

Appendix A

Air Quality/Greenhouse Gas Emissions Modeling Results

4800 Long Beach Blvd - South Coast Air Basin, Annual

4800 Long Beach Blvd
South Coast Air Basin, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	18.00	Dwelling Unit	1.10	28,422.00	51

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	CH4 Intensity (lb/MWhr)	0.015	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Adjusted for 2030 RPS

Land Use - taken from project plan

Construction Phase - Per client provided info

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client provided info

Off-road Equipment - Per client information

Grading - per lot size and client info

Architectural Coating - architectural and area code compliance with Rule 1113

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No fireplaces per client info

Area Coating - compliance w rule 1113

Energy Use - 7% reduction per 2019 building code; net zero energy emissions

Water And Wastewater - City served by sanitary sewer only. 20% reduction per 2016 CALGreen

Solid Waste - Updated to reflect City diversion rate of 70%

Construction Off-road Equipment Mitigation - compliance w rule 403- watering twice a day

Mobile Land Use Mitigation -

Area Mitigation - zero VOC paints for interiors

Energy Mitigation - Per GPR Scorecard

Water Mitigation - Low flow appliances

Waste Mitigation -

Fleet Mix -

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Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	10.00	228.00
tblConstructionPhase	NumDays	200.00	314.00
tblConstructionPhase	NumDays	4.00	27.00
tblConstructionPhase	NumDays	10.00	221.00
tblConstructionPhase	NumDays	2.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	T24E	243.83	226.76
tblEnergyUse	T24NG	10,792.56	0.00
tblFireplaces	NumberGas	15.30	0.00
tblFireplaces	NumberNoFireplace	1.80	18.00
tblFireplaces	NumberWood	0.90	0.00
tblGrading	AcresOfGrading	37.13	1.10
tblGrading	AcresOfGrading	13.00	1.10
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LandUseSquareFeet	18,000.00	28,422.00
tblLandUse	LotAcreage	1.13	1.10
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	8.28	4.97

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tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,172,772.46	938,217.97
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.90	0.00
tblWoodstoves	NumberNoncatalytic	0.90	0.00

2.0 Emissions Summary

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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	0.1646	1.5218	1.1820	2.3500e-003	0.1107	0.0729	0.1835	0.0563	0.0684	0.1247	0.0000	203.6381	203.6381	0.0514	0.0000	204.9223
2021	0.4021	2.4554	2.4756	4.5600e-003	0.0307	0.1238	0.1546	8.1900e-003	0.1186	0.1268	0.0000	386.1299	386.1299	0.0759	0.0000	388.0271
Maximum	0.4021	2.4554	2.4756	4.5600e-003	0.1107	0.1238	0.1835	0.0563	0.1186	0.1268	0.0000	386.1299	386.1299	0.0759	0.0000	388.0271

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	0.1646	1.5218	1.1820	2.3500e-003	0.0576	0.0729	0.1305	0.0274	0.0684	0.0958	0.0000	203.6379	203.6379	0.0514	0.0000	204.9221
2021	0.4021	2.4554	2.4756	4.5600e-003	0.0307	0.1238	0.1546	8.1900e-003	0.1186	0.1268	0.0000	386.1294	386.1294	0.0759	0.0000	388.0266
Maximum	0.4021	2.4554	2.4756	4.5600e-003	0.0576	0.1238	0.1546	0.0274	0.1186	0.1268	0.0000	386.1294	386.1294	0.0759	0.0000	388.0266

	ROG	NOx	CO	SO2	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	37.53	0.00	15.69	44.77	0.00	11.47	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2020	9-30-2020	0.7421	0.7421
2	10-1-2020	12-31-2020	0.9480	0.9480
3	1-1-2021	3-31-2021	0.9949	0.9949
4	4-1-2021	6-30-2021	0.9986	0.9986
5	7-1-2021	9-30-2021	0.7208	0.7208
		Highest	0.9986	0.9986

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	0.1172	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	14.5122	14.5122	6.2000e-004	1.2000e-004	14.5643
Mobile	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560
Waste						0.0000	0.0000		0.0000	0.0000	1.0089	0.0000	1.0089	0.0596	0.0000	2.4994
Water						0.0000	0.0000		0.0000	0.0000	0.3319	3.2794	3.6113	1.2800e-003	7.5000e-004	3.8668
Total	0.1369	0.1101	0.4509	1.2800e-003	0.1320	1.8100e-003	0.1338	0.0354	1.7500e-003	0.0371	1.3408	136.2333	137.5741	0.0665	8.7000e-004	139.4970

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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	0.1172	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560
Waste						0.0000	0.0000		0.0000	0.0000	1.0089	0.0000	1.0089	0.0596	0.0000	2.4994
Water						0.0000	0.0000		0.0000	0.0000	0.2656	2.8872	3.1528	1.0400e-003	6.0000e-004	3.3581
Total	0.1369	0.1101	0.4509	1.2800e-003	0.1320	1.8100e-003	0.1338	0.0354	1.7500e-003	0.0371	1.2744	121.3289	122.6033	0.0657	6.0000e-004	124.4240

	ROG	NOx	CO	SO2	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	4.95	10.94	10.88	1.29	31.03	10.81

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	7/1/2020	7/15/2020	6	13	
2	Grading	Grading	7/16/2020	8/16/2020	6	27	
3	Paving	Paving	10/1/2020	6/15/2021	6	221	
4	Building Construction	Building Construction	10/15/2020	10/15/2021	6	314	
5	Architectural Coating	Architectural Coating	2/15/2021	11/6/2021	6	228	

Acres of Grading (Site Preparation Phase): 1.1

Acres of Grading (Grading Phase): 1.1

Acres of Paving: 0

Residential Indoor: 57,555; Residential Outdoor: 19,185; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (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	1	7.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

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					0.0348	0.0000	0.0348	0.0189	0.0000	0.0189	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1901	0.1065	2.2000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988
Total	0.0169	0.1901	0.1065	2.2000e-004	0.0348	8.2500e-003	0.0431	0.0189	7.5900e-003	0.0265	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988

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3.2 Site Preparation - 2020**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	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360
Total	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360

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					0.0157	0.0000	0.0157	8.5000e-003	0.0000	8.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1901	0.1065	2.2000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988
Total	0.0169	0.1901	0.1065	2.2000e-004	0.0157	8.2500e-003	0.0239	8.5000e-003	7.5900e-003	0.0161	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988

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3.2 Site Preparation - 2020**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	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360
Total	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360

3.3 Grading - 2020**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					0.0616	0.0000	0.0616	0.0336	0.0000	0.0336	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0421	0.4665	0.2616	5.6000e-004		0.0200	0.0200		0.0186	0.0186	0.0000	49.1512	49.1512	0.0148	0.0000	49.5203
Total	0.0421	0.4665	0.2616	5.6000e-004	0.0616	0.0200	0.0816	0.0336	0.0186	0.0522	0.0000	49.1512	49.1512	0.0148	0.0000	49.5203

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3.3 Grading - 2020**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	5.0000e-004	0.0180	3.7300e-003	5.0000e-005	1.0700e-003	6.0000e-005	1.1300e-003	2.9000e-004	5.0000e-005	3.5000e-004	0.0000	4.7421	4.7421	3.4000e-004	0.0000	4.7507
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.3000e-004	9.2200e-003	3.0000e-005	2.6700e-003	2.0000e-005	2.6900e-003	7.1000e-004	2.0000e-005	7.3000e-004	0.0000	2.4024	2.4024	7.0000e-005	0.0000	2.4041
Total	1.5800e-003	0.0188	0.0130	8.0000e-005	3.7400e-003	8.0000e-005	3.8200e-003	1.0000e-003	7.0000e-005	1.0800e-003	0.0000	7.1444	7.1444	4.1000e-004	0.0000	7.1548

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					0.0277	0.0000	0.0277	0.0151	0.0000	0.0151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0421	0.4665	0.2616	5.6000e-004		0.0200	0.0200		0.0186	0.0186	0.0000	49.1511	49.1511	0.0148	0.0000	49.5203
Total	0.0421	0.4665	0.2616	5.6000e-004	0.0277	0.0200	0.0478	0.0151	0.0186	0.0337	0.0000	49.1511	49.1511	0.0148	0.0000	49.5203

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3.3 Grading - 2020**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	5.0000e-004	0.0180	3.7300e-003	5.0000e-005	1.0700e-003	6.0000e-005	1.1300e-003	2.9000e-004	5.0000e-005	3.5000e-004	0.0000	4.7421	4.7421	3.4000e-004	0.0000	4.7507
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.3000e-004	9.2200e-003	3.0000e-005	2.6700e-003	2.0000e-005	2.6900e-003	7.1000e-004	2.0000e-005	7.3000e-004	0.0000	2.4024	2.4024	7.0000e-005	0.0000	2.4041
Total	1.5800e-003	0.0188	0.0130	8.0000e-005	3.7400e-003	8.0000e-005	3.8200e-003	1.0000e-003	7.0000e-005	1.0800e-003	0.0000	7.1444	7.1444	4.1000e-004	0.0000	7.1548

3.4 Paving - 2020**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	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3992	56.3992	0.0182	0.0000	56.8552
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3992	56.3992	0.0182	0.0000	56.8552

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3.4 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079
Total	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079

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	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3991	56.3991	0.0182	0.0000	56.8551
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3991	56.3991	0.0182	0.0000	56.8551

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3.4 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079
Total	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079

3.4 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	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3911	101.3911	0.0328	0.0000	102.2109
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3911	101.3911	0.0328	0.0000	102.2109

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3.4 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	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968
Total	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968

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	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3910	101.3910	0.0328	0.0000	102.2108
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3910	101.3910	0.0328	0.0000	102.2108

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3.4 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	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968
Total	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968

3.5 Building Construction - 2020**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	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8166	60.8166	0.0113	0.0000	61.0989
Total	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8166	60.8166	0.0113	0.0000	61.0989

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3.5 Building Construction - 2020**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	2.3000e-004	7.1800e-003	1.8100e-003	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.6391	1.6391	1.1000e-004	0.0000	1.6419
Worker	1.9400e-003	1.4900e-003	0.0165	5.0000e-005	4.7800e-003	4.0000e-005	4.8200e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.3055	4.3055	1.2000e-004	0.0000	4.3086
Total	2.1700e-003	8.6700e-003	0.0183	7.0000e-005	5.2000e-003	8.0000e-005	5.2800e-003	1.3900e-003	6.0000e-005	1.4600e-003	0.0000	5.9446	5.9446	2.3000e-004	0.0000	5.9505

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	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8165	60.8165	0.0113	0.0000	61.0988
Total	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8165	60.8165	0.0113	0.0000	61.0988

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3.5 Building Construction - 2020**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	2.3000e-004	7.1800e-003	1.8100e-003	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.6391	1.6391	1.1000e-004	0.0000	1.6419
Worker	1.9400e-003	1.4900e-003	0.0165	5.0000e-005	4.7800e-003	4.0000e-005	4.8200e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.3055	4.3055	1.2000e-004	0.0000	4.3086
Total	2.1700e-003	8.6700e-003	0.0183	7.0000e-005	5.2000e-003	8.0000e-005	5.2800e-003	1.3900e-003	6.0000e-005	1.4600e-003	0.0000	5.9446	5.9446	2.3000e-004	0.0000	5.9505

3.5 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	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2113	224.2113	0.0400	0.0000	225.2120
Total	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2113	224.2113	0.0400	0.0000	225.2120

