

Appendix A-1

Air Quality and Greenhouse Gas Emission Calculations

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

Perris & Morgan Unmitigated
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Industrial Park	306.50	1000sqft	7.04	306,496.00	0
Other Asphalt Surfaces	144.18	1000sqft	3.31	144,183.00	0
Parking Lot	305.00	Space	2.74	122,000.00	0

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/MW hr)	474.14	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - SCE adjusted for 2017 Power Content Label assuming 46% in operational year 2022.

Land Use -

Construction Phase - Based on information from the applicant.

Off-road Equipment - Based on CalEEMod default assumptions.

Trips and VMT - Trips rounded to even numbers to represent roundtrips. CalEEMod default assumptions.

Grading - Acres provided by applicant.

Architectural Coating - SCAQMD R1113

Vehicle Trips - Mobile emissions calculated in spreadsheet.

Area Coating - SCAQMD R1113

Energy Use -

Water And Wastewater - Assume 100% aerobic.

Construction Off-road Equipment Mitigation - Fugitive dust measures.

Waste Mitigation - AB391

Operational Off-Road Equipment - Based on SCAQMD Survey.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	30.00	15.00
tblConstructionPhase	NumDays	300.00	185.00
tblConstructionPhase	NumDays	20.00	30.00
tblGrading	AcresOfGrading	37.50	15.40
tblLandUse	LandUseSquareFeet	306,500.00	306,496.00
tblLandUse	LandUseSquareFeet	144,180.00	144,183.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00

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tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	89.00	100.00
tblOperationalOffRoadEquipment	OperHorsePower	402.00	200.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	9.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	702.44	474.14
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	49.00	50.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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tblWater	SepticTankPercent	10.33	0.00
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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	1.3272	3.2116	2.9504	8.0100e-003	0.4605	0.1251	0.5856	0.1608	0.1171	0.2778	0.0000	723.1895	723.1895	0.0985	0.0000	725.6519
Maximum	1.3272	3.2116	2.9504	8.0100e-003	0.4605	0.1251	0.5856	0.1608	0.1171	0.2778	0.0000	723.1895	723.1895	0.0985	0.0000	725.6519

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	1.3272	3.2116	2.9504	8.0100e-003	0.3815	0.1251	0.5066	0.1193	0.1171	0.2364	0.0000	723.1891	723.1891	0.0985	0.0000	725.6515
Maximum	1.3272	3.2116	2.9504	8.0100e-003	0.3815	0.1251	0.5066	0.1193	0.1171	0.2364	0.0000	723.1891	723.1891	0.0985	0.0000	725.6515

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	17.16	0.00	13.49	25.78	0.00	14.92	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	1-1-2021	3-31-2021	1.1963	1.1963
2	4-1-2021	6-30-2021	0.9833	0.9833
3	7-1-2021	9-30-2021	0.9941	0.9941
		Highest	1.1963	1.1963

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	1.2572	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203
Energy	5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	715.7934	715.7934	0.0288	6.6200e-003	718.4869
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	0.2621	2.3426	2.4420	4.0100e-003		0.1446	0.1446		0.1330	0.1330	0.0000	352.0523	352.0523	0.1139	0.0000	354.8989
Waste						0.0000	0.0000		0.0000	0.0000	79.0366	0.0000	79.0366	4.6709	0.0000	195.8097
Water						0.0000	0.0000		0.0000	0.0000	25.7056	206.0656	231.7712	0.0972	0.0576	251.3771
Total	1.5252	2.3965	2.4970	4.3300e-003	0.0000	0.1487	0.1487	0.0000	0.1371	0.1371	104.7422	1,273.9304	1,378.6725	4.9109	0.0643	1,520.5928

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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	1.2572	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203
Energy	5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	715.7934	715.7934	0.0288	6.6200e-003	718.4869
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	0.2621	2.3426	2.4420	4.0100e-003		0.1446	0.1446		0.1330	0.1330	0.0000	352.0523	352.0523	0.1139	0.0000	354.8989
Waste						0.0000	0.0000		0.0000	0.0000	39.5183	0.0000	39.5183	2.3355	0.0000	97.9049
Water						0.0000	0.0000		0.0000	0.0000	25.7056	206.0656	231.7712	0.0972	0.0576	251.3771
Total	1.5252	2.3965	2.4970	4.3300e-003	0.0000	0.1487	0.1487	0.0000	0.1371	0.1371	65.2239	1,273.9304	1,339.1543	2.5754	0.0643	1,422.6880

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.73	0.00	2.87	47.56	0.00	6.44

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/4/2021	5	15	
3	Building Construction	Building Construction	2/5/2021	10/21/2021	5	185	
4	Paving	Paving	10/22/2021	11/18/2021	5	20	
5	Architectural Coating	Architectural Coating	11/19/2021	12/30/2021	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15.4

Acres of Paving: 6.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 474,744; Non-Residential Outdoor: 158,248; Striped Parking Area: 15,971 (Architectural Coating – sqft)

OffRoad Equipment

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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
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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	244.00	96.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530

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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	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004
Total	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004

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					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0407	0.0102	0.0509	0.0223	9.4000e-003	0.0317	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530

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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	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004
Total	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004

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					0.0533	0.0000	0.0533	0.0257	0.0000	0.0257	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0314	0.3480	0.2316	4.7000e-004		0.0149	0.0149		0.0137	0.0137	0.0000	40.8712	40.8712	0.0132	0.0000	41.2017
Total	0.0314	0.3480	0.2316	4.7000e-004	0.0533	0.0149	0.0682	0.0257	0.0137	0.0394	0.0000	40.8712	40.8712	0.0132	0.0000	41.2017

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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	0.0000	0.0000	0.0000	0.0000	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	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341
Total	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341

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					0.0240	0.0000	0.0240	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0314	0.3480	0.2316	4.7000e-004		0.0149	0.0149		0.0137	0.0137	0.0000	40.8712	40.8712	0.0132	0.0000	41.2017
Total	0.0314	0.3480	0.2316	4.7000e-004	0.0240	0.0149	0.0389	0.0116	0.0137	0.0253	0.0000	40.8712	40.8712	0.0132	0.0000	41.2017

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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	0.0000	0.0000	0.0000	0.0000	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	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341
Total	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341

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	0.1758	1.6125	1.5332	2.4900e-003		0.0887	0.0887		0.0834	0.0834	0.0000	214.2645	214.2645	0.0517	0.0000	215.5568
Total	0.1758	1.6125	1.5332	2.4900e-003		0.0887	0.0887		0.0834	0.0834	0.0000	214.2645	214.2645	0.0517	0.0000	215.5568

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3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0212	0.8280	0.1593	2.2600e-003	0.0561	1.5800e-003	0.0577	0.0162	1.5100e-003	0.0177	0.0000	216.6482	216.6482	0.0165	0.0000	217.0614
Worker	0.0968	0.0652	0.7105	2.2200e-003	0.2481	1.4900e-003	0.2496	0.0659	1.3700e-003	0.0672	0.0000	200.6126	200.6126	4.6700e-003	0.0000	200.7295
Total	0.1180	0.8932	0.8698	4.4800e-003	0.3042	3.0700e-003	0.3072	0.0821	2.8800e-003	0.0849	0.0000	417.2608	417.2608	0.0212	0.0000	417.7908

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	0.1758	1.6125	1.5332	2.4900e-003		0.0887	0.0887		0.0834	0.0834	0.0000	214.2642	214.2642	0.0517	0.0000	215.5565
Total	0.1758	1.6125	1.5332	2.4900e-003		0.0887	0.0887		0.0834	0.0834	0.0000	214.2642	214.2642	0.0517	0.0000	215.5565

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3.4 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0212	0.8280	0.1593	2.2600e-003	0.0561	1.5800e-003	0.0577	0.0162	1.5100e-003	0.0177	0.0000	216.6482	216.6482	0.0165	0.0000	217.0614
Worker	0.0968	0.0652	0.7105	2.2200e-003	0.2481	1.4900e-003	0.2496	0.0659	1.3700e-003	0.0672	0.0000	200.6126	200.6126	4.6700e-003	0.0000	200.7295
Total	0.1180	0.8932	0.8698	4.4800e-003	0.3042	3.0700e-003	0.3072	0.0821	2.8800e-003	0.0849	0.0000	417.2608	417.2608	0.0212	0.0000	417.7908

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	7.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0205	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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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	6.9000e-004	4.6000e-004	5.0400e-003	2.0000e-005	1.7600e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4222	1.4222	3.0000e-005	0.0000	1.4230
Total	6.9000e-004	4.6000e-004	5.0400e-003	2.0000e-005	1.7600e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4222	1.4222	3.0000e-005	0.0000	1.4230

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	7.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0205	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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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	6.9000e-004	4.6000e-004	5.0400e-003	2.0000e-005	1.7600e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4222	1.4222	3.0000e-005	0.0000	1.4230
Total	6.9000e-004	4.6000e-004	5.0400e-003	2.0000e-005	1.7600e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4222	1.4222	3.0000e-005	0.0000	1.4230

3.6 Architectural Coating - 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					
Archit. Coating	0.9539					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0229	0.0273	4.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	3.8299	3.8299	2.6000e-004	0.0000	3.8365
Total	0.9571	0.0229	0.0273	4.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	3.8299	3.8299	2.6000e-004	0.0000	3.8365

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3.6 Architectural Coating - 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	3.2200e-003	2.1700e-003	0.0236	7.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2300e-003	0.0000	6.6664	6.6664	1.6000e-004	0.0000	6.6702
Total	3.2200e-003	2.1700e-003	0.0236	7.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2300e-003	0.0000	6.6664	6.6664	1.6000e-004	0.0000	6.6702

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9539					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0229	0.0273	4.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	3.8299	3.8299	2.6000e-004	0.0000	3.8365
Total	0.9571	0.0229	0.0273	4.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	3.8299	3.8299	2.6000e-004	0.0000	3.8365

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3.6 Architectural Coating - 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	3.2200e-003	2.1700e-003	0.0236	7.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2300e-003	0.0000	6.6664	6.6664	1.6000e-004	0.0000	6.6702
Total	3.2200e-003	2.1700e-003	0.0236	7.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2300e-003	0.0000	6.6664	6.6664	1.6000e-004	0.0000	6.6702

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	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
Industrial Park	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 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
Parking Lot	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

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	657.1871	657.1871	0.0277	5.5400e-003	659.5323
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	657.1871	657.1871	0.0277	5.5400e-003	659.5323
NaturalGas Mitigated	5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	58.6063	58.6063	1.1200e-003	1.0700e-003	58.9546
NaturalGas Unmitigated	5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	58.6063	58.6063	1.1200e-003	1.0700e-003	58.9546

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	34700	1.9000e-004	1.7000e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8517	1.8517	4.0000e-005	3.0000e-005	1.8627
Industrial Park	1.06354e+006	5.7300e-003	0.0521	0.0438	3.1000e-004		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	56.7546	56.7546	1.0900e-003	1.0400e-003	57.0919
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
Parking Lot	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
Total		5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	58.6063	58.6063	1.1300e-003	1.0700e-003	58.9546

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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					
General Office Building	34700	1.9000e-004	1.7000e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8517	1.8517	4.0000e-005	3.0000e-005	1.8627
Industrial Park	1.06354e+006	5.7300e-003	0.0521	0.0438	3.1000e-004		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	56.7546	56.7546	1.0900e-003	1.0400e-003	57.0919
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
Parking Lot	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
Total		5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	58.6063	58.6063	1.1300e-003	1.0700e-003	58.9546

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	95200	20.4743	8.6000e-004	1.7000e-004	20.5474
Industrial Park	2.91784e+006	627.5294	0.0265	5.2900e-003	629.7688
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42700	9.1833	3.9000e-004	8.0000e-005	9.2161
Total		657.1871	0.0277	5.5400e-003	659.5323

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	95200	20.4743	8.6000e-004	1.7000e-004	20.5474
Industrial Park	2.91784e+006	627.5294	0.0265	5.2900e-003	629.7688
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42700	9.1833	3.9000e-004	8.0000e-005	9.2161
Total		657.1871	0.0277	5.5400e-003	659.5323

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2572	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203
Unmitigated	1.2572	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203

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	0.0954					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.1000e-004	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203
Total	1.2572	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203

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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	0.0954					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.1000e-004	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203
Total	1.2572	9.0000e-005	9.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0203

7.0 Water Detail

7.1 Mitigation Measures Water

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	231.7712	0.0972	0.0576	251.3771
Unmitigated	231.7712	0.0972	0.0576	251.3771

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	8.2089	2.4800e-003	1.4300e-003	8.6976
Industrial Park	70.8781 / 0	223.5623	0.0947	0.0562	242.6795
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		231.7712	0.0972	0.0576	251.3771

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	8.2089	2.4800e-003	1.4300e-003	8.6976
Industrial Park	70.8781 / 0	223.5623	0.0947	0.0562	242.6795
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		231.7712	0.0972	0.0576	251.3771

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	39.5183	2.3355	0.0000	97.9049
Unmitigated	79.0366	4.6709	0.0000	195.8097

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Industrial Park	380.06	77.1488	4.5594	0.0000	191.1328
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		79.0366	4.6709	0.0000	195.8097

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	4.65	0.9439	0.0558	0.0000	2.3385
Industrial Park	190.03	38.5744	2.2797	0.0000	95.5664
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		39.5183	2.3355	0.0000	97.9049

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	9	8.00	365	100	0.20	CNG
Off-Highway Trucks	1	8.00	365	200	0.38	Diesel

Perris & Morgan Unmitigated - Riverside-South Coast County, Annual

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	0.2096	1.9468	2.1292	2.8200e-003		0.1290	0.1290		0.1187	0.1187	0.0000	247.8354	247.8354	0.0802	0.0000	249.8392
Off-Highway Trucks	0.0525	0.3958	0.3128	1.1900e-003		0.0156	0.0156		0.0143	0.0143	0.0000	104.2170	104.2170	0.0337	0.0000	105.0596
Total	0.2621	2.3426	2.4420	4.0100e-003		0.1445	0.1445		0.1330	0.1330	0.0000	352.0524	352.0524	0.1139	0.0000	354.8989

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

Perris & Morgan Unmitigated
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Industrial Park	306.50	1000sqft	7.04	306,496.00	0
Other Asphalt Surfaces	144.18	1000sqft	3.31	144,183.00	0
Parking Lot	305.00	Space	2.74	122,000.00	0

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/MW hr)	474.14	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

Project Characteristics - SCE adjusted for 2017 Power Content Label assuming 46% in operational year 2022.

