1.7	4.6	1.1	1.6	2.7
Building Construction										
Onsite	1.3	11.8	13.2	0.0	0.0	0.6	0.6	0.0	0.5	0.5
Offsite	0.1	0.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.4	12.0	14.2	0.0	0.0	0.6	0.6	0.0	0.5	0.5
2023 Max Onsite	**5.6**	**58.3**	**40.1**	**0.1**	**5.7**	**2.5**	**8.2**	**2.7**	**2.3**	**5.0**
2023 Max Total	**5.7**	**58.4**	**41.3**	**0.1**	**5.7**	**2.5**	**8.2**	**2.7**	**2.3**	**5.0**

2024	**ROG**	**NOx**	**CO**	**SOx**	**PM10F**	**PM10Exh**	**PM10Total**	**PM2.5Fug**	**PM2.5 Exh**	**PM2.5Total**
Building Construction										
Onsite	1.2	11.2	13.1	0.0	0.0	0.5	0.5	0.0	0.5	0.5
Offsite	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.3	11.3	13.3	0.0	0.0	0.5	0.5	0.0	0.5	0.5
Paving										
Onsite	0.6	5.1	6.5	0.0	0.0	0.3	0.3	0.0	0.2	0.2
Offsite	0.1	0.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	5.2	8.2	0.0	0.0	0.3	0.3	0.0	0.2	0.2
Architectural Coating										
Onsite	50.5	0.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	50.5	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2024 Max Onsite	**50.5**	**11.2**	**13.1**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**	**0.5**	**0.5**
2024 Max Total	**50.5**	**11.3**	**13.3**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**	**0.5**	**0.5**
2023-2024 Max Onsite	**50.5**	**58.3**	**40.1**	**0.1**	**5.7**	**2.5**	**8.2**	**2.7**	**2.3**	**5.0**
2023-2024 Max Total	**50.5**	**58.4**	**41.3**	**0.1**	**5.7**	**2.5**	**8.2**	**2.7**	**2.3**	**5.0**
Regional Threshold	75	100	550	150			150			55
Exceeds Threshold	NO	NO	NO	NO			NO			NO
LST Threshold		225	1250				10			6
Exceeds LST		NO	NO				NO			NO

Regional Emission Summary

	ROG	NOx	CO	SOx	PM10	PM2.5
2023						
Site Preparation	5.7	58.4	41.3	0.1	8.2	5.0
Grading	3.4	45.6	26.7	0.1	4.6	2.7
Building Construction	1.4	12.0	14.2	0.0	0.6	0.5
Max Daily 2023	5.7	58.4	41.3	0.1	8.2	5.0
2024						
Buildiong Construction	1.3	11.3	13.3	0	0.5	0.5
Paving	0.7	5.2	8.2	0.0	0.3	0.2
Architectural Coating	50.5	0.9	1.4	0.0	0.0	0.0
Max Daily 2024	50.5	11.3	13.3	0	0.5	0.5
Max Daily 2023-2024	50.5	58.4	41.3	0.1	8.2	5.0

Local Emission Summary

2023	NOx	CO	PM10	PM2.5
Site Preparation	58.3	40.1	8.2	5.0
Grading	33.9	23.2	3.8	2.3
Building Construction	11.8	13.2	0.6	0.5
Max Daily 2023	58.3	40.1	8.2	5.0
2024				
Buildiong Construction	11.2	13.1	0.5	0.5
Paving	5.1	6.5	0.3	0.2
Architectural Coating	0.9	1.2	0.0	0.0
Max Daily 2024	11.2	13.1	0.5	0.5
Max Daily 2023-2024	58.3	40.1	8.2	5.0