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3.5 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	7.1000e-004	0.0240	6.0700e-003	6.0000e-005	1.5600e-003	5.0000e-005	1.6100e-003	4.5000e-004	5.0000e-005	5.0000e-004	0.0000	5.9973	5.9973	3.9000e-004	0.0000	6.0070
Worker	6.6700e-003	4.9500e-003	0.0560	1.7000e-004	0.0176	1.3000e-004	0.0178	4.6800e-003	1.2000e-004	4.8000e-003	0.0000	15.3591	15.3591	4.1000e-004	0.0000	15.3694
Total	7.3800e-003	0.0290	0.0621	2.3000e-004	0.0192	1.8000e-004	0.0194	5.1300e-003	1.7000e-004	5.3000e-003	0.0000	21.3564	21.3564	8.0000e-004	0.0000	21.3764

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	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2111	224.2111	0.0400	0.0000	225.2117
Total	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2111	224.2111	0.0400	0.0000	225.2117

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3.5 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	7.1000e-004	0.0240	6.0700e-003	6.0000e-005	1.5600e-003	5.0000e-005	1.6100e-003	4.5000e-004	5.0000e-005	5.0000e-004	0.0000	5.9973	5.9973	3.9000e-004	0.0000	6.0070
Worker	6.6700e-003	4.9500e-003	0.0560	1.7000e-004	0.0176	1.3000e-004	0.0178	4.6800e-003	1.2000e-004	4.8000e-003	0.0000	15.3591	15.3591	4.1000e-004	0.0000	15.3694
Total	7.3800e-003	0.0290	0.0621	2.3000e-004	0.0192	1.8000e-004	0.0194	5.1300e-003	1.7000e-004	5.3000e-003	0.0000	21.3564	21.3564	8.0000e-004	0.0000	21.3764

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	0.0889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0250	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570
Total	0.1139	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570

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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	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740
Total	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740

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	0.0889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0250	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570
Total	0.1139	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570

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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	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740
Total	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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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	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560
Unmitigated	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	104.58	102.06	87.12	347,612	347,612
Total	104.58	102.06	87.12	347,612	347,612

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
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.554588	0.041680	0.206638	0.111313	0.012826	0.005773	0.022313	0.034878	0.002168	0.001490	0.004854	0.000717	0.000760

5.0 Energy Detail

Historical Energy Use: N

4800 Long Beach Blvd - South Coast Air Basin, Annual

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

[illegible]

4800 Long Beach Blvd - South Coast Air Basin, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

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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			
Condo/Townhouse	90411.7	14.5122	6.2000e-004	1.2000e-004	14.5643
Total		14.5122	6.2000e-004	1.2000e-004	14.5643

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	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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Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1172	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105
Unmitigated	0.1172	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105

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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	8.8900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1027					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.6100e-003	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105
Total	0.1172	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105

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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	8.8900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1027					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.6100e-003	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105
Total	0.1172	2.1400e-003	0.1858	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3105

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

4800 Long Beach Blvd - South Coast Air Basin, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.1528	1.0400e-003	6.0000e-004	3.3581
Unmitigated	3.6113	1.2800e-003	7.5000e-004	3.8668

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	0.938218 / 0.739357	3.6113	1.2800e-003	7.5000e-004	3.8668
Total		3.6113	1.2800e-003	7.5000e-004	3.8668

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	0.750574 / 0.739357	3.1528	1.0400e-003	6.0000e-004	3.3581
Total		3.1528	1.0400e-003	6.0000e-004	3.3581

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0089	0.0596	0.0000	2.4994
Unmitigated	1.0089	0.0596	0.0000	2.4994

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	4.97	1.0089	0.0596	0.0000	2.4994
Total		1.0089	0.0596	0.0000	2.4994

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	4.97	1.0089	0.0596	0.0000	2.4994
Total		1.0089	0.0596	0.0000	2.4994

9.0 Operational Offroad

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

4800 Long Beach Blvd - South Coast Air Basin, Summer

4800 Long Beach Blvd
South Coast Air Basin, Summer**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	18.00	Dwelling Unit	1.10	28,422.00	51

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	CH4 Intensity (lb/MWhr)	0.015	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

4800 Long Beach Blvd - South Coast Air Basin, Summer

Project Characteristics - Adjusted for 2030 RPS

Land Use - taken from project plan

Construction Phase - Per client provided info

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client provided info

Off-road Equipment - Per client information

Grading - per lot size and client info

Architectural Coating - architectural and area code compliance with Rule 1113

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No fireplaces per client info

Area Coating - compliance w rule 1113

Energy Use - 7% reduction per 2019 building code; net zero energy emissions

Water And Wastewater - City served by sanitary sewer only. 20% reduction per 2016 CALGreen

Solid Waste - Updated to reflect City diversion rate of 70%

Construction Off-road Equipment Mitigation - compliance w rule 403- watering twice a day

Mobile Land Use Mitigation -

Area Mitigation - zero VOC paints for interiors

Energy Mitigation - Per GPR Scorecard

Water Mitigation - Low flow appliances

Waste Mitigation -

Fleet Mix -

4800 Long Beach Blvd - South Coast Air Basin, Summer

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	10.00	228.00
tblConstructionPhase	NumDays	200.00	314.00
tblConstructionPhase	NumDays	4.00	27.00
tblConstructionPhase	NumDays	10.00	221.00
tblConstructionPhase	NumDays	2.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	T24E	243.83	226.76
tblEnergyUse	T24NG	10,792.56	0.00
tblFireplaces	NumberGas	15.30	0.00
tblFireplaces	NumberNoFireplace	1.80	18.00
tblFireplaces	NumberWood	0.90	0.00
tblGrading	AcresOfGrading	37.13	1.10
tblGrading	AcresOfGrading	13.00	1.10
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LandUseSquareFeet	18,000.00	28,422.00
tblLandUse	LotAcreage	1.13	1.10
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	8.28	4.97

4800 Long Beach Blvd - South Coast Air Basin, Summer

tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,172,772.46	938,217.97
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.90	0.00
tblWoodstoves	NumberNoncatalytic	0.90	0.00

2.0 Emissions Summary

4800 Long Beach Blvd - South Coast Air Basin, Summer

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					
2020	3.2372	35.8989	22.3439	0.0472	5.5044	1.4887	6.7749	2.9447	1.3816	4.1136	0.0000	4,609.216 6	4,609.216 6	1.2392	0.0000	4,640.196 6
2021	3.6670	23.3843	23.8597	0.0447	0.3034	1.1799	1.4833	0.0808	1.1242	1.2050	0.0000	4,198.759 1	4,198.759 1	0.8968	0.0000	4,221.179 1
Maximum	3.6670	35.8989	23.8597	0.0472	5.5044	1.4887	6.7749	2.9447	1.3816	4.1136	0.0000	4,609.216 6	4,609.216 6	1.2392	0.0000	4,640.196 6

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					
2020	3.2372	35.8989	22.3439	0.0472	2.5569	1.4887	3.8275	1.3463	1.3816	2.5767	0.0000	4,609.216 6	4,609.216 6	1.2392	0.0000	4,640.196 6
2021	3.6670	23.3843	23.8597	0.0447	0.3034	1.1799	1.4833	0.0808	1.1242	1.2050	0.0000	4,198.759 1	4,198.759 1	0.8968	0.0000	4,221.179 1
Maximum	3.6670	35.8989	23.8597	0.0472	2.5569	1.4887	3.8275	1.3463	1.3816	2.5767	0.0000	4,609.216 6	4,609.216 6	1.2392	0.0000	4,640.196 6

	ROG	NOx	CO	SO2	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	50.75	0.00	35.69	52.83	0.00	28.90	0.00	0.00	0.00	0.00	0.00	0.00

4800 Long Beach Blvd - South Coast Air Basin, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1192	0.5920	1.5732	7.4500e-003	0.7593	4.4000e-003	0.7637	0.2031	4.0800e-003	0.2071		763.2497	763.2497	0.0294		763.9842
Total	0.7756	0.6092	3.0598	7.5300e-003	0.7593	0.0126	0.7719	0.2031	0.0123	0.2154	0.0000	765.9236	765.9236	0.0320	0.0000	766.7226

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1192	0.5920	1.5732	7.4500e-003	0.7593	4.4000e-003	0.7637	0.2031	4.0800e-003	0.2071		763.2497	763.2497	0.0294		763.9842
Total	0.7756	0.6092	3.0598	7.5300e-003	0.7593	0.0126	0.7719	0.2031	0.0123	0.2154	0.0000	765.9236	765.9236	0.0320	0.0000	766.7226

4800 Long Beach Blvd - South Coast Air Basin, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/15/2020	6	13	
2	Grading	Grading	7/16/2020	8/16/2020	6	27	
3	Paving	Paving	10/1/2020	6/15/2021	6	221	
4	Building Construction	Building Construction	10/15/2020	10/15/2021	6	314	
5	Architectural Coating	Architectural Coating	2/15/2021	11/6/2021	6	228	

Acres of Grading (Site Preparation Phase): 1.1

Acres of Grading (Grading Phase): 1.1

Acres of Paving: 0

Residential Indoor: 57,555; Residential Outdoor: 19,185; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

4800 Long Beach Blvd - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

4800 Long Beach Blvd - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020**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					5.3591	0.0000	5.3591	2.9061	0.0000	2.9061			0.0000			0.0000
Off-Road	2.6010	29.2449	16.3789	0.0340		1.2695	1.2695		1.1679	1.1679		3,297.0370	3,297.0370	1.0663		3,323.6952
Total	2.6010	29.2449	16.3789	0.0340	5.3591	1.2695	6.6285	2.9061	1.1679	4.0740		3,297.0370	3,297.0370	1.0663		3,323.6952

4800 Long Beach Blvd - South Coast Air Basin, Summer

3.2 Site Preparation - 2020**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	0.0583	0.0394	0.5299	1.4900e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		148.6987	148.6987	4.2900e-003		148.8059
Total	0.0583	0.0394	0.5299	1.4900e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		148.6987	148.6987	4.2900e-003		148.8059

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4116	0.0000	2.4116	1.3078	0.0000	1.3078			0.0000			0.0000
Off-Road	2.6010	29.2449	16.3789	0.0340		1.2695	1.2695		1.1679	1.1679	0.0000	3,297.0370	3,297.0370	1.0663		3,323.6952
Total	2.6010	29.2449	16.3789	0.0340	2.4116	1.2695	3.6810	1.3078	1.1679	2.4757	0.0000	3,297.0370	3,297.0370	1.0663		3,323.6952

4800 Long Beach Blvd - South Coast Air Basin, Summer

3.2 Site Preparation - 2020**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	0.0583	0.0394	0.5299	1.4900e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		148.6987	148.6987	4.2900e-003		148.8059
Total	0.0583	0.0394	0.5299	1.4900e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		148.6987	148.6987	4.2900e-003		148.8059

3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5640	0.0000	4.5640	2.4880	0.0000	2.4880			0.0000			0.0000
Off-Road	3.1196	34.5545	19.3803	0.0415		1.4830	1.4830		1.3762	1.3762		4,013.326 2	4,013.326 2	1.2057		4,043.468 1
Total	3.1196	34.5545	19.3803	0.0415	4.5640	1.4830	6.0470	2.4880	1.3762	3.8642		4,013.326 2	4,013.326 2	1.2057		4,043.468 1

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3.3 Grading - 2020**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	0.0369	1.2899	0.2682	3.5900e-003	0.0809	4.1700e-003	0.0850	0.0222	3.9900e-003	0.0262		389.9999	389.9999	0.0276		390.6896
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	0.0807	0.0546	0.7336	2.0700e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		205.8905	205.8905	5.9300e-003		206.0389
Total	0.1176	1.3444	1.0019	5.6600e-003	0.2821	5.7000e-003	0.2878	0.0755	5.4000e-003	0.0809		595.8905	595.8905	0.0335		596.7285