Land Use -

Construction Phase - Based on information from the applicant.

Off-road Equipment - Based on CalEEMod default assumptions.

Trips and VMT - Trips rounded to even numbers to represent roundtrips. CalEEMod default assumptions.

Grading - Acres provided by applicant.

Architectural Coating - SCAQMD R1113

Vehicle Trips - Mobile emissions calculated in spreadsheet.

Area Coating - SCAQMD R1113

Energy Use -

Water And Wastewater - Assume 100% aerobic.

Construction Off-road Equipment Mitigation - Fugitive dust measures.

Waste Mitigation - AB391

Operational Off-Road Equipment - Based on SCAQMD Survey.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	30.00	15.00
tblConstructionPhase	NumDays	300.00	185.00
tblConstructionPhase	NumDays	20.00	30.00
tblGrading	AcresOfGrading	37.50	15.40
tblLandUse	LandUseSquareFeet	306,500.00	306,496.00
tblLandUse	LandUseSquareFeet	144,180.00	144,183.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	89.00	100.00
tblOperationalOffRoadEquipment	OperHorsePower	402.00	200.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	9.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	702.44	474.14
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	49.00	50.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

tblWater	SepticTankPercent	10.33	0.00
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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	64.0468	46.4539	31.6179	0.0779	18.2675	2.0457	20.3131	9.9840	1.8820	11.8660	0.0000	7,774.5659	7,774.5659	1.9479	0.0000	7,796.2066
Maximum	64.0468	46.4539	31.6179	0.0779	18.2675	2.0457	20.3131	9.9840	1.8820	11.8660	0.0000	7,774.5659	7,774.5659	1.9479	0.0000	7,796.2066

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	64.0468	46.4539	31.6179	0.0779	8.3310	2.0457	10.3767	4.5222	1.8820	6.4042	0.0000	7,774.5659	7,774.5659	1.9479	0.0000	7,796.2066
Maximum	64.0468	46.4539	31.6179	0.0779	8.3310	2.0457	10.3767	4.5222	1.8820	6.4042	0.0000	7,774.5659	7,774.5659	1.9479	0.0000	7,796.2066

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	54.39	0.00	48.92	54.71	0.00	46.03	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	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Energy	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Offroad	1.4363	12.8362	13.3808	0.0220		0.7920	0.7920		0.7287	0.7287		2,126.4180	2,126.4180	0.6877		2,143.6111
Total	8.3596	13.1319	13.7069	0.0237	0.0000	0.8147	0.8147	0.0000	0.7514	0.7514		2,480.5714	2,480.5714	0.6950	6.4900e-003	2,499.8792

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	lb/day										lb/day					
Area	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Energy	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Offroad	1.4363	12.8362	13.3808	0.0220		0.7920	0.7920		0.7287	0.7287		2,126.4180	2,126.4180	0.6877		2,143.6111
Total	8.3596	13.1319	13.7069	0.0237	0.0000	0.8147	0.8147	0.0000	0.7514	0.7514		2,480.5714	2,480.5714	0.6950	6.4900e-003	2,499.8792

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

3.0 Construction Detail

Construction Phase

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/4/2021	5	15	
3	Building Construction	Building Construction	2/5/2021	10/21/2021	5	185	
4	Paving	Paving	10/22/2021	11/18/2021	5	20	
5	Architectural Coating	Architectural Coating	11/19/2021	12/30/2021	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15.4

Acres of Paving: 6.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 474,744; Non-Residential Outdoor: 158,248; Striped Parking Area: 15,971 (Architectural Coating – sqft)

OffRoad Equipment

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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
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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	244.00	96.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

3.1 Mitigation Measures Construction

Water Exposed Area

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	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	8.1298	2.0445	10.1743	4.4688	1.8809	6.3497	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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					7.1109	0.0000	7.1109	3.4278	0.0000	3.4278			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	7.1109	1.9853	9.0962	3.4278	1.8265	5.2543		6,007.0434	6,007.0434	1.9428		6,055.6134

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.0000	0.0000	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					
Fugitive Dust					3.1999	0.0000	3.1999	1.5425	0.0000	1.5425			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	3.1999	1.9853	5.1852	1.5425	1.8265	3.3690	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.0000	0.0000	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

3.4 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

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.2241	8.8838	1.5850	0.0249	0.6147	0.0169	0.6316	0.1770	0.0162	0.1932		2,623.2098	2,623.2098	0.1877		2,627.9014
Worker	1.1568	0.6590	9.0210	0.0261	2.7273	0.0161	2.7434	0.7233	0.0148	0.7381		2,597.9922	2,597.9922	0.0620		2,599.5409
Total	1.3809	9.5428	10.6060	0.0510	3.3421	0.0330	3.3750	0.9003	0.0310	0.9313		5,221.2020	5,221.2020	0.2496		5,227.4423

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

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.2241	8.8838	1.5850	0.0249	0.6147	0.0169	0.6316	0.1770	0.0162	0.1932		2,623.2098	2,623.2098	0.1877		2,627.9014
Worker	1.1568	0.6590	9.0210	0.0261	2.7273	0.0161	2.7434	0.7233	0.0148	0.7381		2,597.9922	2,597.9922	0.0620		2,599.5409
Total	1.3809	9.5428	10.6060	0.0510	3.3421	0.0330	3.3750	0.9003	0.0310	0.9313		5,221.2020	5,221.2020	0.2496		5,227.4423

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0481	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.0759	0.0432	0.5915	1.7100e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		170.3602	170.3602	4.0600e-003		170.4617
Total	0.0759	0.0432	0.5915	1.7100e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		170.3602	170.3602	4.0600e-003		170.4617

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0481	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.0759	0.0432	0.5915	1.7100e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		170.3602	170.3602	4.0600e-003		170.4617
Total	0.0759	0.0432	0.5915	1.7100e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		170.3602	170.3602	4.0600e-003		170.4617

3.6 Architectural Coating - 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					
Archit. Coating	63.5908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	63.8097	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

3.6 Architectural Coating - 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	0.2371	0.1350	1.8486	5.3400e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		532.3755	532.3755	0.0127		532.6928
Total	0.2371	0.1350	1.8486	5.3400e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		532.3755	532.3755	0.0127		532.6928

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	63.5908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	63.8097	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

3.6 Architectural Coating - 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	0.2371	0.1350	1.8486	5.3400e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		532.3755	532.3755	0.0127		532.6928
Total	0.2371	0.1350	1.8486	5.3400e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		532.3755	532.3755	0.0127		532.6928

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	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
Industrial Park	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 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
Parking Lot	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	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894
NaturalGas Unmitigated	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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					
General Office Building	95.0685	1.0300e-003	9.3200e-003	7.8300e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.1845	11.1845	2.1000e-004	2.1000e-004	11.2510
Industrial Park	2913.81	0.0314	0.2857	0.2400	1.7100e-003		0.0217	0.0217		0.0217	0.0217		342.8013	342.8013	6.5700e-003	6.2800e-003	344.8384
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
Parking Lot	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
Total		0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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					
General Office Building	0.0950685	1.0300e-003	9.3200e-003	7.8300e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.1845	11.1845	2.1000e-004	2.1000e-004	11.2510
Industrial Park	2.91381	0.0314	0.2857	0.2400	1.7100e-003		0.0217	0.0217		0.0217	0.0217		342.8013	342.8013	6.5700e-003	6.2800e-003	344.8384
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
Parking Lot	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
Total		0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894

6.0 Area Detail

6.1 Mitigation Measures Area

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Unmitigated	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786

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	0.5227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2800e-003	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Total	6.8908	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

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	0.5227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2800e-003	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Total	6.8908	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	9	8.00	365	100	0.20	CNG
Off-Highway Trucks	1	8.00	365	200	0.38	Diesel

Perris & Morgan Unmitigated - Riverside-South Coast County, Summer

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	1.1487	10.6675	11.6671	0.0155		0.7067	0.7067		0.6501	0.6501		1,496.9410	1,496.9410	0.4841		1,509.0445
Off-Highway Trucks	0.2876	2.1687	1.7138	6.5000e-003		0.0854	0.0854		0.0786	0.0786		629.4770	629.4770	0.2036		634.5666
Total	1.4363	12.8362	13.3808	0.0220		0.7920	0.7920		0.7287	0.7287		2,126.4180	2,126.4180	0.6877		2,143.6111

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

Perris & Morgan Unmitigated
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Industrial Park	306.50	1000sqft	7.04	306,496.00	0
Other Asphalt Surfaces	144.18	1000sqft	3.31	144,183.00	0
Parking Lot	305.00	Space	2.74	122,000.00	0

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/MW hr)	474.14	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

Project Characteristics - SCE adjusted for 2017 Power Content Label assuming 46% in operational year 2022.

Land Use -

Construction Phase - Based on information from the applicant.

Off-road Equipment - Based on CalEEMod default assumptions.

Trips and VMT - Trips rounded to even numbers to represent roundtrips. CalEEMod default assumptions.

Grading - Acres provided by applicant.

Architectural Coating - SCAQMD R1113

Vehicle Trips - Mobile emissions calculated in spreadsheet.

Area Coating - SCAQMD R1113

Energy Use -

Water And Wastewater - Assume 100% aerobic.

Construction Off-road Equipment Mitigation - Fugitive dust measures.

Waste Mitigation - AB391

Operational Off-Road Equipment - Based on SCAQMD Survey.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	30.00	15.00
tblConstructionPhase	NumDays	300.00	185.00
tblConstructionPhase	NumDays	20.00	30.00
tblGrading	AcresOfGrading	37.50	15.40
tblLandUse	LandUseSquareFeet	306,500.00	306,496.00
tblLandUse	LandUseSquareFeet	144,180.00	144,183.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	89.00	100.00
tblOperationalOffRoadEquipment	OperHorsePower	402.00	200.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	9.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	702.44	474.14
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	49.00	50.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

tblWater	SepticTankPercent	10.33	0.00
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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	64.0423	46.4557	31.4753	0.0742	18.2675	2.0457	20.3131	9.9840	1.8820	11.8660	0.0000	7,408.579 1	7,408.579 1	1.9472	0.0000	7,430.553 5
Maximum	64.0423	46.4557	31.4753	0.0742	18.2675	2.0457	20.3131	9.9840	1.8820	11.8660	0.0000	7,408.579 1	7,408.579 1	1.9472	0.0000	7,430.553 5

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	64.0423	46.4557	31.4753	0.0742	8.3310	2.0457	10.3767	4.5222	1.8820	6.4042	0.0000	7,408.579 1	7,408.579 1	1.9472	0.0000	7,430.553 5
Maximum	64.0423	46.4557	31.4753	0.0742	8.3310	2.0457	10.3767	4.5222	1.8820	6.4042	0.0000	7,408.579 1	7,408.579 1	1.9472	0.0000	7,430.553 5

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	54.39	0.00	48.92	54.71	0.00	46.03	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	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Energy	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Offroad	1.4363	12.8362	13.3808	0.0220		0.7920	0.7920		0.7287	0.7287		2,126.4180	2,126.4180	0.6877		2,143.6111
Total	8.3596	13.1319	13.7069	0.0237	0.0000	0.8147	0.8147	0.0000	0.7514	0.7514		2,480.5714	2,480.5714	0.6950	6.4900e-003	2,499.8792

