TO: City of Moreno Valley

FROM: Chris Turnage

SUBJECT: **Sunnymead Master Drainage Plan – Storm Drain Lines F and F-7: Air Quality and Greenhouse Gas Technical Memorandum (City Project 804-0008)**

DATE: **January 30, 2025**

SUNNYMEAD MASTER DRAINAGE PLAN: AIR QUALITY AND GHG EMISSIONS TECHNICAL MEMO

PROJECT DESCRIPTION

The City of Moreno Valley (City) proposes storm drain improvements to Master Drainage Plan Line F from Hemlock Avenue to the north of Eucalyptus Street. The proposed improvements would reduce flooding at Hemlock Avenue and Graham Street and on Sunnymead Boulevard. In addition to addressing flooding issues, the project would also improve water quality through implementing infiltration elements. The proposed storm drain system is identified in the City's Master Drainage Plan and the Riverside County Master Drainage plan. The proposed improvements are intended to provide a flood protection level up to a 100-year storm event in the local area.

Construction equipment and activities will produce emissions of air pollutants and greenhouse gases (GHG). There are no predicted emissions from operation of the project. The analyses presented in this technical memo were used to evaluate the potential impacts to air quality and GHG emissions from project construction and project operations and demonstrate the emissions are all below applicable significance thresholds. The findings in this analysis will inform the CEQA checklist.

SIGNIFICANCE THRESHOLDS

The proposed storm drain infrastructure project site is located within the South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD) has jurisdiction over an approximately 12,000 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what used to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards. Table 1 summarizes the SCAQMD air quality significance thresholds to determine significance for the purposes of CEQA.

Table 1. South Coast AQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day

PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: SCAQMD March 2023 (south-coast-aqmd-air-quality-significance-thresholds.pdf)

SCAQMD developed localized significance thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative I-4. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. The thresholds are developed based on the ambient concentrations of NO_X, CO, PM_{10} and $PM_{2.5}$ for each source receptor area and distance to the nearest sensitive receptor. The LSTs applicable to the proposed project are those for a project site up to 1 acre in size with sensitive receptors within 25 meters of construction activity and located within the Perris Valley source receptor area. These values are summarized in Table 2.

Table 2. South Coast AQMD Localized Significance Thresholds

Allowable Emissions (lbs/day)		
Pollutant	**Construction**	**Operation**
NO_X	118 lbs/day	118 lbs/day
CO	602 lbs/day	602 lbs/day
PM_{10}	4 lbs/day	1 lb/day
$PM_{2.5}$	3 lbs/day	1 lb/day

Source: SCAQMD October 2009 (https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2)

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency[1]. The interim threshold for GHG emissions from an industrial project is defined as "< 10,000 $MTCO_2e$/yr, includes construction emissions amortized over 30 years & added to operational GHG emissions." This interim threshold is still currently in effect.

AIR QUALITY EVALUATION

CONSTRUCTION EMISSIONS

Construction emissions are considered short-term, temporary emissions. Potential emissions from construction of the proposed project were estimated using CalEEMod (2020.4.0). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects.

CalEEMod provides default assumptions for construction activity based on basic project information. These defaults can be modified by the user if more detail is available. Model inputs included the project footprint of 0.417 acres (total of temporary and permanent impact areas), and a construction start year of 2023. Default phasing assumptions were adjusted to reflect a 577-day construction period, as provided by the design team, with no demolition, building construction, or architectural coatings. The model's default assumptions for equipment

[1] http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds

and earth-moving activities associated with the adjusted construction period were used to estimate pollutant emissions.

SCAQMD has adopted Rule 403 to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions. Implementation of the measures in Rule 403 would reduce the emissions of PM_{10} and $PM_{2.5}$ estimated by CalEEMod defaults.

The following measures were added to the CalEEMod modeling analysis:

- All clearing, grading, earth-moving or excavation activities shall cease when winds exceed 25mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project ar watered at least three (3) times a day during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the midmorning, afternoon and after work is finished for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour.

The maximum daily emissions, assuming compliance with all state and local regulatory conditions, are presented in Table 3.

Table 3. Construction Emissions Summary (Pounds per Day)

Source/Phase	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions*	2.2	22.0	17.9	<0.1	3.2	1.9
SCAQMD Air Quality Significance Threshold**	75	100	550	150	150	55
SCAQMD Localized Significance Threshold***	--	118	602	--	4	3
Significant	NO	NO	NO	NO	NO	NO

*CalEEMod 2020.4.0
**SCAQMD March 2023 (south-coast-aqmd-air-quality-significance-thresholds.pdf)
***SCAQMD October 2009 (http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds)

Details of model inputs and assumptions are included as Attachment A.

OPERATIONS

The Project related operations emissions, along with a comparison of SCAQMD significance thresholds, are shown in Table 4. There are no predicted operational emissions.

Table 4. Operational Emissions Summary (Pounds per Day)

Source	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Area Source	0	0	0	0	0
Energy Source	0	0	0	0	0
Mobile Source	0	0	0	0	0
Totals	**0**	**0**	**0**	**0**	**0**

SCAQMD Air Quality Signficance Threshold	55	55	550	150	55
SCAQMD Localized Significance Threshold	--	118	602	1	
Significant	NO	NO	NO	NO	NO

*CalEEMod 2020.4.0

MITIGATION

The estimated maximum daily emisisons of all air pollutants during project construction and operation are below the SCAQMD air quality significance thresholds and localized significance thresholds; therefore, no mitigation is required.