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0538	0.0000	2.0538	1.1196	0.0000	1.1196			0.0000			0.0000
Off-Road	3.1196	34.5545	19.3803	0.0415		1.4830	1.4830		1.3762	1.3762	0.0000	4,013.326 2	4,013.326 2	1.2057		4,043.468 1
Total	3.1196	34.5545	19.3803	0.0415	2.0538	1.4830	3.5368	1.1196	1.3762	2.4958	0.0000	4,013.326 2	4,013.326 2	1.2057		4,043.468 1

4800 Long Beach Blvd - South Coast Air Basin, Summer

3.3 Grading - 2020**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	0.0369	1.2899	0.2682	3.5900e-003	0.0809	4.1700e-003	0.0850	0.0222	3.9900e-003	0.0262		389.9999	389.9999	0.0276		390.6896
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	0.0807	0.0546	0.7336	2.0700e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		205.8905	205.8905	5.9300e-003		206.0389
Total	0.1176	1.3444	1.0019	5.6600e-003	0.2821	5.7000e-003	0.2878	0.0755	5.4000e-003	0.0809		595.8905	595.8905	0.0335		596.7285

3.4 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134		1,573.9096	1,573.9096	0.5090		1,586.6355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134		1,573.9096	1,573.9096	0.5090		1,586.6355

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3.4 Paving - 2020**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	0.0449	0.0303	0.4076	1.1500e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		114.3836	114.3836	3.3000e-003		114.4660
Total	0.0449	0.0303	0.4076	1.1500e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		114.3836	114.3836	3.3000e-003		114.4660

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134	0.0000	1,573.9096	1,573.9096	0.5090		1,586.6355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134	0.0000	1,573.9096	1,573.9096	0.5090		1,586.6355

4800 Long Beach Blvd - South Coast Air Basin, Summer

3.4 Paving - 2020**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	0.0449	0.0303	0.4076	1.1500e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		114.3836	114.3836	3.3000e-003		114.4660
Total	0.0449	0.0303	0.4076	1.1500e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		114.3836	114.3836	3.3000e-003		114.4660

3.4 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	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670		1,574.1488	1,574.1488	0.5091		1,586.8766
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670		1,574.1488	1,574.1488	0.5091		1,586.8766

4800 Long Beach Blvd - South Coast Air Basin, Summer

3.4 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	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644
Total	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670	0.0000	1,574.1488	1,574.1488	0.5091		1,586.8766
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670	0.0000	1,574.1488	1,574.1488	0.5091		1,586.8766

4800 Long Beach Blvd - South Coast Air Basin, Summer

3.4 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	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644
Total	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644

3.5 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

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3.5 Building Construction - 2020**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	6.6400e-003	0.2106	0.0512	5.1000e-004	0.0128	1.0400e-003	0.0138	3.6800e-003	1.0000e-003	4.6800e-003		54.5583	54.5583	3.4900e-003		54.6456
Worker	0.0583	0.0394	0.5299	1.4900e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		148.6987	148.6987	4.2900e-003		148.8059
Total	0.0650	0.2501	0.5811	2.0000e-003	0.1581	2.1500e-003	0.1603	0.0422	2.0200e-003	0.0442		203.2570	203.2570	7.7800e-003		203.4514

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

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3.5 Building Construction - 2020**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	6.6400e-003	0.2106	0.0512	5.1000e-004	0.0128	1.0400e-003	0.0138	3.6800e-003	1.0000e-003	4.6800e-003		54.5583	54.5583	3.4900e-003		54.6456
Worker	0.0583	0.0394	0.5299	1.4900e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		148.6987	148.6987	4.2900e-003		148.8059
Total	0.0650	0.2501	0.5811	2.0000e-003	0.1581	2.1500e-003	0.1603	0.0422	2.0200e-003	0.0442		203.2570	203.2570	7.7800e-003		203.4514

3.5 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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517

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3.5 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	5.6300e-003	0.1915	0.0465	5.1000e-004	0.0128	3.9000e-004	0.0132	3.6800e-003	3.7000e-004	4.0600e-003		54.1488	54.1488	3.3500e-003		54.2325
Worker	0.0544	0.0355	0.4881	1.4400e-003	0.1453	1.0800e-003	0.1464	0.0385	9.9000e-004	0.0395		143.8968	143.8968	3.8800e-003		143.9937
Total	0.0600	0.2270	0.5346	1.9500e-003	0.1581	1.4700e-003	0.1596	0.0422	1.3600e-003	0.0436		198.0455	198.0455	7.2300e-003		198.2262

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517

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3.5 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	5.6300e-003	0.1915	0.0465	5.1000e-004	0.0128	3.9000e-004	0.0132	3.6800e-003	3.7000e-004	4.0600e-003		54.1488	54.1488	3.3500e-003		54.2325
Worker	0.0544	0.0355	0.4881	1.4400e-003	0.1453	1.0800e-003	0.1464	0.0385	9.9000e-004	0.0395		143.8968	143.8968	3.8800e-003		143.9937
Total	0.0600	0.2270	0.5346	1.9500e-003	0.1581	1.4700e-003	0.1596	0.0422	1.3600e-003	0.0436		198.0455	198.0455	7.2300e-003		198.2262

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	0.7800					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	0.9989	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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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	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	0.0126	8.1900e-003	0.1126	3.3000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		33.2070	33.2070	9.0000e-004		33.2293
Total	0.0126	8.1900e-003	0.1126	3.3000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		33.2070	33.2070	9.0000e-004		33.2293

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	0.7800					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	0.9989	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

4800 Long Beach Blvd - South Coast Air Basin, 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	0.0126	8.1900e-003	0.1126	3.3000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		33.2070	33.2070	9.0000e-004		33.2293
Total	0.0126	8.1900e-003	0.1126	3.3000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		33.2070	33.2070	9.0000e-004		33.2293

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

4800 Long Beach Blvd - South Coast Air Basin, 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	0.1192	0.5920	1.5732	7.4500e-003	0.7593	4.4000e-003	0.7637	0.2031	4.0800e-003	0.2071		763.2497	763.2497	0.0294		763.9842
Unmitigated	0.1192	0.5920	1.5732	7.4500e-003	0.7593	4.4000e-003	0.7637	0.2031	4.0800e-003	0.2071		763.2497	763.2497	0.0294		763.9842

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	104.58	102.06	87.12	347,612	347,612
Total	104.58	102.06	87.12	347,612	347,612

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
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.554588	0.041680	0.206638	0.111313	0.012826	0.005773	0.022313	0.034878	0.002168	0.001490	0.004854	0.000717	0.000760

5.0 Energy Detail

Historical Energy Use: N

4800 Long Beach Blvd - South Coast Air Basin, Summer

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4800 Long Beach Blvd - South Coast Air Basin, 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					
Condo/Townhouse	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	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					
Condo/Townhouse	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

4800 Long Beach Blvd - South Coast Air Basin, Summer

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384
Unmitigated	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384

4800 Long Beach Blvd - South Coast Air Basin, Summer

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	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0449	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003		2.6739	2.6739	2.5800e-003		2.7384
Total	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384

4800 Long Beach Blvd - South Coast Air Basin, 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	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0449	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003		2.6739	2.6739	2.5800e-003		2.7384
Total	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

4800 Long Beach Blvd - South Coast Air Basin, Summer

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

4800 Long Beach Blvd - South Coast Air Basin, Winter

4800 Long Beach Blvd
South Coast Air Basin, Winter**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	18.00	Dwelling Unit	1.10	28,422.00	51

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	CH4 Intensity (lb/MWhr)	0.015	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

4800 Long Beach Blvd - South Coast Air Basin, Winter

Project Characteristics - Adjusted for 2030 RPS

Land Use - taken from project plan

Construction Phase - Per client provided info

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client provided info

Off-road Equipment - Per client information

Grading - per lot size and client info

Architectural Coating - architectural and area code compliance with Rule 1113

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No fireplaces per client info

Area Coating - compliance w rule 1113

Energy Use - 7% reduction per 2019 building code; net zero energy emissions

Water And Wastewater - City served by sanitary sewer only. 20% reduction per 2016 CALGreen

Solid Waste - Updated to reflect City diversion rate of 70%

Construction Off-road Equipment Mitigation - compliance w rule 403- watering twice a day

Mobile Land Use Mitigation -

Area Mitigation - zero VOC paints for interiors

Energy Mitigation - Per GPR Scorecard

Water Mitigation - Low flow appliances

Waste Mitigation -

Fleet Mix -

4800 Long Beach Blvd - South Coast Air Basin, Winter

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	10.00	228.00
tblConstructionPhase	NumDays	200.00	314.00
tblConstructionPhase	NumDays	4.00	27.00
tblConstructionPhase	NumDays	10.00	221.00
tblConstructionPhase	NumDays	2.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	T24E	243.83	226.76
tblEnergyUse	T24NG	10,792.56	0.00
tblFireplaces	NumberGas	15.30	0.00
tblFireplaces	NumberNoFireplace	1.80	18.00
tblFireplaces	NumberWood	0.90	0.00
tblGrading	AcresOfGrading	37.13	1.10
tblGrading	AcresOfGrading	13.00	1.10
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LandUseSquareFeet	18,000.00	28,422.00
tblLandUse	LotAcreage	1.13	1.10
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	8.28	4.97

4800 Long Beach Blvd - South Coast Air Basin, Winter

tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,172,772.46	938,217.97
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.90	0.00
tblWoodstoves	NumberNoncatalytic	0.90	0.00

2.0 Emissions Summary

4800 Long Beach Blvd - South Coast Air Basin, Winter

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					
2020	3.2462	35.9212	22.2620	0.0470	5.5044	1.4888	6.7749	2.9447	1.3817	4.1136	0.0000	4,589.778 6	4,589.778 6	1.2399	0.0000	4,620.775 7
2021	3.6783	23.3909	23.7723	0.0445	0.3034	1.1799	1.4833	0.0808	1.1243	1.2050	0.0000	4,179.410 9	4,179.410 9	0.8965	0.0000	4,201.824 2
Maximum	3.6783	35.9212	23.7723	0.0470	5.5044	1.4888	6.7749	2.9447	1.3817	4.1136	0.0000	4,589.778 6	4,589.778 6	1.2399	0.0000	4,620.775 7

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					
2020	3.2462	35.9212	22.2620	0.0470	2.5569	1.4888	3.8275	1.3463	1.3817	2.5768	0.0000	4,589.778 6	4,589.778 6	1.2399	0.0000	4,620.775 7
2021	3.6783	23.3909	23.7723	0.0445	0.3034	1.1799	1.4833	0.0808	1.1243	1.2050	0.0000	4,179.410 9	4,179.410 9	0.8965	0.0000	4,201.824 2
Maximum	3.6783	35.9212	23.7723	0.0470	2.5569	1.4888	3.8275	1.3463	1.3817	2.5768	0.0000	4,589.778 6	4,589.778 6	1.2399	0.0000	4,620.775 7

	ROG	NOx	CO	SO2	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	50.75	0.00	35.69	52.83	0.00	28.89	0.00	0.00	0.00	0.00	0.00	0.00

4800 Long Beach Blvd - South Coast Air Basin, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1140	0.6000	1.4751	7.0900e-003	0.7593	4.4100e-003	0.7637	0.2031	4.0900e-003	0.2072		726.0970	726.0970	0.0295		726.8344
Total	0.7704	0.6171	2.9617	7.1700e-003	0.7593	0.0126	0.7719	0.2031	0.0123	0.2154	0.0000	728.7710	728.7710	0.0321	0.0000	729.5728