Cactus Avenue and Bradshaw Circle Residential Project Summary Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cactus Avenue and Bradshaw Circle Residential Project
Lead Agency	City of Moreno Valley
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	24.0
Location	Bradshaw Cir & Cactus Ave, Moreno Valley, CA 92555, USA
County	Riverside-South Coast
City	Moreno Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5583
EDFZ	11
Electric Utility	Moreno Valley Utility
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	37.0	Dwelling Unit	3.12	136,045	15,961	—	120	—
Other Asphalt Surfaces	57.0	1000sqft	1.33	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.52	1.27	11.4	14.3	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,712	2,712	0.11	0.04	1.14	2,729
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.70	49.2	58.4	41.3	0.10	2.54	5.89	8.43	2.34	2.74	5.08	—	13,829	13,829	0.36	1.47	0.51	14,277
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	3.09	5.85	7.27	0.01	0.26	0.21	0.37	0.24	0.08	0.26	—	1,380	1,380	0.06	0.04	0.27	1,388
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.56	1.07	1.33	< 0.005	0.05	0.04	0.07	0.04	0.01	0.05	—	228	228	0.01	0.01	0.04	230
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshol	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.89	4.90	1.67	14.0	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,596	3,604	1.05	0.14	11.9	3,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.58	4.59	1.75	10.1	0.03	0.05	0.87	0.91	0.05	0.15	0.20	8.54	3,424	3,433	1.06	0.14	1.26	3,503
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.70	4.71	1.79	11.9	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,452	3,461	1.06	0.14	5.70	3,535
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.86	0.33	2.18	0.01	0.01	0.16	0.17	0.01	0.03	0.04	1.41	572	573	0.18	0.02	0.94	585
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—

Unmit.	Yes	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

6. Climate Risk Detailed Report

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

7. Health and Equity Details

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	58.0
Healthy Places Index Score for Project Location (b)	43.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

Cactus Avenue and Bradshaw Circle Residential Project Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cactus Avenue and Bradshaw Circle Residential Project
Lead Agency	City of Moreno Valley
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	24.0
Location	Bradshaw Cir & Cactus Ave, Moreno Valley, CA 92555, USA
County	Riverside-South Coast
City	Moreno Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5583
EDFZ	11
Electric Utility	Moreno Valley Utility
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	37.0	Dwelling Unit	3.12	136,045	15,961	—	120	—
Other Asphalt Surfaces	57.0	1000sqft	1.33	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.52	1.27	11.4	14.3	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,712	2,712	0.11	0.04	1.14	2,729
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.70	49.2	58.4	41.3	0.10	2.54	5.89	8.43	2.34	2.74	5.08	—	13,829	13,829	0.36	1.47	0.51	14,277
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	3.09	5.85	7.27	0.01	0.26	0.21	0.37	0.24	0.08	0.26	—	1,380	1,380	0.06	0.04	0.27	1,388
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.56	1.07	1.33	< 0.005	0.05	0.04	0.07	0.04	0.01	0.05	—	228	228	0.01	0.01	0.04	230
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshol	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.52	1.27	11.4	14.3	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,712	2,712	0.11	0.04	1.14	2,729
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	6.70	5.63	58.4	41.3	0.10	2.54	5.89	8.43	2.34	2.74	5.08	—	13,829	13,829	0.36	1.47	0.51	14,277
2024	1.51	49.2	11.4	14.0	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,697	2,697	0.11	0.04	0.03	2,713
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.42	0.35	3.53	3.21	0.01	0.15	0.21	0.37	0.14	0.08	0.22	—	801	801	0.03	0.04	0.27	814
2024	0.78	3.09	5.85	7.27	0.01	0.26	0.11	0.37	0.24	0.03	0.26	—	1,380	1,380	0.06	0.02	0.26	1,388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.08	0.06	0.64	0.59	< 0.005	0.03	0.04	0.07	0.03	0.01	0.04	—	133	133	< 0.005	0.01	0.04	135
2024	0.14	0.56	1.07	1.33	< 0.005	0.05	0.02	0.07	0.04	< 0.005	0.05	—	228	228	0.01	< 0.005	0.04	230