GREENHOUSE GAS EVALUATION

The Greenhouse Gas Evaluation used the same model output that was developed for the Air Quality Evaluation. CalEEMod indicated the the total estimated project-related GHG emissions are 175.5 metric tons of carbon dioxide equivalent ($MTCO_2e$). These emissions were amortized over a 30-year period to compare to the SCAQMD interim threshold, as shown in Table 5.

Table 5. Total Project Greenhouse Gas Emissions (Annual) (Metric Tons Per Year)

Emission Source	**Emissions**			
	CO_2	**CH_4**	**N_2O**	**Total CO_2e**
Annual construction-related emissions amortized over 30 years	5.80	0.002	0	5.9
Energy	0	0	0	0
Mobile Sources	0	0	0	0
Waste	0	0	0	0
Water Usage	0	0	0	0
Total CO_2e	**5.9**			

*CalEEMod 2020.4.0

The estimated GHG emissions are below SCAQMD interim significance threshold; therefore, no mitigation is required.

ATTACHMENT 1: CALEEMOD ANNUAL EMISSIONS

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

Sunnymead Master Drainage Plan

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.42		0.42	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Alameda Municipal Power				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Given a total construction period of 577 days.

Grading - Disturbed area is 0.417 acres

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	547.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00

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

tblConstructionPhase	PhaseEndDate	5/11/2023	6/12/2025
tblConstructionPhase	PhaseEndDate	5/18/2023	6/8/2023
tblConstructionPhase	PhaseEndDate	5/9/2023	5/22/2023
tblGrading	AcresOfGrading	410.25	0.42
tblGrading	AcresOfGrading	5.00	0.42
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

Sunnymead Master Drainage Plan - South Coast Air Basin, 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	0.0905	0.9437	0.5932	1.4600e-003	0.3928	0.0391	0.4319	0.2120	0.0360	0.2481	0.0000	127.8899	127.8899	0.0380	2.4000e-004	128.9123
2024	0.1233	1.2775	0.7679	1.9700e-003	0.6074	0.0525	0.6599	0.3294	0.0483	0.3777	0.0000	174.1229	174.1229	0.0527	2.7000e-004	175.5213
2025	0.0504	0.5121	0.3328	8.8000e-004	0.2714	0.0204	0.2918	0.1471	0.0188	0.1659	0.0000	77.6288	77.6288	0.0235	1.1000e-004	78.2506
Maximum	**0.1233**	**1.2775**	**0.7679**	**1.9700e-003**	**0.6074**	**0.0525**	**0.6599**	**0.3294**	**0.0483**	**0.3777**	**0.0000**	**174.1229**	**174.1229**	**0.0527**	**2.7000e-004**	**175.5213**

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	0.0905	0.9437	0.5932	1.4600e-003	0.1611	0.0391	0.2002	0.0848	0.0360	0.1208	0.0000	127.8897	127.8897	0.0380	2.4000e-004	128.9122
2024	0.1233	1.2775	0.7679	1.9700e-003	0.2463	0.0525	0.2988	0.1310	0.0483	0.1793	0.0000	174.1227	174.1227	0.0527	2.7000e-004	175.5211
2025	0.0504	0.5121	0.3328	8.8000e-004	0.1101	0.0204	0.1305	0.0585	0.0188	0.0773	0.0000	77.6287	77.6287	0.0235	1.1000e-004	78.2505
Maximum	**0.1233**	**1.2775**	**0.7679**	**1.9700e-003**	**0.2463**	**0.0525**	**0.2988**	**0.1310**	**0.0483**	**0.1793**	**0.0000**	**174.1227**	**174.1227**	**0.0527**	**2.7000e-004**	**175.5211**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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**	**59.30**	**0.00**	**54.50**	**60.17**	**0.00**	**52.33**	**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	**5-9-2023**	**8-8-2023**	0.4590	0.4590
2	**8-9-2023**	**11-8-2023**	0.3669	0.3669
3	**11-9-2023**	**2-8-2024**	0.3604	0.3604
4	**2-9-2024**	**5-8-2024**	0.3437	0.3437
5	**5-9-2024**	**8-8-2024**	0.3513	0.3513
6	**8-9-2024**	**11-8-2024**	0.3513	0.3513
7	**11-9-2024**	**2-8-2025**	0.3364	0.3364
8	**2-9-2025**	**5-8-2025**	0.3056	0.3056
9	**5-9-2025**	**8-8-2025**	0.1202	0.1202
		Highest	0.4590	0.4590

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Waste						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**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Waste						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**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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	5/9/2023	5/22/2023	5	10	
2	Grading	Grading	5/10/2023	6/12/2025	5	547	
3	Paving	Paving	5/12/2023	6/8/2023	5	20	

Acres of Grading (Site Preparation Phase): 0.417

Acres of Grading (Grading Phase): 0.417

Acres of Paving: 0

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
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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

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	2	5.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					2.2000e-004	0.0000	2.2000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0309	0.0196	5.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	4.2748	4.2748	1.3800e-003	0.0000	4.3094
Total	**2.6700e-003**	**0.0309**	**0.0196**	**5.0000e-005**	**2.2000e-004**	**1.1300e-003**	**1.3500e-003**	**2.0000e-005**	**1.0400e-003**	**1.0600e-003**	**0.0000**	**4.2748**	**4.2748**	**1.3800e-003**	**0.0000**	**4.3094**

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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	9.0000e-005	8.0000e-005	1.0600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2912	0.2912	1.0000e-005	1.0000e-005	0.2934
Total	**9.0000e-005**	**8.0000e-005**	**1.0600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2912**	**0.2912**	**1.0000e-005**	**1.0000e-005**	**0.2934**