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1140	0.6000	1.4751	7.0900e-003	0.7593	4.4100e-003	0.7637	0.2031	4.0900e-003	0.2072		726.0970	726.0970	0.0295		726.8344
Total	0.7704	0.6171	2.9617	7.1700e-003	0.7593	0.0126	0.7719	0.2031	0.0123	0.2154	0.0000	728.7710	728.7710	0.0321	0.0000	729.5728

4800 Long Beach Blvd - South Coast Air Basin, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/15/2020	6	13	
2	Grading	Grading	7/16/2020	8/16/2020	6	27	
3	Paving	Paving	10/1/2020	6/15/2021	6	221	
4	Building Construction	Building Construction	10/15/2020	10/15/2021	6	314	
5	Architectural Coating	Architectural Coating	2/15/2021	11/6/2021	6	228	

Acres of Grading (Site Preparation Phase): 1.1

Acres of Grading (Grading Phase): 1.1

Acres of Paving: 0

Residential Indoor: 57,555; Residential Outdoor: 19,185; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

4800 Long Beach Blvd - South Coast Air Basin, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

4800 Long Beach Blvd - South Coast Air Basin, Winter

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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020**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					5.3591	0.0000	5.3591	2.9061	0.0000	2.9061			0.0000			0.0000
Off-Road	2.6010	29.2449	16.3789	0.0340		1.2695	1.2695		1.1679	1.1679		3,297.0370	3,297.0370	1.0663		3,323.6952
Total	2.6010	29.2449	16.3789	0.0340	5.3591	1.2695	6.6285	2.9061	1.1679	4.0740		3,297.0370	3,297.0370	1.0663		3,323.6952

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.2 Site Preparation - 2020**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	0.0642	0.0433	0.4805	1.4000e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		139.4707	139.4707	4.0100e-003		139.5710
Total	0.0642	0.0433	0.4805	1.4000e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		139.4707	139.4707	4.0100e-003		139.5710

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4116	0.0000	2.4116	1.3078	0.0000	1.3078			0.0000			0.0000
Off-Road	2.6010	29.2449	16.3789	0.0340		1.2695	1.2695		1.1679	1.1679	0.0000	3,297.0370	3,297.0370	1.0663		3,323.6952
Total	2.6010	29.2449	16.3789	0.0340	2.4116	1.2695	3.6810	1.3078	1.1679	2.4757	0.0000	3,297.0370	3,297.0370	1.0663		3,323.6952

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.2 Site Preparation - 2020**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	0.0642	0.0433	0.4805	1.4000e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		139.4707	139.4707	4.0100e-003		139.5710
Total	0.0642	0.0433	0.4805	1.4000e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		139.4707	139.4707	4.0100e-003		139.5710

3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5640	0.0000	4.5640	2.4880	0.0000	2.4880			0.0000			0.0000
Off-Road	3.1196	34.5545	19.3803	0.0415		1.4830	1.4830		1.3762	1.3762		4,013.326 2	4,013.326 2	1.2057		4,043.468 1
Total	3.1196	34.5545	19.3803	0.0415	4.5640	1.4830	6.0470	2.4880	1.3762	3.8642		4,013.326 2	4,013.326 2	1.2057		4,043.468 1

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.3 Grading - 2020**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	0.0378	1.3068	0.2865	3.5300e-003	0.0809	4.2400e-003	0.0851	0.0222	4.0500e-003	0.0262		383.3392	383.3392	0.0287		384.0554
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	0.0888	0.0600	0.6653	1.9400e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		193.1132	193.1132	5.5600e-003		193.2522
Total	0.1266	1.3667	0.9517	5.4700e-003	0.2821	5.7700e-003	0.2878	0.0755	5.4600e-003	0.0810		576.4524	576.4524	0.0342		577.3076

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0538	0.0000	2.0538	1.1196	0.0000	1.1196			0.0000			0.0000
Off-Road	3.1196	34.5545	19.3803	0.0415		1.4830	1.4830		1.3762	1.3762	0.0000	4,013.326 2	4,013.326 2	1.2057		4,043.468 1
Total	3.1196	34.5545	19.3803	0.0415	2.0538	1.4830	3.5368	1.1196	1.3762	2.4958	0.0000	4,013.326 2	4,013.326 2	1.2057		4,043.468 1

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.3 Grading - 2020**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	0.0378	1.3068	0.2865	3.5300e-003	0.0809	4.2400e-003	0.0851	0.0222	4.0500e-003	0.0262		383.3392	383.3392	0.0287		384.0554
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	0.0888	0.0600	0.6653	1.9400e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		193.1132	193.1132	5.5600e-003		193.2522
Total	0.1266	1.3667	0.9517	5.4700e-003	0.2821	5.7700e-003	0.2878	0.0755	5.4600e-003	0.0810		576.4524	576.4524	0.0342		577.3076

3.4 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134		1,573.9096	1,573.9096	0.5090		1,586.6355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134		1,573.9096	1,573.9096	0.5090		1,586.6355

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.4 Paving - 2020**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	0.0493	0.0333	0.3696	1.0800e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		107.2851	107.2851	3.0900e-003		107.3623
Total	0.0493	0.0333	0.3696	1.0800e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		107.2851	107.2851	3.0900e-003		107.3623

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134	0.0000	1,573.9096	1,573.9096	0.5090		1,586.6355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8016	8.6246	8.1671	0.0163		0.4494	0.4494		0.4134	0.4134	0.0000	1,573.9096	1,573.9096	0.5090		1,586.6355

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.4 Paving - 2020**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	0.0493	0.0333	0.3696	1.0800e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		107.2851	107.2851	3.0900e-003		107.3623
Total	0.0493	0.0333	0.3696	1.0800e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		107.2851	107.2851	3.0900e-003		107.3623

3.4 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	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670		1,574.1488	1,574.1488	0.5091		1,586.8766
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670		1,574.1488	1,574.1488	0.5091		1,586.8766

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.4 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	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849
Total	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670	0.0000	1,574.1488	1,574.1488	0.5091		1,586.8766
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7411	7.9589	8.1200	0.0163		0.3989	0.3989		0.3670	0.3670	0.0000	1,574.1488	1,574.1488	0.5091		1,586.8766

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.4 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	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849
Total	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849

3.5 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.5 Building Construction - 2020**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	6.9400e-003	0.2106	0.0568	5.0000e-004	0.0128	1.0600e-003	0.0139	3.6800e-003	1.0100e-003	4.7000e-003		53.0755	53.0755	3.7300e-003		53.1688
Worker	0.0642	0.0433	0.4805	1.4000e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		139.4707	139.4707	4.0100e-003		139.5710
Total	0.0711	0.2539	0.5372	1.9000e-003	0.1581	2.1700e-003	0.1603	0.0422	2.0300e-003	0.0443		192.5462	192.5462	7.7400e-003		192.7398

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.5 Building Construction - 2020**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	6.9400e-003	0.2106	0.0568	5.0000e-004	0.0128	1.0600e-003	0.0139	3.6800e-003	1.0100e-003	4.7000e-003		53.0755	53.0755	3.7300e-003		53.1688
Worker	0.0642	0.0433	0.4805	1.4000e-003	0.1453	1.1100e-003	0.1464	0.0385	1.0200e-003	0.0396		139.4707	139.4707	4.0100e-003		139.5710
Total	0.0711	0.2539	0.5372	1.9000e-003	0.1581	2.1700e-003	0.1603	0.0422	2.0300e-003	0.0443		192.5462	192.5462	7.7400e-003		192.7398

3.5 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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517

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3.5 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	5.9100e-003	0.1911	0.0517	4.9000e-004	0.0128	4.0000e-004	0.0132	3.6800e-003	3.9000e-004	4.0700e-003		52.6748	52.6748	3.5800e-003		52.7642
Worker	0.0600	0.0390	0.4418	1.3500e-003	0.1453	1.0800e-003	0.1464	0.0385	9.9000e-004	0.0395		134.9597	134.9597	3.6300e-003		135.0504
Total	0.0659	0.2301	0.4935	1.8400e-003	0.1581	1.4800e-003	0.1596	0.0422	1.3800e-003	0.0436		187.6344	187.6344	7.2100e-003		187.8146

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517

4800 Long Beach Blvd - South Coast Air Basin, Winter

3.5 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	5.9100e-003	0.1911	0.0517	4.9000e-004	0.0128	4.0000e-004	0.0132	3.6800e-003	3.9000e-004	4.0700e-003		52.6748	52.6748	3.5800e-003		52.7642
Worker	0.0600	0.0390	0.4418	1.3500e-003	0.1453	1.0800e-003	0.1464	0.0385	9.9000e-004	0.0395		134.9597	134.9597	3.6300e-003		135.0504
Total	0.0659	0.2301	0.4935	1.8400e-003	0.1581	1.4800e-003	0.1596	0.0422	1.3800e-003	0.0436		187.6344	187.6344	7.2100e-003		187.8146

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	0.7800					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	0.9989	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

4800 Long Beach Blvd - South Coast Air Basin, 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	0.0138	8.9900e-003	0.1020	3.1000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		31.1445	31.1445	8.4000e-004		31.1655
Total	0.0138	8.9900e-003	0.1020	3.1000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		31.1445	31.1445	8.4000e-004		31.1655

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	0.7800					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	0.9989	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

4800 Long Beach Blvd - South Coast Air Basin, 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	0.0138	8.9900e-003	0.1020	3.1000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		31.1445	31.1445	8.4000e-004		31.1655
Total	0.0138	8.9900e-003	0.1020	3.1000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		31.1445	31.1445	8.4000e-004		31.1655

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

4800 Long Beach Blvd - South Coast Air Basin, 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	0.1140	0.6000	1.4751	7.0900e-003	0.7593	4.4100e-003	0.7637	0.2031	4.0900e-003	0.2072		726.0970	726.0970	0.0295		726.8344
Unmitigated	0.1140	0.6000	1.4751	7.0900e-003	0.7593	4.4100e-003	0.7637	0.2031	4.0900e-003	0.2072		726.0970	726.0970	0.0295		726.8344

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	104.58	102.06	87.12	347,612	347,612
Total	104.58	102.06	87.12	347,612	347,612

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
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.554588	0.041680	0.206638	0.111313	0.012826	0.005773	0.022313	0.034878	0.002168	0.001490	0.004854	0.000717	0.000760

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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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	lb/day										lb/day					
Condo/Townhouse	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	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					
Condo/Townhouse	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

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Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384
Unmitigated	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384

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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	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0449	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003		2.6739	2.6739	2.5800e-003		2.7384
Total	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384

4800 Long Beach Blvd - South Coast Air Basin, 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	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0449	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003		2.6739	2.6739	2.5800e-003		2.7384
Total	0.6564	0.0172	1.4866	8.0000e-005		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	2.6739	2.6739	2.5800e-003	0.0000	2.7384

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

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4800 Long Beach Blvd
South Coast Air Basin, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	18.00	Dwelling Unit	1.10	28,422.00	51

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	CH4 Intensity (lb/MWhr)	0.015	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Adjusted for 2030 RPS

Land Use - taken from project plan

Construction Phase - Per client provided info

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client provided info

Off-road Equipment - Per client information

Grading - per lot size and client info

Architectural Coating - architectural and area code compliance with Rule 1113

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No fireplaces per client info

Area Coating - compliance w rule 1113

Energy Use - 7% reduction per 2019 building code; net zero energy emissions

Water And Wastewater - City served by sanitary sewer only. 20% reduction per 2016 CALGreen

Solid Waste - Updated to reflect City diversion rate of 70%

Construction Off-road Equipment Mitigation - compliance w rule 403- watering twice a day

