Appendix C

Air Quality

Appendix B Air Quality and GHG Supporting Tables and Model Output

Table B1
CalEEMod Construction Output: Amphitheater Venue, Attraction, Lot 22

West Harbor Construction - Venue Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	West Harbor Construction - Venue
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.20
Location	33.7309468486894, -118.27636210216771
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4614
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Recreational	1.00	User Defined Unit	2.50	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.26	9.39	13.3	0.02	0.34	0.56	0.86	0.31	0.14	0.43	—	2,427	2,427	0.10	0.11	3.26	2,442
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.92	19.8	19.6	0.05	0.73	4.05	4.78	0.68	1.67	2.35	—	6,383	6,383	0.31	0.55	0.24	6,555
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.93	7.16	9.40	0.02	0.25	0.84	1.09	0.23	0.25	0.48	—	2,127	2,127	0.09	0.10	1.11	2,159
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	1.31	1.72	< 0.005	0.05	0.15	0.20	0.04	0.04	0.09	—	352	352	0.02	0.02	0.18	357

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.26	9.39	13.3	0.02	0.34	0.56	0.86	0.31	0.14	0.43	—	2,427	2,427	0.10	0.11	3.26	2,442

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.92	19.8	19.6	0.05	0.73	4.05	4.78	0.68	1.67	2.35	—	6,383	6,383	0.31	0.55	0.24	6,555
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.93	7.16	9.40	0.02	0.25	0.84	1.09	0.23	0.25	0.48	—	2,127	2,127	0.09	0.10	1.11	2,159
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.17	1.31	1.72	< 0.005	0.05	0.15	0.20	0.04	0.04	0.09	—	352	352	0.02	0.02	0.18	357

3. Construction Emissions Details

3.1. Demolition Venue (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.93	2.92	< 0.005	0.07	—	0.07	0.06	—	0.06	—	432	432	0.02	< 0.005	—	434
Demolition	—	—	—	—	—	1.43	1.43	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	0.23	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	34.3	34.3	< 0.005	< 0.005	—	34.4

Demoliti	—	—	—	—	—	0.11	0.11	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.68	5.68	< 0.005	< 0.005	—	5.70
Demolition	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.14	1.77	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	393	393	0.02	0.01	0.04	398
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	2.21	0.84	0.01	0.02	0.46	0.49	0.02	0.13	0.15	—	1,737	1,737	0.09	0.27	0.10	1,821
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.7	31.7	< 0.005	< 0.005	0.05	32.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.18	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	138	138	0.01	0.02	0.14	145
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.25	5.25	< 0.005	< 0.005	0.01	5.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.8	22.8	< 0.005	< 0.005	0.02	24.0

3.3. Grading Venue (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	15.4	16.2	0.03	0.69	—	0.69	0.63	—	0.63	—	2,703	2,703	0.11	0.02	—	2,713
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.23	1.29	< 0.005	0.05	—	0.05	0.05	—	0.05	—	215	215	0.01	< 0.005	—	216
Dust From Material Movement	—	—	—	—	—	0.22	0.22	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.22	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.6	35.6	< 0.005	< 0.005	—	35.7
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.14	1.77	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	393	393	0.02	0.01	0.04	398
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	4.19	1.58	0.02	0.04	0.88	0.92	0.04	0.24	0.28	—	3,286	3,286	0.18	0.52	0.20	3,444
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.7	31.7	< 0.005	< 0.005	0.05	32.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.34	0.13	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	261	261	0.01	0.04	0.26	274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.25	5.25	< 0.005	< 0.005	0.01	5.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.2	43.2	< 0.005	0.01	0.04	45.3

3.5. Utilities Venue (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	1.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	1.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.9	23.9	< 0.005	< 0.005	—	24.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.95	3.95	< 0.005	< 0.005	—	3.97
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	1.39	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	277	277	0.01	0.01	1.01	281
Vendor	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	127	127	0.01	0.02	0.35	133
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	0.01	0.01	0.03	265
Vendor	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	127	127	0.01	0.02	0.01	132
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.9	21.9	< 0.005	< 0.005	0.04	22.2

Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.62	3.62	< 0.005	< 0.005	0.01	3.67
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.73	1.73	< 0.005	< 0.005	< 0.005	1.80
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Concrete Paving Venue (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.22	4.08	0.01	0.12	—	0.12	0.11	—	0.11	—	619	619	0.03	0.01	—	621
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.26	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	50.9	50.9	< 0.005	< 0.005	—	51.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.42	8.42	< 0.005	< 0.005	—	8.45
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	2.09	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	415	415	0.02	0.01	1.52	421
Vendor	0.02	0.72	0.35	< 0.005	0.01	0.17	0.18	< 0.005	0.05	0.05	—	635	635	0.03	0.09	1.74	663
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.8	32.8	< 0.005	< 0.005	0.05	33.2
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.2	52.2	< 0.005	0.01	0.06	54.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.43	5.43	< 0.005	< 0.005	0.01	5.50
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.01	9.02
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Construction Venue (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.09	9.22	10.5	0.02	0.34	—	0.34	0.31	—	0.31	—	1,874	1,874	0.08	0.02	—	1,880
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.09	9.22	10.5	0.02	0.34	—	0.34	0.31	—	0.31	—	1,874	1,874	0.08	0.02	—	1,880
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	4.67	5.33	0.01	0.17	—	0.17	0.16	—	0.16	—	950	950	0.04	0.01	—	953
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.85	0.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	157	157	0.01	< 0.005	—	158
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.17	2.78	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	553	553	0.02	0.02	2.02	561
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.19	2.36	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	524	524	0.02	0.02	0.05	531
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.26	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	270	270	0.01	0.01	0.44	273

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.6	44.6	< 0.005	< 0.005	0.07	45.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating Venue (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	3.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.45
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.41
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	131	131	0.01	< 0.005	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition Venue	Demolition	1/1/2025	2/3/2025	6.00	29.0	—
Grading Venue	Grading	2/4/2025	3/9/2025	6.00	29.0	—
Utilities Venue	Grading	3/10/2025	4/13/2025	6.00	30.0	—
Concrete Paving Venue	Building Construction	4/14/2025	5/18/2025	6.00	30.0	—
Construction Venue	Building Construction	5/19/2025	12/19/2025	6.00	185	—
Architectural Coating Venue	Architectural Coating	12/20/2025	12/25/2025	6.00	5.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition Venue	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition Venue	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading Venue	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading Venue	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading Venue	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading Venue	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading Venue	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43

Utilities Venue	Tractors/Loaders/Back	Diesel	Average	1.00	8.00	84.0	0.37
Concrete Paving Venue	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Concrete Paving Venue	Tractors/Loaders/Backhoes	Diesel	Average	2.00	5.00	84.0	0.37
Concrete Paving Venue	Air Compressors	Diesel	Average	1.00	5.00	37.0	0.48
Concrete Paving Venue	Pumps	Diesel	Average	1.00	4.00	11.0	0.74
Construction Venue	Cranes	Diesel	Average	1.00	6.00	367	0.29
Construction Venue	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Construction Venue	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Construction Venue	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Construction Venue	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Architectural Coating Venue	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition Venue	—	—	—	—
Demolition Venue	Worker	30.0	18.5	LDA,LDT1,LDT2
Demolition Venue	Vendor	—	10.2	HHDT,MHDT
Demolition Venue	Hauling	25.1	20.0	HHDT
Demolition Venue	Onsite truck	—	—	HHDT
Grading Venue	—	—	—	—
Grading Venue	Worker	30.0	18.5	LDA,LDT1,LDT2
Grading Venue	Vendor	—	10.2	HHDT,MHDT

Grading Venue	Hauling	47.4	20.0	HHDT
Grading Venue	Onsite truck	—	—	HHDT
Utilities Venue	—	—	—	—
Utilities Venue	Worker	20.0	18.5	LDA,LDT1,LDT2
Utilities Venue	Vendor	4.00	10.2	HHDT,MHDT
Utilities Venue	Hauling	0.00	20.0	HHDT
Utilities Venue	Onsite truck	—	—	HHDT
Concrete Paving Venue	—	—	—	—
Concrete Paving Venue	Worker	30.0	18.5	LDA,LDT1,LDT2
Concrete Paving Venue	Vendor	20.0	10.2	HHDT,MHDT
Concrete Paving Venue	Hauling	0.00	20.0	HHDT
Concrete Paving Venue	Onsite truck	—	—	HHDT
Construction Venue	—	—	—	—
Construction Venue	Worker	40.0	18.5	LDA,LDT1,LDT2
Construction Venue	Vendor	0.00	10.2	HHDT,MHDT
Construction Venue	Hauling	0.00	20.0	HHDT
Construction Venue	Onsite truck	—	—	HHDT
Architectural Coating Venue	—	—	—	—
Architectural Coating Venue	Worker	10.0	18.5	LDA,LDT1,LDT2
Architectural Coating Venue	Vendor	—	10.2	HHDT,MHDT
Architectural Coating Venue	Hauling	0.00	20.0	HHDT
Architectural Coating Venue	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating Venue	0.00	0.00	0.00	4,000	0.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition Venue	0.00	0.00	0.00	63,180	—
Grading Venue	11,000	—	30.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Recreational	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01

West Harbor Construction - Attraction Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	West Harbor Construction - Attraction
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.20
Location	33.7309468486894, -118.27636210216771
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4614
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Recreational	1.00	User Defined Unit	0.50	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.92	14.8	19.7	0.03	0.52	0.79	1.22	0.48	0.19	0.64	—	3,803	3,803	0.16	0.11	3.92	3,832
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.74	14.8	19.2	0.03	0.52	0.70	1.22	0.48	0.17	0.64	—	3,767	3,767	0.16	0.17	0.09	3,794
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	3.44	5.23	0.01	0.12	0.27	0.39	0.11	0.06	0.17	—	1,076	1,076	0.05	0.03	0.54	1,088
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.63	0.95	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	178	178	0.01	0.01	0.09	180

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.92	14.8	19.7	0.03	0.52	0.79	1.22	0.48	0.19	0.64	—	3,803	3,803	0.16	0.11	3.92	3,832

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.74	14.8	19.2	0.03	0.52	0.70	1.22	0.48	0.17	0.64	—	3,767	3,767	0.16	0.17	0.09	3,794
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.45	3.44	5.23	0.01	0.12	0.27	0.39	0.11	0.06	0.17	—	1,076	1,076	0.05	0.03	0.54	1,088
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.63	0.95	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	178	178	0.01	0.01	0.09	180

3. Construction Emissions Details

3.1. Utilities Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	1.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.1	23.1	< 0.005	< 0.005	—	23.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.82	3.82	< 0.005	< 0.005	—	3.83
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	0.01	0.01	0.03	265
Vendor	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	127	127	0.01	0.02	0.01	132
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.03	21.4
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.50	3.50	< 0.005	< 0.005	0.01	3.55
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.74
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	2.45	4.03	0.01	0.09	—	0.09	0.09	—	0.09	—	615	615	0.02	< 0.005	—	617
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.3	25.3	< 0.005	< 0.005	—	25.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.19	4.19	< 0.005	< 0.005	—	4.20
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.14	1.77	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	393	393	0.02	0.01	0.04	398
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.4	16.4	< 0.005	< 0.005	0.03	16.6

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.71	2.71	< 0.005	< 0.005	< 0.005	2.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Pile Driving Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.96	1.78	< 0.005	0.03	—	0.03	0.03	—	0.03	—	287	287	0.01	< 0.005	—	288
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.9	14.9	< 0.005	< 0.005	—	15.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.47	2.47	< 0.005	< 0.005	—	2.48
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	0.01	0.01	0.03	265
Vendor	0.01	1.19	0.40	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	1,024	1,024	0.05	0.16	0.06	1,073
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.0
Vendor	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	53.3	53.3	< 0.005	0.01	0.05	55.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.32
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.82	8.82	< 0.005	< 0.005	0.01	9.26
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Parts Delivery Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	4.38	5.45	0.01	0.13	—	0.13	0.12	—	0.12	—	900	900	0.04	0.01	—	903
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	4.38	5.45	0.01	0.13	—	0.13	0.12	—	0.12	—	900	900	0.04	0.01	—	903
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	1.08	1.34	< 0.005	0.03	—	0.03	0.03	—	0.03	—	222	222	0.01	< 0.005	—	223
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.20	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.7	36.7	< 0.005	< 0.005	—	36.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	1.39	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	277	277	0.01	0.01	1.01	281
Vendor	0.01	0.22	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	190	190	0.01	0.03	0.52	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	0.01	0.01	0.03	265
Vendor	0.01	0.23	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	190	190	0.01	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	65.6	65.6	< 0.005	< 0.005	0.11	66.5

Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.9	46.9	< 0.005	0.01	0.06	49.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.02	11.0
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	0.01	8.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Support Construction Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	9.96	10.7	0.02	0.38	—	0.38	0.35	—	0.35	—	2,022	2,022	0.08	0.02	—	2,028
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	9.96	10.7	0.02	0.38	—	0.38	0.35	—	0.35	—	2,022	2,022	0.08	0.02	—	2,028
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.82	0.88	< 0.005	0.03	—	0.03	0.03	—	0.03	—	166	166	0.01	< 0.005	—	167
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.15	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.5	27.5	< 0.005	< 0.005	—	27.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	2.09	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	415	415	0.02	0.01	1.52	421
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.14	1.77	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	393	393	0.02	0.01	0.04	398
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.8	32.8	< 0.005	< 0.005	0.05	33.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.43	5.43	< 0.005	< 0.005	0.01	5.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Concrete Paving Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.22	4.08	0.01	0.12	—	0.12	0.11	—	0.11	—	619	619	0.03	0.01	—	621
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.3	37.3	< 0.005	< 0.005	—	37.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.18	6.18	< 0.005	< 0.005	—	6.20
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	2.09	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	415	415	0.02	0.01	1.52	421
Vendor	0.01	0.36	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	317	317	0.01	0.04	0.87	332
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.04	24.4

Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.1	19.1	< 0.005	< 0.005	0.02	20.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.98	3.98	< 0.005	< 0.005	0.01	4.04
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.17	3.17	< 0.005	< 0.005	< 0.005	3.31
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Construction Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.84	1.14	< 0.005	0.04	—	0.04	0.03	—	0.03	—	214	214	0.01	< 0.005	—	215
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	2.09	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	415	415	0.02	0.01	1.52	421
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	65.6	65.6	< 0.005	< 0.005	0.11	66.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.02	11.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating Attraction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	3.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.45
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.41
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.70	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	138	138	0.01	< 0.005	0.51	140
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Utilities Attraction	Grading	1/1/2025	2/3/2025	6.00	29.0	—
Grading Attraction	Grading	2/26/2025	3/14/2025	6.00	15.0	—
Pile Driving Attraction	Building Construction	2/4/2025	2/25/2025	6.00	19.0	—
Parts Delivery Attraction	Building Construction	2/26/2025	6/10/2025	6.00	90.0	—
Support Construction Attraction	Building Construction	3/15/2025	4/18/2025	6.00	30.0	—
Concrete Paving Attraction	Building Construction	4/19/2025	5/14/2025	6.00	22.0	—

Construction Attraction	Building Construction	5/15/2025	7/23/2025	6.00	60.0	—
Architectural Coating Attraction	Architectural Coating	7/24/2025	7/29/2025	6.00	5.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Utilities Attraction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading Attraction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading Attraction	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Pile Driving Attraction	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Parts Delivery Attraction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Parts Delivery Attraction	Aerial Lifts	Diesel	Average	3.00	8.00	46.0	0.31
Support Construction Attraction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Support Construction Attraction	Forklifts	Diesel	Average	2.00	8.00	82.0	0.20
Support Construction Attraction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Support Construction Attraction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Concrete Paving Attraction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Concrete Paving Attraction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	5.00	84.0	0.37
Concrete Paving Attraction	Air Compressors	Diesel	Average	1.00	5.00	37.0	0.48

Concrete Paving Attraction	Pumps	Diesel	Average	1.00	4.00	11.0	0.74
Construction Attraction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Construction Attraction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Construction Attraction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Architectural Coating Attraction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Utilities Attraction	—	—	—	—
Utilities Attraction	Worker	20.0	18.5	LDA,LDT1,LDT2
Utilities Attraction	Vendor	4.00	10.2	HHDT,MHDT
Utilities Attraction	Hauling	0.00	20.0	HHDT
Utilities Attraction	Onsite truck	—	—	HHDT
Grading Attraction	—	—	—	—
Grading Attraction	Worker	30.0	18.5	LDA,LDT1,LDT2
Grading Attraction	Vendor	—	10.2	HHDT,MHDT
Grading Attraction	Hauling	0.00	20.0	HHDT
Grading Attraction	Onsite truck	—	—	HHDT
Pile Driving Attraction	—	—	—	—
Pile Driving Attraction	Worker	20.0	18.5	LDA,LDT1,LDT2
Pile Driving Attraction	Vendor	6.00	50.0	HHDT
Pile Driving Attraction	Hauling	0.00	20.0	HHDT
Pile Driving Attraction	Onsite truck	—	—	HHDT

Parts Delivery Attraction	—	—	—	—
Parts Delivery Attraction	Worker	20.0	18.5	LDA,LDT1,LDT2
Parts Delivery Attraction	Vendor	6.00	10.2	HHDT,MHDT
Parts Delivery Attraction	Hauling	0.00	20.0	HHDT
Parts Delivery Attraction	Onsite truck	—	—	HHDT
Support Construction Attraction	—	—	—	—
Support Construction Attraction	Worker	30.0	18.5	LDA,LDT1,LDT2
Support Construction Attraction	Vendor	0.00	10.2	HHDT,MHDT
Support Construction Attraction	Hauling	0.00	20.0	HHDT
Support Construction Attraction	Onsite truck	—	—	HHDT
Concrete Paving Attraction	—	—	—	—
Concrete Paving Attraction	Worker	30.0	18.5	LDA,LDT1,LDT2
Concrete Paving Attraction	Vendor	10.0	10.2	HHDT,MHDT
Concrete Paving Attraction	Hauling	0.00	20.0	HHDT
Concrete Paving Attraction	Onsite truck	—	—	HHDT
Construction Attraction	—	—	—	—
Construction Attraction	Worker	30.0	18.5	LDA,LDT1,LDT2
Construction Attraction	Vendor	0.00	10.2	HHDT,MHDT
Construction Attraction	Hauling	0.00	20.0	HHDT
Construction Attraction	Onsite truck	—	—	HHDT
Architectural Coating Attraction	—	—	—	—
Architectural Coating Attraction	Worker	10.0	18.5	LDA,LDT1,LDT2
Architectural Coating Attraction	Vendor	—	10.2	HHDT,MHDT
Architectural Coating Attraction	Hauling	0.00	20.0	HHDT
Architectural Coating Attraction	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating Attraction	0.00	0.00	0.00	4,000	0.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Recreational	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01

8. User Changes to Default Data

Screen	Justification
Land Use	Provided by project proponent and LAHD Engineering.
Construction: Construction Phases	Provided by project proponent and LAHD Engineering.
Construction: Off-Road Equipment	Provided by project proponent and LAHD Engineering.
Construction: Dust From Material Movement	Provided by project proponent and LAHD Engineering.
Construction: Trips and VMT	Provided by project proponent and LAHD Engineering.
Construction: Architectural Coatings	Assumed minimal coating of railings, small structures for Venue and Attraction.
Construction: Paving	Parking acreage provided by LAHD Engineering Division.

West Harbor Construction - Lot 22 St Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	West Harbor Construction - Lot 22 St
Construction Start Date	1/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.20
Location	33.7309468486894, -118.27636210216771
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4614
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Parking Lot	2,600	Space	18.1	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.50	47.2	36.5	0.16	1.42	7.70	9.11	1.32	2.53	3.85	—	21,046	21,046	1.05	2.29	33.9	21,787
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.76	7.25	6.37	0.02	0.25	0.77	1.02	0.23	0.25	0.48	—	2,515	2,515	0.12	0.23	1.51	2,588
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	1.32	1.16	< 0.005	0.05	0.14	0.19	0.04	0.05	0.09	—	416	416	0.02	0.04	0.25	428

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.50	47.2	36.5	0.16	1.42	7.70	9.11	1.32	2.53	3.85	—	21,046	21,046	1.05	2.29	33.9	21,787
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.76	7.25	6.37	0.02	0.25	0.77	1.02	0.23	0.25	0.48	—	2,515	2,515	0.12	0.23	1.51	2,588
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	1.32	1.16	< 0.005	0.05	0.14	0.19	0.04	0.05	0.09	—	416	416	0.02	0.04	0.25	428

3. Construction Emissions Details

3.1. Demolition 22Lot Buildings (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.13	0.13	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	1.95	1.75	< 0.005	0.08	—	0.08	0.07	—	0.07	—	300	300	0.01	< 0.005	—	301
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.36	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.7	49.7	< 0.005	< 0.005	—	49.9
Demolition	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.76	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.20	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	162	162	0.01	0.03	0.38	171
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.5	17.5	< 0.005	< 0.005	0.03	17.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.01	14.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.90	2.90	< 0.005	< 0.005	< 0.005	2.93
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.47

3.3. Grading 22Lot (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.68	2.56	0.01	0.11	—	0.11	0.10	—	0.10	—	597	597	0.02	< 0.005	—	599
Dust From Material Movement	—	—	—	—	—	0.33	0.33	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.49	0.47	< 0.005	0.02	—	0.02	0.02	—	0.02	—	98.8	98.8	< 0.005	< 0.005	—	99.1
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	1.39	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	277	277	0.01	0.01	1.01	281
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	17.4	6.76	0.09	0.18	3.79	3.97	0.18	1.04	1.22	—	14,170	14,170	0.77	2.22	32.9	14,885
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.04	24.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.65	0.61	0.01	0.02	0.34	0.36	0.02	0.09	0.11	—	1,281	1,281	0.07	0.20	1.28	1,344
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.98	3.98	< 0.005	< 0.005	0.01	4.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.30	0.11	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	212	212	0.01	0.03	0.21	223

3.5. Paving 22st Lot (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	1.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.82	1.09	< 0.005	0.04	—	0.04	0.04	—	0.04	—	166	166	0.01	< 0.005	—	166
Paving	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.4	27.4	< 0.005	< 0.005	—	27.5
Paving	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.76	210
Vendor	0.03	0.97	0.48	0.01	0.01	0.23	0.24	0.01	0.06	0.07	—	857	857	0.04	0.12	2.34	896
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.9	21.9	< 0.005	< 0.005	0.04	22.2
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	93.9	93.9	< 0.005	0.01	0.11	98.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.62	3.62	< 0.005	< 0.005	0.01	3.67
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.5	15.5	< 0.005	< 0.005	0.02	16.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition 22Lot Buildings	Demolition	4/1/2025	5/7/2025	6.00	32.0	—
Grading 22Lot	Grading	5/8/2025	6/15/2025	6.00	33.0	—
Paving 22st Lot	Paving	6/16/2025	7/31/2025	6.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition 22Lot Buildings	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition 22Lot Buildings	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition 22Lot Buildings	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading 22Lot	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading 22Lot	Graders	Diesel	Average	1.00	8.00	148	0.41

Grading 22Lot	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading 22Lot	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading 22Lot	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving 22st Lot	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving 22st Lot	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving 22st Lot	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading 22Lot	—	—	—	—
Grading 22Lot	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading 22Lot	Vendor	—	10.2	HHDT,MHDT
Grading 22Lot	Hauling	205	20.0	HHDT
Grading 22Lot	Onsite truck	—	—	HHDT
Paving 22st Lot	—	—	—	—
Paving 22st Lot	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving 22st Lot	Vendor	27.0	10.2	HHDT,MHDT
Paving 22st Lot	Hauling	0.00	20.0	HHDT
Paving 22st Lot	Onsite truck	—	—	HHDT
Demolition 22Lot Buildings	—	—	—	—
Demolition 22Lot Buildings	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition 22Lot Buildings	Vendor	—	10.2	HHDT,MHDT
Demolition 22Lot Buildings	Hauling	2.34	20.0	HHDT
Demolition 22Lot Buildings	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition 22Lot Buildings	0.00	0.00	0.00	6,500	—
Grading 22Lot	49,000	5,000	99.0	0.00	—
Paving 22st Lot	0.00	0.00	0.00	0.00	18.1

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Parking Lot	18.1	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01

8. User Changes to Default Data

Screen	Justification
Land Use	Provided by project proponent and LAHD Engineering.
Construction: Construction Phases	Provided by project proponent and LAHD Engineering.
Construction: Off-Road Equipment	Provided by project proponent and LAHD Engineering.
Construction: Dust From Material Movement	Provided by project proponent and LAHD Engineering.
Construction: Trips and VMT	Provided by project proponent and LAHD Engineering.
Construction: Architectural Coatings	Assumed minimal coating of railings, small structures for Venue and Attraction.
Construction: Paving	Parking acreage provided by LAHD Engineering Division.