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					9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0309	0.0196	5.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	4.2748	4.2748	1.3800e-003	0.0000	4.3094
Total	**2.6700e-003**	**0.0309**	**0.0196**	**5.0000e-005**	**9.0000e-005**	**1.1300e-003**	**1.2200e-003**	**1.0000e-005**	**1.0400e-003**	**1.0500e-003**	**0.0000**	**4.2748**	**4.2748**	**1.3800e-003**	**0.0000**	**4.3094**

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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	9.0000e-005	8.0000e-005	1.0600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2912	0.2912	1.0000e-005	1.0000e-005	0.2934
Total	**9.0000e-005**	**8.0000e-005**	**1.0600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2912**	**0.2912**	**1.0000e-005**	**1.0000e-005**	**0.2934**

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					0.3796	0.0000	0.3796	0.2086	0.0000	0.2086	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0784	0.8550	0.4663	1.1800e-003		0.0353	0.0353		0.0325	0.0325	0.0000	104.0004	104.0004	0.0336	0.0000	104.8413
Total	**0.0784**	**0.8550**	**0.4663**	**1.1800e-003**	**0.3796**	**0.0353**	**0.4149**	**0.2086**	**0.0325**	**0.2410**	**0.0000**	**104.0004**	**104.0004**	**0.0336**	**0.0000**	**104.8413**

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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	0.0000	0.0000	0.0000	0.0000	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	2.5500e-003	2.0600e-003	0.0284	8.0000e-005	9.9300e-003	6.0000e-005	9.9800e-003	2.6400e-003	5.0000e-005	2.6900e-003	0.0000	7.8276	7.8276	1.7000e-004	1.9000e-004	7.8878
Total	**2.5500e-003**	**2.0600e-003**	**0.0284**	**8.0000e-005**	**9.9300e-003**	**6.0000e-005**	**9.9800e-003**	**2.6400e-003**	**5.0000e-005**	**2.6900e-003**	**0.0000**	**7.8276**	**7.8276**	**1.7000e-004**	**1.9000e-004**	**7.8878**

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					0.1481	0.0000	0.1481	0.0813	0.0000	0.0813	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0784	0.8550	0.4663	1.1800e-003		0.0353	0.0353		0.0325	0.0325	0.0000	104.0003	104.0003	0.0336	0.0000	104.8412
Total	**0.0784**	**0.8550**	**0.4663**	**1.1800e-003**	**0.1481**	**0.0353**	**0.1833**	**0.0813**	**0.0325**	**0.1138**	**0.0000**	**104.0003**	**104.0003**	**0.0336**	**0.0000**	**104.8412**

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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	0.0000	0.0000	0.0000	0.0000	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	2.5500e-003	2.0600e-003	0.0284	8.0000e-005	9.9300e-003	6.0000e-005	9.9800e-003	2.6400e-003	5.0000e-005	2.6900e-003	0.0000	7.8276	7.8276	1.7000e-004	1.9000e-004	7.8878
Total	**2.5500e-003**	**2.0600e-003**	**0.0284**	**8.0000e-005**	**9.9300e-003**	**6.0000e-005**	**9.9800e-003**	**2.6400e-003**	**5.0000e-005**	**2.6900e-003**	**0.0000**	**7.8276**	**7.8276**	**1.7000e-004**	**1.9000e-004**	**7.8878**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5919	0.0000	0.5919	0.3253	0.0000	0.3253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1196	1.2746	0.7266	1.8500e-003		0.0524	0.0524		0.0482	0.0482	0.0000	162.1781	162.1781	0.0525	0.0000	163.4894
Total	**0.1196**	**1.2746**	**0.7266**	**1.8500e-003**	**0.5919**	**0.0524**	**0.6443**	**0.3253**	**0.0482**	**0.3735**	**0.0000**	**162.1781**	**162.1781**	**0.0525**	**0.0000**	**163.4894**

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

3.3 Grading - 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	3.7200e-003	2.8600e-003	0.0413	1.3000e-004	0.0155	8.0000e-005	0.0156	4.1100e-003	8.0000e-005	4.1900e-003	0.0000	11.9448	11.9448	2.5000e-004	2.7000e-004	12.0319
Total	**3.7200e-003**	**2.8600e-003**	**0.0413**	**1.3000e-004**	**0.0155**	**8.0000e-005**	**0.0156**	**4.1100e-003**	**8.0000e-005**	**4.1900e-003**	**0.0000**	**11.9448**	**11.9448**	**2.5000e-004**	**2.7000e-004**	**12.0319**

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					0.2308	0.0000	0.2308	0.1269	0.0000	0.1269	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1196	1.2746	0.7266	1.8500e-003		0.0524	0.0524		0.0482	0.0482	0.0000	162.1779	162.1779	0.0525	0.0000	163.4892
Total	**0.1196**	**1.2746**	**0.7266**	**1.8500e-003**	**0.2308**	**0.0524**	**0.2833**	**0.1269**	**0.0482**	**0.1751**	**0.0000**	**162.1779**	**162.1779**	**0.0525**	**0.0000**	**163.4892**

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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

3.3 Grading - 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	3.7200e-003	2.8600e-003	0.0413	1.3000e-004	0.0155	8.0000e-005	0.0156	4.1100e-003	8.0000e-005	4.1900e-003	0.0000	11.9448	11.9448	2.5000e-004	2.7000e-004	12.0319
Total	**3.7200e-003**	**2.8600e-003**	**0.0413**	**1.3000e-004**	**0.0155**	**8.0000e-005**	**0.0156**	**4.1100e-003**	**8.0000e-005**	**4.1900e-003**	**0.0000**	**11.9448**	**11.9448**	**2.5000e-004**	**2.7000e-004**	**12.0319**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2644	0.0000	0.2644	0.1453	0.0000	0.1453	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0489	0.5109	0.3156	8.2000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	72.4250	72.4250	0.0234	0.0000	73.0106
Total	**0.0489**	**0.5109**	**0.3156**	**8.2000e-004**	**0.2644**	**0.0204**	**0.2848**	**0.1453**	**0.0188**	**0.1640**	**0.0000**	**72.4250**	**72.4250**	**0.0234**	**0.0000**	**73.0106**