Mobile Land Use Mitigation -

Area Mitigation - zero VOC paints for interiors

Energy Mitigation - Per GPR Scorecard

Water Mitigation - Low flow appliances

Waste Mitigation -

Fleet Mix -

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Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	10.00	228.00
tblConstructionPhase	NumDays	200.00	314.00
tblConstructionPhase	NumDays	4.00	27.00
tblConstructionPhase	NumDays	10.00	221.00
tblConstructionPhase	NumDays	2.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	T24E	243.83	226.76
tblEnergyUse	T24NG	10,792.56	0.00
tblFireplaces	NumberGas	15.30	0.00
tblFireplaces	NumberNoFireplace	1.80	18.00
tblFireplaces	NumberWood	0.90	0.00
tblGrading	AcresOfGrading	37.13	1.10
tblGrading	AcresOfGrading	13.00	1.10
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LandUseSquareFeet	18,000.00	28,422.00
tblLandUse	LotAcreage	1.13	1.10
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	8.28	4.97

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tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,172,772.46	938,217.97
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.90	0.00
tblWoodstoves	NumberNoncatalytic	0.90	0.00

2.0 Emissions Summary

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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	0.1646	1.5218	1.1820	2.3500e-003	0.1107	0.0729	0.1835	0.0563	0.0684	0.1247	0.0000	203.6381	203.6381	0.0514	0.0000	204.9223
2021	0.4021	2.4554	2.4756	4.5600e-003	0.0307	0.1238	0.1546	8.1900e-003	0.1186	0.1268	0.0000	386.1299	386.1299	0.0759	0.0000	388.0271
Maximum	0.4021	2.4554	2.4756	4.5600e-003	0.1107	0.1238	0.1835	0.0563	0.1186	0.1268	0.0000	386.1299	386.1299	0.0759	0.0000	388.0271

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	0.1646	1.5218	1.1820	2.3500e-003	0.0576	0.0729	0.1305	0.0274	0.0684	0.0958	0.0000	203.6379	203.6379	0.0514	0.0000	204.9221
2021	0.4021	2.4554	2.4756	4.5600e-003	0.0307	0.1238	0.1546	8.1900e-003	0.1186	0.1268	0.0000	386.1294	386.1294	0.0759	0.0000	388.0266
Maximum	0.4021	2.4554	2.4756	4.5600e-003	0.0576	0.1238	0.1546	0.0274	0.1186	0.1268	0.0000	386.1294	386.1294	0.0759	0.0000	388.0266

	ROG	NOx	CO	SO2	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	37.53	0.00	15.69	44.77	0.00	11.47	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2020	9-30-2020	0.7421	0.7421
2	10-1-2020	12-31-2020	0.9480	0.9480
3	1-1-2021	3-31-2021	0.9949	0.9949
4	4-1-2021	6-30-2021	0.9986	0.9986
5	7-1-2021	9-30-2021	0.7208	0.7208
		Highest	0.9986	0.9986

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	0.1171	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	14.5122	14.5122	6.2000e-004	1.2000e-004	14.5643
Mobile	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560
Waste						0.0000	0.0000		0.0000	0.0000	1.0089	0.0000	1.0089	0.0596	0.0000	2.4994
Water						0.0000	0.0000		0.0000	0.0000	0.3319	3.2794	3.6113	1.2800e-003	7.5000e-004	3.8668
Total	0.1368	0.1101	0.4502	1.2800e-003	0.1320	1.8100e-003	0.1338	0.0354	1.7500e-003	0.0371	1.3408	136.2333	137.5741	0.0665	8.7000e-004	139.4969

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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	0.1171	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560
Waste						0.0000	0.0000		0.0000	0.0000	1.0089	0.0000	1.0089	0.0596	0.0000	2.4994
Water						0.0000	0.0000		0.0000	0.0000	0.2656	2.8872	3.1528	1.0400e-003	6.0000e-004	3.3581
Total	0.1368	0.1101	0.4502	1.2800e-003	0.1320	1.8100e-003	0.1338	0.0354	1.7500e-003	0.0371	1.2744	121.3289	122.6033	0.0657	6.0000e-004	124.4239

	ROG	NOx	CO	SO2	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	4.95	10.94	10.88	1.29	31.03	10.81

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	7/1/2020	7/15/2020	6	13	
2	Grading	Grading	7/16/2020	8/16/2020	6	27	
3	Paving	Paving	10/1/2020	6/15/2021	6	221	
4	Building Construction	Building Construction	10/15/2020	10/15/2021	6	314	
5	Architectural Coating	Architectural Coating	2/15/2021	11/6/2021	6	228	

Acres of Grading (Site Preparation Phase): 1.1

Acres of Grading (Grading Phase): 1.1

Acres of Paving: 0

Residential Indoor: 57,555; Residential Outdoor: 19,185; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (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	1	7.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020**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					0.0348	0.0000	0.0348	0.0189	0.0000	0.0189	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1901	0.1065	2.2000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988
Total	0.0169	0.1901	0.1065	2.2000e-004	0.0348	8.2500e-003	0.0431	0.0189	7.5900e-003	0.0265	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988

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3.2 Site Preparation - 2020**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	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360
Total	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360

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					0.0157	0.0000	0.0157	8.5000e-003	0.0000	8.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1901	0.1065	2.2000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988
Total	0.0169	0.1901	0.1065	2.2000e-004	0.0157	8.2500e-003	0.0239	8.5000e-003	7.5900e-003	0.0161	0.0000	19.4416	19.4416	6.2900e-003	0.0000	19.5988

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3.2 Site Preparation - 2020**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	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360
Total	3.8000e-004	2.9000e-004	3.2100e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.3000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.8354	0.8354	2.0000e-005	0.0000	0.8360

3.3 Grading - 2020**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					0.0616	0.0000	0.0616	0.0336	0.0000	0.0336	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0421	0.4665	0.2616	5.6000e-004		0.0200	0.0200		0.0186	0.0186	0.0000	49.1512	49.1512	0.0148	0.0000	49.5203
Total	0.0421	0.4665	0.2616	5.6000e-004	0.0616	0.0200	0.0816	0.0336	0.0186	0.0522	0.0000	49.1512	49.1512	0.0148	0.0000	49.5203

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3.3 Grading - 2020**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	5.0000e-004	0.0180	3.7300e-003	5.0000e-005	1.0700e-003	6.0000e-005	1.1300e-003	2.9000e-004	5.0000e-005	3.5000e-004	0.0000	4.7421	4.7421	3.4000e-004	0.0000	4.7507
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.3000e-004	9.2200e-003	3.0000e-005	2.6700e-003	2.0000e-005	2.6900e-003	7.1000e-004	2.0000e-005	7.3000e-004	0.0000	2.4024	2.4024	7.0000e-005	0.0000	2.4041
Total	1.5800e-003	0.0188	0.0130	8.0000e-005	3.7400e-003	8.0000e-005	3.8200e-003	1.0000e-003	7.0000e-005	1.0800e-003	0.0000	7.1444	7.1444	4.1000e-004	0.0000	7.1548

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					0.0277	0.0000	0.0277	0.0151	0.0000	0.0151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0421	0.4665	0.2616	5.6000e-004		0.0200	0.0200		0.0186	0.0186	0.0000	49.1511	49.1511	0.0148	0.0000	49.5203
Total	0.0421	0.4665	0.2616	5.6000e-004	0.0277	0.0200	0.0478	0.0151	0.0186	0.0337	0.0000	49.1511	49.1511	0.0148	0.0000	49.5203

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3.3 Grading - 2020**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	5.0000e-004	0.0180	3.7300e-003	5.0000e-005	1.0700e-003	6.0000e-005	1.1300e-003	2.9000e-004	5.0000e-005	3.5000e-004	0.0000	4.7421	4.7421	3.4000e-004	0.0000	4.7507
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.3000e-004	9.2200e-003	3.0000e-005	2.6700e-003	2.0000e-005	2.6900e-003	7.1000e-004	2.0000e-005	7.3000e-004	0.0000	2.4024	2.4024	7.0000e-005	0.0000	2.4041
Total	1.5800e-003	0.0188	0.0130	8.0000e-005	3.7400e-003	8.0000e-005	3.8200e-003	1.0000e-003	7.0000e-005	1.0800e-003	0.0000	7.1444	7.1444	4.1000e-004	0.0000	7.1548

3.4 Paving - 2020**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	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3992	56.3992	0.0182	0.0000	56.8552
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3992	56.3992	0.0182	0.0000	56.8552

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3.4 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079
Total	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079

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	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3991	56.3991	0.0182	0.0000	56.8551
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0317	0.3407	0.3226	6.4000e-004		0.0178	0.0178		0.0163	0.0163	0.0000	56.3991	56.3991	0.0182	0.0000	56.8551

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3.4 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079
Total	1.7600e-003	1.3500e-003	0.0150	4.0000e-005	4.3300e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.9051	3.9051	1.1000e-004	0.0000	3.9079

3.4 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	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3911	101.3911	0.0328	0.0000	102.2109
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3911	101.3911	0.0328	0.0000	102.2109

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3.4 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	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968
Total	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968

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	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3910	101.3910	0.0328	0.0000	102.2108
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0526	0.5651	0.5765	1.1500e-003		0.0283	0.0283		0.0261	0.0261	0.0000	101.3910	101.3910	0.0328	0.0000	102.2108

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3.4 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	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968
Total	2.9500e-003	2.1900e-003	0.0248	8.0000e-005	7.7900e-003	6.0000e-005	7.8500e-003	2.0700e-003	5.0000e-005	2.1200e-003	0.0000	6.7922	6.7922	1.8000e-004	0.0000	6.7968

3.5 Building Construction - 2020**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	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8166	60.8166	0.0113	0.0000	61.0989
Total	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8166	60.8166	0.0113	0.0000	61.0989

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3.5 Building Construction - 2020**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	2.3000e-004	7.1800e-003	1.8100e-003	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.6391	1.6391	1.1000e-004	0.0000	1.6419
Worker	1.9400e-003	1.4900e-003	0.0165	5.0000e-005	4.7800e-003	4.0000e-005	4.8200e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.3055	4.3055	1.2000e-004	0.0000	4.3086
Total	2.1700e-003	8.6700e-003	0.0183	7.0000e-005	5.2000e-003	8.0000e-005	5.2800e-003	1.3900e-003	6.0000e-005	1.4600e-003	0.0000	5.9446	5.9446	2.3000e-004	0.0000	5.9505

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	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8165	60.8165	0.0113	0.0000	61.0988
Total	0.0680	0.4954	0.4418	7.4000e-004		0.0267	0.0267		0.0258	0.0258	0.0000	60.8165	60.8165	0.0113	0.0000	61.0988

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3.5 Building Construction - 2020**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	2.3000e-004	7.1800e-003	1.8100e-003	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.6391	1.6391	1.1000e-004	0.0000	1.6419
Worker	1.9400e-003	1.4900e-003	0.0165	5.0000e-005	4.7800e-003	4.0000e-005	4.8200e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.3055	4.3055	1.2000e-004	0.0000	4.3086
Total	2.1700e-003	8.6700e-003	0.0183	7.0000e-005	5.2000e-003	8.0000e-005	5.2800e-003	1.3900e-003	6.0000e-005	1.4600e-003	0.0000	5.9446	5.9446	2.3000e-004	0.0000	5.9505

3.5 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	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2113	224.2113	0.0400	0.0000	225.2120
Total	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2113	224.2113	0.0400	0.0000	225.2120