2.4. Operations Emissions Compared Against Thresholds

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

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

Unmit.	1.89	4.90	1.67	14.0	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,596	3,604	1.05	0.14	11.9	3,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.58	4.59	1.75	10.1	0.03	0.05	0.87	0.91	0.05	0.15	0.20	8.54	3,424	3,433	1.06	0.14	1.26	3,503
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.70	4.71	1.79	11.9	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,452	3,461	1.06	0.14	5.70	3,535
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.86	0.33	2.18	0.01	0.01	0.16	0.17	0.01	0.03	0.04	1.41	572	573	0.18	0.02	0.94	585
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.65	1.53	1.32	11.8	0.03	0.02	0.87	0.89	0.02	0.15	0.17	—	2,724	2,724	0.12	0.13	10.9	2,776
Area	0.20	3.35	0.02	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.61	5.61	< 0.005	< 0.005	—	5.63
Energy	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	851	851	0.07	< 0.005	—	854
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Waste	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	1.89	4.90	1.67	14.0	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,596	3,604	1.05	0.14	11.9	3,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.54	1.42	1.41	10.00	0.03	0.02	0.87	0.89	0.02	0.15	0.17	—	2,559	2,559	0.13	0.13	0.28	2,601
Area	0.00	3.16	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	851	851	0.07	< 0.005	—	854
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Waste	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	1.58	4.59	1.75	10.1	0.03	0.05	0.87	0.91	0.05	0.15	0.20	8.54	3,424	3,433	1.06	0.14	1.26	3,503
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.53	1.40	1.44	10.4	0.03	0.02	0.87	0.89	0.02	0.15	0.17	—	2,583	2,583	0.13	0.13	4.73	2,630
Area	0.14	3.29	0.01	1.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.84	3.84	< 0.005	< 0.005	—	3.86
Energy	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	851	851	0.07	< 0.005	—	854
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Waste	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

Total	1.70	4.71	1.79	11.9	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,452	3,461	1.06	0.14	5.70	3,535
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.28	0.26	0.26	1.89	< 0.005	< 0.005	0.16	0.16	< 0.005	0.03	0.03	—	428	428	0.02	0.02	0.78	435
Area	0.03	0.60	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.64	0.64	< 0.005	< 0.005	—	0.64
Energy	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	141	141	0.01	< 0.005	—	141
Water	—	—	—	—	—	—	—	—	—	—	—	0.48	2.44	2.92	0.05	< 0.005	—	4.50
Waste	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.27
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	0.31	0.86	0.33	2.18	0.01	0.01	0.16	0.17	0.01	0.03	0.04	1.41	572	573	0.18	0.02	0.94	585

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.60	5.55	58.3	40.1	0.07	2.54	—	2.54	2.34	—	2.34	—	7,525	7,525	0.31	0.06	—	7,551
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.80	0.55	< 0.005	0.03	—	0.03	0.03	—	0.03	—	103	103	< 0.005	< 0.005	—	103
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.15	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.1	17.1	< 0.005	< 0.005	—	17.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.20	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	236	236	0.01	0.01	0.03	239
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.28	3.28	< 0.005	< 0.005	0.01	3.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.86	3.24	33.9	23.2	0.04	1.50	—	1.50	1.38	—	1.38	—	4,630	4,630	0.19	0.04	—	4,646
Dust From Material Movement	—	—	—	—	—	—	2.27	2.27	—	0.94	0.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.74	0.51	< 0.005	0.03	—	0.03	0.03	—	0.03	—	101	101	< 0.005	< 0.005	—	102
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.03	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.35	0.13	10.8	2.51	0.06	0.17	0.61	0.78	0.17	0.22	0.39	—	8,996	8,996	0.16	1.43	0.49	9,427
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.49	4.49	< 0.005	< 0.005	0.01	4.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.24	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	197	197	< 0.005	0.03	0.18	207
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.74	0.74	< 0.005	< 0.005	< 0.005	0.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	32.6	32.6	< 0.005	0.01	0.03	34.2