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

3.3 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	1.1500e-003	0.0172	6.0000e-005	6.9100e-003	4.0000e-005	6.9500e-003	1.8400e-003	3.0000e-005	1.8700e-003	0.0000	5.2038	5.2038	1.0000e-004	1.1000e-004	5.2400
Total	**1.5600e-003**	**1.1500e-003**	**0.0172**	**6.0000e-005**	**6.9100e-003**	**4.0000e-005**	**6.9500e-003**	**1.8400e-003**	**3.0000e-005**	**1.8700e-003**	**0.0000**	**5.2038**	**5.2038**	**1.0000e-004**	**1.1000e-004**	**5.2400**

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					0.1031	0.0000	0.1031	0.0567	0.0000	0.0567	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0489	0.5109	0.3156	8.2000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	72.4249	72.4249	0.0234	0.0000	73.0105
Total	**0.0489**	**0.5109**	**0.3156**	**8.2000e-004**	**0.1031**	**0.0204**	**0.1235**	**0.0567**	**0.0188**	**0.0754**	**0.0000**	**72.4249**	**72.4249**	**0.0234**	**0.0000**	**73.0105**

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

3.3 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	1.1500e-003	0.0172	6.0000e-005	6.9100e-003	4.0000e-005	6.9500e-003	1.8400e-003	3.0000e-005	1.8700e-003	0.0000	5.2038	5.2038	1.0000e-004	1.1000e-004	5.2400
Total	**1.5600e-003**	**1.1500e-003**	**0.0172**	**6.0000e-005**	**6.9100e-003**	**4.0000e-005**	**6.9500e-003**	**1.8400e-003**	**3.0000e-005**	**1.8700e-003**	**0.0000**	**5.2038**	**5.2038**	**1.0000e-004**	**1.1000e-004**	**5.2400**

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1100e-003	0.0551	0.0702	1.1000e-004		2.6400e-003	2.6400e-003		2.4700e-003	2.4700e-003	0.0000	9.3992	9.3992	2.7400e-003	0.0000	9.4677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.1100e-003**	**0.0551**	**0.0702**	**1.1000e-004**		**2.6400e-003**	**2.6400e-003**		**2.4700e-003**	**2.4700e-003**	**0.0000**	**9.3992**	**9.3992**	**2.7400e-003**	**0.0000**	**9.4677**

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

3.4 Paving - 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	6.8000e-004	5.5000e-004	7.6100e-003	2.0000e-005	2.6600e-003	2.0000e-005	2.6700e-003	7.1000e-004	1.0000e-005	7.2000e-004	0.0000	2.0967	2.0967	5.0000e-005	5.0000e-005	2.1128
Total	**6.8000e-004**	**5.5000e-004**	**7.6100e-003**	**2.0000e-005**	**2.6600e-003**	**2.0000e-005**	**2.6700e-003**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**2.0967**	**2.0967**	**5.0000e-005**	**5.0000e-005**	**2.1128**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1100e-003	0.0551	0.0702	1.1000e-004		2.6400e-003	2.6400e-003		2.4700e-003	2.4700e-003	0.0000	9.3992	9.3992	2.7400e-003	0.0000	9.4677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.1100e-003**	**0.0551**	**0.0702**	**1.1000e-004**		**2.6400e-003**	**2.6400e-003**		**2.4700e-003**	**2.4700e-003**	**0.0000**	**9.3992**	**9.3992**	**2.7400e-003**	**0.0000**	**9.4677**

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

3.4 Paving - 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	6.8000e-004	5.5000e-004	7.6100e-003	2.0000e-005	2.6600e-003	2.0000e-005	2.6700e-003	7.1000e-004	1.0000e-005	7.2000e-004	0.0000	2.0967	2.0967	5.0000e-005	5.0000e-005	2.1128
Total	**6.8000e-004**	**5.5000e-004**	**7.6100e-003**	**2.0000e-005**	**2.6600e-003**	**2.0000e-005**	**2.6700e-003**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**2.0967**	**2.0967**	**5.0000e-005**	**5.0000e-005**	**2.1128**

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Sunnymead Master Drainage Plan - South Coast Air Basin, Annual

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	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

ATTACHMENT 2: CALEEMOD SUMMER EMISSIONS

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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

Sunnymead Master Drainage Plan

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	10.50		10.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Alameda Municipal Power				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Given a total construction period of 577 days.