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3.5 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	7.1000e-004	0.0240	6.0700e-003	6.0000e-005	1.5600e-003	5.0000e-005	1.6100e-003	4.5000e-004	5.0000e-005	5.0000e-004	0.0000	5.9973	5.9973	3.9000e-004	0.0000	6.0070
Worker	6.6700e-003	4.9500e-003	0.0560	1.7000e-004	0.0176	1.3000e-004	0.0178	4.6800e-003	1.2000e-004	4.8000e-003	0.0000	15.3591	15.3591	4.1000e-004	0.0000	15.3694
Total	7.3800e-003	0.0290	0.0621	2.3000e-004	0.0192	1.8000e-004	0.0194	5.1300e-003	1.7000e-004	5.3000e-003	0.0000	21.3564	21.3564	8.0000e-004	0.0000	21.3764

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	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2111	224.2111	0.0400	0.0000	225.2117
Total	0.2238	1.6841	1.5931	2.7200e-003		0.0845	0.0845		0.0816	0.0816	0.0000	224.2111	224.2111	0.0400	0.0000	225.2117

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3.5 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	7.1000e-004	0.0240	6.0700e-003	6.0000e-005	1.5600e-003	5.0000e-005	1.6100e-003	4.5000e-004	5.0000e-005	5.0000e-004	0.0000	5.9973	5.9973	3.9000e-004	0.0000	6.0070
Worker	6.6700e-003	4.9500e-003	0.0560	1.7000e-004	0.0176	1.3000e-004	0.0178	4.6800e-003	1.2000e-004	4.8000e-003	0.0000	15.3591	15.3591	4.1000e-004	0.0000	15.3694
Total	7.3800e-003	0.0290	0.0621	2.3000e-004	0.0192	1.8000e-004	0.0194	5.1300e-003	1.7000e-004	5.3000e-003	0.0000	21.3564	21.3564	8.0000e-004	0.0000	21.3764

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	0.0889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0250	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570
Total	0.1139	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570

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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	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740
Total	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740

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	0.0889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0250	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570
Total	0.1139	0.1741	0.2072	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	29.1071	29.1071	2.0000e-003	0.0000	29.1570

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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	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740
Total	1.4200e-003	1.0500e-003	0.0119	4.0000e-005	3.7500e-003	3.0000e-005	3.7800e-003	1.0000e-003	3.0000e-005	1.0200e-003	0.0000	3.2718	3.2718	9.0000e-005	0.0000	3.2740

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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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	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560
Unmitigated	0.0197	0.1079	0.2650	1.2700e-003	0.1320	7.8000e-004	0.1328	0.0354	7.2000e-004	0.0361	0.0000	118.1384	118.1384	4.7000e-003	0.0000	118.2560

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	104.58	102.06	87.12	347,612	347,612
Total	104.58	102.06	87.12	347,612	347,612

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.554588	0.041680	0.206638	0.111313	0.012826	0.005773	0.022313	0.034878	0.002168	0.001490	0.004854	0.000717	0.000760

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

[illegible]

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5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

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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			
Condo/Townhouse	90411.7	14.5122	6.2000e-004	1.2000e-004	14.5643
Total		14.5122	6.2000e-004	1.2000e-004	14.5643

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	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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Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1171	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104
Unmitigated	0.1171	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104

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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	8.8900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1027					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5400e-003	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104
Total	0.1171	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104

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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	8.8900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1027					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5400e-003	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104
Total	0.1171	2.1300e-003	0.1851	1.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	0.3032	0.3032	2.9000e-004	0.0000	0.3104

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.1528	1.0400e-003	6.0000e-004	3.3581
Unmitigated	3.6113	1.2800e-003	7.5000e-004	3.8668

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	0.938218 / 0.739357	3.6113	1.2800e-003	7.5000e-004	3.8668
Total		3.6113	1.2800e-003	7.5000e-004	3.8668

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	0.750574 / 0.739357	3.1528	1.0400e-003	6.0000e-004	3.3581
Total		3.1528	1.0400e-003	6.0000e-004	3.3581

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0089	0.0596	0.0000	2.4994
Unmitigated	1.0089	0.0596	0.0000	2.4994

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	4.97	1.0089	0.0596	0.0000	2.4994
Total		1.0089	0.0596	0.0000	2.4994

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	4.97	1.0089	0.0596	0.0000	2.4994
Total		1.0089	0.0596	0.0000	2.4994

9.0 Operational Offroad

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

Greenhouse Gas Emission Worksheet
N2O Mobile Emissions

4800 Long Beach Blvd.

From CalEEMod v.2016.3.2 Vehicle Fleet Mix Output:

Annual VMT: 347,612

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	0.554588	0.04	0.0221835	0.04	0.022184
Light Truck < 3750 lbs	0.04168	0.05	0.002084	0.06	0.002501
Light Truck 3751-5750 lbs	0.206638	0.05	0.0103319	0.06	0.012398
Med Truck 5751-8500 lbs	0.111313	0.12	0.0133576	0.2	0.022263
Lite-Heavy Truck 8501-10,000 lbs	0.012826	0.12	0.0015391	0.2	0.002565
Lite-Heavy Truck 10,001-14,000 lbs	0.005773	0.09	0.0005196	0.125	0.000722
Med-Heavy Truck 14,001-33,000 lbs	0.022313	0.06	0.0013388	0.05	0.001116
Heavy-Heavy Truck 33,001-60,000 lbs	0.034878	0.06	0.0020927	0.05	0.001744
Other Bus	0.002168	0.06	0.0001301	0.05	0.000108
Urban Bus	0.00149	0.06	0.0000894	0.05	7.45E-05
Motorcycle	0.004854	0.09	0.0004369	0.01	4.85E-05
School Bus	0.000717	0.06	4.302E-05	0.05	3.59E-05
Motor Home	0.00076	0.09	0.0000684	0.125	0.000095
Total	100.0%		0.0542149		0.065854

Total Emissions (metric tons) =

Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4 21 GWP
N2O 310 GWP
1 ton (short, US) = 0.90718474 metric ton

Annual Mobile Emissions:

	Total Emissions	Total CO2e units
N2O Emissions:	0.0229 metric tons N2O	7.10 metric tons CO2e
	Project Total:	7.10 metric tons CO2e

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.

** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

*** CalEEMod v.2016.3.2 results for mobile sources.

Appendix B

Noise Measurement and Analyses Data

Freq Weight : A
Time Weight : FAST
Level Range : 30-90
Max dB : 78.1 - 2018/08/29 16:31:40
Level Range : 30-90
SEL : 90.2
Leq : 62.5

No.s	Date Time	(dB)
1	2018/08/29 16:23:57	54.9
2	2018/08/29 16:23:58	60.9
3	2018/08/29 16:23:59	56.4
4	2018/08/29 16:24:00	57.2
5	2018/08/29 16:24:01	57.7
6	2018/08/29 16:24:02	58.6
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Level Range : 30-90
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269	2018/08/29	16:40:48	57.9
270	2018/08/29	16:40:49	57.5
271	2018/08/29	16:40:50	56.3
272	2018/08/29	16:40:51	55.6
273	2018/08/29	16:40:52	56.9
274	2018/08/29	16:40:53	57.9
275	2018/08/29	16:40:54	59.0
276	2018/08/29	16:40:55	58.6
277	2018/08/29	16:40:56	57.6
278	2018/08/29	16:40:57	56.4
279	2018/08/29	16:40:58	56.4
280	2018/08/29	16:40:59	55.6
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283	2018/08/29	16:41:02	54.0

284	2018/08/29	16:41:03	53.6
285	2018/08/29	16:41:04	54.9
286	2018/08/29	16:41:05	54.6
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288	2018/08/29	16:41:07	54.1
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495	2018/08/29	16:44:34	55.0
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502	2018/08/29	16:44:41	61.1
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540	2018/08/29	16:45:19	58.7
541	2018/08/29	16:45:20	59.6
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543	2018/08/29	16:45:22	59.8
544	2018/08/29	16:45:23	60.3
545	2018/08/29	16:45:24	60.3
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553	2018/08/29	16:45:32	60.3
554	2018/08/29	16:45:33	60.6
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556	2018/08/29	16:45:35	60.8
557	2018/08/29	16:45:36	61.0
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561	2018/08/29	16:45:40	59.8
562	2018/08/29	16:45:41	59.4
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565	2018/08/29	16:45:44	59.4
566	2018/08/29	16:45:45	57.5
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571	2018/08/29	16:45:50	56.8
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574	2018/08/29	16:45:53	54.2
575	2018/08/29	16:45:54	54.2
576	2018/08/29	16:45:55	54.6
577	2018/08/29	16:45:56	54.1
578	2018/08/29	16:45:57	54.0
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580	2018/08/29	16:45:59	53.4

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584	2018/08/29	16:46:03	54.3
585	2018/08/29	16:46:04	54.9
586	2018/08/29	16:46:05	56.1
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588	2018/08/29	16:46:07	55.8
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593	2018/08/29	16:46:12	55.6
594	2018/08/29	16:46:13	57.0
595	2018/08/29	16:46:14	57.7
596	2018/08/29	16:46:15	61.0
597	2018/08/29	16:46:16	61.4
598	2018/08/29	16:46:17	62.7
599	2018/08/29	16:46:18	62.0
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Freq Weight : A
Time Weight : FAST
Level Range : 40-100
Max dB : 85.3 - 2018/08/29 16:52:43
Level Range : 40-100
SEL : 97.7
Leq : 70.0

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4	2018/08/29 16:49:08	65.0
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6	2018/08/29 16:49:10	66.7
7	2018/08/29 16:49:11	69.2
8	2018/08/29 16:49:12	69.1
9	2018/08/29 16:49:13	67.5
10	2018/08/29 16:49:14	67.5
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12	2018/08/29 16:49:16	66.1
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20	2018/08/29 16:49:24	62.9
21	2018/08/29 16:49:25	62.5
22	2018/08/29 16:49:26	62.9
23	2018/08/29 16:49:27	64.8
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56	2018/08/29 16:50:00	74.8
57	2018/08/29 16:50:01	72.8
58	2018/08/29 16:50:02	74.5
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525	2018/08/29	16:57:49	66.1
526	2018/08/29	16:57:50	67.6
527	2018/08/29	16:57:51	65.2
528	2018/08/29	16:57:52	64.6
529	2018/08/29	16:57:53	63.0
530	2018/08/29	16:57:54	61.6
531	2018/08/29	16:57:55	63.7
532	2018/08/29	16:57:56	69.4
533	2018/08/29	16:57:57	76.3
534	2018/08/29	16:57:58	73.1
535	2018/08/29	16:57:59	73.4
536	2018/08/29	16:58:00	76.1
537	2018/08/29	16:58:01	74.2
538	2018/08/29	16:58:02	76.5
539	2018/08/29	16:58:03	73.9
540	2018/08/29	16:58:04	72.8
541	2018/08/29	16:58:05	69.4
542	2018/08/29	16:58:06	69.8
543	2018/08/29	16:58:07	71.1
544	2018/08/29	16:58:08	73.7
545	2018/08/29	16:58:09	69.9
546	2018/08/29	16:58:10	72.0
547	2018/08/29	16:58:11	71.9
548	2018/08/29	16:58:12	70.7
549	2018/08/29	16:58:13	72.2
550	2018/08/29	16:58:14	72.4
551	2018/08/29	16:58:15	71.8
552	2018/08/29	16:58:16	72.3
553	2018/08/29	16:58:17	71.2
554	2018/08/29	16:58:18	72.9
555	2018/08/29	16:58:19	71.9
556	2018/08/29	16:58:20	70.4
557	2018/08/29	16:58:21	71.4
558	2018/08/29	16:58:22	71.6
559	2018/08/29	16:58:23	72.8
560	2018/08/29	16:58:24	71.7
561	2018/08/29	16:58:25	69.9
562	2018/08/29	16:58:26	71.3
563	2018/08/29	16:58:27	70.7
564	2018/08/29	16:58:28	70.0
565	2018/08/29	16:58:29	70.3
566	2018/08/29	16:58:30	69.0
567	2018/08/29	16:58:31	70.5
568	2018/08/29	16:58:32	70.2
569	2018/08/29	16:58:33	68.8
570	2018/08/29	16:58:34	72.4
571	2018/08/29	16:58:35	71.6
572	2018/08/29	16:58:36	71.2
573	2018/08/29	16:58:37	71.4
574	2018/08/29	16:58:38	72.8
575	2018/08/29	16:58:39	74.4
576	2018/08/29	16:58:40	72.5
577	2018/08/29	16:58:41	66.4
578	2018/08/29	16:58:42	65.6
579	2018/08/29	16:58:43	63.6
580	2018/08/29	16:58:44	64.6