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	lb/day										lb/day					
Area	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Energy	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Offroad	1.4363	12.8362	13.3808	0.0220		0.7920	0.7920		0.7287	0.7287		2,126.4180	2,126.4180	0.6877		2,143.6111
Total	8.3596	13.1319	13.7069	0.0237	0.0000	0.8147	0.8147	0.0000	0.7514	0.7514		2,480.5714	2,480.5714	0.6950	6.4900e-003	2,499.8792

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

3.0 Construction Detail

Construction Phase

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/4/2021	5	15	
3	Building Construction	Building Construction	2/5/2021	10/21/2021	5	185	
4	Paving	Paving	10/22/2021	11/18/2021	5	20	
5	Architectural Coating	Architectural Coating	11/19/2021	12/30/2021	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15.4

Acres of Paving: 6.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 474,744; Non-Residential Outdoor: 158,248; Striped Parking Area: 15,971 (Architectural Coating – sqft)

OffRoad Equipment

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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
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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	244.00	96.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

3.1 Mitigation Measures Construction

Water Exposed Area

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	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	8.1298	2.0445	10.1743	4.4688	1.8809	6.3497	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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					7.1109	0.0000	7.1109	3.4278	0.0000	3.4278			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	7.1109	1.9853	9.0962	3.4278	1.8265	5.2543		6,007.0434	6,007.0434	1.9428		6,055.6134

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.0000	0.0000	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					
Fugitive Dust					3.1999	0.0000	3.1999	1.5425	0.0000	1.5425			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	3.1999	1.9853	5.1852	1.5425	1.8265	3.3690	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.0000	0.0000	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

3.4 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

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.2380	8.8073	1.8750	0.0239	0.6147	0.0174	0.6321	0.1770	0.0167	0.1936		2,524.5429	2,524.5429	0.2091		2,529.7705
Worker	1.1352	0.6815	7.2817	0.0234	2.7273	0.0161	2.7434	0.7233	0.0148	0.7381		2,330.6723	2,330.6723	0.0539		2,332.0187
Total	1.3733	9.4888	9.1567	0.0473	3.3421	0.0335	3.3756	0.9003	0.0315	0.9317		4,855.2152	4,855.2152	0.2630		4,861.7892

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

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.2380	8.8073	1.8750	0.0239	0.6147	0.0174	0.6321	0.1770	0.0167	0.1936		2,524.5429	2,524.5429	0.2091		2,529.7705
Worker	1.1352	0.6815	7.2817	0.0234	2.7273	0.0161	2.7434	0.7233	0.0148	0.7381		2,330.6723	2,330.6723	0.0539		2,332.0187
Total	1.3733	9.4888	9.1567	0.0473	3.3421	0.0335	3.3756	0.9003	0.0315	0.9317		4,855.2152	4,855.2152	0.2630		4,861.7892

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0481	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.0744	0.0447	0.4775	1.5300e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		152.8310	152.8310	3.5300e-003		152.9193
Total	0.0744	0.0447	0.4775	1.5300e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		152.8310	152.8310	3.5300e-003		152.9193

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0481	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.0744	0.0447	0.4775	1.5300e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		152.8310	152.8310	3.5300e-003		152.9193
Total	0.0744	0.0447	0.4775	1.5300e-003	0.1788	1.0500e-003	0.1799	0.0474	9.7000e-004	0.0484		152.8310	152.8310	3.5300e-003		152.9193

3.6 Architectural Coating - 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					
Archit. Coating	63.5908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	63.8097	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

3.6 Architectural Coating - 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	0.2326	0.1397	1.4922	4.7900e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		477.5968	477.5968	0.0110		477.8727
Total	0.2326	0.1397	1.4922	4.7900e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		477.5968	477.5968	0.0110		477.8727

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	63.5908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	63.8097	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

3.6 Architectural Coating - 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	0.2326	0.1397	1.4922	4.7900e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		477.5968	477.5968	0.0110		477.8727
Total	0.2326	0.1397	1.4922	4.7900e-003	0.5589	3.2900e-003	0.5622	0.1482	3.0300e-003	0.1513		477.5968	477.5968	0.0110		477.8727

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	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
Industrial Park	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 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
Parking Lot	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	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894
NaturalGas Unmitigated	0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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					
General Office Building	95.0685	1.0300e-003	9.3200e-003	7.8300e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.1845	11.1845	2.1000e-004	2.1000e-004	11.2510
Industrial Park	2913.81	0.0314	0.2857	0.2400	1.7100e-003		0.0217	0.0217		0.0217	0.0217		342.8013	342.8013	6.5700e-003	6.2800e-003	344.8384
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
Parking Lot	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
Total		0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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					
General Office Building	0.0950685	1.0300e-003	9.3200e-003	7.8300e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.1845	11.1845	2.1000e-004	2.1000e-004	11.2510
Industrial Park	2.91381	0.0314	0.2857	0.2400	1.7100e-003		0.0217	0.0217		0.0217	0.0217		342.8013	342.8013	6.5700e-003	6.2800e-003	344.8384
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
Parking Lot	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
Total		0.0325	0.2950	0.2478	1.7700e-003		0.0224	0.0224		0.0224	0.0224		353.9859	353.9859	6.7800e-003	6.4900e-003	356.0894

6.0 Area Detail

6.1 Mitigation Measures Area

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Unmitigated	6.8909	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786

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	0.5227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2800e-003	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Total	6.8908	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

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	0.5227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2800e-003	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786
Total	6.8908	7.1000e-004	0.0783	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1676	0.1676	4.4000e-004		0.1786

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	9	8.00	365	100	0.20	CNG
Off-Highway Trucks	1	8.00	365	200	0.38	Diesel

Perris & Morgan Unmitigated - Riverside-South Coast County, Winter

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	1.1487	10.6675	11.6671	0.0155		0.7067	0.7067		0.6501	0.6501		1,496.9410	1,496.9410	0.4841		1,509.0445
Off-Highway Trucks	0.2876	2.1687	1.7138	6.5000e-003		0.0854	0.0854		0.0786	0.0786		629.4770	629.4770	0.2036		634.5666
Total	1.4363	12.8362	13.3808	0.0220		0.7920	0.7920		0.7287	0.7287		2,126.4180	2,126.4180	0.6877		2,143.6111

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Perris & Morgan Electric Forklift GHG - Riverside-South Coast County, Annual

Perris & Morgan Electric Forklift GHG
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	306.50	1000sqft	7.04	306,500.00	0

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/MW hr)	74.14	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Perris & Morgan Electric Forklift GHG - Riverside-South Coast County, Annual

Project Characteristics - Operational Electric Forklift GHG Emissions Only. Adjusted SCE GHG intensity factors RPS.

Land Use - Operational electric forklift GHG emissions only.

Construction Phase - Operational electric forklift GHG emissions only.

Off-road Equipment - Operational electric forklift GHG emissions only.

Trips and VMT - Operational electric forklift GHG emissions only.

On-road Fugitive Dust - Operational electric forklift GHG emissions only.

Vehicle Trips - Operational electric forklift GHG emissions only.

Consumer Products - Operational electric forklift GHG emissions only.

Area Coating - Operational electric forklift GHG emissions only.

Landscape Equipment - Operational electric forklift GHG emissions only.

Energy Use - Operational electric forklift GHG emissions only.

Water And Wastewater - Operational electric forklift GHG emissions only.

Solid Waste - Operational electric forklift GHG emissions only.

Operational Off-Road Equipment - Operational electric forklift GHG emissions only.

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	153250	0
tblAreaCoating	Area_Nonresidential_Interior	459750	0
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	8/13/2020	7/17/2020
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	T24E	3.07	0.00
tblEnergyUse	T24NG	3.47	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOnRoadDust	AverageVehicleWeight	2.40	0.00
tblOnRoadDust	MeanVehicleSpeed	40.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	28.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	702.44	74.14
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	380.06	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	70,878,125.00	0.00

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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					
2020											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

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					
2020											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

Perris & Morgan Electric Forklift GHG - Riverside-South Coast County, Annual

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

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

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	0.0000	0.0000	0.0000	0.0000
Energy											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad											0.0000	689.6597	689.6597	0.2231	0.0000	695.2360
Waste											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	689.6597	689.6597	0.2231	0.0000	695.2360

Perris & Morgan Electric Forklift GHG - Riverside-South Coast County, Annual

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad											0.0000	689.6597	689.6597	0.2231	0.0000	695.2360
Waste											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	689.6597	689.6597	0.2231	0.0000	695.2360

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/17/2020	7/17/2020	5	1	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

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
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Demolition - 2020

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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
Vendor											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
Total											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	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

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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	0.0000
Electricity Unmitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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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
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											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

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

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8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

Perris & Morgan Electric Forklift GHG - Riverside-South Coast County, Annual

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	28	8.00	365	89	0.20	Electrical

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts											0.0000	689.6597	689.6597	0.2231	0.0000	695.2360
Total											0.0000	689.6597	689.6597	0.2231	0.0000	695.2360

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

User Defined Equipment

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

11.0 Vegetation

**Southern California Edison
Effect of 28% RPS
Based on 2012 Baseline Data**

2012 Emission Factor ¹	702.44 lb CO ₂ /MWh
2012 Renewables ²	20%
Without RPS	878.05 lb CO ₂ /MWh
Future Renewables ³	28.0%
With 28% RPS	632.19 lb CO ₂ /MWh

Reduction 10.0%

All renewable energy is assumed to be carbon neutral (i.e. no emissions from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. SCE. 2012 Power Content Label (Actual)
3. 20% RPS

CH₄

2012 Emission Factor ¹	0.029
With 28% RPS	0.026

N₂O

2012 Emission Factor ¹	0.00617
With 28% RPS	0.00555

2022

**Southern California Edison
Effect of 46% RPS
Based on 2012 Baseline Data**

2012 Emission Factor ¹	702.44 lb CO ₂ /MWh
2012 Renewables ²	20%
Without RPS	878.05 lb CO ₂ /MWh
Future Renewables ³	46.0%
With 36.4% RPS	474.14 lb CO ₂ /MWh

Reduction 32.5%

All renewable energy is assumed to be carbon neutral (i.e. no emissions from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. SCE. 2012 Power Content Label (Actual)
3. SCE's 2018 Corporate Sustainability Report
<https://www.edison.com/content/dam/eix/documents/s>

CH₄

2009 Emission Factor ¹	0.029
With 36.4% RPS	0.020

N₂O

2009 Emission Factor ¹	0.00617
With 36.4% RPS	0.0042

2022 Perris & Morgan Project - Operation Mobile Source Assumptions Summary

Project Vehicle	EMFAC Class	Average Daily Trip Length (miles)	Max Daily Trips (trips/day)	Max Daily VMT (VMT/day)	Annual Trips (trips/year)	Annual VMT (VMT/year)
4-axle trucks	HHDT	40	86	3,440	31,390	1,255,600
3-axle trucks	MHDT	40	28	1,120	10,220	408,800
2-axle trucks	LHDT1 and LHDT2 composite	40	23	920	8,395	335,800
Passenger cars	LDA, LDT1, LDT2, MCY, and MDV Composite	16.6	362	6,009	132,130	2,193,358

*Employee trip length assumed as CalEEMod default.
 *Truck trip length assumed 40 miles based on SCAQMD recommendation.