Grading - Project footprint is 10.5 acres

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	30.00	547.00
tblGrading	AcresOfGrading	1,641.00	10.50
tblGrading	AcresOfGrading	15.00	10.50

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

tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

Sunnymead Master Drainage Plan - South Coast Air Basin, 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	4.4884	44.8025	44.2308	0.0895	19.4507	1.9376	20.7182	10.1228	1.7826	11.2889	0.0000	8,688.4340	8,688.4340	2.6682	9.9400e-003	8,758.0987
2024	3.2897	32.4255	28.5720	0.0646	6.3435	1.3370	7.6805	3.3923	1.2300	4.6223	0.0000	6,272.1868	6,272.1868	1.9488	5.2800e-003	6,322.4798
2025	2.9683	27.9865	27.1230	0.0645	6.3435	1.1324	7.4759	3.3923	1.0418	4.4341	0.0000	6,264.2948	6,264.2948	1.9478	4.9300e-003	6,314.4594
Maximum	**4.4884**	**44.8025**	**44.2308**	**0.0895**	**19.4507**	**1.9376**	**20.7182**	**10.1228**	**1.7826**	**11.2889**	**0.0000**	**8,688.4340**	**8,688.4340**	**2.6682**	**9.9400e-003**	**8,758.0987**

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	4.4884	44.8025	44.2308	0.0895	7.7511	1.9376	9.0186	3.9917	1.7826	5.1578	0.0000	8,688.4340	8,688.4340	2.6682	9.9400e-003	8,758.0987
2024	3.2897	32.4255	28.5720	0.0646	2.6576	1.3370	3.9946	1.3717	1.2300	2.6017	0.0000	6,272.1868	6,272.1868	1.9488	5.2800e-003	6,322.4798
2025	2.9683	27.9865	27.1230	0.0645	2.6576	1.1324	3.7900	1.3717	1.0418	2.4135	0.0000	6,264.2948	6,264.2948	1.9478	4.9300e-003	6,314.4593
Maximum	**4.4884**	**44.8025**	**44.2308**	**0.0895**	**7.7511**	**1.9376**	**9.0186**	**3.9917**	**1.7826**	**5.1578**	**0.0000**	**8,688.4340**	**8,688.4340**	**2.6682**	**9.9400e-003**	**8,758.0987**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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**	**59.34**	**0.00**	**53.16**	**60.16**	**0.00**	**50.00**	**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	1.0000e-004	1.0000e-005	1.0700e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4500e-003
Total	**1.0000e-004**	**1.0000e-005**	**1.0700e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4500e-003**

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	1.0000e-004	1.0000e-005	1.0700e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4500e-003
Total	**1.0000e-004**	**1.0000e-005**	**1.0700e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4500e-003**

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	3/1/2023	3/14/2023	5	10	
2	Grading	Grading	3/15/2023	4/17/2025	5	547	
3	Paving	Paving	4/26/2023	5/23/2023	5	20	

Acres of Grading (Site Preparation Phase): 10.5

Acres of Grading (Grading Phase): 10.5

Acres of Paving: 0

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	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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

Paving	Rollers	2	8.00	80	0.38

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	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					19.1798	0.0000	19.1798	10.0509	0.0000	10.0509			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.1798**	**1.2660**	**20.4458**	**10.0509**	**1.1647**	**11.2157**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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
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	0.0689	0.0490	0.8205	2.3600e-003	0.2709	1.5000e-003	0.2724	0.0719	1.3800e-003	0.0732		241.3914	241.3914	5.1300e-003	5.1100e-003	243.0420
Total	**0.0689**	**0.0490**	**0.8205**	**2.3600e-003**	**0.2709**	**1.5000e-003**	**0.2724**	**0.0719**	**1.3800e-003**	**0.0732**		**241.3914**	**241.3914**	**5.1300e-003**	**5.1100e-003**	**243.0420**

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					7.4801	0.0000	7.4801	3.9199	0.0000	3.9199			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.4801**	**1.2660**	**8.7461**	**3.9199**	**1.1647**	**5.0846**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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
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	0.0689	0.0490	0.8205	2.3600e-003	0.2709	1.5000e-003	0.2724	0.0719	1.3800e-003	0.0732		241.3914	241.3914	5.1300e-003	5.1100e-003	243.0420
Total	**0.0689**	**0.0490**	**0.8205**	**2.3600e-003**	**0.2709**	**1.5000e-003**	**0.2724**	**0.0719**	**1.3800e-003**	**0.0732**		**241.3914**	**241.3914**	**5.1300e-003**	**5.1100e-003**	**243.0420**

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					6.0424	0.0000	6.0424	3.3124	0.0000	3.3124			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**6.0424**	**1.4245**	**7.4669**	**3.3124**	**1.3105**	**4.6230**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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	0.0765	0.0544	0.9117	2.6200e-003	0.3010	1.6700e-003	0.3027	0.0798	1.5400e-003	0.0814		268.2126	268.2126	5.7100e-003	5.6800e-003	270.0466
Total	**0.0765**	**0.0544**	**0.9117**	**2.6200e-003**	**0.3010**	**1.6700e-003**	**0.3027**	**0.0798**	**1.5400e-003**	**0.0814**		**268.2126**	**268.2126**	**5.7100e-003**	**5.6800e-003**	**270.0466**

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					2.3566	0.0000	2.3566	1.2919	0.0000	1.2919			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**2.3566**	**1.4245**	**3.7810**	**1.2919**	**1.3105**	**2.6024**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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	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	0.0765	0.0544	0.9117	2.6200e-003	0.3010	1.6700e-003	0.3027	0.0798	1.5400e-003	0.0814		268.2126	268.2126	5.7100e-003	5.6800e-003	270.0466
Total	**0.0765**	**0.0544**	**0.9117**	**2.6200e-003**	**0.3010**	**1.6700e-003**	**0.3027**	**0.0798**	**1.5400e-003**	**0.0814**		**268.2126**	**268.2126**	**5.7100e-003**	**5.6800e-003**	**270.0466**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0424	0.0000	6.0424	3.3124	0.0000	3.3124			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**6.0424**	**1.3354**	**7.3778**	**3.3124**	**1.2286**	**4.5410**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