581	2018/08/29	16:58:45	65.0
582	2018/08/29	16:58:46	63.7
583	2018/08/29	16:58:47	69.7
584	2018/08/29	16:58:48	69.6
585	2018/08/29	16:58:49	70.7
586	2018/08/29	16:58:50	70.2
587	2018/08/29	16:58:51	71.9
588	2018/08/29	16:58:52	74.9
589	2018/08/29	16:58:53	69.5
590	2018/08/29	16:58:54	72.4
591	2018/08/29	16:58:55	72.1
592	2018/08/29	16:58:56	70.2
593	2018/08/29	16:58:57	72.0
594	2018/08/29	16:58:58	71.4
595	2018/08/29	16:58:59	69.0
596	2018/08/29	16:59:00	68.7
597	2018/08/29	16:59:01	69.1
598	2018/08/29	16:59:02	68.3
599	2018/08/29	16:59:03	66.5
600	2018/08/29	16:59:04	63.5

Train Vibration Calculation - 4800 Long Beach Boulevard

Project Site Distance to Rail Road 60 Feet

Type of Development

Wood-Frame Houses	-5
1-2 Story Masonry	-7
3-4 Story Masonry	-10
Large Masonry on Piles	-10
Large Masonry on Spread-footings	-13
Foundations on Rock	0

Wood-Frame Houses	-5
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Speed Correction

PT Speed	35 MPH
FT Speed	26 MPH
PT Speed Correction	-3.1 VdB
FT Speed Correction	-5.7 VdB

Locomotive Powered Passenger or Freight Curve

Initial Vibration at Distance	VdB	RMS	PPV
	83	0.014	0.057

Speed Reductions

	VdB	RMS	PPV
Passenger Adjusted VdB	80	0.010	0.040
Freight Adjusted VdB	74	0.005	0.021

Structure Reductions

	VdB	RMS	PPV
Passenger Adjusted VdB	75	0.006	0.022
Freight Adjusted VdB	69	0.003	0.012

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Assessment Manual*.

Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Roller

PPV{ref} = 0.21 in/sec
D = 50 feet
PPV at receptor = 0.074 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.019 in/sec
Lv = 85 VdB

Equipment = Dozer

PPV{ref} = 0.089 in/sec
D = 50 feet
PPV at receptor = 0.031 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.008 in/sec
Lv = 78 VdB

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, April 1995
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

Vibration Source Levels For Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate Lv at 25 feet *
Impact Pile Driver	upper range	1.518	112
	typical	0.644	104
Sonic Pile Driver	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall construction)		0.202	94
Hydromill (slurry wall construction)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Bulldozer	large	0.089	87
	small	0.003	58
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~1.7

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontal Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA		Human Response
	Low freq (30Hz)	Hi Freq (60 Hz)	
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.
75	35	50	
85	45	60	
90	50	65	

Impact Criteria

Land Use	Lv in VdB		
	Frequent Events (70+/day)	Occasional Events (30-70)	Infrequent (<30 events/day)
Category 1: Vibration Sensitive	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Roller

PPV{ref} = 0.21 in/sec
D = 90 feet
PPV at receptor = 0.031 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.008 in/sec
Lv = 78 VdB

Equipment = Dozer
PPV{ref} = 0.089 in/sec
D = 90 feet
PPV at receptor = 0.013 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.003 in/sec
Lv = 70 VdB

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, April 1995
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

Vibration Source Levels For Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate Lv at 25 feet *
Impact Pile Driver	upper range	1.518	112
	typical	0.644	104
Sonic Pile Driver	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall construction)		0.202	94
Hydromill (slurry wall construction)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Bulldozer	large	0.089	87
	small	0.003	58
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~1.7

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontal Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA		Human Response
	Low freq (30Hz)	Hi Freq (60 Hz)	
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.
75	35	50	
85	45	60	
90	50	65	

Impact Criteria

Land Use	Lv in VdB		
	Frequent Events (70+/day)	Occasional Events (30-70)	Infrequent (<30 events/day)
Category 1: Vibration Sensitive	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Roller

PPV{ref} = 0.21 in/sec
D = 150 feet
PPV at receptor = 0.014 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.004 in/sec
Lv = 71 VdB

Equipment = Dozer

PPV{ref} = 0.089 in/sec
D = 150 feet
PPV at receptor = 0.006 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.002 in/sec
Lv = 64 VdB

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, April 1995
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

Vibration Source Levels For Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate Lv at 25 feet *
Impact Pile Driver	upper range	1.518	112
	typical	0.644	104
Sonic Pile Driver	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall construction)		0.202	94
Hydromill (slurry wall construction)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Bulldozer	large	0.089	87
	small	0.003	58
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~1.7

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontal Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA		Human Response
	Low freq (30Hz)	Hi Freq (60 Hz)	
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.
75	35	50	
85	45	60	
90	50	65	

Impact Criteria

Land Use	Lv in VdB		
	Frequent Events (70+/day)	Occasional Events (30-70)	Infrequent (<30 events/day)
Category 1: Vibration Sensitive	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Roller

PPV{ref} = 0.21 in/sec
D = 235 feet
PPV at receptor = 0.007 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.002 in/sec
Lv = 65 VdB

Equipment = Dozer
PPV{ref} = 0.089 in/sec
D = 235 feet
PPV at receptor = 0.003 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.001 in/sec
Lv = 58 VdB

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, April 1995
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

Vibration Source Levels For Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate Lv at 25 feet *
Impact Pile Driver	upper range	1.518	112
	typical	0.644	104
Sonic Pile Driver	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall construction)		0.202	94
Hydromill (slurry wall construction)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Bulldozer	large	0.089	87
	small	0.003	58
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~1.7

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontal Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA		Human Response
	Low freq (30Hz)	Hi Freq (60 Hz)	
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.
75	35	50	
85	45	60	
90	50	65	

Impact Criteria

Land Use	Lv in VdB		
	Frequent Events (70+/day)	Occasional Events (30-70)	Infrequent (<30 events/day)
Category 1: Vibration Sensitive	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Roller

PPV{ref} = 0.21 in/sec
D = 380 feet
PPV at receptor = 0.004 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.001 in/sec
Lv = 59 VdB

Equipment = Dozer
PPV{ref} = 0.089 in/sec
D = 380 feet
PPV at receptor = 0.002 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.000 in/sec
Lv = 51 VdB

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, April 1995
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

Vibration Source Levels For Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate Lv at 25 feet *
Impact Pile Driver	upper range	1.518	112
	typical	0.644	104
Sonic Pile Driver	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall construction)		0.202	94
Hydromill (slurry wall construction)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Bulldozer	large	0.089	87
	small	0.003	58
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~1.7

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontal Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA		Human Response
	Low freq (30Hz)	Hi Freq (60 Hz)	
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.
75	35	50	
85	45	60	
90	50	65	

Impact Criteria

Land Use	Lv in VdB		
	Frequent Events (70+/day)	Occasional Events (30-70)	Infrequent (<30 events/day)
Category 1: Vibration Sensitive	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

[Home \(/\)](#) > [Programs \(/programs/\)](#) > [Environmental Review \(/programs/environmental-review/\)](#) > DNL Calculator

DNL Calculator

WARNING: HUD recommends the use of Microsoft Internet Explorer for performing noise calculations. The HUD Noise Calculator has an error when using Google Chrome unless the cache is cleared before each use of the calculator. HUD is aware of the problem and working to fix it in the programming of the calculator.

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](#).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	4800 Long Beach Boulevard - Existing
Record Date	9/24/2018
User's Name	Rincon Consultants, Inc.

Road # 1 Name:	Long Beach Boulevard
-----------------------	-----------------------------

Road #1

Vehicle Type	Cars ☒	Medium Trucks ☒	Heavy Trucks ☒
Effective Distance	45	45	45
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	23765	490	245
Night Fraction of ADT	10	3	2
Road Gradient (%)			2
Vehicle DNL	67.8301	59.2232	66.3265
Calculate Road #1 DNL	70.4565	Reset	

Add Road Source	Add Rail Source
Airport Noise Level	
Loud Impulse Sounds?	☐ Yes ☐ No

Combined DNL for all Road and Rail sources	0
Combined DNL including Airport	
Site DNL with Loud Impulse Sound	

Calculate

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - **Contact your Field or Regional Environmental Officer** (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

Day/Night Noise Level Assessment Tool Flowcharts (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

DNL Calculator

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The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](#).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	4800 Long Beach Boulevard - Existing plus Project
Record Date	3/27/2020
User's Name	Rincon Consultants, Inc.

Road # 1 Name:	Long Beach Boulevard
----------------	----------------------

Road #1

Vehicle Type	Cars ☒	Medium Trucks ☒	Heavy Trucks ☒
Effective Distance	45	45	45
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	23870	490	245
Night Fraction of ADT	10	3	2
Road Gradient (%)			2
Vehicle DNL	67.8492	59.2232	66.3265
Calculate Road #1 DNL	70.4686	Reset	

Add Road Source	Add Rail Source
-----------------	-----------------

Airport Noise Level	
---------------------	--

Loud Impulse Sounds? ☐ Yes ☐ No

Combined DNL for all Road and Rail sources	0
Combined DNL including Airport	
Site DNL with Loud Impulse Sound	

Calculate

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - **Contact your Field or Regional Environmental Officer** (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

Day/Night Noise Level Assessment Tool Flowcharts (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

SP and G
Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 09/24/2018
Case Description: Site Preparation/Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Multi-Family Residences	Residential	65.0	65.0	65.0

Equipment						
Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Dozer	No	40		81.7	50.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				

Night		Day	Calculated (dBA)		Day		Evening		
			Evening		Night				

Equipment									
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax

Grader			85.0	81.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor			84.0	80.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer			81.7	77.7	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	85.0	84.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			

SP and G

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				
</									

			SP and G							
Dozer			72.1	68.1	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	75.5	75.0	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #4 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Shield of Faith (church)	Residential	65.0	65.0	65.0

Equipment						
Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		235.0	0.0
Tractor	No	40	84.0		235.0	0.0
Dozer	No	40		81.7	235.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				

Night		Day	Calculated (dBA)		Day	Evening			
			Evening		Night				

Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Leq			Lmax	Leq	Lmax	Leq			

Grader			71.6	67.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor			70.6	66.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer			68.2	64.2	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	71.6	71.1	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			

**** Receptor #5 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment						
Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		380.0	0.0
Tractor	No	40	84.0		380.0	0.0
Dozer	No	40		81.7	380.0	0.0

Results

Noise Limit Exceedance (dBA)