Table B2
Vehicle Emissions

	Vehicle Activity				Peak Day Engine Exhaust Emissions										Peak Day Dust Emissions						Indirect Emissions from Electricity C			Annual Emissions									
	Vehicle Trips (1-way)	Transit Distance (miles, 1-way)	Offsite/Onsite	Operating Days	PM10	PM2.5	DPM	NOx	SOx	CO	VOC	CO2	CH4	N2O	PM10 Tire and Brake Wear	PM2.5 Tire and Brake Wear	PM10 Road Dust	PM2.5 Road Dust	PM10 Dust Total	PM2.5 Dust Total	CO2	CH4	N2O	PM10	PM2.5	DPM	NOx	SOx	CO	VOC	PM10 Road Dust	PM2.5 Road Dust	CO2	CH4	N2O	CO2e
Year 2025					(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(mton/day)	(mton/day)	(mton/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(mton/day)	(mton/day)	(mton/day)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(mty)	(mty)	(mty)	(mty)
Amphitheater																																			
Vehicles - Patrons	4,512	16.9	offsite	100	0.29	0.27	0.01	13.60	0.49	194.73	20.09	21.24	0.00	0.00	2.86	0.87	11.27	1.70	14.14	2.56	0.38	0.00	0.00	29.13	26.80	0.60	1,360.22	49.13	19,472.55	2,009.36	1,127.39	169.51	2,161.76	0.08	0.06	2,182.49
Vehicles - Employees	350	9.3	offsite	100	0.01	0.01	0.00	0.58	0.02	8.35	0.86	0.91	0.00	0.00	0.12	0.04	0.48	0.07	0.61	0.11	0.02	0.00	0.00	1.25	1.15	0.03	58.31	2.11	834.80	86.14	48.33	7.27	92.68	0.00	0.00	93.56
Shuttle Buses - Fleet Mix	300	3	offsite	100	0.00	0.00	0.00	1.09	0.00	73.31	0.08	2.10	0.00	0.00	0.28	0.09	0.13	0.02	0.41	0.11	0.01	0.00	0.00	0.11	0.10	0.00	109.45	0.25	7,330.93	8.27	13.31	2.00	211.39	0.23	0.04	229.23
Shuttle Buses - Mitigated - Electric	300	3	offsite	100	0	0	0	0	0	0	0	0	0	0	0.28	0.09	0.13	0.02	0.41	0.11	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.31	2.00	44.06	0.00	0.00	44.23
Tractor/Trailers	6	25	offsite	100	0.00	0.00	0.00	0.44	0.00	0.09	0.00	0.17	0.00	0.00	0.02	0.01	0.02	0.00	0.04	0.01	0.00	0.00	0.00	0.19	0.18	0.19	43.62	0.34	8.76	0.39	2.22	0.33	16.61	0.00	0.00	17.40
Food Trucks	24	20	offsite	100	0.02	0.02	0.02	1.99	0.01	0.36	0.05	0.54	0.00	0.00	0.06	0.02	0.07	0.01	0.13	0.03	0.00	0.00	0.00	2.25	2.15	2.25	198.82	1.13	35.63	4.55	7.10	1.07	53.85	0.00	0.01	56.38
Vehicles - Patrons	4,512	0.25	onsite	100	0.01	0.01	0.00	0.14	0.01	2.46	0.08	0.32	0.00	0.00																						0.00
Vehicles - Employees	350	0.25	onsite	100	0.00	0.00	0.00	0.01	0.00	0.19	0.01	0.02	0.00	0.00																						0.00
Shuttle Buses - Fleet Mix	300	0.25	onsite	100	0.00	0.00	0.00	0.26	0.00	10.21	0.01	0.47	0.00	0.00																						0.00
Shuttle Buses - Mitigated - Electric	300	0.25	onsite	100	0	0	0	0	0	0	0	0	0	0																						0.00
Tractor/Trailers	6	0.25	onsite	100	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00																						0.00
Food Trucks	24	0.25	onsite	100	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00																						0.00
Tower Attraction																																			
Vehicles - Employees	38	9.3	offsite	365	0.00	0.00	0.00	0.06	0.00	0.91	0.09	0.10	0.00	0.00	0.01	0.00	0.05	0.01	0.07	0.01	0.00	0.00	0.00	0.49	0.46	0.01	23.11	0.83	330.82	34.14	19.15	2.88	36.73	0.00	0.00	37.08
Vehicles - Employees	38	0.25	onsite	365	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00																						0.00
Unmitigated - Onsite and Offsite																																			
Patron and Employee Vehicles					0.32	0.29	0.01	14.40	0.53	206.65	21.13	22.59	0.00	0.00	3.00	0.91	11.81	1.78	14.81	2.68	0.40	0.00	0.00	30.87	28.41	0.63	1,441.64	52.07	20,638.17	2,129.64	1,194.88	179.66	2,291.16	0.08	0.07	2,313.13
Other Vehicles					0.03	0.03	0.03	3.83	0.02	83.97	0.15	3.29	0.00	0.00	0.35	0.12	0.23	0.03	0.58	0.15	0.02	0.00	0.00	2.54	2.43	2.44	351.89	1.72	7,375.32	13.21	22.62	3.40	281.85	0.23	0.05	303.01
Total Unmitigated					*0.34*	*0.32*	*0.03*	*18.23*	*0.54*	*290.62*	*21.28*	*25.88*	*0.00*	*0.00*	*3.35*	*1.03*	*12.04*	*1.81*	*15.39*	*2.83*	*0.41*	*0.00*	*0.00*	*33.41*	*30.84*	*3.07*	*1,793.53*	*53.79*	*28,013.48*	*2,142.86*	*1,217.50*	*183.06*	*2,573.01*	*0.31*	*0.12*	*2,616.14*
Mitigated - Onsite and Offsite																																			0.00
Patron and Employee Vehicles					0.32	0.29	0.01	14.40	0.53	206.65	21.13	22.59	0.00	0.00	3.00	0.91	11.81	1.78	14.81	2.68	0.40	0.00	0.00	30.87	28.41	0.63	1,441.64	52.07	20,638.17	2,129.64	1,194.88	179.66	2,291.16	0.08	0.07	2,313.13
Other Vehicles					0.03	0.02	0.03	2.47	0.01	0.45	0.05	0.72	0.00	0.00	0.35	0.12	0.23	0.03	0.58	0.15	0.44	0.00	0.00	2.44	2.33	2.44	242.44	1.47	44.38	4.94	22.62	3.40	114.52	0.00	0.01	118.01
Total Mitigated					*0.34*	*0.32*	*0.03*	*16.88*	*0.54*	*207.11*	*21.19*	*23.31*	*0.00*	*0.00*	*3.35*	*1.03*	*12.04*	*1.81*	*15.39*	*2.83*	*0.84*	*0.00*	*0.00*	*33.31*	*30.74*	*3.07*	*1,684.08*	*53.54*	*20,682.55*	*2,134.58*	*1,217.50*	*183.06*	*2,405.68*	*0.29*	*0.08*	*2,431.14*
Unmitigated Onsite																																			
Patron and Employee Vehicles					0.01	0.01	0.00	0.16	0.01	2.67	0.09	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Vehicles					0.00	0.00	0.00	0.31	0.00	10.22	0.01	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Unmitigated Onsite					*0.01*	*0.01*	*0.00*	*0.46*	*0.01*	*12.89*	*0.10*	*0.83*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Mitigated Onsite																																			
Patron and Employee Vehicles					0.01	0.01	0.00	0.16	0.01	2.67	0.09	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Vehicles					0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Mitigated Onsite					*0.01*	*0.01*	*0.00*	*0.20*	*0.01*	*2.68*	*0.09*	*0.36*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*

Notes:

Patron and employee vehicle trips and transit distance were provided by ICF in Traffic Section 8/8/23 03.8_Transportation_FP.docx. Amusement attraction patron trips are incorporated into overall patron trips

Onsite transit distance was obtained from GoogleEarth: 0.25 mi 1-way

Mitigated scenario includes AQ MM: Electric shuttle busses.

Table B3
Vehicle Emission Factors

	Engine Exhaust Emission Factors										Dust Emission Factors								Indirect GHG Emission Factors from Electricity Use			Electricity Consumption Rate (kW-hr/mi)	Conventional Fuel VMT / Total VMT	Electric VMT / Total VMT
	PM10	PM2.5	DPM	NOx	SOx	CO	VOC	CO2	CH4	N2O	PM10 Tire Wear	PM10 Brake Wear	PM2.5 Tire Wear	PM2.5 Brake Wear	PM10 Road Dust (Offsite)	PM2.5 Road Dust (Offsite)			CO2	CH4	N2O			
	(grams/mile)										(grams/mile)								(lb/MW-hr)					
Offsite Transit																								
Vehicles - Autos	0.00173	0.00159	0.00004	0.08091	0.00292	1.15833	0.11953	295.64346	0.01070	0.00872	0.00800	0.00904	0.00200	0.00316	0.07	0.01			513.50	0.03	0.00	0.37	0.94	0.06
Shuttle Bus	0.00053	0.00050	0.00001	0.55161	0.00128	36.94724	0.04170	2413.43787	2.62967	0.46754	0.03197	0.10769	0.00799	0.03769	0.07	0.01			513.50	0.03	0.00	2.10	0.97	0.03
Tractor Trailer	0.00566	0.00541	0.00563	1.31904	0.01025	0.26487	0.01172	1109.82705	0.02315	0.17611	0.01200	0.04371	0.00300	0.01530	0.07	0.01			513.50	0.03	0.00	1.05	1.00	0.00
Food Truck	0.02128	0.02036	0.02128	1.87879	0.01068	0.33666	0.04303	1131.09170	0.00535	0.17838	0.01200	0.04342	0.00300	0.01520	0.07	0.01			513.50	0.03	0.00	1.05	0.99	0.01
Onsite Transit																								
Vehicles - Autos	0.00416	0.00382	0.00006	0.05754	0.00397	0.99047	0.03194	401.66037	0.00818	0.00575		0.00652		0.00228	0.39	0.06			513.50	0.03	0.00	0.44	0.70	0.30
Shuttle Bus	0.00082	0.00077	0.00001	1.57127	0.00192	61.73124	0.06453	6500.91926	4.31219	1.28804		0.10838		0.03793	0.39	0.06			513.50	0.03	0.00	2.80	0.97	0.03
Tractor Trailer	0.00446	0.00426	0.00439	2.57605	0.01839	0.48452	0.04606	2000.92565	0.07434	0.31797		0.06140		0.02149	0.39	0.06			513.50	0.03	0.00	1.67	1.00	0.00
Food Truck	0.07046	0.06741	0.07045	2.95258	0.01874	0.53373	0.27061	1985.93693	0.02173	0.31323		0.06119		0.02142	0.39	0.06			513.50	0.03	0.00	1.67	0.99	0.01

Source:
Composite emission factors reflect composite of diesel, natural gas, plug-in hybrid, and electric vehicles.
Exhaust emission factors were obtained from EMFAC 2021.

PM brake wear emission factors were obtained from EMFAC 2021.

PM entrained road dust emission factors are from CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust. Revised and Updated March 2021.
GHG indirect emission factors from the use of electricity were obtained from The Climate Registry 2022 Emission Factors. Table 3.1 for CAMX eGrid Subregion. May 2022.

Source:
EMFAC 2021

Table B4
Vehicle Emission Factors - Transit - EMFAC Output

Offsite Transit

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumpti
Los Angeles (SC)	2025	LDA	Aggregate	Aggregate	Gasoline	3261717.88	128067964.6	128067964.6	0	15146578.41	0
Los Angeles (SC)	2025	LDA	Aggregate	Aggregate	Diesel	8115.47098	234266.2649	234266.2649	0	33198.01165	0
Los Angeles (SC)	2025	LDA	Aggregate	Aggregate	Electricity	193284.342	9414235.572	0	9414235.572	962630.9064	3634671.93
Los Angeles (SC)	2025	LDA	Aggregate	Aggregate	Plug-in Hybr	98452.1923	4526938.566	2173660.688	2353277.878	407099.8154	710760.0582
Los Angeles (SC)	2025	LDT1	Aggregate	Aggregate	Gasoline	307303.616	11174163.84	11174163.84	0	1354474.758	0
Los Angeles (SC)	2025	LDT1	Aggregate	Aggregate	Diesel	107.136004	2101.61697	2101.61697	0	300.6545051	0
Los Angeles (SC)	2025	LDT1	Aggregate	Aggregate	Electricity	1046.87555	45556.73451	0	45556.73451	4989.349211	17588.65952
Los Angeles (SC)	2025	LDT1	Aggregate	Aggregate	Plug-in Hybr	677.134296	34223.91571	14817.78225	19406.13347	2799.950315	5861.230703
Los Angeles (SC)	2025	LDT2	Aggregate	Aggregate	Gasoline	1598846.9	65845213.92	65845213.92	0	7529127.141	0
Los Angeles (SC)	2025	LDT2	Aggregate	Aggregate	Diesel	5200.08586	223595.1163	223595.1163	0	25066.83445	0
Los Angeles (SC)	2025	LDT2	Aggregate	Aggregate	Electricity	14017.6954	505882.2277	0	505882.2277	71409.26545	195312.2926
Los Angeles (SC)	2025	LDT2	Aggregate	Aggregate	Plug-in Hybr	16355.8529	792451.7915	359033.7273	433418.0641	67631.45183	130905.1733
Los Angeles (SC)	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	3045.50821	166109.7043	166109.7043	0	43459.40214	0
Los Angeles (SC)	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	11.3148646	540.869077	0	540.869077	161.4631178	565.2097315
Los Angeles (SC)	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	88.6155946	4861.964162	4861.964162	0	1264.544535	0
Los Angeles (SC)	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	4793.94054	197687.3174	197687.3174	0	55417.95262	0
Los Angeles (SC)	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	44.1737849	2089.691847	0	2089.691847	510.6489534	2183.784756
Los Angeles (SC)	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	17.4336753	762.1095311	762.1095311	0	201.533286	0
Los Angeles (SC)	2025	UBUS	Aggregate	Aggregate	Gasoline	434.388786	30651.97854	30651.97854	0	1737.555145	0
Los Angeles (SC)	2025	UBUS	Aggregate	Aggregate	Diesel	6.35643167	939.4744674	939.4744674	0	25.42572667	0
Los Angeles (SC)	2025	UBUS	Aggregate	Aggregate	Electricity	152.244373	15265.9648	0	15265.9648	608.977491	32087.93491
Los Angeles (SC)	2025	UBUS	Aggregate	Aggregate	Natural Gas	3807.33633	407436.691	407436.691	0	15229.34531	0