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

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0715	0.0485	0.8491	2.5400e-003	0.3010	1.6000e-003	0.3026	0.0798	1.4700e-003	0.0813		262.4381	262.4381	5.1500e-003	5.2800e-003	264.1392
Total	**0.0715**	**0.0485**	**0.8491**	**2.5400e-003**	**0.3010**	**1.6000e-003**	**0.3026**	**0.0798**	**1.4700e-003**	**0.0813**		**262.4381**	**262.4381**	**5.1500e-003**	**5.2800e-003**	**264.1392**

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					2.3566	0.0000	2.3566	1.2919	0.0000	1.2919			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**2.3566**	**1.3354**	**3.6920**	**1.2919**	**1.2286**	**2.5204**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0715	0.0485	0.8491	2.5400e-003	0.3010	1.6000e-003	0.3026	0.0798	1.4700e-003	0.0813		262.4381	262.4381	5.1500e-003	5.2800e-003	264.1392
Total	**0.0715**	**0.0485**	**0.8491**	**2.5400e-003**	**0.3010**	**1.6000e-003**	**0.3026**	**0.0798**	**1.4700e-003**	**0.0813**		**262.4381**	**262.4381**	**5.1500e-003**	**5.2800e-003**	**264.1392**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0424	0.0000	6.0424	3.3124	0.0000	3.3124			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404		6,008.2814	6,008.2814	1.9432		6,056.8614
Total	**2.9012**	**27.9429**	**26.3311**	**0.0621**	**6.0424**	**1.1309**	**7.1733**	**3.3124**	**1.0404**	**4.3529**		**6,008.2814**	**6,008.2814**	**1.9432**		**6,056.8614**

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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

3.3 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0671	0.0436	0.7920	2.4600e-003	0.3010	1.5300e-003	0.3026	0.0798	1.4000e-003	0.0812		256.0134	256.0134	4.6400e-003	4.9300e-003	257.5979
Total	**0.0671**	**0.0436**	**0.7920**	**2.4600e-003**	**0.3010**	**1.5300e-003**	**0.3026**	**0.0798**	**1.4000e-003**	**0.0812**		**256.0134**	**256.0134**	**4.6400e-003**	**4.9300e-003**	**257.5979**

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					2.3566	0.0000	2.3566	1.2919	0.0000	1.2919			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404	0.0000	6,008.2814	6,008.2814	1.9432		6,056.8614
Total	**2.9012**	**27.9429**	**26.3311**	**0.0621**	**2.3566**	**1.1309**	**3.4874**	**1.2919**	**1.0404**	**2.3323**	**0.0000**	**6,008.2814**	**6,008.2814**	**1.9432**		**6,056.8614**

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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

3.3 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0671	0.0436	0.7920	2.4600e-003	0.3010	1.5300e-003	0.3026	0.0798	1.4000e-003	0.0812		256.0134	256.0134	4.6400e-003	4.9300e-003	257.5979
Total	**0.0671**	**0.0436**	**0.7920**	**2.4600e-003**	**0.3010**	**1.5300e-003**	**0.3026**	**0.0798**	**1.4000e-003**	**0.0812**		**256.0134**	**256.0134**	**4.6400e-003**	**4.9300e-003**	**257.5979**

3.4 Paving - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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

3.4 Paving - 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
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	0.0574	0.0408	0.6837	1.9700e-003	0.2258	1.2500e-003	0.2270	0.0599	1.1500e-003	0.0610		201.1595	201.1595	4.2800e-003	4.2600e-003	202.5350
Total	**0.0574**	**0.0408**	**0.6837**	**1.9700e-003**	**0.2258**	**1.2500e-003**	**0.2270**	**0.0599**	**1.1500e-003**	**0.0610**		**201.1595**	**201.1595**	**4.2800e-003**	**4.2600e-003**	**202.5350**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Sunnymead Master Drainage Plan - South Coast Air Basin, Summer

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

3.4 Paving - 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
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	0.0574	0.0408	0.6837	1.9700e-003	0.2258	1.2500e-003	0.2270	0.0599	1.1500e-003	0.0610		201.1595	201.1595	4.2800e-003	4.2600e-003	202.5350
Total	**0.0574**	**0.0408**	**0.6837**	**1.9700e-003**	**0.2258**	**1.2500e-003**	**0.2270**	**0.0599**	**1.1500e-003**	**0.0610**		**201.1595**	**201.1595**	**4.2800e-003**	**4.2600e-003**	**202.5350**

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

Sunnymead Master Drainage Plan - South Coast Air Basin, 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	1.0000e-004	1.0000e-005	1.0700e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4500e-003
Unmitigated	1.0000e-004	1.0000e-005	1.0700e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4500e-003

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0700e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4500e-003
Total	**1.0000e-004**	**1.0000e-005**	**1.0700e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4500e-003**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0700e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4500e-003
Total	**1.0000e-004**	**1.0000e-005**	**1.0700e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4500e-003**

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

ATTACHMENT 3: CALEEMOD WINTER EMISSIONS

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

Sunnymead Master Drainage Plan

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.42		0.42	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Alameda Municipal Power				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Given a total construction period of 577 days.