Project Vehicle	EMFAC Class	Average Daily Trip Length (miles)	Max Daily Trips (trips/day)	Max Daily VMT (VMT/day)	Annual Trips (trips/year)	Annual VMT (VMT/year)
4-axle trucks	HHDT	40	86	3,440	31,390	1,255,600
3-axle trucks	MHDT	40	28	1,120	10,220	408,800
2-axle trucks	LHDT1 and LHDT2 composite	40	23	920	8,395	335,800
Passenger cars	LDA, LDT1, LDT2, MCY, and MDV Composite	16.6	362	6,009	132,130	2,193,358

Project Vehicle	EMFAC Class	Max Daily Trips (trips/day)	Annual Trips (trips/year)
4-axle trucks	HHDT	86	31,390
3-axle trucks	MHDT	28	10,220
2-axle trucks	LHDT1 and LHDT2 composite	23	8,395
Passenger cars	LDA, LDT1, LDT2, MCY, and MDV Composite	362	132,130

Project Vehicle	EMFAC Class	Idling Minutes per Day (min/day)	Idling Minutes per Year (min/year)
4-axle trucks	HHDT	1,290	470,850
3-axle trucks	MHDT	420	153,300
2-axle trucks	LHDT1 and LHDT2 composite	345	125,925

2022 Operation Mobile Source Emissions Summary - Annual Emissions

Emissions - Max Daily (Pounds/Day)							Emissions - Annual (Tons/Year)							Emissions - Annual (Metric Tons/Year)		
ROG	NOx	CO	SOx	PM10	PM2.5	Subtotal	ROG	NOx	CO	SOx	PM10	PM2.5	CO2	CH4	N2O	CO2e
Running Exhaust, Tire Wear, and Break Wear																
0.54	24.90	3.97	0.10	0.22	0.21	Subtotal	0.10	4.54	0.72	0.02	0.04	0.04	1,805.62	0.10	0.29	1,893.55
0.14	3.88	1.02	0.02	0.08	0.08		0.03	0.71	0.19	0.00	0.01	0.01	426.81	0.00	0.05	442.52
0.10	1.68	1.19	0.01	0.02	0.02		0.02	0.31	0.22	0.00	0.00	0.00	221.65	0.00	0.01	225.95
0.36	0.87	12.37	0.04	0.02	0.02		0.07	0.16	2.26	0.01	0.00	0.00	663.66	0.01	0.01	668.10
1.14	31.33	18.55	0.18	0.34	0.33	Subtotal	0.21	5.72	3.39	0.03	0.06	0.06	3,117.74	0.11	0.37	3,230.12

PM10	PM2.5	PM10	PM2.5
Paved Road - PM only			
2.27	0.56	0.42	0.10
0.74	0.18	0.14	0.03
0.61	0.15	0.11	0.03
3.97	0.98	0.72	0.18
7.60	1.86	1.39	0.34

ROG	NOx	CO	SOx	PM10	PM2.5	ROG	NOx	CO	SOx	PM10	PM2.5	CO2	CH4	N2O	CO2e	
Starting Exhaust, Hot Soak, Running Loss Evaporative, Resting Loss Evap, Diurnal Loss Evap																
0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.09	0.04	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.06	0.00	0.07	
0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.08	0.00	0.14	
0.22	0.18	1.89	0.00	0.00	0.00	0.04	0.03	0.35	0.00	0.00	0.00	0.00	8.06	0.01	9.35	
0.23	0.69	1.98	0.00	0.00	0.00	0.04	0.13	0.36	0.00	0.00	0.00	0.00	8.21	0.01	9.57	

ROG	NOx	CO	SOx	PM10	PM2.5	ROG	NOx	CO	SOx	PM10	PM2.5	CO2	CH4	N2O	CO2e	
Idling																
0.13	1.68	1.74	0.00	0.00	0.00	0.02	0.31	0.32	0.00	0.00	0.00	0.00	53.42	0.00	55.96	
0.04	0.85	0.65	0.00	0.00	0.00	0.01	0.15	0.12	0.00	0.00	0.00	0.00	20.06	0.00	20.93	
0.12	0.39	1.07	0.00	0.01	0.01	0.02	0.07	0.20	0.00	0.00	0.00	0.00	9.83	0.00	10.23	
0.28	2.92	3.46	0.00	0.01	0.01	0.05	0.53	0.63	0.00	0.00	0.00	0.00	83.31	0.01	87.12	
TOTAL	1.65	34.94	23.99	0.18	7.95	2.20	0.30	6.38	4.38	0.03	1.45	0.40	3,209.25	0.13	3,326.80	



Project Trip Generation for Perris Boulevard and Morgan Street Industrial Park Project

(Updated Site Plan)

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates¹									
Warehousing	150	TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19
Trip Generation									
Perris and Morgan Industrial Park Project	150	286.892 TSF	499	38	11	49	15	40	55
Trip Generation (By Vehicle Classification)									
Vehicle Mix²	Percent²								
Passenger Vehicles	72.5%		362	27	8	35	11	29	40
2-Axle Trucks	4.6%		23	2	1	3	1	2	3
3-Axle Trucks	5.7%		28	2	1	3	1	2	3
4+-Axle Trucks	17.2%		86	7	2	9	3	7	10
Warehousing Subtotal (Non-PCE)			499	38	12	51	16	40	56
Vehicle Mix	PCE Factor								
Passenger Vehicles	1.0		362	27	8	35	11	29	40
2-Axle Trucks	1.5		34	3	1	4	1	3	4
3-Axle Trucks	2.0		57	4	2	6	2	4	6
4+-Axle Trucks	3.0		258	21	6	27	9	21	30
Total Trip Generation (w/PCE)			711	55	17	72	23	57	80

Notes: PCE = Passenger Car Equivalent; TSF = Thousand Square Feet

¹ Trip rates from Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

² Vehicle Mix and Percent from SCAQMD, Warehouse Truck Trip Study Data Results and Usage, July 2014.



Table 6. Operation Mobile Source Emissions Factors - EMFAC2017 Annual ROG

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	STEX HOTSOAK RUNLOSS ROG RESTLOSS									
								ROG_RUNEX (g/mile)	ROG_IDLEX (g/vehicle/day)	ROG_STREX (g/trip)	ROG_HOTSOAK (g/trip)	ROG_RUNLOSS (g/trip)	ROG_RESTLOSS (g/vehicle/day)	ROG_DIURN (g/vehicle/day)	ROG_RESTLOSS - Calculated (g/trip)	ROG_DIURN - Calculated (g/trip)	DIURN_Combined - Calculated (g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg	GAS	77.82	7,970.98	1,557.07	0.534539611	0	0.001625762	0.145944615	0.764377261	0.05284316	0.077569423			
SOUTH COAST AQMD	2022	HHDT	Aggreg	DSL	108,362.01	13,373,431.11	1,118,616.81	0.066311067	4.953559592	0	0	0	0	0			
SOUTH COAST AQMD	2022	HHDT	Aggreg	NG	5,023.71	204,625.17	19,592.47	0.339192067	0.065718619	0	0	0	0	0			
							HHDT Composite	0.0707	4.8770	0.0000	0.0001	0.0004	0.0000	0.0000	0.000004	0.000005	0.0005
SOUTH COAST AQMD	2022	MHDT	Aggreg	GAS	25,445.41	1,367,743.28	509,111.79	0.056133967	1.005198629	0.201893597	0.079459578	0.414432874	0.02568769	0.040796047			
SOUTH COAST AQMD	2022	MHDT	Aggreg	DSL	123,310.05	7,939,339.81	1,231,987.67	0.058435145	0.091276741	0	0	0	0	0			
							MHDT Composite	0.0581	0.2256	0.0297	0.0117	0.0609	0.0038	0.0060	0.000375	0.000596	0.1032
SOUTH COAST AQMD	2022	LHDT1	Aggreg	GAS	175,903.09	6,298,251.46	2,620,693.98	0.033352878	0.439576809	0.121077931	0.122149849	0.813995078	0.035361742	0.059906428			
SOUTH COAST AQMD	2022	LHDT1	Aggreg	DSL	119,380.70	4,817,006.91	1,501,659.07	0.070684026	0.109759705	0	0	0	0	0			
SOUTH COAST AQMD	2022	LHDT2	Aggreg	GAS	30,009.92	1,040,649.06	447,103.12	0.022119932	0.442151492	0.122035778	0.118048535	0.742889405	0.032420485	0.053737357			
SOUTH COAST AQMD	2022	LHDT2	Aggreg	DSL	47,335.63	1,861,640.34	595,422.68	0.066532795	0.109759705	0	0	0	0	0			
							LHDT1 and LHDT2 Composite	0.0498	0.2826	0.0635	0.0636	0.4209	0.0183	0.0309	0.001393	0.002353	0.5517
SOUTH COAST AQMD	2022	LDA	Aggreg	GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.010807584	0	0.225004301	0.100808652	0.213622344	0.236739793	0.258119784			
SOUTH COAST AQMD	2022	LDA	Aggreg	DSL	58,937.50	2,358,229.53	279,973.44	0.018297169	0	0	0	0	0	0			
SOUTH COAST AQMD	2022	LDA	Aggreg	ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0	0.004888026	0	0.008247438	0.024026526			
SOUTH COAST AQMD	2022	LDT1	Aggreg	GAS	736,905.60	27,300,895.56	3,399,511.91	0.031959652	0	0.361389035	0.207144146	0.70681942	0.516804396	0.638701209			
SOUTH COAST AQMD	2022	LDT1	Aggreg	DSL	387.16	9,037.12	1,348.41	0.194856526	0	0	0	0	0	0			
SOUTH COAST AQMD	2022	LDT1	Aggreg	ELEC	5,339.04	221,507.36	26,794.47	0	0	0	0.004888026	0	0.008187019	0.023888919			
SOUTH COAST AQMD	2022	LDT2	Aggreg	GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.018748117	0	0.31555438	0.126512271	0.413337261	0.361826801	0.369693456			
SOUTH COAST AQMD	2022	LDT2	Aggreg	DSL	14,234.59	607,996.51	70,193.22	0.020716871	0	0	0	0	0	0			
SOUTH COAST AQMD	2022	LDT2	Aggreg	ELEC	22,589.96	734,756.07	114,302.65	0	0	0	0.004888026	0	0.008282318	0.024087012			
SOUTH COAST AQMD	2022	MCY	Aggreg	GAS	295,960.08	2,072,370.13	591,920.16	2.484622471	0	1.81517329	0.697336661	1.961252461	1.420600236	2.381222297			
SOUTH COAST AQMD	2022	MDV	Aggreg	GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.025510081	0	0.410373139	0.149292732	0.450727833	0.440692731	0.434477209			
SOUTH COAST AQMD	2022	MDV	Aggreg	DSL	33,348.92	1,344,806.36	163,526.28	0.014262978	0	0	0	0	0	0			
SOUTH COAST AQMD	2022	MDV	Aggreg	ELEC	11,658.48	391,944.28	59,625.30	0	0	0	0.004888026	0	0.008312586	0.024155143			
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0273	0.0000	0.2772	0.1192	0.3174	0.3050	0.3308	0.071361	0.081057	0.8662

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SOUTH COAST AQMD

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.

Model Year: Aggregated

Notes:

Idle Duration:

HHDT	109.4	min/day
MHDT	5.86	min/day
LHDT1	1.74	min/day
LHDT2	1.87	min/day
OBUS	5.9	min/day

Table 7. Operation Mobile Source Emissions Factors - EMFAC2017 Annual NOx

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX
								(g/mile)	(g/vehicle/day)	(g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS		77.82	7,970.98	1,557.07	4.256515209	0	0.612327367
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL		108,362.01	13,373,431.11	1,118,616.81	3.285140382	66.75346503	2.151408659
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG		5,023.71	204,625.17	19,592.47	3.105546263	23.64504698	0
							HHDT Composite	3.283005	66.065026	2.118102
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS		25,445.41	1,367,743.28	509,111.79	0.406849173	0.089425844	0.355284788
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL		123,310.05	7,939,339.81	1,231,987.67	1.769634249	6.441753291	1.708179911
							MHDT Composite	1.569363	5.508233	1.509362
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS		175,903.09	6,298,251.46	2,620,693.98	0.201142464	0.038374024	0.51526363
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL		119,380.70	4,817,006.91	1,501,659.07	1.573434289	1.99969513	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS		30,009.92	1,040,649.06	447,103.12	0.198760186	0.038569855	0.52922198
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL		47,335.63	1,861,640.34	595,422.68	1.386134477	2.006002541	0
							LHDT1 and LHDT2 Composite	0.829918	0.973696	0.270803
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS		6,542,832.21	252,244,145.84	30,915,700.59	0.03867161	0	0.185257907
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL		58,937.50	2,358,229.53	279,973.44	0.070553067	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS		736,905.60	27,300,895.56	3,399,511.91	0.115457882	0	0.261427756
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL		387.16	9,037.12	1,348.41	1.051194494	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC		5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS		2,246,302.75	84,740,129.27	10,535,909.69	0.081381107	0	0.283196524
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL		14,234.59	607,996.51	70,193.22	0.045978296	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC		22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS		295,960.08	2,072,370.13	591,920.16	1.127843422	0	0.263203905
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS		1,579,640.37	55,888,916.43	7,302,407.35	0.1080538	0	0.355488734
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL		33,348.92	1,344,806.36	163,526.28	0.048102126	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC		11,658.48	391,944.28	59,625.30	0	0	0
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0657	0.0000	0.2269