Vehicle Category	Fuel	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL
LDA	Gasoline	5.588314671	0	3.912765066	9.501079736	0.19344687	0	0.031838926	0.225285796	0.282341532	0.433756655	0.941383984
LDA	Diesel	0.056281023	0	0	0.056281023	0.006443624	0	0	0.006443624	0.000516469	0.000809782	0.007769875
LDA	Electricity	0	0	0	0	0	0	0	0	0.020754837	0.015872494	0.03662733
LDA	Plug-in Hybr	0.016609894	0	0.05002917	0.066639064	0.003293844	0	0.000867213	0.004161056	0.009980191	0.007242579	0.021383827
LDT1	Gasoline	2.001102899	0	0.580351117	2.581454016	0.027715292	0	0.004195489	0.031910781	0.024634814	0.046673508	0.103219103
LDT1	Diesel	0.003488566	0	0	0.003488566	0.00058848	0	0	0.00058848	4.63327E-06	1.00545E-05	0.000603168
LDT1	Electricity	0	0	0	0	0	0	0	0	0.000100435	7.69527E-05	0.000177388
LDT1	Plug-in Hybr	0.000113229	0	0.000344091	0.00045732	1.56768E-05	0	4.19803E-06	1.98748E-05	7.54508E-05	5.48993E-05	0.000150225
LDT2	Gasoline	5.002759071	0	2.465404979	7.46816405	0.102150299	0	0.015812421	0.11796272	0.145163848	0.262715798	0.525842366
LDT2	Diesel	0.010799118	0	0	0.010799118	0.001226847	0	0	0.001226847	0.000492943	0.000878769	0.002598559
LDT2	Electricity	0	0	0	0	0	0	0	0	0.001115279	0.000851052	0.001966332
LDT2	Plug-in Hybr	0.002743534	0	0.008311341	0.011054875	0.000439936	0	0.000117057	0.000556992	0.001747057	0.001269655	0.003573704
T6 Instate Delivery Class 7	Diesel	0.140006711	0.032519696	0.075554538	0.248080945	0.001002798	1.59102E-05	0	0.001018708	0.000549314	0.002805684	0.004373706
T6 Instate Delivery Class 7	Electricity	0	0	0	0	0	0	0	0	1.78862E-06	4.56779E-06	6.35641E-06
T6 Instate Delivery Class 7	Natural Gas	0.000785157	0.000512394	0	0.001297551	3.78117E-06	1.14561E-06	0	4.92678E-06	1.60782E-05	8.21212E-05	0.000103126
T6 Instate Other Class 4	Diesel	0.245611535	0.067295374	0.102209848	0.415116757	0.004239297	0.00026052	0	0.004499817	0.000653739	0.00332902	0.008482576
T6 Instate Other Class 4	Electricity	0	0	0	0	0	0	0	0	6.91047E-06	1.7595E-05	2.45055E-05
T6 Instate Other Class 4	Natural Gas	9.55954E-05	0.000106303	0	0.000201899	7.16516E-07	2.91316E-07	0	1.00783E-06	2.52025E-06	1.28338E-05	1.63619E-05
UBUS	Gasoline	0.005566772	0	0.001421075	0.006987848	6.03556E-05	0	1.42923E-06	6.17848E-05	9.23974E-05	0.001241211	0.001395393
UBUS	Diesel	0.000812775	0	0	0.000812775	6.21296E-06	0	0	6.21296E-06	9.19713E-06	3.98699E-05	5.528E-05
UBUS	Electricity	0	0	0	0	0	0	0	0	0.00013164	0.000323478	0.000455118
UBUS	Natural Gas	0.268432921	0	0	0.268432921	0.000183666	0	0	0.000183666	0.003769495	0.017270943	0.021224103

Vehicle Category	Fuel	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX
LDA	Gasoline	0.210391122	0	0.034627737	0.245018859	1.129366128	1.239304729	2.613689716	39897.18324	0	1135.060588	41032.24383
LDA	Diesel	0.006734977	0	0	0.006734977	0.002065875	0.002313662	0.011114514	64.6489101	0	0	64.6489101
LDA	Electricity	0	0	0	0	0.083019347	0.045349981	0.128369328	0	0	0	0
LDA	Plug-in Hybr	0.003582356	0	0.000943173	0.004525528	0.039920765	0.020693084	0.065139377	724.4496634	0	28.45921346	752.9088768
LDT1	Gasoline	0.030142909	0	0.004562977	0.034705886	0.098539258	0.13335288	0.266598023	4166.897281	0	127.2494458	4294.146727
LDT1	Diesel	0.000615088	0	0	0.000615088	1.85331E-05	2.87272E-05	0.000662348	1.021311364	0	0	1.021311364
LDT1	Electricity	0	0	0	0	0.000401742	0.000219865	0.000621606	0	0	0	0
LDT1	Plug-in Hybr	1.705E-05	0	4.56574E-06	2.16157E-05	0.000301803	0.000156855	0.000480274	4.943204868	0	0.208114233	5.151319101
LDT2	Gasoline	0.111097771	0	0.01719745	0.128295221	0.580655393	0.750616564	1.459567178	24933.37001	0	691.9724852	25625.34249
LDT2	Diesel	0.001282319	0	0	0.001282319	0.001971771	0.00251077	0.00576486	77.7858257	0	0	77.7858257
LDT2	Electricity	0	0	0	0	0.004461118	0.002431578	0.006892696	0	0	0	0
LDT2	Plug-in Hybr	0.00047847	0	0.00012731	0.00060578	0.006988229	0.003627585	0.011221594	119.7314958	0	5.478689564	125.2101854
T6 Instate Delivery Class 7	Diesel	0.00104814	1.66296E-05	0	0.00106477	0.002197255	0.008016239	0.011278264	197.7171832	6.98544996	0	204.7026331
T6 Instate Delivery Class 7	Electricity	0	0	0	0	7.15447E-06	1.30508E-05	2.02053E-05	0	0	0	0
T6 Instate Delivery Class 7	Natural Gas	4.11237E-06	1.24596E-06	0	5.35833E-06	6.43128E-05	0.000234632	0.000304303	4.721686326	0.39980222	0	5.121488546
T6 Instate Other Class 4	Diesel	0.004430979	0.0002723	0	0.004703279	0.002614956	0.009511487	0.016829721	237.4637713	11.7533971	0	249.2171684
T6 Instate Other Class 4	Electricity	0	0	0	0	2.76419E-05	5.02715E-05	7.79134E-05	0	0	0	0
T6 Instate Other Class 4	Natural Gas	7.79276E-07	3.16833E-07	0	1.09611E-06	1.0081E-05	3.6668E-05	4.78451E-05	0.729968716	0.08806319	0	0.818031901
UBUS	Gasoline	6.56422E-05	0	1.55442E-06	6.71966E-05	0.00036959	0.003546316	0.003983102	62.82421918	0	0.180566473	63.00478565
UBUS	Diesel	6.49389E-06	0	0	6.49389E-06	3.67885E-05	0.000113914	0.000157196	1.807545015	0	0	1.807545015
UBUS	Electricity	0	0	0	0	0.000526559	0.000924223	0.001450782	0	0	0	0
UBUS	Natural Gas	0.00019197	0	0	0.00019197	0.015077978	0.049345552	0.064615501	1143.773404	0	0	1143.773404

Vehicle Category	Fuel	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX
LDA	Gasoline	0.370180645	0	1.079430316	1.449610962	0.642482474	0	0.522443274	1.164925748	1.397086857	0	4.845494859	6.242581716
LDA	Diesel	0.000496641	0	0	0.000496641	0.010185462	0	0	0.010185462	0.010692394	0	0	0.010692394
LDA	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
LDA	Plug-in Hybr	0.002582995	0	0.018005241	0.020588236	0.003007451	0	0.009052043	0.012059494	0.008157112	0	0.073078479	0.081235591
LDT1	Gasoline	0.11155099	0	0.157382803	0.268933793	0.139783099	0	0.057349005	0.197132104	0.497923013	0	0.810666325	1.308589339
LDT1	Diesel	3.50698E-05	0	0	3.50698E-05	0.000160908	0	0	0.000160908	0.000755033	0	0	0.000755033
LDT1	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
LDT1	Plug-in Hybr	1.75868E-05	0	0.000123726	0.000141313	2.04541E-05	0	6.21524E-05	8.26066E-05	5.56068E-05	0	0.000502619	0.000558226
LDT2	Gasoline	0.248091931	0	0.612909486	0.861001418	0.434453575	0	0.288793649	0.723247224	0.971910943	0	2.779682612	3.751593554
LDT2	Diesel	0.000207029	0	0	0.000207029	0.012255189	0	0	0.012255189	0.004457211	0	0	0.004457211
LDT2	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
LDT2	Plug-in Hybr	0.000426296	0	0.002989586	0.003415882	0.000495977	0	0.001502255	0.001998232	0.001347348	0	0.01214052	0.013487869
T6 Instate Delivery Class 7	Diesel	7.28888E-05	2.71796E-05	0	0.000100068	0.031150423	0.00110056	0	0.032250983	0.001569275	0.000585169	0	0.002154444
T6 Instate Delivery Class 7	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
T6 Instate Delivery Class 7	Natural Gas	0.002808089	0.001468026	0	0.004276116	0.000962547	8.15023E-05	0	0.001044049	4.01221E-05	2.09752E-05	0	6.10973E-05
T6 Instate Other Class 4	Diesel	0.000367073	7.42245E-05	0	0.000441298	0.037412514	0.001851752	0	0.039264266	0.007902985	0.001598034	0	0.009501018
T6 Instate Other Class 4	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
T6 Instate Other Class 4	Natural Gas	0.000455744	0.000285067	0	0.000740811	0.000148809	1.79523E-05	0	0.000166761	6.51168E-06	4.07304E-06	0	1.05847E-05
UBUS	Gasoline	0.000172032	0	0.000184303	0.000356335	0.000544071	0	0.000138617	0.000682687	0.000561595	0	0.000778296	0.001339891
UBUS	Diesel	4.86536E-06	0	0	4.86536E-06	0.000284779	0	0	0.000284779	0.00010475	0	0	0.00010475
UBUS	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
UBUS	Natural Gas	1.316506816	0	0	1.316506816	0.233165691	0	0	0.233165691	0.01898763	0	0	0.01898763

Vehicle Category	Fuel	ROG_DIURN	ROG_HOTSOAK	ROG_RUNLOSS	ROG_TOTAL	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HOTSOAK	TOG_RUNLOSS	TOG_TOTAL
LDA	Gasoline	5.294908011	1.518608725	3.834557845	16.8906563	2.038625862	0	5.305206957	7.343832819	5.294908011	1.518608725	3.834557845	17.9919074
LDA	Diesel	0	0	0	0.010692394	0.01217258	0	0	0.01217258	0	0	0	0.01217258
LDA	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
LDA	Plug-in Hybr	0.05046383	0.018724464	0.01656878	0.166992665	0.011902838	0	0.080011736	0.091914574	0.05046383	0.018724464	0.01656878	0.177671649
LDT1	Gasoline	1.053420778	0.281059952	0.791469342	3.434539411	0.726568092	0	0.887577586	1.614145678	1.053420778	0.281059952	0.791469342	3.740095751
LDT1	Diesel	0	0	0	0.000755033	0.000859555	0	0	0.000859555	0	0	0	0.000859555
LDT1	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
LDT1	Plug-in Hybr	0.000217014	7.51332E-05	6.28328E-05	0.000913206	8.11413E-05	0	0.000550305	0.000631446	0.000217014	7.51332E-05	6.28328E-05	0.000986426
LDT2	Gasoline	2.421145033	0.650420943	1.745577468	8.568736999	1.418210166	0	3.043402575	4.461612741	2.421145033	0.650420943	1.745577468	9.278756185
LDT2	Diesel	0	0	0	0.004457211	0.005074238	0	0	0.005074238	0	0	0	0.005074238
LDT2	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
LDT2	Plug-in Hybr	0.005739992	0.001953773	0.001710437	0.022892072	0.001966048	0	0.013292342	0.015258389	0.005739992	0.001953773	0.001710437	0.024662593
T6 Instate Delivery Class 7	Diesel	0	0	0	0.002154444	0.0017865	0.000666171	0	0.002452671	0	0	0	0.002452671
T6 Instate Delivery Class 7	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
T6 Instate Delivery Class 7	Natural Gas	0	0	0	6.10973E-05	0.002865861	0.001498228	0	0.00436409	0	0	0	0.00436409
T6 Instate Other Class 4	Diesel	0	0	0	0.009501018	0.008996946	0.00181924	0	0.010816186	0	0	0	0.010816186
T6 Instate Other Class 4	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
T6 Instate Other Class 4	Natural Gas	0	0	0	1.05847E-05	0.00046512	0.000290932	0	0.000756052	0	0	0	0.000756052
UBUS	Gasoline	0.000206649	6.17432E-05	0.000180112	0.001788396	0.000819478	0	0.000852136	0.001671615	0.000206649	6.17432E-05	0.000180112	0.002120119
UBUS	Diesel	0	0	0	0.00010475	0.00011925	0	0	0.00011925	0	0	0	0.00011925
UBUS	Electricity	0	0	0	0	0	0	0	0	0	0	0	0
UBUS	Natural Gas	0	0	0	0.01898763	1.343785385	0	0	1.343785385	0	0	0	1.343785385