3.5. Building Construction (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.71	1.91	< 0.005	0.08	—	0.08	0.07	—	0.07	—	347	347	0.01	< 0.005	—	348
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57.5	57.5	< 0.005	< 0.005	—	57.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.07	0.08	0.92	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	180	180	0.01	0.01	0.02	182
Vendor	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	124	124	< 0.005	0.02	0.01	130
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	26.4	26.4	< 0.005	< 0.005	0.05	26.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.02	18.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.37	4.37	< 0.005	< 0.005	0.01	4.43
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.98	2.98	< 0.005	< 0.005	< 0.005	3.12
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.58	5.45	6.37	0.01	0.24	—	0.24	0.22	—	0.22	—	1,164	1,164	0.05	0.01	—	1,168
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.99	1.16	< 0.005	0.04	—	0.04	0.04	—	0.04	—	193	193	0.01	< 0.005	—	193
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	1.11	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	192	192	0.01	0.01	0.76	195
Vendor	0.01	< 0.005	0.14	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	123	123	< 0.005	0.02	0.35	129
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.84	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	176	176	0.01	0.01	0.02	178
Vendor	0.01	< 0.005	0.15	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	123	123	< 0.005	0.02	0.01	128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.43	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	86.6	86.6	< 0.005	< 0.005	0.16	87.8
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	59.6	59.6	< 0.005	0.01	0.07	62.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.08	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	14.3	14.3	< 0.005	< 0.005	0.03	14.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.87	9.87	< 0.005	< 0.005	0.01	10.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.05	6.49	0.01	0.25	—	0.25	0.23	—	0.23	—	976	976	0.04	0.01	—	979
Paving	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.05	6.49	0.01	0.25	—	0.25	0.23	—	0.23	—	976	976	0.04	0.01	—	979
Paving	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.3
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.97	7.97	< 0.005	< 0.005	—	7.99
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	288	288	0.01	0.01	1.14	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.26	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	265	265	0.01	0.01	0.03	268
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	49.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.17	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	35.2	35.2	< 0.005	< 0.005	< 0.005	35.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.78
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Single Family Housing	1.65	1.53	1.32	11.8	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,724	2,724	0.12	0.13	10.9	2,776
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.65	1.53	1.32	11.8	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,724	2,724	0.12	0.13	10.9	2,776
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.54	1.42	1.41	10.00	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,559	2,559	0.13	0.13	0.28	2,601
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.54	1.42	1.41	10.00	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,559	2,559	0.13	0.13	0.28	2,601
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.28	0.26	0.26	1.89	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	428	428	0.02	0.02	0.78	435
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.28	0.26	0.26	1.89	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	428	428	0.02	0.02	0.78	435

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	71.0	71.0	0.01	< 0.005	—	71.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	71.0	71.0	0.01	< 0.005	—	71.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.8	69.8	0.01	< 0.005	—	70.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.8	69.8	0.01	< 0.005	—	70.0

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	2.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.20	0.19	0.02	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.61	5.61	< 0.005	< 0.005	—	5.63
Total	0.20	3.35	0.02	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.61	5.61	< 0.005	< 0.005	—	5.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	49.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	2.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	52.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	—	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.02	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.64	0.64	< 0.005	< 0.005	—	0.64
Total	0.03	1.04	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.64	0.64	< 0.005	< 0.005	—	0.64

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.48	2.44	2.92	0.05	< 0.005	—	4.50
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.48	2.44	2.92	0.05	< 0.005	—	4.50

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.27
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.27

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/2/2023	10/6/2023	5.00	5.00	—
Grading	Grading	10/7/2023	10/18/2023	5.00	8.00	—
Building Construction	Building Construction	10/19/2023	9/4/2024	5.00	230	—
Paving	Paving	9/8/2024	10/3/2024	5.00	18.0	—
Architectural Coating	Architectural Coating	10/4/2024	10/29/2024	5.00	18.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	0.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	212	0.43
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	212	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	127	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	13.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.96	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.66	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	275,491	91,830	2,600	867	3,467

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	17.5	0.00	—
Grading	—	8,097	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.73

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.41	0%
Other Asphalt Surfaces	1.33	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Single Family Housing	349	349	349	127,352	3,118	3,118	3,118	1,138,146
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
275491.125	91,830	2,600	867	3,467

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	345,552	453	0.0330	0.0040	1,315,880
Other Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,504,930	309,311
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	10.5	0.00
Other Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.6	annual days of extreme heat
Extreme Precipitation	2.30	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	28.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	99.1
AQ-PM	52.2
AQ-DPM	18.8
Drinking Water	10.2
Lead Risk Housing	30.5
Pesticides	67.3
Toxic Releases	43.2
Traffic	9.99
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	39.4