Table 8. Operation Mobile Source Emissions Factors - EMFAC2017 Annual CO

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	CO_RUNEX	CO_IDLEX	CO_STREX
								(g/mile)	(g/vehicle/day)	(g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS		77.82	7,970.98	1,557.07	33.20956955	0	5.253797049
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL		108,362.01	13,373,431.11	1,118,616.81	0.307101864	67.54376867	0
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG		5,023.71	204,625.17	19,592.47	13.40108382	20.13296542	0
HHDT Composite								0.5236	66.7901	0.0031
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS		25,445.41	1,367,743.28	509,111.79	1.436670867	14.38449122	4.337340156
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL		123,310.05	7,939,339.81	1,231,987.67	0.234510134	2.354049319	0
MHDT Composite								0.4112	4.1220	0.6374
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS		175,903.09	6,298,251.46	2,620,693.98	0.808390803	3.751801981	1.700216538
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL		119,380.70	4,817,006.91	1,501,659.07	0.389981061	0.909745076	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS		30,009.92	1,040,649.06	447,103.12	0.561921039	3.759210533	1.676711817
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL		47,335.63	1,861,640.34	595,422.68	0.360377228	0.909745076	0
LHDT1 and LHDT2 Composite								0.5868	2.3983	0.8884
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS		6,542,832.21	252,244,145.84	30,915,700.59	0.701626991	0	2.147026188
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL		58,937.50	2,358,229.53	279,973.44	0.26131431	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS		736,905.60	27,300,895.56	3,399,511.91	1.403423642	0	2.296184577
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL		387.16	9,037.12	1,348.41	1.137842369	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC		5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS		2,246,302.75	84,740,129.27	10,535,909.69	0.983936842	0	2.686339669
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL		14,234.59	607,996.51	70,193.22	0.172240796	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC		22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS		295,960.08	2,072,370.13	591,920.16	19.02538024	0	8.517012991
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS		1,579,640.37	55,888,916.43	7,302,407.35	1.167815956	0	3.175998674
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL		33,348.92	1,344,806.36	163,526.28	0.251390452	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC		11,658.48	391,944.28	59,625.30	0	0	0
LDA, LDT1, LDT2, MCY, and MDV Composite								0.9338	0.0000	2.3715

Table 9. Operation Mobile Source Emissions Factors - EMFAC2017 Annual SO2

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	SO2_RUNEX (g/mile)	SO2_IDLEX (g/vehicle/day)	SO2_STREX (g/trip)
SOUTH COAST AQMD	2022	HHDT		Aggreg: GAS	77.82	7,970.98	1,557.07	0.020337736	0	0.000469929
SOUTH COAST AQMD	2022	HHDT		Aggreg: DSL	108,362.01	13,373,431.11	1,118,616.81	0.013295811	0.118539891	0
SOUTH COAST AQMD	2022	HHDT		Aggreg: NG	5,023.71	204,625.17	19,592.47	0	0	0
							HHDT Composite	0.0131	0.1167	0.0000
SOUTH COAST AQMD	2022	MHDT		Aggreg: GAS	25,445.41	1,367,743.28	509,111.79	0.016502566	0.005393097	0.000381445
SOUTH COAST AQMD	2022	MHDT		Aggreg: DSL	123,310.05	7,939,339.81	1,231,987.67	0.008848701	0.007603378	0
							MHDT Composite	0.0100	0.0073	0.0001
SOUTH COAST AQMD	2022	LHDT1		Aggreg: GAS	175,903.09	6,298,251.46	2,620,693.98	0.007964965	0.001197565	0.000186934
SOUTH COAST AQMD	2022	LHDT1		Aggreg: DSL	119,380.70	4,817,006.91	1,501,659.07	0.00443268	0.001252191	0
SOUTH COAST AQMD	2022	LHDT2		Aggreg: GAS	30,009.92	1,040,649.06	447,103.12	0.009145957	0.001383595	0.00021301
SOUTH COAST AQMD	2022	LHDT2		Aggreg: DSL	47,335.63	1,861,640.34	595,422.68	0.004887929	0.002012074	0
							LHDT1 and LHDT2 Composite	0.0064	0.0013	0.0001
SOUTH COAST AQMD	2022	LDA		Aggreg: GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.002691066	0	0.000541733
SOUTH COAST AQMD	2022	LDA		Aggreg: DSL	58,937.50	2,358,229.53	279,973.44	0.001975961	0	0
SOUTH COAST AQMD	2022	LDA		Aggreg: ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1		Aggreg: GAS	736,905.60	27,300,895.56	3,399,511.91	0.003134269	0	0.00063437
SOUTH COAST AQMD	2022	LDT1		Aggreg: DSL	387.16	9,037.12	1,348.41	0.00425796	0	0
SOUTH COAST AQMD	2022	LDT1		Aggreg: ELEC	5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2		Aggreg: GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.003362871	0	0.00069058
SOUTH COAST AQMD	2022	LDT2		Aggreg: DSL	14,234.59	607,996.51	70,193.22	0.00269885	0	0
SOUTH COAST AQMD	2022	LDT2		Aggreg: ELEC	22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY		Aggreg: GAS	295,960.08	2,072,370.13	591,920.16	0.002167072	0	0.000591751
SOUTH COAST AQMD	2022	MDV		Aggreg: GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.004139788	0	0.000855224
SOUTH COAST AQMD	2022	MDV		Aggreg: DSL	33,348.92	1,344,806.36	163,526.28	0.003516579	0	0
SOUTH COAST AQMD	2022	MDV		Aggreg: ELEC	11,658.48	391,944.28	59,625.30	0	0	0
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0030	0.0000	0.0006

Table 10. Operation Mobile Source Emissions Factors - EMFAC2017 Annual PM10

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	PM10_Combined -
								(g/mile)	(g/vehicle/day)	(g/trip)	(g/mile)	(g/mile)	Calculated
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS		77.82	7,970.98	1,557.07	0.001317308	0	0.000849671	0.020000006	0.061740018	
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL		108,362.01	13,373,431.11	1,118,616.81	0.029646183	0.037331856	0	0.035492432	0.060869521	
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG		5,023.71	204,625.17	19,592.47	0.006163741	0.043716688	0	0.03600001	0.061740018	
							HHDT Composite	0.0293	0.0374	0.0000	0.0355	0.0609	0.125650
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS		25,445.41	1,367,743.28	509,111.79	0.001026455	0	0.00041505	0.012000003	0.130340037	
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL		123,310.05	7,939,339.81	1,231,987.67	0.038704027	0.0151735	0	0.012000003	0.130340037	
							MHDT Composite	0.0332	0.0129	0.0001	0.0120	0.1303	0.175507
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS		175,903.09	6,298,251.46	2,620,693.98	0.001287898	0	0.000418348	0.008000002	0.076440022	
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL		119,380.70	4,817,006.91	1,501,659.07	0.014911662	0.027585037	0	0.012000003	0.076440022	
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS		30,009.92	1,040,649.06	447,103.12	0.001147395	0	0.000347276	0.008000002	0.089180026	
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL		47,335.63	1,861,640.34	595,422.68	0.015833419	0.028057457	0	0.012000003	0.089180026	
							LHDT1 and LHDT2 Composite	0.0079	0.0132	0.0002	0.0099	0.0791	0.096875
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS		6,542,832.21	252,244,145.84	30,915,700.59	0.001649979	0	0.001891865	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL		58,937.50	2,358,229.53	279,973.44	0.008486478	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS		736,905.60	27,300,895.56	3,399,511.91	0.002476444	0	0.00264091	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL		387.16	9,037.12	1,348.41	0.147108482	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC		5,339.04	221,507.36	26,794.47	0	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS		2,246,302.75	84,740,129.27	10,535,909.69	0.001746336	0	0.001892763	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL		14,234.59	607,996.51	70,193.22	0.005996942	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC		22,589.96	734,756.07	114,302.65	0	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS		295,960.08	2,072,370.13	591,920.16	0.002271226	0	0.003195935	0.004000001	0.011760003	
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS		1,579,640.37	55,888,916.43	7,302,407.35	0.001825958	0	0.002065929	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL		33,348.92	1,344,806.36	163,526.28	0.005119944	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC		11,658.48	391,944.28	59,625.30	0	0	0	0.008000002	0.036750011	
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0018	0.0000	0.0019	0.0080	0.0366	0.046390

Table 11. Operation Mobile Source Emissions Factors - EMFAC2017 Annual PM2.5

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_Combined
								(g/mile)	(g/vehicle/day)	(g/trip)	(g/mile)	(g/mile)	Calculated
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS		77.82	7,970.98	1,557.07	0.001211216	0	0.000781242	0.005000001	0.026460008	
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL		108,362.01	13,373,431.11	1,118,616.81	0.028363702	0.035716897	0	0.008873108	0.026086937	
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG		5,023.71	204,625.17	19,592.47	0.005897101	0.041825523	0	0.009000003	0.026460008	
							HHDT Composite	0.0280	0.0358	0.0000	0.0089	0.0261	0.062975
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS		25,445.41	1,367,743.28	509,111.79	0.000943788	0	0.000381623	0.003000001	0.055860016	
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL		123,310.05	7,939,339.81	1,231,987.67	0.037029708	0.014517101	0	0.003000001	0.055860016	
							MHDT Composite	0.0317	0.0124	0.0001	0.0030	0.0559	0.090587
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS		175,903.09	6,298,251.46	2,620,693.98	0.001184175	0	0.000384656	0.002000001	0.032760009	
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL		119,380.70	4,817,006.91	1,501,659.07	0.01426659	0.02639172	0	0.003000001	0.032760009	
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS		30,009.92	1,040,649.06	447,103.12	0.001054987	0	0.000319307	0.002000001	0.038220011	
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL		47,335.63	1,861,640.34	595,422.68	0.015148473	0.026843704	0	0.003000001	0.038220011	
							LHDT1 and LHDT2 Composite	0.0075	0.0126	0.0002	0.0025	0.0339	0.043891
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS		6,542,832.21	252,244,145.84	30,915,700.59	0.001517114	0	0.001739569	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL		58,937.50	2,358,229.53	279,973.44	0.008119357	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS		736,905.60	27,300,895.56	3,399,511.91	0.002277129	0	0.002428387	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL		387.16	9,037.12	1,348.41	0.140744635	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC		5,339.04	221,507.36	26,794.47	0	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS		2,246,302.75	84,740,129.27	10,535,909.69	0.001605737	0	0.001740385	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL		14,234.59	607,996.51	70,193.22	0.005737517	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC		22,589.96	734,756.07	114,302.65	0	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS		295,960.08	2,072,370.13	591,920.16	0.002122758	0	0.00300824	0.001	0.005040001	
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS		1,579,640.37	55,888,916.43	7,302,407.35	0.001679195	0	0.001899896	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL		33,348.92	1,344,806.36	163,526.28	0.004898457	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC		11,658.48	391,944.28	59,625.30	0	0	0	0.002000001	0.015750005	
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0016	0.0000	0.0018	0.0020	0.0157	0.019333

Table 12. Operation Mobile Source Emissions Factors - EMFAC2017 Annual CO2

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	CO2_RUNEX	CO2_IDLEX	CO2_STREX
								(g/mile)	(g/vehicle/day)	(g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS		77.82	7,970.98	1,557.07	2055.186477	0	47.48765277
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL		108,362.01	13,373,431.11	1,118,616.81	1407.335867	12547.21771	0
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG		5,023.71	204,625.17	19,592.47	3421.848687	4090.128254	0
HHDT Composite								1438.0574	12412.4802	0.0279
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS		25,445.41	1,367,743.28	509,111.79	1667.631581	544.9879106	38.54614187
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL		123,310.05	7,939,339.81	1,231,987.67	936.6178281	804.8028346	0
MHDT Composite								1044.0456	766.6212	5.6646
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS		175,903.09	6,298,251.46	2,620,693.98	804.8825647	121.01741	18.89017013
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL		119,380.70	4,817,006.91	1,501,659.07	468.8881985	132.4565781	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS		30,009.92	1,040,649.06	447,103.12	924.225105	139.8162546	21.52525194
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL		47,335.63	1,861,640.34	595,422.68	517.0443772	212.836845	0
LHDT1 and LHDT2 Composite								660.0538	138.5383	10.0856
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS		6,542,832.21	252,244,145.84	30,915,700.59	271.9398747	0	54.7436816
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL		58,937.50	2,358,229.53	279,973.44	209.0169003	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS		736,905.60	27,300,895.56	3,399,511.91	316.7268879	0	64.10486059
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL		387.16	9,037.12	1,348.41	450.4063221	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC		5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS		2,246,302.75	84,740,129.27	10,535,909.69	339.8277789	0	69.78509531
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL		14,234.59	607,996.51	70,193.22	285.4839537	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC		22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS		295,960.08	2,072,370.13	591,920.16	218.988869	0	59.79811033
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS		1,579,640.37	55,888,916.43	7,302,407.35	418.337462	0	86.42281908
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL		33,348.92	1,344,806.36	163,526.28	371.9832052	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC		11,658.48	391,944.28	59,625.30	0	0	0
LDA, LDT1, LDT2, MCY, and MDV Composite								302.5781	0.0000	61.0181

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SOUTH COAST AQMD

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the

Model Year: Aggregated

Notes:

Idle Duration:

HHDT 109.4 min/day

MHDT 5.86 min/day

LHDT1 1.74 min/day

LHDT2 1.87 min/day

Table 13. Operation Mobile Source Emissions Factors - EMFAC2017 Annual CH4

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	CH4_RUNEX (g/mile)	CH4_IDLEX (g/vehicle/day)	CH4_STREX (g/trip)
SOUTH COAST AQMD	2022	HHDT		Aggreg: GAS	77.82	7,970.98	1,557.07	0.104729778	0	0.000309787
SOUTH COAST AQMD	2022	HHDT		Aggreg: DSL	108,362.01	13,373,431.11	1,118,616.81	0.003079977	0.230080013	0
SOUTH COAST AQMD	2022	HHDT		Aggreg: NG	5,023.71	204,625.17	19,592.47	5.042366254	1.281148276	0
				HHDT Composite				0.0790	0.2458	0.0000
SOUTH COAST AQMD	2022	MHDT		Aggreg: GAS	25,445.41	1,367,743.28	509,111.79	0.011680586	0.266596384	0.038414753
SOUTH COAST AQMD	2022	MHDT		Aggreg: DSL	123,310.05	7,939,339.81	1,231,987.67	0.002714161	0.004239568	0
				MHDT Composite				0.0040	0.0428	0.0056
SOUTH COAST AQMD	2022	LHDT1		Aggreg: GAS	175,903.09	6,298,251.46	2,620,693.98	0.006951485	0.124302455	0.024593498
SOUTH COAST AQMD	2022	LHDT1		Aggreg: DSL	119,380.70	4,817,006.91	1,501,659.07	0.003283138	0.005098128	0
SOUTH COAST AQMD	2022	LHDT2		Aggreg: GAS	30,009.92	1,040,649.06	447,103.12	0.005021629	0.125034233	0.024870664
SOUTH COAST AQMD	2022	LHDT2		Aggreg: DSL	47,335.63	1,861,640.34	595,422.68	0.003090321	0.005098128	0
				LHDT1 and LHDT2 Composite				0.0050	0.0676	0.0129
SOUTH COAST AQMD	2022	LDA		Aggreg: GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.002812828	0	0.05048983
SOUTH COAST AQMD	2022	LDA		Aggreg: DSL	58,937.50	2,358,229.53	279,973.44	0.000849869	0	0
SOUTH COAST AQMD	2022	LDA		Aggreg: ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1		Aggreg: GAS	736,905.60	27,300,895.56	3,399,511.91	0.00724046	0	0.072234245
SOUTH COAST AQMD	2022	LDT1		Aggreg: DSL	387.16	9,037.12	1,348.41	0.009050713	0	0
SOUTH COAST AQMD	2022	LDT1		Aggreg: ELEC	5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2		Aggreg: GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.004595676	0	0.068107859
SOUTH COAST AQMD	2022	LDT2		Aggreg: DSL	14,234.59	607,996.51	70,193.22	0.000962259	0	0
SOUTH COAST AQMD	2022	LDT2		Aggreg: ELEC	22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY		Aggreg: GAS	295,960.08	2,072,370.13	591,920.16	0.363623493	0	0.236116735
SOUTH COAST AQMD	2022	MDV		Aggreg: GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.006037295	0	0.083466507
SOUTH COAST AQMD	2022	MDV		Aggreg: DSL	33,348.92	1,344,806.36	163,526.28	0.000662488	0	0
SOUTH COAST AQMD	2022	MDV		Aggreg: ELEC	11,658.48	391,944.28	59,625.30	0	0	0
				LDA, LDT1, LDT2, MCY, and MDV Composite				0.0055	0.0000	0.0592

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SOUTH COAST AQMD

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the

Model Year: Aggregated

Notes:

Idle Duration:

HHDT 109.4 min/day

MHDT 5.86 min/day

LHDT1 1.74 min/day

LHDT2 1.87 min/day

Table 14. Operation Mobile Source Emissions Factors - EMFAC2017 Annual N2O

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	N2O_RUNEX (g/mile)	N2O_IDLEX (g/vehicle/day)	N2O_STREX (g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg	GAS	77.82	7,970.98	1,557.07	0.151162066	0	0.015570448
SOUTH COAST AQMD	2022	HHDT	Aggreg	DSL	108,362.01	13,373,431.11	1,118,616.81	0.2212136	1.972247894	0
SOUTH COAST AQMD	2022	HHDT	Aggreg	NG	5,023.71	204,625.17	19,592.47	0.69756624	0.833799401	0
HHDT Composite								0.2283	1.9539	0.0000
SOUTH COAST AQMD	2022	MHDT	Aggreg	GAS	25,445.41	1,367,743.28	509,111.79	0.020987597	0.007896366	0.02903852
SOUTH COAST AQMD	2022	MHDT	Aggreg	DSL	123,310.05	7,939,339.81	1,231,987.67	0.147223279	0.126503798	0
MHDT Composite								0.1287	0.1091	0.0043
SOUTH COAST AQMD	2022	LHDT1	Aggreg	GAS	175,903.09	6,298,251.46	2,620,693.98	0.012289986	0.003235333	0.041601158
SOUTH COAST AQMD	2022	LHDT1	Aggreg	DSL	119,380.70	4,817,006.91	1,501,659.07	0.073702695	0.02082033	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg	GAS	30,009.92	1,040,649.06	447,103.12	0.01301057	0.003165872	0.041621973
SOUTH COAST AQMD	2022	LHDT2	Aggreg	DSL	47,335.63	1,861,640.34	595,422.68	0.081272176	0.033454988	0
LHDT1 and LHDT2 Composite								0.0426	0.0133	0.0218
SOUTH COAST AQMD	2022	LDA	Aggreg	GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.004493468	0	0.025615648
SOUTH COAST AQMD	2022	LDA	Aggreg	DSL	58,937.50	2,358,229.53	279,973.44	0.032854546	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg	ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg	GAS	736,905.60	27,300,895.56	3,399,511.91	0.008633663	0	0.02886365
SOUTH COAST AQMD	2022	LDT1	Aggreg	DSL	387.16	9,037.12	1,348.41	0.070797602	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg	ELEC	5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg	GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.00677134	0	0.032289374
SOUTH COAST AQMD	2022	LDT2	Aggreg	DSL	14,234.59	607,996.51	70,193.22	0.044874102	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg	ELEC	22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg	GAS	295,960.08	2,072,370.13	591,920.16	0.065286726	0	0.015038799
SOUTH COAST AQMD	2022	MDV	Aggreg	GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.008524791	0	0.035699312
SOUTH COAST AQMD	2022	MDV	Aggreg	DSL	33,348.92	1,344,806.36	163,526.28	0.05847058	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg	ELEC	11,658.48	391,944.28	59,625.30	0	0	0
LDA, LDT1, LDT2, MCY, and MDV Composite								0.0063	0.0000	0.0277

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SOUTH COAST AQMD

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in

Model Year: Aggregated

Notes:

Idle Duration:

HHDT	109.4	min/day
MHDT	5.86	min/day
LHDT1	1.74	min/day
LHDT2	1.87	min/day
OBUS	5.9	min/day

Table 14. Paved Road Fugitive Emissions - Operation Mobile Sources

Equation:

$$E = k \times (sL/2)^{0.91} \times (W)1.02 \text{ [maximum day]}$$

Where:

		Units
k	particle size multiplier (PM ₁₀)	0.00220 lb/VMT
k	particle size multiplier (PM _{2.5})	0.00054 lb/VMT
sL	silt loading (2) average weight (tons) of the vehicle traveling the	0.1 g/m ²
W	road	2.4 tons

Notes/References:

k = Emission factors from CalEEMod2016.3.1 per AP-42, Section 13.2.1 (Paved Roads).

sL = Silt loading from CalEEMod2016.3.2

For daily emissions it is assumed to have no precipitation.

Truck Weight Assumptions

EMFAC Definition	EMFAC Category	GVWR (pounds)	GVWR (tons)	
Heavy Heavy-Duty Truck	HHDT	>33,000	17	<i>Assumed 33,000 pounds</i>
Medium Heavy-Duty Truck	MHDT	14,001-33,000	8	<i>Assumed average of 14,001 & 33,000 pounds</i>
Composite light-heavy-duty trucks	LHDT1 & LHDT2	8,501-14,000	4	<i>Assumed average of 8,501 & 14,000 pounds</i>

Source: EMFAC 2014

GVWR = Gross Vehicle Weight Rating

1 pound = 0.0005 US tons

Employee Vehicles Evaluated:

Employee Type	Average Weight (tons)
Passenger Vehicles	2.4

Reference:

Source: CalEEMod2016.3.2 (average vehicle weight = 2.4 tons)

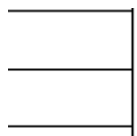
Per AP-42, Section 13.2.1 (Paved Roads): The above equation calls for the average weight of all vehicles traveling the road. For example, if 99 percent of traffic on the road are 2 ton cars/trucks while the remaining 1 percent consists of 20 ton trucks, then the mean weight "W" is 2.2 tons. More specifically, the above equation is not intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor should be calculated to represent the "fleet" average weight of all vehicles traveling the road.

Emission Factors	PM10 Paved Road	PM2.5 Paved Road	PM10 Paved Road	PM2.5 Paved Road
	(lb/VMT)	(lb/VMT)	(g/VMT)	(g/VMT)
HHDT	0.0007	0.0002	0.2998	0.0736
MHDT	0.0007	0.0002	0.2998	0.0736
LHDT1 & LHDT2	0.0007	0.0002	0.2998	0.0736
Passenger Vehicles	0.0007	0.0002	0.2998	0.0736
Average	0.0007	0.0002	0.2998	0.0736

$$RESTL_{CalEEMod} = \frac{\sum_{fueltype} (RESTL_EmissionRate_i \times Population_i)}{\sum_{fueltype} Trip_i}$$

$$DIURN_{CalEEMod} = \frac{\sum_{fueltype} (DIURN_EmissionRate_i \times Population_i)}{\sum_{fueltype} Trip_i}$$

RESTL	Resting Loss Evaporative	grams/vehicle/day	grams/trip
DIURN	Diurnal Loss Evaporative	grams/vehicle/day	grams/trip



2022 Perris & Morgan Project - Operation Mobile Source Assumptions Summary

Daily emissions (lb/day)

Project Vehicle	EMFAC Class	Average Daily Trip Length (miles)	Max Daily Trips (trips/day)	Max Daily VMT (VMT/day)	Annual Trips (trips/year)	Annual VMT (VMT/year)	Daily emissions (lb/day)			
							NOx	CO	PM10	PM2.5
4-axle trucks	HHDT	0.19	86	16	31,390	5,964	0.12	0.02	0.00	0.00
3-axle trucks	MHDT	0.19	28	5	10,220	1,942	0.02	0.00	0.00	0.00
2-axle trucks	LHDT1 and LHDT2 composite	0.19	23	4	8,395	1,595	0.01	0.01	0.00	0.00
Passenger cars	LDA, LDT1, LDT2, MCY, and MDV Composite	0.19	362	69	132,130	25,105	0.01	0.14	0.00	0.00
<i>Subtotal</i>							<i>0.15</i>	<i>0.17</i>	<i>0.00</i>	<i>0.00</i>

*Employee trip length assumed as CalEEMod default.
 *Truck trip length assumed 40 miles based on SCAQMD recommendation.

Project Vehicle	EMFAC Class	Average Daily Trip Length (miles)	Max Daily Trips (trips/day)	Max Daily VMT (VMT/day)	Annual Trips (trips/year)	Annual VMT (VMT/year)	PM10		PM2.5	
4-axle trucks	HHDT	0.19	86	16	31,390	5,964			0.01	0.00
3-axle trucks	MHDT	0.19	28	5	10,220	1,942			0.00	0.00
2-axle trucks	LHDT1 and LHDT2 composite	0.19	23	4	8,395	1,595			0.00	0.00
Passenger cars	LDA, LDT1, LDT2, MCY, and MDV Composite	0.19	362	69	132,130	25,105			0.05	0.01
<i>Subtotal</i>									<i>0.06</i>	<i>0.02</i>

Project Vehicle	EMFAC Class	Max Daily		Annual Trips (trips/year)	NOx	CO	PM10	PM2.5
		Trips (trips/day)	Annual Trips (trips/year)					
4-axle trucks	HHDT	86	31,390	0.40	0.00	0.00	0.00	
3-axle trucks	MHDT	28	10,220	0.09	0.04	0.00	0.00	
2-axle trucks	LHDT1 and LHDT2 composite	23	8,395	0.01	0.05	0.00	0.00	
Passenger cars	LDA, LDT1, LDT2, MCY, and MDV Composite	362	132,130	0.18	1.89	0.00	0.00	
<i>Subtotal</i>					<i>0.69</i>	<i>1.98</i>	<i>0.00</i>	<i>0.00</i>

Project Vehicle	EMFAC Class	Idling		NOx	CO	PM10	PM2.5	
		Idling Minutes per Day (min/day)	Minutes per Year (min/year)					
4-axle trucks	HHDT	1,290	470,850	1.68	1.74	0.00	0.00	
3-axle trucks	MHDT	420	153,300	0.85	0.65	0.00	0.00	
2-axle trucks	LHDT1 and LHDT2 composite	345	125,925	0.39	1.07	0.01	0.01	
<i>Subtotal</i>					<i>2.92</i>	<i>3.46</i>	<i>0.01</i>	<i>0.01</i>

TOTAL 3.77 5.61 0.07 0.03



Project Trip Generation for Perris Boulevard and Morgan Street Industrial Park Project

(Updated Site Plan)

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates¹									
Warehousing	150	TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19
Trip Generation									
Perris and Morgan Industrial Park Project	150	286.892 TSF	499	38	11	49	15	40	55
Trip Generation (By Vehicle Classification)									
Vehicle Mix²	Percent²								
Passenger Vehicles	72.5%		362	27	8	35	11	29	40
2-Axle Trucks	4.6%		23	2	1	3	1	2	3
3-Axle Trucks	5.7%		28	2	1	3	1	2	3
4+-Axle Trucks	17.2%		86	7	2	9	3	7	10
Warehousing Subtotal (Non-PCE)			499	38	12	51	16	40	56
Vehicle Mix	PCE Factor								
Passenger Vehicles	1.0		362	27	8	35	11	29	40
2-Axle Trucks	1.5		34	3	1	4	1	3	4
3-Axle Trucks	2.0		57	4	2	6	2	4	6
4+-Axle Trucks	3.0		258	21	6	27	9	21	30
Total Trip Generation (w/PCE)			711	55	17	72	23	57	80

Notes: PCE = Passenger Car Equivalent; TSF = Thousand Square Feet

¹ Trip rates from Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

² Vehicle Mix and Percent from SCAQMD, Warehouse Truck Trip Study Data Results and Usage, July 2014.