Vehicle Category	Fuel	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNEX	Fuel Consum	DPM_TOTEX
LDA	Gasoline	109.8812228	0	47.57339034	157.4546132	0.394424275	0	0.011221229	0.405645504	5.030187699	4326.7988	0
LDA	Diesel	0.116509801	0	0	0.116509801	0.000612581	0	0	0.000612581	0.000800526	5.7750615	0.006734977
LDA	Electricity	0	0	0	0	0	0	0	0	0	0	0
LDA	Plug-in Hybr	1.182405926	0	0.555852887	1.738258813	0.007161922	0	0.000281348	0.007443271	0.094792145	79.3933	0
LDT1	Gasoline	22.43996091	0	7.810969639	30.25093055	0.041194022	0	0.00125799	0.042452012	0.470420562	452.81241	0
LDT1	Diesel	0.004118206	0	0	0.004118206	9.67744E-06	0	0	9.67744E-06	7.18157E-06	0.0912333	0.000615088
LDT1	Electricity	0	0	0	0	0	0	0	0	0	0	0
LDT1	Plug-in Hybr	0.008085051	0	0.003823044	0.011908095	4.88686E-05	0	2.05742E-06	5.0926E-05	0.00068602	0.5432002	0
LDT2	Gasoline	65.50135862	0	26.6030556	92.10441422	0.246491747	0	0.006840852	0.253332599	2.753769098	2702.1603	0
LDT2	Diesel	0.042618056	0	0	0.042618056	0.00073706	0	0	0.00073706	0.000764061	6.948577	0.001282319
LDT2	Electricity	0	0	0	0	0	0	0	0	0	0	0
LDT2	Plug-in Hybr	0.195677982	0	0.092343785	0.288021767	0.001183668	0	5.41624E-05	0.00123783	0.016606685	13.203258	0
T6 Instate Delivery Class 7	Diesel	0.010787215	0.023542365	0	0.03432958	0.001872263	6.6148E-05	0	0.001938412	0.040278421	18.286005	0.00106477
T6 Instate Delivery Class 7	Electricity	0	0	0	0	0	0	0	0	0	0	0
T6 Instate Delivery Class 7	Natural Gas	0.013637152	0.002109063	0	0.015746215	0	0	0	0	0.00568096	0.591966	0
T6 Instate Other Class 4	Diesel	0.029278336	0.042570094	0	0.07184843	0.00224864	0.000111298	0	0.002359938	0.04591	22.262471	0.004703279
T6 Instate Other Class 4	Electricity	0	0	0	0	0	0	0	0	0	0	0
T6 Instate Other Class 4	Natural Gas	0.002015765	0.0005566	0	0.002572365	0	0	0	0	0.000890487	0.094552	0
UBUS	Gasoline	0.011943899	0	0.016123407	0.028067306	0.000621081	0	1.78508E-06	0.000622866	0.001520461	6.6437759	0
UBUS	Diesel	0.000136277	0	0	0.000136277	1.71274E-05	0	0	1.71274E-05	0.00022783	0.1614673	6.49389E-06
UBUS	Electricity	0	0	0	0	0	0	0	0	0	0	0
UBUS	Natural Gas	18.47399555	0	0	18.47399555	0	0	0	0	0.435648286	132.20276	0

Composite Emission Factors

	Gasoline	Diesel	Natural Gas	Plug-In Hybrid (conventional fuel)	Plug-In Hybrid (electricity)	Electricity Electric	VMT Ratio Conventional Fuel	Electric	Energy Consumption	NOx_TOTEX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_TOTEX	CH4_TOTEX	N2O_TOTEX	ROG_TOTEX	ROG_TOTAL	CO_TOTEX	SOx_TOTEX	Fuel Consumption	DPM_TOTEX
	VMT (% of conventional fuel)	VMT (% of conventional fuel)	VMT (% of conventional fuel)	VMT (% of conventional fuel)	VMT (% of electricity)	VMT (% of electricity)	VMT (% of Total VMT)	VMT (% of Total VMT)	kW-hr/mi	g/mi	g/mi	g/mi	g/mi		g/mi	g/mi	g/mi		g/mi	g/mi	g/mi	g/mi		g/mi	g/mi	gal/mi	g/mi
2025 Vehicles Offsite	98.55%	0.22%	0.00%	1.22%	21.97%	78.03%	94%	6%	0.367615	0.080913	0.001594	0.002000	0.003164	0.006758	0.001733	0.008000	0.009039	0.018771	295.643461	0.010697	0.008716	0.046882	0.119528	1.158330	0.002922	0.034354	0.000035
2025 Shuttle Bus Offsite	6.98%	0.21%	92.80%	0.00%	0.00%	100.00%	97%	3%	2.101926	0.551614	0.000503	0.007993	0.037693	0.046188	0.000531	0.031972	0.107693	0.140196	2413.437873	2.629668	0.467543	0.040801	0.041697	36.947241	0.001278	0.305987	0.000013
2025 Tractor Trailer Offsite	0.00%	97.16%	2.84%	0.00%	0.00%	100.00%	100%	0.3%	1.045003	1.319043	0.005414	0.003000	0.015299	0.023713	0.005660	0.012000	0.043711	0.061371	1109.827052	0.023147	0.176108	0.011719	0.011719	0.264867	0.010253	0.110068	0.005632
2025 Food Truck Offsite	0.00%	99.62%	0.38%	0.00%	0.00%	100.00%	99%	1.0%	1.045027	1.878789	0.020361	0.003000	0.015197	0.038558	0.021281	0.012000	0.043421	0.076702	1131.091702	0.005348	0.178375	0.043028	0.043028	0.336660	0.010676	0.111485	0.021276

Notes:
EMFAC emissions, fuel use and energy consumption were converted to g/mi, gal/mi, and kW-hr/mi using VMT.
Ran EMFAC Emissions, not Emission Rates, because Emissions provides fuel use and energy consumption.
EMFAC outputs natural gas use as DGE. To calculate gallons of natural gas, it is necessary to convert DGE to natural gas.

lb LNG/gal diesel (DGE):	6.06	Source:	Alternative Fuels Data Center: Gasoline and Diesel Gallon Equivalency Methodology (energy.gov)
LNG compressed density (lb/gal):	1.615	Source:	1-lng_basics_82809_final_hq.pdf (kosancrisplant.com)

Onsite Transit

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, tons/day for Emissions, 1000 gallons/day for Fuel Consumption, mph for Speed, kWh/day for Energy Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	CVMT	EVMT	NOx_RUNEX	PM2.5_RUNEX
South Coast AQMD	2025	LDA	Aggregate	10	Gasoline	1315812.72	1315812.716	0	0.086070456	0.007576606
South Coast AQMD	2025	LDA	Aggregate	10	Diesel	2506.68134	2506.681336	0	0.000650231	0.00015595
South Coast AQMD	2025	LDA	Aggregate	10	Electricity	637539.233	0	637539.2327	0	0
South Coast AQMD	2025	LDA	Aggregate	10	Plug-in Hybr	238108.862	22511.43423	215597.4277	0.000392398	0.00013095
South Coast AQMD	2025	LDT1	Aggregate	10	Gasoline	112579.088	112579.0879	0	0.03040715	0.001009967
South Coast AQMD	2025	LDT1	Aggregate	10	Diesel	20.005486	20.00548598	0	2.48395E-05	1.48504E-05
South Coast AQMD	2025	LDT1	Aggregate	10	Electricity	2783.82176	0	2783.821756	0	0
South Coast AQMD	2025	LDT1	Aggregate	10	Plug-in Hybr	1817.8564	149.0863703	1668.770025	2.59858E-06	6.06957E-07
South Coast AQMD	2025	LDT2	Aggregate	10	Gasoline	670268.785	670268.7849	0	0.075979981	0.003958203
South Coast AQMD	2025	LDT2	Aggregate	10	Diesel	2348.29695	2348.296954	0	0.000343057	2.70003E-05
South Coast AQMD	2025	LDT2	Aggregate	10	Electricity	32477.2106	0	32477.21059	0	0
South Coast AQMD	2025	LDT2	Aggregate	10	Plug-in Hybr	41292.3367	3621.681665	37670.655	6.31294E-05	1.70768E-05
South Coast AQMD	2025	T6 Instate Delivery Class 7	Aggregate	10	Diesel	1213.987	1213.986998	0	0.003532297	5.79663E-06
South Coast AQMD	2025	T6 Instate Delivery Class 7	Aggregate	10	Electricity	4.00827117	0	4.008271175	0	0
South Coast AQMD	2025	T6 Instate Delivery Class 7	Aggregate	10	Natural Gas	35.219598	35.21959796	0	2.63387E-05	9.51358E-08
South Coast AQMD	2025	T6 Instate Other Class 4	Aggregate	10	Diesel	1626.6881	1626.688104	0	0.005362953	0.000122506
South Coast AQMD	2025	T6 Instate Other Class 4	Aggregate	10	Electricity	16.2637771	0	16.26377707	0	0
South Coast AQMD	2025	T6 Instate Other Class 4	Aggregate	10	Natural Gas	5.91405369	5.914053694	0	3.55499E-06	1.91586E-08
South Coast AQMD	2025	UBUS	Aggregate	10	Gasoline	1612.127	1612.127001	0	0.000504409	7.02533E-06
South Coast AQMD	2025	UBUS	Aggregate	10	Diesel	55.9352888	55.93528882	0	8.57227E-05	3.09454E-07
South Coast AQMD	2025	UBUS	Aggregate	10	Electricity	715.955506	0	715.9555058	0	0
South Coast AQMD	2025	UBUS	Aggregate	10	Natural Gas	24484.4097	24484.40966	0	0.045946631	1.55862E-05