Haz Waste Facilities/Generators	40.9
Impaired Water Bodies	0.00
Solid Waste	75.7
Sensitive Population	—
Asthma	71.4
Cardio-vascular	93.1
Low Birth Weights	79.9
Socioeconomic Factor Indicators	—
Education	63.2
Housing	56.0
Linguistic	7.38
Poverty	51.6
Unemployment	35.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	63.39022199
Employed	50.78916977
Education	—
Bachelor's or higher	31.86192737
High school enrollment	14.38470422
Preschool enrollment	9.29038881
Transportation	—
Auto Access	94.58488387
Active commuting	22.03259335

Social	—
2-parent households	28.65392018
Voting	24.26536635
Neighborhood	—
Alcohol availability	63.46721417
Park access	10.16296677
Retail density	10.3554472
Supermarket access	24.07288592
Tree canopy	1.000898242
Housing	—
Homeownership	86.56486591
Housing habitability	65.54600282
Low-inc homeowner severe housing cost burden	33.51725908
Low-inc renter severe housing cost burden	30.14243552
Uncrowded housing	57.46182471
Health Outcomes	—
Insured adults	61.5167458
Arthritis	43.8
Asthma ER Admissions	30.7
High Blood Pressure	36.7
Cancer (excluding skin)	52.2
Asthma	37.3
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	54.0
Life Expectancy at Birth	24.7
Cognitively Disabled	30.7

Physically Disabled	47.8
Heart Attack ER Admissions	3.5
Mental Health Not Good	42.4
Chronic Kidney Disease	55.3
Obesity	27.8
Pedestrian Injuries	60.6
Physical Health Not Good	48.3
Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	25.3
Current Smoker	39.2
No Leisure Time for Physical Activity	47.6
Climate Change Exposures	—
Wildfire Risk	0.6
SLR Inundation Area	0.0
Children	58.1
Elderly	61.9
English Speaking	66.7
Foreign-born	28.7
Outdoor Workers	40.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.8
Traffic Density	25.7
Traffic Access	23.0
Other Indices	—
Hardship	56.2
Other Decision Support	—

2016 Voting	28.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	58.0
Healthy Places Index Score for Project Location (b)	43.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Project Description
Construction: Construction Phases	No demolition required
Construction: Off-Road Equipment	Crawler tractors replace tractors/loaders/backhoes to provide larger equipment for site preparation and grading (to match input in 2020.4. Cement and motor mixers and tractors/loaders/backhoes deleted to b eoncisitnet with the V2020.4 paving equipment inventory
Operations: Vehicle Data	Trip rates set to match the rates assumed in the 2020.4 analysis
Operations: Hearths	No fireplaces or hearths

Cactus Avenue and Bradshaw Circle Residential Project Detailed Report

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5.18.2. Sequestration

5.18.2.1. Unmitigated

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cactus Avenue and Bradshaw Circle Residential Project
Lead Agency	City of Moreno Valley
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	24.0
Location	Bradshaw Cir & Cactus Ave, Moreno Valley, CA 92555, USA
County	Riverside-South Coast
City	Moreno Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5583
EDFZ	11
Electric Utility	Moreno Valley Utility
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	37.0	Dwelling Unit	3.12	136,045	15,961	—	120	—
Other Asphalt Surfaces	57.0	1000sqft	1.33	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.52	1.27	11.4	14.3	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,712	2,712	0.11	0.04	1.14	2,729
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.70	49.2	58.4	41.3	0.10	2.54	5.89	8.43	2.34	2.74	5.08	—	13,829	13,829	0.36	1.47	0.51	14,277
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	3.09	5.85	7.27	0.01	0.26	0.21	0.37	0.24	0.08	0.26	—	1,380	1,380	0.06	0.04	0.27	1,388
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.56	1.07	1.33	< 0.005	0.05	0.04	0.07	0.04	0.01	0.05	—	228	228	0.01	0.01	0.04	230
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshol	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.52	1.27	11.4	14.3	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,712	2,712	0.11	0.04	1.14	2,729
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	6.70	5.63	58.4	41.3	0.10	2.54	5.89	8.43	2.34	2.74	5.08	—	13,829	13,829	0.36	1.47	0.51	14,277
2024	1.51	49.2	11.4	14.0	0.02	0.50	0.26	0.71	0.46	0.06	0.51	—	2,697	2,697	0.11	0.04	0.03	2,713
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.42	0.35	3.53	3.21	0.01	0.15	0.21	0.37	0.14	0.08	0.22	—	801	801	0.03	0.04	0.27	814
2024	0.78	3.09	5.85	7.27	0.01	0.26	0.11	0.37	0.24	0.03	0.26	—	1,380	1,380	0.06	0.02	0.26	1,388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.08	0.06	0.64	0.59	< 0.005	0.03	0.04	0.07	0.03	0.01	0.04	—	133	133	< 0.005	0.01	0.04	135
2024	0.14	0.56	1.07	1.33	< 0.005	0.05	0.02	0.07	0.04	< 0.005	0.05	—	228	228	0.01	< 0.005	0.04	230