Table 6. Operation Mobile Source Emissions Factors - EMFAC2017 Annual ROG

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN	ROG_RESTLOSS - Calculated	ROG_DIURN - Calculated	DIURN_Combined - Calculated	STEX HOTSOAK RUNLOSS ROG RESTLOSS
								(g/mile)	(g/vehicle/day)	(g/trip)	(g/trip)	(g/trip)	(g/vehicle/day)	(g/vehicle/day)	(g/trip)	(g/trip)	(g/trip)	
SOUTH COAST AQMD	2022	HHDT	Aggreg	GAS	77.82	7,970.98	1,557.07	0.534539611	0	0.001625762	0.145944615	0.764377261	0.05284316	0.077569423				
SOUTH COAST AQMD	2022	HHDT	Aggreg	DSL	108,362.01	13,373,431.11	1,118,616.81	0.066311067	4.953559592	0	0	0	0	0				
SOUTH COAST AQMD	2022	HHDT	Aggreg	NG	5,023.71	204,625.17	19,592.47	0.339192067	0.065718619	0	0	0	0	0				
					HHDT Composite			0.0707	4.8770	0.0000	0.0001	0.0004	0.0000	0.0000	0.000004	0.000005		0.0005
SOUTH COAST AQMD	2022	MHDT	Aggreg	GAS	25,445.41	1,367,743.28	509,111.79	0.056133967	1.005198629	0.201893597	0.079459578	0.414432874	0.02568769	0.040796047				
SOUTH COAST AQMD	2022	MHDT	Aggreg	DSL	123,310.05	7,939,339.81	1,231,987.67	0.058435145	0.091276741	0	0	0	0	0				
					MHDT Composite			0.0581	0.2256	0.0297	0.0117	0.0609	0.0038	0.0060	0.000375	0.000596		0.1032
SOUTH COAST AQMD	2022	LHDT1	Aggreg	GAS	175,903.09	6,298,251.46	2,620,693.98	0.033352878	0.439576809	0.121077931	0.122149849	0.813995078	0.035361742	0.059906428				
SOUTH COAST AQMD	2022	LHDT1	Aggreg	DSL	119,380.70	4,817,006.91	1,501,659.07	0.070684026	0.109759705	0	0	0	0	0				
SOUTH COAST AQMD	2022	LHDT2	Aggreg	GAS	30,009.92	1,040,649.06	447,103.12	0.022119932	0.442151492	0.122035778	0.118048535	0.742889405	0.032420485	0.053737357				
SOUTH COAST AQMD	2022	LHDT2	Aggreg	DSL	47,335.63	1,861,640.34	595,422.68	0.066532795	0.109759705	0	0	0	0	0				
					LHDT1 and LHDT2 Composite			0.0498	0.2826	0.0635	0.0636	0.4209	0.0183	0.0309	0.001393	0.002353		0.5517
SOUTH COAST AQMD	2022	LDA	Aggreg	GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.010807584	0	0.225004301	0.100808652	0.213622344	0.236739793	0.258119784				
SOUTH COAST AQMD	2022	LDA	Aggreg	DSL	58,937.50	2,358,229.53	279,973.44	0.018297169	0	0	0	0	0	0				
SOUTH COAST AQMD	2022	LDA	Aggreg	ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0	0.004888026	0	0.008247438	0.024026526				
SOUTH COAST AQMD	2022	LDT1	Aggreg	GAS	736,905.60	27,300,895.56	3,399,511.91	0.031959652	0.361389035	0.207144146	0.70681942	0.516804396	0.638701209					
SOUTH COAST AQMD	2022	LDT1	Aggreg	DSL	387.16	9,037.12	1,348.41	0.194856526	0	0	0	0	0	0				
SOUTH COAST AQMD	2022	LDT1	Aggreg	ELEC	5,339.04	221,507.36	26,794.47	0	0	0	0.004888026	0	0.008187019	0.023888919				
SOUTH COAST AQMD	2022	LDT2	Aggreg	GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.018748117	0.31555438	0.126512271	0.413337261	0.361826801	0.369693456					
SOUTH COAST AQMD	2022	LDT2	Aggreg	DSL	14,234.59	607,996.51	70,193.22	0.020716871	0	0	0	0	0	0				
SOUTH COAST AQMD	2022	LDT2	Aggreg	ELEC	22,589.96	734,756.07	114,302.65	0	0	0	0.004888026	0	0.008282318	0.024087012				
SOUTH COAST AQMD	2022	MCY	Aggreg	GAS	295,960.08	2,072,370.13	591,920.16	2.484622471	0	1.81517329	0.697336661	1.961252461	1.420600236	2.381222297				
SOUTH COAST AQMD	2022	MDV	Aggreg	GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.025510081	0.410373139	0.149292732	0.450727833	0.440692731	0.434477209					
SOUTH COAST AQMD	2022	MDV	Aggreg	DSL	33,348.92	1,344,806.36	163,526.28	0.014262978	0	0	0	0	0	0				
SOUTH COAST AQMD	2022	MDV	Aggreg	ELEC	11,658.48	391,944.28	59,625.30	0	0	0	0.004888026	0	0.008312586	0.024155143				
					LDA, LDT1, LDT2, MCY, and MDV Composite			0.0273	0.0000	0.2772	0.1192	0.3174	0.3050	0.3308	0.071361	0.081057		0.8662

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District
 Region: SOUTH COAST AQMD
 Calendar Year: 2022
 Season: Annual
 Vehicle Classification: EMFAC2007 Categories
 Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.
 Model Year: Aggregated

Notes:

Idle Duration:	
HHDT	109.4 min/day
MHDT	5.86 min/day
LHDT1	1.74 min/day
LHDT2	1.87 min/day
OBUS	5.9 min/day

Table 7. Operation Mobile Source Emissions Factors - EMFAC2017 Annual NOx

Region	CalYr	VehClass	Speed Fuel	Population	VMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX
							(g/mile)	(g/vehicle/day)	(g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS	77.82	7,970.98	1,557.07	4.256515209	0	0.612327367
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL	108,362.01	13,373,431.11	1,118,616.81	3.285140382	66.75346503	2.151408659
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG	5,023.71	204,625.17	19,592.47	3.105546263	23.64504698	0
						HHDT Composite	3.283005	66.065026	2.118102
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS	25,445.41	1,367,743.28	509,111.79	0.406849173	0.089425844	0.355284788
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL	123,310.05	7,939,339.81	1,231,987.67	1.769634249	6.441753291	1.708179911
						MHDT Composite	1.569363	5.508233	1.509362
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS	175,903.09	6,298,251.46	2,620,693.98	0.201142464	0.038374024	0.51526363
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL	119,380.70	4,817,006.91	1,501,659.07	1.573434289	1.99969513	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS	30,009.92	1,040,649.06	447,103.12	0.198760186	0.038569855	0.52922198
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL	47,335.63	1,861,640.34	595,422.68	1.386134477	2.006002541	0
						LHDT1 and LHDT2 Composite	0.829918	0.973696	0.270803
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.03867161	0	0.185257907
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL	58,937.50	2,358,229.53	279,973.44	0.070553067	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS	736,905.60	27,300,895.56	3,399,511.91	0.115457882	0	0.261427756
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL	387.16	9,037.12	1,348.41	1.051194494	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC	5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.081381107	0	0.283196524
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL	14,234.59	607,996.51	70,193.22	0.045978296	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC	22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS	295,960.08	2,072,370.13	591,920.16	1.127843422	0	0.263203905
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.1080538	0	0.355488734
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL	33,348.92	1,344,806.36	163,526.28	0.048102126	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC	11,658.48	391,944.28	59,625.30	0	0	0
						LDA, LDT1, LDT2, MCY, and MDV Composite	0.0657	0.0000	0.2269

Table 8. Operation Mobile Source Emissions Factors - EMFAC2017 Annual CO

Region	CalYr	VehClass	Speed Fuel	Population	VMT	Trips	CO_RUNEX (g/mile)	CO_IDLEX (g/vehicle/day)	CO_STREX (g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS	77.82	7,970.98	1,557.07	33.20956955	0	5.253797049
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL	108,362.01	13,373,431.11	1,118,616.81	0.307101864	67.54376867	0
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG	5,023.71	204,625.17	19,592.47	13.40108382	20.13296542	0
			HHDT Composite				0.5236	66.7901	0.0031
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS	25,445.41	1,367,743.28	509,111.79	1.436670867	14.38449122	4.337340156
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL	123,310.05	7,939,339.81	1,231,987.67	0.234510134	2.354049319	0
			MHDT Composite				0.4112	4.1220	0.6374
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS	175,903.09	6,298,251.46	2,620,693.98	0.808390803	3.751801981	1.700216538
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL	119,380.70	4,817,006.91	1,501,659.07	0.389981061	0.909745076	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS	30,009.92	1,040,649.06	447,103.12	0.561921039	3.759210533	1.676711817
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL	47,335.63	1,861,640.34	595,422.68	0.360377228	0.909745076	0
			LHDT1 and LHDT2 Composite				0.5868	2.3983	0.8884
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.701626991	0	2.147026188
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL	58,937.50	2,358,229.53	279,973.44	0.26131431	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS	736,905.60	27,300,895.56	3,399,511.91	1.403423642	0	2.296184577
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL	387.16	9,037.12	1,348.41	1.137842369	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC	5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.983936842	0	2.686339669
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL	14,234.59	607,996.51	70,193.22	0.172240796	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC	22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS	295,960.08	2,072,370.13	591,920.16	19.02538024	0	8.517012991
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS	1,579,640.37	55,888,916.43	7,302,407.35	1.167815956	0	3.175998674
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL	33,348.92	1,344,806.36	163,526.28	0.251390452	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC	11,658.48	391,944.28	59,625.30	0	0	0
			LDA, LDT1, LDT2, MCY, and MDV Composite				0.9338	0.0000	2.3715