Vehicle Category	Fuel	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX	NH3_RUNEX	PM10_PMBW	PM2.5_PMBW	Fuel Consumptio	Energy Consumptio	DPM_RUNEX
LDA	Gasoline	0.00824025	774.444898	0.014203945	0.010002046	0.052978671	0.077306352	1.829781519	0.007656176	0.051770859	0.010672463	0.003735362	81.66424685	0	0
LDA	Diesel	0.000163002	1.376985056	2.76262E-05	0.000216945	0.000594777	0.000677114	0.009215308	1.30476E-05	8.56574E-06	2.07523E-05	7.2633E-06	0.12300553	0	0.000163002
LDA	Electricity	0	0	0	0	0	0	0	0	0	0.001649148	0.000577202	0	298805.8168	0
LDA	Plug-in Hybr	0.00014242	14.54961657	0.000100696	7.12864E-05	0.000317498	0.000463293	0.031294413	0.000143838	0.000982496	0.000616656	0.000215829	1.534238888	79681.81144	0
LDT1	Gasoline	0.001098432	79.30146949	0.003925503	0.002134808	0.017359935	0.025331576	0.373502874	0.000783976	0.004717993	0.001310636	0.000458723	8.362240873	0	0
LDT1	Diesel	1.55219E-05	0.01936244	8.88717E-07	3.05056E-06	1.91336E-05	2.17823E-05	7.70067E-05	1.83469E-07	6.8362E-08	2.66833E-07	9.33916E-08	0.001729639	0	1.55219E-05
LDT1	Electricity	0	0	0	0	0	0	0	0	0	7.20998E-06	2.52349E-06	0	1304.738738	0
LDT1	Plug-in Hybr	6.60121E-07	0.096438317	6.66137E-07	4.7113E-07	2.10252E-06	3.06799E-06	0.000207782	9.53391E-07	6.90226E-06	4.6903E-06	1.6416E-06	0.0101693	616.7541974	0
LDT2	Gasoline	0.004304907	479.9815904	0.009265879	0.006673589	0.035806062	0.052248122	1.084202552	0.004745107	0.027929687	0.007462284	0.002611799	50.61345898	0	0
LDT2	Diesel	2.82211E-05	1.63462226	2.36411E-05	0.000257535	0.000508978	0.000579438	0.004947529	1.54889E-05	8.02452E-06	2.58218E-05	9.03763E-06	0.146020159	0	2.82211E-05
LDT2	Electricity	0	0	0	0	0	0	0	0	0	8.38237E-05	2.93383E-05	0	15221.61922	0
LDT2	Plug-in Hybr	1.85725E-05	2.341951712	1.61875E-05	1.14525E-05	5.10764E-05	7.45306E-05	0.00504241	2.31526E-05	0.000167506	0.000106704	3.73465E-05	0.246955882	13922.55028	0
T6 Instate Delivery Class 7	Diesel	6.05873E-06	2.682766352	2.88917E-06	0.000422671	6.2203E-05	7.08133E-05	0.000419295	2.54042E-05	0.00029437	8.22932E-05	2.88026E-05	0.239650456	0	6.05873E-06
T6 Instate Delivery Class 7	Electricity	0	0	0	0	0	0	0	0	0	1.35856E-07	4.75494E-08	0	6.674261094	0
T6 Instate Delivery Class 7	Natural Gas	1.03469E-07	0.08137804	9.98063E-05	1.65894E-05	1.42604E-06	0.00010186	0.000250041	0	4.11523E-05	2.38745E-06	8.35608E-07	0.00940606	0	0
T6 Instate Other Class 4	Diesel	0.000128045	3.596024847	2.28343E-05	0.000566555	0.000491616	0.000559667	0.000925056	3.40522E-05	0.000379988	0.000110269	3.85942E-05	0.321231475	0	0.000128045
T6 Instate Other Class 4	Electricity	0	0	0	0	0	0	0	0	0	5.51241E-07	1.92934E-07	0	27.08117535	0
T6 Instate Other Class 4	Natural Gas	2.08368E-08	0.013541529	1.66626E-05	2.76053E-06	2.38076E-07	1.70054E-05	4.50374E-05	0	6.91027E-06	4.00899E-07	1.40315E-07	0.001565194	0	0
UBUS	Gasoline	7.64068E-06	5.616889841	2.38304E-05	4.92348E-05	7.52458E-05	0.000109798	0.000901432	5.55287E-05	7.99679E-05	0.00019126	6.6941E-05	0.592294016	0	0
UBUS	Diesel	3.23446E-07	0.140479779	4.36877E-07	2.21326E-05	9.40583E-06	1.07078E-05	1.40176E-05	1.33112E-06	1.35648E-05	6.78239E-06	2.37384E-06	0.012549003	0	3.23446E-07
UBUS	Electricity	0	0	0	0	0	0	0	0	0	4.34014E-05	1.51905E-05	0	2003.881926	0
UBUS	Natural Gas	1.6291E-05	186.7827584	0.127691335	0.038076887	0.001826492	0.130320595	1.82740136	0	0.026179751	0.002968562	0.001038997	21.58923807	0	0

Composite Emission Factors

	Gasoline	Diesel	Natural Gas	Plug-In Hybrid (conventional fuel)	Plug-In Hybrid (electricity)	Electricity Electric	VMT Ratio Conventional Fuel	Electric	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_PMBW	PM2.5_PMBW	Fuel Consumption	Energy Consumption	DPM_RUNEX
	VMT (% of conventional fuel)	VMT (% of conventional fuel)	VMT (% of conventional fuel)	VMT (% of conventional fuel)	VMT (% of electricity)	VMT (% of electricity)	VMT (% of Total VMT)	VMT (% of Total VMT)	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	gal/mi	kW-hr/mi	g/mi
2025 Vehicles Onsite	98.55%	0.22%	0.00%	1.22%	21.97%	78.03%	70%	30%	0.057541	0.003825	0.004157	401.660374	0.008179	0.005747	0.031937	0.990474	0.003970	0.006516	0.002281	0.067002	0.441454	0.000061
2025 Shuttle Bus Onsite	6.98%	0.21%	92.80%	0.00%	0.00%	100.00%	97%	3%	1.571266	0.000774	0.000819	6500.919260	4.312186	1.288037	0.064528	61.731235	0.001920	0.108383	0.037934	0.848642	2.798892	0.000011
2025 Tractor Trailer Onsite	0.00%	97.16%	2.84%	0.00%	0.00%	100.00%	100%	0%	2.576047	0.004265	0.004461	2000.925654	0.074340	0.317974	0.046060	0.484523	0.018390	0.061398	0.021489	0.199372	1.665122	0.004386
2025 Food Truck Onsite	0.00%	99.62%	0.38%	0.00%	0.00%	100.00%	99%	1%	2.952583	0.067412	0.070460	1985.936929	0.021731	0.313230	0.270612	0.533733	0.018735	0.061193	0.021417	0.197719	1.665122	0.070449

Notes:
EMFAC emissions, fuel use and energy consumption were converted to g/mi, gal/mi, and kW-hr/mi using VMT.
Ran EMFAC Emissions, not Emission Rates, because Emissions provides fuel use and energy consumption.
EMFAC outputs natural gas use as DGE. To calculate gallons of natural gas, it is necessary to convert DGE to natural gas.

lb LNG/gal diesel (DGE):	6.06	Source:	Alternative Fuels Data Center: Gasoline and Diesel Gallon Equivalency Methodology (energy.gov)
LNG compressed density (lb/gal):	1.615	Source:	1-lng_basics_82809_final_hq.pdf (kosancrisplant.com)

Table B5

Paved Road Dust Emission Factors

Emission Source	(sL) Silt Loading (g/m2)[2]	(k) Particle Size Multiplier - PM10 (g/VMT)[3]	(k) Particle Size Multiplier - PM2.5 (g/VMT)[3]	(W) Average Vehicle Weight on Road (tons)[4]	Fraction of Travel by Roadway Type[5]	(E) Uncontrolled PM10 Emission Factor (g/VMT)	(E) Uncontrolled PM2.5 Emission Factor (g/VMT)
Freeway	0.015	1.00	0.15	2.4	0.44	0.05	0.01
Major	0.013	1.00	0.15	2.4	0.44	0.05	0.01
Collector	0.013	1.00	0.15	2.4	0.07	0.05	0.01
Local	0.135	1.00	0.15	2.4	0.05	0.39	0.06
Composite EF for Offsite Transit - all vehicles						0.07	0.01

Notes:

1. Emission factors were calculated using: 1) EPA AP-42, Chapter 13.2; and 2) CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust, Revised and Updated March 2021. Conservatively, downward adjustment due to annual precipitation was omitted.
The equation is: E = k (sL)^0.91 x (W)^1.02
2. Silt loading was obtained from CARB Miscellaneous Process Methodology 7.9, Tables 3a, 3c.1, and 3c.3.
3. Particle size multiplier (k) for PM10 is the same in EPA AP42 and CARB methodologies. Particle size multiplier for PM2.5 is based on CARB methodology which reflects a more appropriate PM2.5/PM10 fraction to California than AP42.
4. Average vehicle weight on road was obtained from CARB Miscellaneous Process Methodology 7.9.
5. Fraction of travel by roadway type was obtaned from CARB Miscellaneous Process Methodology 7.9, Table 2.

Table B6

Operational Electricity and Natural Gas Use, Stationary Source Emissions

		GHG Emission Factors			GHG Emissions (mty)				Criteria Pollutant Emission Factors (lb/mmscf) [5]					Criteria Pollutant Emissions (lb/yr)					Criteria Pollutant Emissions (lb/day)				
	Activity[1] (GW-hour/yr)	CO2 [2,3] (lb/MWhr)	CH4 [2,4] (lb/GWhr)	N2O [2,4] (lb/GWhr)	CO2	CH4	N2O	CO2e	PM10	NOx	SOx	CO	VOC	PM10	NOx	SOx	CO	VOC	PM10	NOx	SOx	CO	VOC
Electricity Use	1	513.5	32	4	233	0.01	0.00	234															
	(cft/yr)	(kg/scf)	(g/MMBtu)	(g/MMBtu)																			
Natural Gas Use	750,000	0.0544	4.7	0.1	41	0.00	0.00	41	7.5	130	0.6	35	7	5.6	97.5	0.5	26.3	5.3	0.06	0.98	0.00	0.26	0.05
Total					274	0.02	0.00	275	7.5	130	0.6	35	7	5.6	97.5	0.5	26.3	5.3	0.06	0.98	0.00	0.26	0.05

Source:

1. Activity: Electricity and natural gas use were provided by the project proponent.

2. Electricity: 2022 Climate Registry Default Emission Factors, *Table 3.1, Default Factors for Calculating Emissions from Grid Electricity by eGrid Subregion. CAMX subregion.* May 2022.

3. Natural Gas CO2 emission factors: 2022 Climate Registry Default Emission Factors, *Table 1.1, U.S. Default Factors for Calculating CO2 Emissions from Combustion of Fossil Fuel and Biomass.* May 2022.

4. Natural Gas CH4 and N2O emission factors: 2022 Climate Registry Default Emission Factors, *Table 1.10, Default Factors for Calculating CH4 and N2O Emissionsby Fuel Type for the Residential and Commercial Sector.* May 2022.

Average heating value of natural gas (Btu/scf): 1026

5. Natural gas criteria pollutant emissions factors: SCAQMD Annual Emission Report Guidance, Default Combustion Emission Factors, External Combustion Equipment, Other Equipment. January 2022. Last accessed March 2023 at: http://www.aqmd.gov/home/rules-compliance/compliance/annual-emission-reporting

Annual events: 100

Table B7
Operational Diesel Use, Stationary Source Emissions

			Activity [2]			Emission Factors (g/bhp-hr) [4,5,6]										Peak Day Emissions (lb/day)							Annual Emissions (mty)			
Equipment	Fuel	Power (hp) [1]	hr/day	hr/yr	Load Factor [3]	PM10	DPM	PM2.5	NOx	SOx	CO	VOC	CO2	CH4	N20	PM10	DPM	PM2.5	NOx	SOx	CO	VOC	CO2	CH4	N20	CO2e
Emergency Generator	diesel	500	0.5	200	0.74	0.15	0.15	0.15	4.56	0.005	2.6	0.25	521.64	0.021	0.004	0.06	0.06	0.06	1.86	0.00	1.06	0.10	38.60	0.00	0.00	38.73

Notes:

1. Engine rating was provided by the project proponents.

2. Activity reflects the SCAQMD Rule 1470 limit for maintenance testing of emergency generators (50 hr/yr) and Rule 1110.2 Rule limit of 200 hr/yr for operation.

3. Load Factor for diesel generators is from *CalEEMod 2022, Appendix G, Table G-12. Last accessed in April 2023 at: https://caleemod.com/user-guide.* accessed in June 2023 at: http://www.aqmd.gov/docs/default-source/bact/bact-guidelines/part-d---bact-guidelines-for-non-major-polluting-facilities.pdf.

Standard is reported as NOx+NMHC. 5% is HC per Carl Moyer Program guidelines. 95% is NOx.

VOC/HC ratio is: 1.053 *EPA 2010. Conversion Factors for Hydrocarbon Emission Components. EPA-420-R-10-015. NR-002d. July.*

5. PM2.5 conservatively assumed to equal PM10.

6. SOx was calculated below.

SOx Emission Factor

Diesel Engine	0.005	g/hp-hr
SOx (g/hp-hr) = (S content in X/1,000,000) x (MW SO2/ MW S) x BSFC / heating value =		
Where:		
X = S content in parts per million (ppm)	15	ppm
S MW = Molecular Weight	32	
SO2 MW = Molecular Weight	64	
Diesel heating value	19300	Btu/lb
BSFC for emergency generator = Brake Specific Fuel Consumption (*per AP42, Table 3.3-1*)	7000	Btu/hp-hr

CO2, CH4, and N2O emission factors are from CalEEMod 2021, Appendix G, Table G-40. *Last accessed in April 2023 at: https://caleemod.com/user-guide.*

Table B8
Operational Tugboat Data and Emissions

HC Characteristics							Activity				HC Energy Demand		Unmitigated Emission Factors (g/kW-hr)										Unmitigated Emissions: Peak Day (lb/day)							Average Annual (lb/yr) (mty)									
HC Type	Engine Type	Engine Count per HC	Average MY	Average HP per Engine	Average kW per Engine	Load Factor	Number of HC per Barge	HC Operation (hr/day)	Annual Events	HC Operation (hr/yr)	Peak Day (kW-hr/day)	Annual (kW-hr/yr)	Engine Tier	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	CO2	CH4	N2O	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	CO2	CH4	N2O	CO2e
Tugboat	Propulsion	2	2011	1,154	861	0.16	2	2	25	100	1,102	27,548	Tier 3	0.26	0.23	0.26	8.08	0.007	5	0.45	709	0.026	0.031	0.62	0.55	0.62	19.62	0.02	12.15	1.09	15	14	15	490	0	304	27	20	0	0	20
	Auxiliary	2	2011	139	104	0.34	2	3	25	150	423	10,577	Tier 3	0.11	0.10	0.11	5.32	0.007	5	0.29	709	0.018	0.031	0.10	0.09	0.10	4.96	0.01	4.66	0.27	3	2	3	124	0	117	7	7	0	0	8
Total																								0.72	0.64	0.72	24.58	0.02	16.81	1.36	18.08	16.09	18.05	614.47	0.62	420.25	34.05	27.03	0.00	0.00	27.41

Source:
Engine count, model year, and horsepower were obtained from the 2021 Port Emissions Inventory, Tables 4.1 and 4.2.
Engine load factors were obtained from 2022 San Pedro Bay Emissions Inventory Methodology 3a, Table 3.1.
Activity reflects 1 fireworks event on a peak day.
Activity reflects 1 barge per fireworks event.
Tugboat activity was provided by LAHD.
Engine Tiers and associated emission factors and compliance dates are based on CARB's 2011 HC Rule. Last accessed May 2023: *https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft/chc-regulatory-documents* .