Page 4

BC
Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 09/24/2018
Case Description: Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		Night		
		Daytime	Evening			
Multi-Family Residences	Residential	65.0	65.0	65.0		
	Equipment					
Estimated			Spec	Actual	Receptor	
	Impact	Usage	Lmax	Lmax	Distance	
Shielding						
Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
-----	-----	-----	-----	-----	-----	
Generator	No	50		80.6	50.0	
0.0						
Crane	No	16		80.6	50.0	
0.0						
All Other Equipment > 5 HP	No	50	85.0		50.0	
0.0						
Tractor	No	40	84.0		50.0	
0.0						
Welder / Torch	No	40		74.0	50.0	
0.0						
Welder / Torch	No	40		74.0	50.0	
0.0						
Welder / Torch	No	40		74.0	50.0	
0.0						

Results

Noise Limit Exceedance (dBA)						Noise Limits (dBA)			

Night		Day	Calculated (dBA) Evening			Day Night		Evening	

Equipment			Lmax			Leq			
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Generator				80.6	77.6	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane				80.6	72.6	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP				85.0	82.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor				84.0	80.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				74.0	70.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				74.0	70.0	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	BC	N/A	N/A	N/A	N/A	N/A
Welder / Torch				74.0	70.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total		85.0	85.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA)			Spec	Actual	Receptor	
		Daytime	Evening	Night				
Travel King Motel	Residential	65.0	65.0	65.0				
Equipment								
Estimated		Impact	Usage	Lmax	Lmax	Distance		(dBA)
Shielding		Device	(%)	(dBA)	(dBA)	(feet)		
Description								
-----		-----	-----	-----	-----	-----		
Generator		No	50		80.6	90.0		
0.0								
Crane		No	16		80.6	90.0		
0.0								
All Other Equipment > 5 HP		No	50	85.0		90.0		
0.0								
Tractor		No	40	84.0		90.0		
0.0								
Welder / Torch		No	40		74.0	90.0		
0.0								
Welder / Torch		No	40		74.0	90.0		
0.0								
Welder / Torch		No	40		74.0	90.0		
0.0								

Results

Noise Limit Exceedance (dBA)						Noise Limits (dBA)			

Night		Day	Calculated (dBA) Evening			Day Night		Evening	

Equipment				Lmax	Leq		Lmax	Leq	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Generator				75.5	72.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane				75.4	67.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP				79.9	76.9	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor				78.9	74.9	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				68.9	64.9	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Welder / Torch				68.9	64.9	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				68.9	64.9	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total		79.9	80.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description		Land Use		Baselines (dBA)				
				Daytime	Evening	Night		
Daycare/ Motel LB/ Ministries		Residential		65.0	65.0	65.0		
		Equipment		Spec	Actual	Receptor		
Estimated		Impact	Usage	Lmax	Lmax	Distance		
Shielding		Device	(%)	(dBA)	(dBA)	(feet)	(dBA)	
Description		-----	-----	-----	-----	-----		
Generator		No	50		80.6	150.0		
0.0								
Crane		No	16		80.6	150.0		
0.0								
All Other Equipment > 5 HP		No	50	85.0		150.0		
0.0								
Tractor		No	40	84.0		150.0		
0.0								
Welder / Torch		No	40		74.0	150.0		
0.0								
Welder / Torch		No	40		74.0	150.0		
0.0								
Welder / Torch		No	40		74.0	150.0		
0.0								

Results

Noise Limit Exceedance (dBA)										Noise Limits (dBA)	
				Calculated (dBA)		Day		Evening			
Night		Day		Evening		Night					
Equipment				Lmax		Leq		Lmax		Leq	
Lmax	Leq	Lmax	Leq	Lmax	Lmax	Leq	Leq	Lmax	Lmax	Leq	Leq
Generator				71.1	68.1			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane				71.0	63.0			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP				75.5	72.4			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor				74.5	70.5			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				64.5	60.5			N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	BC	N/A	N/A	N/A	N/A
Welder / Torch				64.5	60.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				64.5	60.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total		75.5	76.1	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #4 ****

Description	Land Use	Baselines (dBA)		Night		
		Daytime	Evening			
Shield of Faith (church)	Residential	65.0	65.0	65.0		
	Equipment					
Estimated		Spec	Actual	Receptor		
	Impact	Usage	Lmax	Lmax	Distance	
Shielding						
Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
-----	-----	-----	-----	-----	-----	
Generator	No	50		80.6	235.0	
0.0						
Crane	No	16		80.6	235.0	
0.0						
All Other Equipment > 5 HP	No	50	85.0		235.0	
0.0						
Tractor	No	40	84.0		235.0	
0.0						
Welder / Torch	No	40		74.0	235.0	
0.0						
Welder / Torch	No	40		74.0	235.0	
0.0						
Welder / Torch	No	40		74.0	235.0	
0.0						

Results

Noise Limit Exceedance (dBA)						Noise Limits (dBA)			

Night		Day		Calculated (dBA)		Day Night		Evening	
				Evening					

Equipment				Lmax	Leq			Lmax	Leq
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Generator				67.2	64.2	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane				67.1	59.1	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP				71.6	68.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor				70.6	66.6	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Welder / Torch				60.6	56.6	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				60.6	56.6	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch				60.6	56.6	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total		71.6	72.2	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #5 ****

Description	Land Use	Baselines (dBA)		Night	
		Daytime	Evening		
-----	-----	-----	-----	-----	
Single-Family Residences	Residential	65.0	65.0	65.0	
	Equipment				
-----	-----	-----	-----	-----	
Estimated		Spec	Actual	Receptor	
	Impact	Usage	Lmax	Lmax	Distance
Shielding	Device	(%)	(dBA)	(dBA)	(feet)
Description	-----	-----	-----	-----	-----

Generator	No	50		80.6	380.0
0.0					
Crane	No	16		80.6	380.0
0.0					
All Other Equipment > 5 HP	No	50	85.0		380.0
0.0					
Tractor	No	40	84.0		380.0
0.0					
Welder / Torch	No	40		74.0	380.0
0.0					
Welder / Torch	No	40		74.0	380.0
0.0					
Welder / Torch	No	40		74.0	380.0
0.0					

Results

Noise Limit Exceedance (dBA)								Noise Limits (dBA)	
-----								-----	
Night		Day		Calculated (dBA)		Day		Evening	
-----		-----		Evening		Night		-----	
Equipment									
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Generator				63.0	60.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane				62.9	55.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP				67.4	64.4	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor				66.4	62.4	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	BC	N/A	N/A		
Welder / Torch				56.4	52.4	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Welder / Torch				56.4	52.4	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Welder / Torch				56.4	52.4	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
		Total		67.4	68.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

P
Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 09/24/2018
Case Description: Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Multi-Family Residences	Residential	65.0	65.0	65.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	50.0	0.0
Paver	No	50		77.2	50.0	0.0
Roller	No	20		80.0	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Pavement Scarafier	No	20		89.5	50.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				
		Calculated (dBA)			Day		Evening		
					Night				

Description	Impact Device	Usage (%)	P Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	90.0	0.0
Paver	No	50		77.2	90.0	0.0
Roller	No	20		80.0	90.0	0.0
Tractor	No	40	84.0	90.0	90.0	0.0
Pavement Scarafier	No	20		89.5	90.0	0.0

Results

Noise Limit Exceedance (dBA)

Noise Limits (dBA)

Night		Calculated (dBA)			Day		Evening		
Night		Day			Night		Evening		
Equipment	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	N/A	N/A	N/A	73.7	69.7	N/A	N/A	N/A	N/A
Paver	N/A	N/A	N/A	72.1	69.1	N/A	N/A	N/A	N/A
Roller	N/A	N/A	N/A	74.9	67.9	N/A	N/A	N/A	N/A
Tractor	N/A	N/A	N/A	78.9	74.9	N/A	N/A	N/A	N/A
Pavement Scarafier	N/A	N/A	N/A	84.4	77.4	N/A	N/A	N/A	N/A
Total		N/A	N/A	84.4	80.4	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Daycare/ Motel LB/ Ministries	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	150.0	0.0
Paver	No	50		77.2	150.0	0.0
Roller	No	20		80.0	150.0	0.0
Tractor	No	40	84.0	90.0	150.0	0.0
Pavement Scarafier	No	20		89.5	150.0	0.0

Results

Noise Limit Exceedance (dBA)

Noise Limits (dBA)

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		Calculated (dBA)			Day		Evening		
Night		Day		Evening		Night		Evening	
Equipment	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	N/A	N/A	N/A	69.3	65.3	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	N/A	N/A	N/A	67.7	64.7	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	N/A	N/A	N/A	70.5	63.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	N/A	N/A	N/A	74.5	70.5	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	N/A	N/A	N/A	80.0	73.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		N/A	N/A	80.0	76.0	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #4 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Shield of Faith (church)	Residential	65.0	65.0	65.0

Description	Equipment		Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
	Impact Device	Usage (%)				
Concrete Mixer Truck	No	40		78.8	235.0	0.0
Paver	No	50		77.2	235.0	0.0
Roller	No	20		80.0	235.0	0.0
Tractor	No	40	84.0		235.0	0.0
Pavement Scarafier	No	20		89.5	235.0	0.0

Results

Noise Limit Exceedance (dBA) Noise Limits (dBA)

		Calculated (dBA)			Day		Evening		
Night		Day		Evening		Night		Evening	
Equipment	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	N/A	N/A	N/A	65.4	61.4	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	N/A	N/A	N/A	63.8	60.8	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	N/A	N/A	N/A	66.6	59.6	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	P	N/A	N/A			
Tractor			70.6	66.6		N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A		N/A	N/A			
Pavement Scarafier			76.1	69.1		N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A		N/A	N/A			
		Total	76.1	72.1		N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A		N/A	N/A			

**** Receptor #5 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Description	Equipment		Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
	Impact Device	Usage (%)				
Concrete Mixer Truck	No	40		78.8	380.0	0.0
Paver	No	50		77.2	380.0	0.0
Roller	No	20		80.0	380.0	0.0
Tractor	No	40	84.0		380.0	0.0
Pavement Scarafier	No	20		89.5	380.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				
Night	Day	Calculated (dBA)		Evening	Day	Night	Evening		
		Lmax	Leq				Lmax	Leq	Lmax
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Concrete Mixer Truck			61.2	57.2	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver			59.6	56.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller			62.4	55.4	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor			66.4	62.4	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier			71.9	64.9	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	71.9	67.9	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AC
Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 09/24/2018
Case Description: Architectural Coating

**** Receptor #1 ****

Description			Land Use	Baselines (dBA)				
				Daytime	Evening	Night		
Multi-Family Residences			Residential	65.0	65.0	65.0		
Equipment								
Description			Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)			No	40		77.7	50.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				
					</				

AC

Night		Day		Calculated (dBA) Evening		Day Night		Evening	
Equipment Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	N/A	N/A	72.6	68.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	Total	72.6	68.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description		Land Use		Baselines (dBA) Daytime		Evening	Night
Daycare/ Motel LB/ Ministries		Residential		65.0		65.0	65.0

Description		Equipment		Receptor		Estimated
		Impact	Usage	Spec	Actual	Shielding
		Device	(%)	Lmax	Lmax	Distance
				(dBA)	(dBA)	(feet)
Compressor (air)		No	40		77.7	150.0
						0.0

Results

Noise Limit Exceedance (dBA)

Noise Limits (dBA)

Night		Day		Calculated (dBA) Evening		Day Night		Evening	
Equipment Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	N/A	N/A	68.1	64.1	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	Total	68.1	64.1	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #4 ****

Description		Land Use		Baselines (dBA) Daytime		Evening	Night
Shield of Faith (church)		Residential		65.0		65.0	65.0

Description		Equipment		Receptor		Estimated
		Impact	Usage	Spec	Actual	Shielding
		Device	(%)	Lmax	Lmax	Distance
				(dBA)	(dBA)	(feet)

Compressor (air)	No	40	AC	77.7	235.0	0.0
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Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				