2.4. Operations Emissions Compared Against Thresholds

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

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

Unmit.	1.89	4.90	1.67	14.0	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,596	3,604	1.05	0.14	11.9	3,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.58	4.59	1.75	10.1	0.03	0.05	0.87	0.91	0.05	0.15	0.20	8.54	3,424	3,433	1.06	0.14	1.26	3,503
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.70	4.71	1.79	11.9	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,452	3,461	1.06	0.14	5.70	3,535
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.86	0.33	2.18	0.01	0.01	0.16	0.17	0.01	0.03	0.04	1.41	572	573	0.18	0.02	0.94	585
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.65	1.53	1.32	11.8	0.03	0.02	0.87	0.89	0.02	0.15	0.17	—	2,724	2,724	0.12	0.13	10.9	2,776
Area	0.20	3.35	0.02	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.61	5.61	< 0.005	< 0.005	—	5.63
Energy	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	851	851	0.07	< 0.005	—	854
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Waste	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	1.89	4.90	1.67	14.0	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,596	3,604	1.05	0.14	11.9	3,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.54	1.42	1.41	10.00	0.03	0.02	0.87	0.89	0.02	0.15	0.17	—	2,559	2,559	0.13	0.13	0.28	2,601
Area	0.00	3.16	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	851	851	0.07	< 0.005	—	854
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Waste	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	1.58	4.59	1.75	10.1	0.03	0.05	0.87	0.91	0.05	0.15	0.20	8.54	3,424	3,433	1.06	0.14	1.26	3,503
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.53	1.40	1.44	10.4	0.03	0.02	0.87	0.89	0.02	0.15	0.17	—	2,583	2,583	0.13	0.13	4.73	2,630
Area	0.14	3.29	0.01	1.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.84	3.84	< 0.005	< 0.005	—	3.86
Energy	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	851	851	0.07	< 0.005	—	854
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Waste	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

Total	1.70	4.71	1.79	11.9	0.03	0.05	0.87	0.92	0.05	0.15	0.20	8.54	3,452	3,461	1.06	0.14	5.70	3,535
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.28	0.26	0.26	1.89	< 0.005	< 0.005	0.16	0.16	< 0.005	0.03	0.03	—	428	428	0.02	0.02	0.78	435
Area	0.03	0.60	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.64	0.64	< 0.005	< 0.005	—	0.64
Energy	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	141	141	0.01	< 0.005	—	141
Water	—	—	—	—	—	—	—	—	—	—	—	0.48	2.44	2.92	0.05	< 0.005	—	4.50
Waste	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.27
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	0.31	0.86	0.33	2.18	0.01	0.01	0.16	0.17	0.01	0.03	0.04	1.41	572	573	0.18	0.02	0.94	585

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.60	5.55	58.3	40.1	0.07	2.54	—	2.54	2.34	—	2.34	—	7,525	7,525	0.31	0.06	—	7,551
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.80	0.55	< 0.005	0.03	—	0.03	0.03	—	0.03	—	103	103	< 0.005	< 0.005	—	103
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.15	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.1	17.1	< 0.005	< 0.005	—	17.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.20	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	236	236	0.01	0.01	0.03	239
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.28	3.28	< 0.005	< 0.005	0.01	3.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.86	3.24	33.9	23.2	0.04	1.50	—	1.50	1.38	—	1.38	—	4,630	4,630	0.19	0.04	—	4,646
Dust From Material Movement	—	—	—	—	—	—	2.27	2.27	—	0.94	0.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.74	0.51	< 0.005	0.03	—	0.03	0.03	—	0.03	—	101	101	< 0.005	< 0.005	—	102
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.03	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.35	0.13	10.8	2.51	0.06	0.17	0.61	0.78	0.17	0.22	0.39	—	8,996	8,996	0.16	1.43	0.49	9,427
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.49	4.49	< 0.005	< 0.005	0.01	4.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.24	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	197	197	< 0.005	0.03	0.18	207
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.74	0.74	< 0.005	< 0.005	< 0.005	0.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	32.6	32.6	< 0.005	0.01	0.03	34.2