DPM	(lb/hr)
propulsion	0.31
auxiliary	0.03
Total	**0.34**

Table B9

Harbor Craft Emission Factors - EPA Standards (g/kW-hr)

				g/kw-hr							
Engine Displacen	**(kW)**	**EPA Tier**	**MY**	**NMHC+NOx**	**PM10**	**PM2.5**	**DPM**	**NOx**	**SOX**	**CO**	**HC**	**VOC**
Category 1 - Aux		**HC auxiliary engines**										
<0.9	≥37	Tier 2	2005	**7.50**	**0.40**	0.36	0.40	7.1	0.007	**5.00**	0.38	0.39
0.9 < displ < 1.2	all	Tier 2	2004	**7.20**	**0.30**	0.27	0.30	6.8	0.007	**5.00**	0.36	0.38
1.2 < displ < 2.5	all	Tier 2	2004	**7.20**	**0.20**	0.18	0.20	6.8	0.007	**5.00**	0.36	0.38
2.5 < displ < 5	all	Tier 2	2007	**7.20**	**0.20**	0.18	0.20	6.8	0.007	**5.00**	0.36	0.38
<0.9	<19	Tier 3	2009	**7.5**	**0.40**	0.36	0.40	7.1	0.007	**6.60**	0.38	0.39
<0.9	19-75	Tier 3	2009-2013	**7.5**	**0.30**	0.27	0.30	7.1	0.007	**5.50**	0.38	0.39
<0.9	19-75	Tier 3	2014+	**4.7**	**0.30**	0.27	0.30	4.5	0.007	**5.00**	0.24	0.25
<0.9	>75	Tier 3	2012+	**5.4**	**0.14**	0.12	0.14	5.1	0.007	**5.00**	0.27	0.28
0.9 < displ < 1.2	all	Tier 3	2013+	**5.4**	**0.12**	0.11	0.12	5.1	0.007	**5.00**	0.27	0.28
1.2 < displ < 2.5	<600	Tier 3	2014-2017	**5.6**	**0.11**	0.10	0.11	5.3	0.007	**5.00**	0.28	0.29
1.2 < displ < 2.5	<600	Tier 3	2018+	**5.6**	**0.10**	0.09	0.10	5.3	0.007	**5.00**	0.28	0.29
1.2 < displ < 2.5	≥600	Tier 3	2014+	**5.6**	**0.11**	0.10	0.11	5.3	0.007	**5.00**	0.28	0.29
2.5 < displ < 3.5	<600	Tier 3	2013-2017	**5.6**	**0.11**	0.10	0.11	5.3	0.007	**5.00**	0.28	0.29
2.5 < displ < 3.5	<600	Tier 3	2018+	**5.6**	**0.10**	0.09	0.10	5.3	0.007	**5.00**	0.28	0.29
2.5 < displ < 3.5	≥600	Tier 3	2013+	**5.6**	**0.11**	0.10	0.11	5.3	0.007	**5.00**	0.28	0.29
3.5 ≤ D < 7	<600	Tier 3	2012-2017	**5.8**	**0.11**	0.10	0.11	5.5	0.007	**5.00**	0.29	0.31
3.5 ≤ D < 7	<600	Tier 3	2018+	**5.8**	**0.10**	0.09	0.10	5.5	0.007	**5.00**	0.29	0.31
3.5 ≤ D < 7	≥600	Tier 3	2012+	**5.8**	**0.11**	0.10	0.11	5.5	0.007	**5.00**	0.29	0.31
	600-1400	Tier 4	2017+		**0.04**	0.04	0.04	**1.8**	0.007	**5.00**	**0.19**	0.20
	1400-2000	Tier 4	2016+		**0.04**	0.04	0.04	**1.8**	0.007	**5.00**	**0.19**	0.20
	2000-3700	Tier 4	2014+		**0.04**	0.04	0.04	**1.8**	0.007	**5.00**	**0.19**	0.20
	>3700	Tier 4	2014-2015		**0.12**	0.11	0.12	**1.8**	0.007	**5.00**	**0.19**	0.20
	>3700	Tier 4	2016+		**0.06**	0.05	0.06	**1.8**	0.007	**5.00**	**0.19**	0.20
Category 2 - Pro		**HC propulsion engines**										
			MY									
5.0 ≤ D < 15	all	Tier 2	2007	**7.8**	**0.27**	0.24	0.27	7.4	0.007	**5.00**	0.39	0.41
15 ≤ D < 20	< 3300 kW	Tier 2	2007	**8.7**	**0.50**	0.45	0.50	8.3	0.007	**5.00**	0.44	0.46
15 ≤ D < 20	≥ 3300 kW	Tier 2	2007	**9.8**	**0.50**	0.45	0.50	9.3	0.007	**5.00**	0.49	0.52
20 ≤ D < 25	all	Tier 2	2007	**9.8**	**0.50**	0.45	0.50	9.3	0.007	**5.00**	0.49	0.52
25 ≤ D < 30	all	Tier 2	2007	**11.0**	**0.50**	0.45	0.50	10.5	0.007	**5.00**	0.55	0.58
7 ≤ D < 15	<2000	Tier 3	2013+	**6.2**	**0.14**	0.12	0.14	5.9	0.007	**5.00**	0.31	0.33
7 ≤ D < 15	2000-3700	Tier 3	2013+	**7.8**	**0.14**	0.12	0.14	7.4	0.007	**5.00**	0.39	0.41
15 ≤ D < 20	<2000	Tier 3	2014+	**7.0**	**0.34**	0.30	0.34	6.7	0.007	**5.00**	0.35	0.37
20 ≤ D < 25	<2000	Tier 3	2014+	**9.8**	**0.27**	0.24	0.27	9.3	0.007	**5.00**	0.49	0.52
25 ≤ D < 30	<2000	Tier 3	2014+	**11.0**	**0.27**	0.24	0.27	10.5	0.007	**5.00**	0.55	0.58
all	2000-3700	Tier 4	2014		**0.04**	0.04	0.04	**1.8**	0.007	**5.00**	**0.19**	0.20
<15	>3700	Tier 4	2014		**0.12**	0.11	0.12	**1.8**	0.007	**5.00**	**0.19**	0.20
15 ≤ D < 30	>3700	Tier 4	2014		**0.25**	0.22	0.25	**1.8**	0.007	**5.00**	**0.19**	0.20
all	>3700	Tier 4	2016		**0.06**	0.05	0.06	**1.8**	0.007	**5.00**	**0.19**	0.20
all	1400-2000	Tier 4	2016		**0.04**	0.04	0.04	**1.8**	0.007	**5.00**	**0.19**	0.20
all	600-1400	Tier 4	2017		**0.04**	0.04	0.04	**1.8**	0.007	**5.00**	**0.19**	0.20

Source:

Federal Marine Compression-Ignition Engines - Exhaust Emission Standards Reference Guide. Last accessed March 2022 at:

Tier 1 and Tier 2 standards: 40CFR Part 94.8

Tier 3 and Tier 4 standards: 40CFR Part 1042.101

EPA Tier 1 emissions standards for marine engines do not specify restrictions to PM, SOx, CO, or VOC. NOx reflects Marpol Annex VI (17 g/kW-hr). PM10, SOX, CO and VOC emissions factors were obtained from EPA offroad emission engine standards for Tier 1 engines.

EPA Tier 2 and Tier 3 emission standards are reported as NOx+THC. 5% is HC per Carl Moyer Program guidelines. 95% is NOx.

SOx emission factor is based on 15 ppm fuel sulfur content.

Bold numbers represent actual emission standards.

Table B10

Harbor Craft GHG Emission Factors

Engine Type	Year		Power		Zero-Hour Emission Factors (g/kw-hr)		
	Min	Max	Min	Max	CO2	CH4	N2O
Propulsion	0	1988	597	74,569	709	0.146	0.031
	1988	2000	597	74,569	709	0.102	0.031
	2000	2004	597	74,569	709	0.102	0.031
	2004	2007	597	74,569	709	0.026	0.031
	2007	2013	597	74,569	709	0.026	0.031
	2013	2017	597	74,569	686	0.025	0.03
	2017	2051	597	74,569	662	0.005	0.029
Auxiliary	0	1988	75	130	709	0.153	0.031
	1988	2000	75	130	709	0.095	0.031
	2000	2004	75	130	709	0.024	0.031
	2004	2007	75	130	709	0.021	0.031
	2007	2013	75	130	709	0.018	0.031
	2013	2051	75	130	738	0.017	0.033

Source:

CO2, CH4 and N2O emission factors are zero-hour factors from the Port's 2022 Emissions Inventory Methodology Document, Version 3, Appendix A. Last accessed in April 2023 at: *https://kentico.portoflosangeles.org/getmedia/ad5ec383-8dc6-4652-ae0d-81b6ea4c7819/SPBP_Emissions_Inventory_Methodology_v3a.* Zero-hour factors are appropriate because engine deterioration does not significantly affect GHG emission factors (per Emissions Inventory Methodology Report Table 3.2).

Table B11

SOx Emission Factor, Harbor Craft

Harbor Craft	0.00552 g/hp-hr	0.00740 g/kw-hr	
Dredging Equipm use OFFROAD BSCF and convert to g SOx /hp-hr			
SOx (gms/hp-hr) = (S content in X/1,000,000) x (MW SO2/ MW S) x BSFC =			
Where:			
X = S content in parts per million (ppm)			15 ppm
S MW = Molecular Weight			32
SO2 MW = Molecular Weight			64
BSFC for harbor craft = Brake Specific Fuel Consumption (per CARB 2007 Harbor Craft Methodology and			184 (g/hp-hr)

Table B12

Firework Display Emissions

	Net Explosive Weight		Emissions - Summer Pops (100 lbs)			
	Basis (lbs) [1]	Basis (lbs) [2]				
	5,342	100	Peak Hour	Peak Day	Annual [3]	Annual [3]
	Big Bay Boom	Summer Pops	(lb/hr)	(lb/day)	(lb/yr)	(mty)
	Peak Day (lbs)	Peak Day (lbs)				
Criteria Pollutants						
PM10	476.60	17.84		17.84		
PM2.5	328.80	12.31		12.31		
SO2	157.60	5.90		5.90		
NOx	8.56	0.32		0.32		
CO	0.75	0.03		0.03		
Toxic Pollutants						
Copper	23.70	0.89	0.89	0.89	22.18	
Hexavalent Chromium	0.04	0.00	0.00	0.00	0.04	
Lead	0.05	0.00	0.00	0.00	0.05	
Formaldehyde	0.07	0.00	0.00	0.00	0.07	
Acetaldehyde	0.26	0.01	0.01	0.01	0.24	
Acrolein	0.06	0.00	0.00	0.00	0.05	
Naphthalene	0.42	0.02	0.02	0.02	0.39	
GHG (kg)						
CO2	896.50	33.56				0.84

Notes:

1. Big Bay Boom emissions were obtained from Port of San Diego, Draft Environmental Impact Report Technical Appendices, San Diego Bay and Imperial Beach Oceanfront Fireworks Display Events Project. Volume I, Table 2-2; and Volume II, Table 2-1. March 2017.

Basis display duration: 10 min

2. Summer Pops are similar to Proposed Project fireworks. Scaled based on net explosive weight and display duration.

Display for Proposed Project: 20 min Source: CEQA 20221205 WHM Data Needs Matrix.12.12.22.xlsx.

3. Annual emissions reflect annual displays: 25

Fireworks barge would be located 1,000 feet from site.

Distance to sensitive receptor: 780 receptor in the Cabrillo Marina.

Distance to off-site worker receptor: 304.8 nearest land receptor.