Grading - Disturbed area is 0.417 acres

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	547.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00

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

tblConstructionPhase	PhaseEndDate	5/11/2023	6/12/2025
tblConstructionPhase	PhaseEndDate	5/18/2023	6/8/2023
tblConstructionPhase	PhaseEndDate	5/9/2023	5/22/2023
tblGrading	AcresOfGrading	410.25	0.42
tblGrading	AcresOfGrading	5.00	0.42
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

Sunnymead Master Drainage Plan - South Coast Air Basin, 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	2.2076	21.9647	17.7716	0.0389	5.0282	0.9135	5.9417	2.6113	0.8439	3.4552	0.0000	3,735.7581	3,735.7581	1.0568	9.3500e-003	3,764.9656
2024	0.9442	9.7510	5.8534	0.0151	4.6378	0.4007	5.0385	2.5147	0.3687	2.8834	0.0000	1,463.7688	1,463.7688	0.4434	2.2400e-003	1,475.5226
2025	0.8642	8.7532	5.6809	0.0150	4.6378	0.3490	4.9868	2.5147	0.3211	2.8358	0.0000	1,461.3877	1,461.3877	0.4432	2.0900e-003	1,473.0924
Maximum	**2.2076**	**21.9647**	**17.7716**	**0.0389**	**5.0282**	**0.9135**	**5.9417**	**2.6113**	**0.8439**	**3.4552**	**0.0000**	**3,735.7581**	**3,735.7581**	**1.0568**	**9.3500e-003**	**3,764.9656**

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	2.2076	21.9647	17.7716	0.0389	2.2457	0.9135	3.1592	1.0939	0.8439	1.9378	0.0000	3,735.7581	3,735.7581	1.0568	9.3500e-003	3,764.9656
2024	0.9442	9.7510	5.8534	0.0151	1.8822	0.4007	2.2829	1.0002	0.3687	1.3689	0.0000	1,463.7688	1,463.7688	0.4434	2.2400e-003	1,475.5226
2025	0.8642	8.7532	5.6809	0.0150	1.8822	0.3490	2.2312	1.0002	0.3211	1.3213	0.0000	1,461.3877	1,461.3877	0.4432	2.0900e-003	1,473.0924
Maximum	**2.2076**	**21.9647**	**17.7716**	**0.0389**	**2.2457**	**0.9135**	**3.1592**	**1.0939**	**0.8439**	**1.9378**	**0.0000**	**3,735.7581**	**3,735.7581**	**1.0568**	**9.3500e-003**	**3,764.9656**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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**	**57.98**	**0.00**	**51.94**	**59.50**	**0.00**	**49.56**	**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	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		1.0000e-004
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**		**1.0000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		1.0000e-004
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**		**1.0000e-004**

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	5/9/2023	5/22/2023	5	10	
2	Grading	Grading	5/10/2023	6/12/2025	5	547	
3	Paving	Paving	5/12/2023	6/8/2023	5	20	

Acres of Grading (Site Preparation Phase): 0.417

Acres of Grading (Grading Phase): 0.417

Acres of Paving: 0

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
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

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	2	5.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					0.0442	0.0000	0.0442	4.7800e-003	0.0000	4.7800e-003			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	**0.5348**	**6.1887**	**3.9239**	**9.7300e-003**	**0.0442**	**0.2266**	**0.2708**	**4.7800e-003**	**0.2084**	**0.2132**		**942.4317**	**942.4317**	**0.3048**		**950.0517**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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
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	0.0207	0.0149	0.2057	6.2000e-004	0.0753	4.2000e-004	0.0757	0.0200	3.8000e-004	0.0203		63.3012	63.3012	1.4200e-003	1.5100e-003	63.7862
Total	**0.0207**	**0.0149**	**0.2057**	**6.2000e-004**	**0.0753**	**4.2000e-004**	**0.0757**	**0.0200**	**3.8000e-004**	**0.0203**		**63.3012**	**63.3012**	**1.4200e-003**	**1.5100e-003**	**63.7862**

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					0.0173	0.0000	0.0173	1.8600e-003	0.0000	1.8600e-003			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	**0.5348**	**6.1887**	**3.9239**	**9.7300e-003**	**0.0173**	**0.2266**	**0.2438**	**1.8600e-003**	**0.2084**	**0.2103**	**0.0000**	**942.4317**	**942.4317**	**0.3048**		**950.0517**

Sunnymead Master Drainage Plan - South Coast Air Basin, 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 Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0207	0.0149	0.2057	6.2000e-004	0.0753	4.2000e-004	0.0757	0.0200	3.8000e-004	0.0203		63.3012	63.3012	1.4200e-003	1.5100e-003	63.7862
Total	**0.0207**	**0.0149**	**0.2057**	**6.2000e-004**	**0.0753**	**4.2000e-004**	**0.0757**	**0.0200**	**3.8000e-004**	**0.0203**		**63.3012**	**63.3012**	**1.4200e-003**	**1.5100e-003**	**63.7862**

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					4.5174	0.0000	4.5174	2.4828	0.0000	2.4828			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**4.5174**	**0.4201**	**4.9375**	**2.4828**	**0.3865**	**2.8693**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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	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	0.0331	0.0239	0.3291	9.9000e-004	0.1204	6.7000e-004	0.1211	0.0319	6.1000e-004	0.0326		101.2819	101.2819	2.2800e-003	2.4100e-003	102.0580
Total	**0.0331**	**0.0239**	**0.3291**	**9.9000e-004**	**0.1204**	**6.7000e-004**	**0.1211**	**0.0319**	**6.1000e-004**	**0.0326**		**101.2819**	**101.2819**	**2.2800e-003**	**2.4100e-003**	**102.0580**