3.5. Building Construction (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.71	1.91	< 0.005	0.08	—	0.08	0.07	—	0.07	—	347	347	0.01	< 0.005	—	348
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57.5	57.5	< 0.005	< 0.005	—	57.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.07	0.08	0.92	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	180	180	0.01	0.01	0.02	182
Vendor	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	124	124	< 0.005	0.02	0.01	130
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	26.4	26.4	< 0.005	< 0.005	0.05	26.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.02	18.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.37	4.37	< 0.005	< 0.005	0.01	4.43
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.98	2.98	< 0.005	< 0.005	< 0.005	3.12
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.58	5.45	6.37	0.01	0.24	—	0.24	0.22	—	0.22	—	1,164	1,164	0.05	0.01	—	1,168
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.99	1.16	< 0.005	0.04	—	0.04	0.04	—	0.04	—	193	193	0.01	< 0.005	—	193
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	1.11	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	192	192	0.01	0.01	0.76	195
Vendor	0.01	< 0.005	0.14	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	123	123	< 0.005	0.02	0.35	129
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.84	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	176	176	0.01	0.01	0.02	178
Vendor	0.01	< 0.005	0.15	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	123	123	< 0.005	0.02	0.01	128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.43	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	86.6	86.6	< 0.005	< 0.005	0.16	87.8
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	59.6	59.6	< 0.005	0.01	0.07	62.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.08	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	14.3	14.3	< 0.005	< 0.005	0.03	14.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.87	9.87	< 0.005	< 0.005	0.01	10.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.05	6.49	0.01	0.25	—	0.25	0.23	—	0.23	—	976	976	0.04	0.01	—	979
Paving	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.05	6.49	0.01	0.25	—	0.25	0.23	—	0.23	—	976	976	0.04	0.01	—	979
Paving	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.3
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.97	7.97	< 0.005	< 0.005	—	7.99
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	288	288	0.01	0.01	1.14	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.26	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	265	265	0.01	0.01	0.03	268
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	49.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.17	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	35.2	35.2	< 0.005	< 0.005	< 0.005	35.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.78
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Single Family Housing	1.65	1.53	1.32	11.8	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,724	2,724	0.12	0.13	10.9	2,776
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.65	1.53	1.32	11.8	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,724	2,724	0.12	0.13	10.9	2,776
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.54	1.42	1.41	10.00	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,559	2,559	0.13	0.13	0.28	2,601
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.54	1.42	1.41	10.00	0.03	0.02	0.14	0.16	0.02	0.04	0.06	—	2,559	2,559	0.13	0.13	0.28	2,601
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.28	0.26	0.26	1.89	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	428	428	0.02	0.02	0.78	435
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.28	0.26	0.26	1.89	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	428	428	0.02	0.02	0.78	435

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	71.0	71.0	0.01	< 0.005	—	71.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	71.0	71.0	0.01	< 0.005	—	71.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.33	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	422	422	0.04	< 0.005	—	423
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.8	69.8	0.01	< 0.005	—	70.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.8	69.8	0.01	< 0.005	—	70.0

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	2.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.20	0.19	0.02	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.61	5.61	< 0.005	< 0.005	—	5.63
Total	0.20	3.35	0.02	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.61	5.61	< 0.005	< 0.005	—	5.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	49.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	2.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	52.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	—	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.02	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.64	0.64	< 0.005	< 0.005	—	0.64
Total	0.03	1.04	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.64	0.64	< 0.005	< 0.005	—	0.64