Table 9. Operation Mobile Source Emissions Factors - EMFAC2017 Annual SO2

Region	CalYr	VehClass	Speed Fuel	Population	VMT	Trips	SO2_RUNEX	SO2_IDLEX	SO2_STREX
							(g/mile)	(g/vehicle/day)	(g/trip)
SOUTH COAST AQMD	2022	HHDT	Aggreg: GAS	77.82	7,970.98	1,557.07	0.020337736	0	0.000469929
SOUTH COAST AQMD	2022	HHDT	Aggreg: DSL	108,362.01	13,373,431.11	1,118,616.81	0.013295811	0.118539891	0
SOUTH COAST AQMD	2022	HHDT	Aggreg: NG	5,023.71	204,625.17	19,592.47	0	0	0
HHDT Composite							0.0131	0.1167	0.0000
SOUTH COAST AQMD	2022	MHDT	Aggreg: GAS	25,445.41	1,367,743.28	509,111.79	0.016502566	0.005393097	0.000381445
SOUTH COAST AQMD	2022	MHDT	Aggreg: DSL	123,310.05	7,939,339.81	1,231,987.67	0.008848701	0.007603378	0
MHDT Composite							0.0100	0.0073	0.0001
SOUTH COAST AQMD	2022	LHDT1	Aggreg: GAS	175,903.09	6,298,251.46	2,620,693.98	0.007964965	0.001197565	0.000186934
SOUTH COAST AQMD	2022	LHDT1	Aggreg: DSL	119,380.70	4,817,006.91	1,501,659.07	0.00443268	0.001252191	0
SOUTH COAST AQMD	2022	LHDT2	Aggreg: GAS	30,009.92	1,040,649.06	447,103.12	0.009145957	0.001383595	0.00021301
SOUTH COAST AQMD	2022	LHDT2	Aggreg: DSL	47,335.63	1,861,640.34	595,422.68	0.004887929	0.002012074	0
LHDT1 and LHDT2 Composite							0.0064	0.0013	0.0001
SOUTH COAST AQMD	2022	LDA	Aggreg: GAS	6,542,832.21	252,244,145.84	30,915,700.59	0.002691066	0	0.000541733
SOUTH COAST AQMD	2022	LDA	Aggreg: DSL	58,937.50	2,358,229.53	279,973.44	0.001975961	0	0
SOUTH COAST AQMD	2022	LDA	Aggreg: ELEC	127,532.62	5,177,709.15	637,025.37	0	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: GAS	736,905.60	27,300,895.56	3,399,511.91	0.003134269	0	0.00063437
SOUTH COAST AQMD	2022	LDT1	Aggreg: DSL	387.16	9,037.12	1,348.41	0.00425796	0	0
SOUTH COAST AQMD	2022	LDT1	Aggreg: ELEC	5,339.04	221,507.36	26,794.47	0	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: GAS	2,246,302.75	84,740,129.27	10,535,909.69	0.003362871	0	0.00069058
SOUTH COAST AQMD	2022	LDT2	Aggreg: DSL	14,234.59	607,996.51	70,193.22	0.00269885	0	0
SOUTH COAST AQMD	2022	LDT2	Aggreg: ELEC	22,589.96	734,756.07	114,302.65	0	0	0
SOUTH COAST AQMD	2022	MCY	Aggreg: GAS	295,960.08	2,072,370.13	591,920.16	0.002167072	0	0.000591751
SOUTH COAST AQMD	2022	MDV	Aggreg: GAS	1,579,640.37	55,888,916.43	7,302,407.35	0.004139788	0	0.000855224
SOUTH COAST AQMD	2022	MDV	Aggreg: DSL	33,348.92	1,344,806.36	163,526.28	0.003516579	0	0
SOUTH COAST AQMD	2022	MDV	Aggreg: ELEC	11,658.48	391,944.28	59,625.30	0	0	0
LDA, LDT1, LDT2, MCY, and MDV Composite							0.0030	0.0000	0.0006

Table 10. Operation Mobile Source Emissions Factors - EMFAC2017 Annual PM10

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	PM10_Combined -
								(g/mile)	(g/vehicle/day)	(g/trip)	(g/mile)	(g/mile)	Calculated
SOUTH COAST AQMD	2022	HHDT	Aggreg. GAS		77.82	7,970.98	1,557.07	0.001317308	0	0.000849671	0.020000006	0.061740018	
SOUTH COAST AQMD	2022	HHDT	Aggreg. DSL		108,362.01	13,373,431.11	1,118,616.81	0.029646183	0.037331856	0	0.035492432	0.060869521	
SOUTH COAST AQMD	2022	HHDT	Aggreg. NG		5,023.71	204,625.17	19,592.47	0.006163741	0.043716688	0	0.03600001	0.061740018	
							HHDT Composite	0.0293	0.0374	0.0000	0.0355	0.0609	0.125650
SOUTH COAST AQMD	2022	MHDT	Aggreg. GAS		25,445.41	1,367,743.28	509,111.79	0.001026455	0	0.00041505	0.012000003	0.130340037	
SOUTH COAST AQMD	2022	MHDT	Aggreg. DSL		123,310.05	7,939,339.81	1,231,987.67	0.038704027	0.0151735	0	0.012000003	0.130340037	
							MHDT Composite	0.0332	0.0129	0.0001	0.0120	0.1303	0.175507
SOUTH COAST AQMD	2022	LHDT1	Aggreg. GAS		175,903.09	6,298,251.46	2,620,693.98	0.001287898	0	0.000418348	0.008000002	0.076440022	
SOUTH COAST AQMD	2022	LHDT1	Aggreg. DSL		119,380.70	4,817,006.91	1,501,659.07	0.014911662	0.027585037	0	0.012000003	0.076440022	
SOUTH COAST AQMD	2022	LHDT2	Aggreg. GAS		30,009.92	1,040,649.06	447,103.12	0.001147395	0	0.000347276	0.008000002	0.089180026	
SOUTH COAST AQMD	2022	LHDT2	Aggreg. DSL		47,335.63	1,861,640.34	595,422.68	0.015833419	0.028057457	0	0.012000003	0.089180026	
							LHDT1 and LHDT2 Composite	0.0079	0.0132	0.0002	0.0099	0.0791	0.096875
SOUTH COAST AQMD	2022	LDA	Aggreg. GAS		6,542,832.21	252,244,145.84	30,915,700.59	0.001649979	0	0.001891865	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDA	Aggreg. DSL		58,937.50	2,358,229.53	279,973.44	0.008486478	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDA	Aggreg. ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT1	Aggreg. GAS		736,905.60	27,300,895.56	3,399,511.91	0.002476444	0	0.00264091	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT1	Aggreg. DSL		387.16	9,037.12	1,348.41	0.147108482	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT1	Aggreg. ELEC		5,339.04	221,507.36	26,794.47	0	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT2	Aggreg. GAS		2,246,302.75	84,740,129.27	10,535,909.69	0.001746336	0	0.001892763	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT2	Aggreg. DSL		14,234.59	607,996.51	70,193.22	0.005996942	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	LDT2	Aggreg. ELEC		22,589.96	734,756.07	114,302.65	0	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	MCY	Aggreg. GAS		295,960.08	2,072,370.13	591,920.16	0.002271226	0	0.003195935	0.004000001	0.011760003	
SOUTH COAST AQMD	2022	MDV	Aggreg. GAS		1,579,640.37	55,888,916.43	7,302,407.35	0.001825958	0	0.002065929	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	MDV	Aggreg. DSL		33,348.92	1,344,806.36	163,526.28	0.005119944	0	0	0.008000002	0.036750011	
SOUTH COAST AQMD	2022	MDV	Aggreg. ELEC		11,658.48	391,944.28	59,625.30	0	0	0	0.008000002	0.036750011	
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0018	0.0000	0.0019	0.0080	0.0366	0.046390

Table 11. Operation Mobile Source Emissions Factors - EMFAC2017 Annual PM2.5

Region	CalYr	VehClass	Speed	Fuel	Population	VMT	Trips	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_Combined
								(g/mile)	(g/vehicle/day)	(g/trip)	(g/mile)	(g/mile)	Calculated
SOUTH COAST AQMD	2022	HHDT	Aggreg. GAS		77.82	7,970.98	1,557.07	0.001211216	0	0.000781242	0.005000001	0.026460008	
SOUTH COAST AQMD	2022	HHDT	Aggreg. DSL		108,362.01	13,373,431.11	1,118,616.81	0.028363702	0.035716897	0	0.008873108	0.026086937	
SOUTH COAST AQMD	2022	HHDT	Aggreg. NG		5,023.71	204,625.17	19,592.47	0.005897101	0.041825523	0	0.009000003	0.026460008	
							HHDT Composite	0.0280	0.0358	0.0000	0.0089	0.0261	0.062975
SOUTH COAST AQMD	2022	MHDT	Aggreg. GAS		25,445.41	1,367,743.28	509,111.79	0.000943788	0	0.000381623	0.003000001	0.055860016	
SOUTH COAST AQMD	2022	MHDT	Aggreg. DSL		123,310.05	7,939,339.81	1,231,987.67	0.037029708	0.014517101	0	0.003000001	0.055860016	
							MHDT Composite	0.0317	0.0124	0.0001	0.0030	0.0559	0.090587
SOUTH COAST AQMD	2022	LHDT1	Aggreg. GAS		175,903.09	6,298,251.46	2,620,693.98	0.001184175	0	0.000384656	0.002000001	0.032760009	
SOUTH COAST AQMD	2022	LHDT1	Aggreg. DSL		119,380.70	4,817,006.91	1,501,659.07	0.01426659	0.02639172	0	0.003000001	0.032760009	
SOUTH COAST AQMD	2022	LHDT2	Aggreg. GAS		30,009.92	1,040,649.06	447,103.12	0.001054987	0	0.000319307	0.002000001	0.038220011	
SOUTH COAST AQMD	2022	LHDT2	Aggreg. DSL		47,335.63	1,861,640.34	595,422.68	0.015148473	0.026843704	0	0.003000001	0.038220011	
							LHDT1 and LHDT2 Composite	0.0075	0.0126	0.0002	0.0025	0.0339	0.043891
SOUTH COAST AQMD	2022	LDA	Aggreg. GAS		6,542,832.21	252,244,145.84	30,915,700.59	0.001517114	0	0.001739569	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDA	Aggreg. DSL		58,937.50	2,358,229.53	279,973.44	0.008119357	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDA	Aggreg. ELEC		127,532.62	5,177,709.15	637,025.37	0	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT1	Aggreg. GAS		736,905.60	27,300,895.56	3,399,511.91	0.002277129	0	0.002428387	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT1	Aggreg. DSL		387.16	9,037.12	1,348.41	0.140744635	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT1	Aggreg. ELEC		5,339.04	221,507.36	26,794.47	0	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT2	Aggreg. GAS		2,246,302.75	84,740,129.27	10,535,909.69	0.001605737	0	0.001740385	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT2	Aggreg. DSL		14,234.59	607,996.51	70,193.22	0.005737517	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	LDT2	Aggreg. ELEC		22,589.96	734,756.07	114,302.65	0	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	MCY	Aggreg. GAS		295,960.08	2,072,370.13	591,920.16	0.002122758	0	0.00300824	0.001	0.005040001	
SOUTH COAST AQMD	2022	MDV	Aggreg. GAS		1,579,640.37	55,888,916.43	7,302,407.35	0.001679195	0	0.001899896	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	MDV	Aggreg. DSL		33,348.92	1,344,806.36	163,526.28	0.004898457	0	0	0.002000001	0.015750005	
SOUTH COAST AQMD	2022	MDV	Aggreg. ELEC		11,658.48	391,944.28	59,625.30	0	0	0	0.002000001	0.015750005	
							LDA, LDT1, LDT2, MCY, and MDV Composite	0.0016	0.0000	0.0018	0.0020	0.0157	0.019333

Table 14. Paved Road Fugitive Emissions - Operation Mobile Sources

Equation:

$$E = k \times (sL/2)^{0.91} \times (W)1.02 \text{ [maximum day]}$$

Where:

		Units
k	particle size multiplier (PM ₁₀)	0.00220 lb/VMT
k	particle size multiplier (PM _{2.5})	0.00054 lb/VMT
sL	silt loading (2) average weight (tons) of the vehicle traveling the road	0.1 g/m ²
W	road	2.4 tons

Notes/References:

k = Emission factors from CalEEMod2016.3.1 per AP-42, Section 13.2.1 (Paved Roads).

sL = Silt loading from CalEEMod2016.3.2

For daily emissions it is assumed to have no precipitation.

Truck Weight Assumptions

EMFAC Definition	EMFAC Category	GVWR (pounds)	GVWR (tons)	
Heavy Heavy-Duty Truck	HHDT	>33,000	17	<i>Assumed 33,000 pounds</i>
Medium Heavy-Duty Truck	MHDT	14,001-33,000	8	<i>Assumed average of 14,001 & 33,000 pounds</i>
Composite light-heavy-duty trucks	LHDT1 & LHDT2	8,501-14,000	4	<i>Assumed average of 8,501 & 14,000 pounds</i>

Source: EMFAC 2014

GVWR = Gross Vehicle Weight Rating

1 pound = 0.0005 US tons

Employee Vehicles Evaluated:

Employee Type	Average Weight (tons)
Passenger Vehicles	2.4

Reference:

Source: CalEEMod2016.3.2 (average vehicle weight = 2.4 tons)

Per AP-42, Section 13.2.1 (Paved Roads): The above equation calls for the average weight of all vehicles traveling the road. For example, if 99 percent of traffic on the road are 2 ton cars/trucks while the remaining 1 percent consists of 20 ton trucks, then the mean weight "W" is 2.2 tons. More specifically, the above equation is not intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor should be calculated to represent the "fleet" average weight of all vehicles traveling the road.

Emission Factors	PM10 Paved Road	PM2.5 Paved Road	PM10 Paved Road	PM2.5 Paved Road
	(lb/VMT)	(lb/VMT)	(g/VMT)	(g/VMT)
HHDT	0.0007	0.0002	0.2998	0.0736
MHDT	0.0007	0.0002	0.2998	0.0736
LHDT1 & LHDT2	0.0007	0.0002	0.2998	0.0736
Passenger Vehicles	0.0007	0.0002	0.2998	0.0736
Average	0.0007	0.0002	0.2998	0.0736