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					1.7618	0.0000	1.7618	0.9683	0.0000	0.9683			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**1.7618**	**0.4201**	**2.1819**	**0.9683**	**0.3865**	**1.3548**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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	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	0.0331	0.0239	0.3291	9.9000e-004	0.1204	6.7000e-004	0.1211	0.0319	6.1000e-004	0.0326		101.2819	101.2819	2.2800e-003	2.4100e-003	102.0580
Total	**0.0331**	**0.0239**	**0.3291**	**9.9000e-004**	**0.1204**	**6.7000e-004**	**0.1211**	**0.0319**	**6.1000e-004**	**0.0326**		**101.2819**	**101.2819**	**2.2800e-003**	**2.4100e-003**	**102.0580**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5174	0.0000	4.5174	2.4828	0.0000	2.4828			0.0000			0.0000
Off-Road	0.9132	9.7297	5.5468	0.0141		0.4001	0.4001		0.3681	0.3681		1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.9132**	**9.7297**	**5.5468**	**0.0141**	**4.5174**	**0.4001**	**4.9175**	**2.4828**	**0.3681**	**2.8509**		**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0310	0.0213	0.3066	9.6000e-004	0.1204	6.4000e-004	0.1211	0.0319	5.9000e-004	0.0325		99.1066	99.1066	2.0600e-003	2.2400e-003	99.8263
Total	**0.0310**	**0.0213**	**0.3066**	**9.6000e-004**	**0.1204**	**6.4000e-004**	**0.1211**	**0.0319**	**5.9000e-004**	**0.0325**		**99.1066**	**99.1066**	**2.0600e-003**	**2.2400e-003**	**99.8263**

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					1.7618	0.0000	1.7618	0.9683	0.0000	0.9683			0.0000			0.0000
Off-Road	0.9132	9.7297	5.5468	0.0141		0.4001	0.4001		0.3681	0.3681	0.0000	1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.9132**	**9.7297**	**5.5468**	**0.0141**	**1.7618**	**0.4001**	**2.1619**	**0.9683**	**0.3681**	**1.3364**	**0.0000**	**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0310	0.0213	0.3066	9.6000e-004	0.1204	6.4000e-004	0.1211	0.0319	5.9000e-004	0.0325		99.1066	99.1066	2.0600e-003	2.2400e-003	99.8263
Total	**0.0310**	**0.0213**	**0.3066**	**9.6000e-004**	**0.1204**	**6.4000e-004**	**0.1211**	**0.0319**	**5.9000e-004**	**0.0325**		**99.1066**	**99.1066**	**2.0600e-003**	**2.2400e-003**	**99.8263**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5174	0.0000	4.5174	2.4828	0.0000	2.4828			0.0000			0.0000
Off-Road	0.8350	8.7341	5.3948	0.0141		0.3484	0.3484		0.3205	0.3205		1,364.6987	1,364.6987	0.4414		1,375.7329
Total	**0.8350**	**8.7341**	**5.3948**	**0.0141**	**4.5174**	**0.3484**	**4.8657**	**2.4828**	**0.3205**	**2.8033**		**1,364.6987**	**1,364.6987**	**0.4414**		**1,375.7329**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

3.3 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0292	0.0191	0.2861	9.3000e-004	0.1204	6.1000e-004	0.1210	0.0319	5.6000e-004	0.0325		96.6891	96.6891	1.8600e-003	2.0900e-003	97.3594
Total	**0.0292**	**0.0191**	**0.2861**	**9.3000e-004**	**0.1204**	**6.1000e-004**	**0.1210**	**0.0319**	**5.6000e-004**	**0.0325**		**96.6891**	**96.6891**	**1.8600e-003**	**2.0900e-003**	**97.3594**

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					1.7618	0.0000	1.7618	0.9683	0.0000	0.9683			0.0000			0.0000
Off-Road	0.8350	8.7341	5.3948	0.0141		0.3484	0.3484		0.3205	0.3205	0.0000	1,364.6987	1,364.6987	0.4414		1,375.7329
Total	**0.8350**	**8.7341**	**5.3948**	**0.0141**	**1.7618**	**0.3484**	**2.1102**	**0.9683**	**0.3205**	**1.2888**	**0.0000**	**1,364.6987**	**1,364.6987**	**0.4414**		**1,375.7329**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

3.3 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0292	0.0191	0.2861	9.3000e-004	0.1204	6.1000e-004	0.1210	0.0319	5.6000e-004	0.0325		96.6891	96.6891	1.8600e-003	2.0900e-003	97.3594
Total	**0.0292**	**0.0191**	**0.2861**	**9.3000e-004**	**0.1204**	**6.1000e-004**	**0.1210**	**0.0319**	**5.6000e-004**	**0.0325**		**96.6891**	**96.6891**	**1.8600e-003**	**2.0900e-003**	**97.3594**

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

3.4 Paving - 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
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	0.0744	0.0537	0.7404	2.2300e-003	0.2709	1.5000e-003	0.2724	0.0719	1.3800e-003	0.0732		227.8843	227.8843	5.1300e-003	5.4300e-003	229.6304
Total	**0.0744**	**0.0537**	**0.7404**	**2.2300e-003**	**0.2709**	**1.5000e-003**	**0.2724**	**0.0719**	**1.3800e-003**	**0.0732**		**227.8843**	**227.8843**	**5.1300e-003**	**5.4300e-003**	**229.6304**

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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

3.4 Paving - 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
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	0.0744	0.0537	0.7404	2.2300e-003	0.2709	1.5000e-003	0.2724	0.0719	1.3800e-003	0.0732		227.8843	227.8843	5.1300e-003	5.4300e-003	229.6304
Total	**0.0744**	**0.0537**	**0.7404**	**2.2300e-003**	**0.2709**	**1.5000e-003**	**0.2724**	**0.0719**	**1.3800e-003**	**0.0732**		**227.8843**	**227.8843**	**5.1300e-003**	**5.4300e-003**	**229.6304**

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

Sunnymead Master Drainage Plan - South Coast Air Basin, 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	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		1.0000e-004
Unmitigated	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		1.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		1.0000e-004
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**		**1.0000e-004**

Sunnymead Master Drainage Plan - South Coast Air Basin, Winter

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		1.0000e-004
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**		**1.0000e-004**

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