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2.88	14.8	17.6	0.30	0.01	—	27.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.48	2.44	2.92	0.05	< 0.005	—	4.50
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.48	2.44	2.92	0.05	< 0.005	—	4.50

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.65	0.00	5.65	0.56	0.00	—	19.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.27
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.27

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/2/2023	10/6/2023	5.00	5.00	—
Grading	Grading	10/7/2023	10/18/2023	5.00	8.00	—
Building Construction	Building Construction	10/19/2023	9/4/2024	5.00	230	—
Paving	Paving	9/8/2024	10/3/2024	5.00	18.0	—
Architectural Coating	Architectural Coating	10/4/2024	10/29/2024	5.00	18.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	0.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	212	0.43
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	212	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	127	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	13.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.96	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.66	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	275,491	91,830	2,600	867	3,467

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	17.5	0.00	—
Grading	—	8,097	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.73

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.41	0%
Other Asphalt Surfaces	1.33	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Single Family Housing	349	349	349	127,352	3,118	3,118	3,118	1,138,146
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
275491.125	91,830	2,600	867	3,467

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	345,552	453	0.0330	0.0040	1,315,880
Other Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,504,930	309,311
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	10.5	0.00
Other Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.6	annual days of extreme heat
Extreme Precipitation	2.30	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	28.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	99.1
AQ-PM	52.2
AQ-DPM	18.8
Drinking Water	10.2
Lead Risk Housing	30.5
Pesticides	67.3
Toxic Releases	43.2
Traffic	9.99
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	39.4

Haz Waste Facilities/Generators	40.9
Impaired Water Bodies	0.00
Solid Waste	75.7
Sensitive Population	—
Asthma	71.4
Cardio-vascular	93.1
Low Birth Weights	79.9
Socioeconomic Factor Indicators	—
Education	63.2
Housing	56.0
Linguistic	7.38
Poverty	51.6
Unemployment	35.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	63.39022199
Employed	50.78916977
Education	—
Bachelor's or higher	31.86192737
High school enrollment	14.38470422
Preschool enrollment	9.29038881
Transportation	—
Auto Access	94.58488387
Active commuting	22.03259335

Social	—
2-parent households	28.65392018
Voting	24.26536635
Neighborhood	—
Alcohol availability	63.46721417
Park access	10.16296677
Retail density	10.3554472
Supermarket access	24.07288592
Tree canopy	1.000898242
Housing	—
Homeownership	86.56486591
Housing habitability	65.54600282
Low-inc homeowner severe housing cost burden	33.51725908
Low-inc renter severe housing cost burden	30.14243552
Uncrowded housing	57.46182471
Health Outcomes	—
Insured adults	61.5167458
Arthritis	43.8
Asthma ER Admissions	30.7
High Blood Pressure	36.7
Cancer (excluding skin)	52.2
Asthma	37.3
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	54.0
Life Expectancy at Birth	24.7
Cognitively Disabled	30.7

Physically Disabled	47.8
Heart Attack ER Admissions	3.5
Mental Health Not Good	42.4
Chronic Kidney Disease	55.3
Obesity	27.8
Pedestrian Injuries	60.6
Physical Health Not Good	48.3
Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	25.3
Current Smoker	39.2
No Leisure Time for Physical Activity	47.6
Climate Change Exposures	—
Wildfire Risk	0.6
SLR Inundation Area	0.0
Children	58.1
Elderly	61.9
English Speaking	66.7
Foreign-born	28.7
Outdoor Workers	40.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.8
Traffic Density	25.7
Traffic Access	23.0
Other Indices	—
Hardship	56.2
Other Decision Support	—

2016 Voting	28.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	58.0
Healthy Places Index Score for Project Location (b)	43.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Project Description
Construction: Construction Phases	No demolition required
Construction: Off-Road Equipment	Crawler tractors replace tractors/loaders/backhoes to provide larger equipment for site preparation and grading (to match input in 2020.4. Cement and motor mixers and tractors/loaders/backhoes deleted to b eoncisitnet with the V2020.4 paving equipment inventory
Operations: Vehicle Data	Trip rates set to match the rates assumed in the 2020.4 analysis
Operations: Hearths	No fireplaces or hearths