Table B13
SCAQMD Risk Tool Output, Fireworks

EMISSIONS ARE ENTERED ON THE EMISSIONS WORKSHEET OR ON ONE OF EQUIPMENT WORKSHEETS

INPUT PARAMETERS ENTERED ON THE EMISSIONS SHEET ARE USED FOR TIERS 1 AND TIER 2 ANALYSES

TIER 2 SCREENING RISK ASSESSMENT REPORT
(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

A/N: 1 **Fac:** Fireworks **Application deemed complete date:** 10/13/2023

1. Stack Data

Equipment Type	Other	0
		0
		0
Combustion Eff	0.0	0
	No T-BACT	
Operation Schedule	0.333 hrs/day	
	1 days/week	
	25 weeks/year	
Stack Height	14 ft	
Building Area	3000 ft²	
Distance to Residential	780 m	
Distance to Commercial	308 m	
Meteorological Station	Long Beach Airport	

2. Tier 2 Data

Dispersion Factors tables	Volume Source
For Chronic X/Q	Table 7
For Acute X/Q max	Table 7.7

Dilution Factors

Receptor	X/Q (µg/m³)/(tons/yr)	X/Qmax (µg/m³)/(lbs/hr)
Residential	0.04	6.17
Commercial - Worker	0.19	22.61

Intake and Adjustment Factors

	Residential	Worker
Year of Exposure	30	
Combined Exposure Factor (CEF) - Table 4	677.40	55.86
Worker Adjustment Factor (WAF) - Table 5	1	4.20

A/N: 1 **Application deemed complete date:** 10/13/23

3. Rule 1401 Compound Data

Code	Compound	R1 - Uncontrolled (lbs/hr)	R2 - Controlled (lbs/hr)	CP (mg/kg-day)-1	MP MICR Resident	MP MICR Worker	MP Chronic Resident	MP Chronic Worker	REL Chronic (µg/m³)	REL 8-hr Chronic (µg/m³)	REL Acute (µg/m³)	MWAF
C23	Copper and Compounds	8.87E-01	8.87E-01	0.00E+00	1.00	1.00	1.00	1.00	0.00E+00	0.00E+00	1.00E+02	1
C16	Chromium 6+	1.40E-03	1.40E-03	5.10E+02	1.60	1.02	2.44	1.00	2.00E-01	0.00E+00	0.00E+00	1
L1	Lead and Compounds (Inorganic)	1.98E-03	1.98E-03	4.20E-02	11.41	5.83	1.00	1.00	0.00E+00	0.00E+00	0.00E+00	1
F2	Formaldehyde	2.64E-03	2.64E-03	2.10E-02	1.00	1.00	1.00	1.00	9.00E+00	9.00E+00	5.50E+01	1
A1	Acetaldehyde	9.74E-03	9.74E-03	1.00E-02	1.00	1.00	1.00	1.00	1.40E+02	3.00E+02	4.70E+02	1
A3	Acrolein	2.17E-03	2.17E-03	0.00E+00	1.00	1.00	1.00	1.00	3.50E-01	7.00E-01	2.50E+00	1
P62	Naphthalene	1.57E-02	1.57E-02	1.20E-01	1.00	1.00	1.00	1.00	9.00E+00	0.00E+00	0.00E+00	1

A/N: 1 Application deemed complete date: 10/13/23

4. Emission Calculations

Compound	R1 (lbs/hr)	R2 (lbs/hr)	R1 (lbs/day)	R2 (lbs/day)	R2 (lbs/yr)	R2 (tons/yr)
Copper and Compounds	8.87E-01	8.87E-01	2.95E-01	2.95E-01	7.39E+00	3.69E-03
Chromium 6+	1.40E-03	1.40E-03	4.67E-04	4.67E-04	1.17E-02	5.84E-06
Lead and Compounds (Inorganic)	1.98E-03	1.98E-03	6.60E-04	6.60E-04	1.65E-02	8.25E-06
Formaldehyde	2.64E-03	2.64E-03	8.80E-04	8.80E-04	2.20E-02	1.10E-05
Acetaldehyde	9.74E-03	9.74E-03	3.24E-03	3.24E-03	8.11E-02	4.05E-05
Acrolein	2.17E-03	2.17E-03	7.23E-04	7.23E-04	1.81E-02	9.04E-06
Naphthalene	1.57E-02	1.57E-02	5.24E-03	5.24E-03	1.31E-01	6.55E-05
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	**9.21E-01**	**9.21E-01**	**3.07E-01**	**3.07E-01**	**7.67E+00**	**3.83E-03**

TIER 2 RESULTS

A/N: 1 Application deemed complete date: 10/13/23

5a. MICR

MICR Resident = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Resident * CEF Resident * MP Resident * 1e-6 * MWAF

MICR Worker = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Worker * CEF Worker* MP Worker* WAF Worker* 1e-6 * MWAF

Compound	Residential	Commercial
Copper and Compounds	0.00E+00	0.00E+00
Chromium 6+	1.35E-07	1.32E-07
Lead and Compounds (Inorganic)	1.12E-10	8.77E-11
Formaldehyde	6.57E-12	1.00E-11
Acetaldehyde	1.15E-11	1.76E-11
Acrolein	0.00E+00	0.00E+00
Naphthalene	2.23E-10	3.41E-10
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	FALSE	0.00E+00
	0.00E+00	0.00E+00
Total	**1.36E-07**	**1.33E-07**
	PASS	PASS

5b. Is Cancer Burden Calculation Needed (MICR >1E-6)? **NO**

New X/Q at which MICR70yr is one-in-a-million [(μg/m³)/(tons/yr)]: 0.00E+00

New Distance, interpolated from X/Q table using New X/Q (meter):

Zone Impact Area (km²): 0.00E+00

Zone of Impact Population (7000 person/km²): 0.00E+00

Cancer Burden: **0.00E+00**

A/N: 1

Application deemed complete date: 10/13/23

6. Hazard Index Summary

HIA = [Q(lb/hr) * (X/Q)max * MWAF]/ Acute REL

HIC = [Q(ton/yr) * (X/Q) * MP * MWAF] / Chronic REL

HIC 8-hr= [Q(ton/yr) * (X/Q) * WAF * MWAF] / 8-hr Chronic REL

Target Organs	Acute	Chronic	8-hr Chronic	Acute Pass/Fail	Chronic Pass/Fail	8-hr Chronic Pass/Fail
Alimentary system (liver) - AL	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Bones and teeth - BN		0.00E+00	N/A	Pass	Pass	Pass
Cardiovascular system - CV	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Developmental - DEV	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Endocrine system - END		0.00E+00	N/A	Pass	Pass	Pass
Eye	2.12E-02	0.00E+00	N/A	Pass	Pass	Pass
Hematopoietic system - HEM	0.00E+00	5.41E-06	N/A	Pass	Pass	Pass
Immune system - IMM	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Kidney - KID		0.00E+00	N/A	Pass	Pass	Pass
Nervous system - NS	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Reproductive system - REP	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Respiratory system - RESP	2.21E-01	1.18E-05	N/A	Pass	Pass	Pass
Skin	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass

A/N: 1 Application deemed complete date: 10/13/23

6a. Hazard Index Acute - Resident

HIA = [Q(lb/hr) * (X/Q)max resident * MWAF] / Acute REL

	HIA - Residential									
Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Copper and Compounds									5.47E-02	
Chromium 6+										
Lead and Compounds (Inorganic)										
Formaldehyde				2.96E-04						
Acetaldehyde				1.28E-04					1.28E-04	
Acrolein				5.36E-03					5.36E-03	
Naphthalene										
Total	0.00E+00	0.00E+00	0.00E+00	5.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-02	0.00E+00

6a. Hazard Index Acute - Worker

A/N: 1 Application deemed complete date: 10/13/23

HIA = [Q(lb/hr) * (X/Q)max Worker * MWAF] / Acute REL

	HIA - Commercial									
Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Copper and Compounds									2.01E-01	
Chromium 6+										
Lead and Compounds (Inorganic)										
Formaldehyde				1.09E-03						
Acetaldehyde				4.69E-04					4.69E-04	
Acrolein				1.96E-02					1.96E-02	
Naphthalene										
Total	0.00E+00	0.00E+00	0.00E+00	2.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-01	0.00E+00

6b. Hazard Index Chronic - Resident

HIC = [Q(ton/yr) * (X/Q) Resident * MP Chronic Resident * MWAF] / Chronic REL

	HIC - Residential												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Copper and Compounds													
Chromium 6+							2.99E-06					2.99E-06	
Lead and Compounds (Inorganic)													
Formaldehyde												5.13E-08	
Acetaldehyde												1.22E-08	
Acrolein												1.08E-06	
Naphthalene												3.05E-07	
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-06	0.00E+00

A/N: 1 **Application deemed complete date:** 10/13/23

6b. Hazard Index Chronic - Worker

HIC = [Q(ton/yr) * (X/Q) * MP Chronic Worker * MWAF] / Chronic REL

	HIC - Commercial												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Copper and Compounds													
Chromium 6+							5.41E-06					5.41E-06	
Lead and Compounds (Inorganic)													
Formaldehyde												2.26E-07	
Acetaldehyde												5.36E-08	
Acrolein												4.78E-06	
Naphthalene												1.35E-06	
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-05	0.00E+00

6c. 8-hour Hazard Index Chronic - Resident

A/N: 1

Application deemed complete date: 10/13/23

HIC 8-hr = [Q(ton/yr) * (X/Q) Resident * WAF Resident * MWAF] / 8-hr Chronic REL

	HIC - Residential												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Copper and Compounds													
Chromium 6+													
Lead and Compounds (Inorganic)													
Formaldehyde												5.13E-08	
Acetaldehyde												5.68E-09	
Acrolein												5.42E-07	
Naphthalene													
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E-07	0.00E+00

6c. 8-hour Hazard Index Chronic - Worker

A/N: 1

Application deemed complete date: 10/13/23

HIC 8-hr = [Q(ton/yr) * (X/Q) Worker * WAF Worker * MWAF] / 8-hr Chronic REL

	HIC - Commercial												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Copper and Compounds													
Chromium 6+													
Lead and Compounds (Inorganic)													
Formaldehyde												9.50E-07	
Acetaldehyde												1.05E-07	
Acrolein												1.00E-05	
Naphthalene													
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-05	0.00E+00

Table B14
SCAQMD Risk Tool Output, Tugboats

EMISSIONS ARE ENTERED ON THE EMISSIONS WORKSHEET OR ON ONE OF EQUIPMENT WORKSHEETS
INPUT PARAMETERS ENTERED ON THE EMISSIONS SHEET ARE USED FOR TIERS 1 AND TIER 2 ANALYSES

TIER 2 SCREENING RISK ASSESSMENT REPORT
(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

A/N: 1 **Fac:** Tugboats **Application deemed complete date:** 10/13/2023

1. Stack Data

Equipment Type	Other		0
			0
			0
Combustion Eff	0.0		0
	No T-BACT		
Operation Schedule	2	hrs/day	
	1	days/week	
	25	weeks/year	
Stack Height	14	ft	
Building Area	3000	ft²	
Distance to Residential	780	m	
Distance to Commercial	308	m	
Meteorological Station	Long Beach Airport		

2. Tier 2 Data

Dispersion Factors tables

	Volume Source
For Chronic X/Q	Table 7
For Acute X/Q max	Table 7.7

Dilution Factors

Receptor	X/Q (µg/m³)/(tons/yr)	X/Qmax (µg/m³)/(lbs/hr)
Residential	0.04	6.17
Commercial - Worker	0.19	22.61

Intake and Adjustment Factors

	Residential	Worker
Year of Exposure	30	
Combined Exposure Factor (CEF) - Table 4	677.40	55.86
Worker Adjustment Factor (WAF) - Table 5	1	4.20

A/N: 1 **Application deemed complete date:** 10/13/23

3. Rule 1401 Compound Data

Code	Compound	R1 - Uncontrolled (lbs/hr)	R2 - Controlled (lbs/hr)	CP (mg/kg-day)-1	MP MICR Resident	MP MICR Worker	MP Chronic Resident	MP Chronic Worker	REL Chronic (µg/m³)	REL 8-hr Chronic (µg/m³)	REL Acute (µg/m³)	MWAF
P1	Particulate Emissions from Diesel-Fueled Engines	3.40E-01	3.40E-01	1.10E+00	1.00	1.00	1.00	1.00	5.00E+00	0.00E+00	0.00E+00	1

A/N: 1

Application deemed complete date: 10/13/23

4. Emission Calculations

Compound	R1 (lbs/hr)	R2 (lbs/hr)	R1 (lbs/day)	R2 (lbs/day)	R2 (lbs/yr)	R2 (tons/yr)
Particulate Emissions from Diesel-Fueled Engines	3.40E-01	3.40E-01	6.80E-01	6.80E-01	1.70E+01	8.50E-03
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	**3.40E-01**	**3.40E-01**	**6.80E-01**	**6.80E-01**	**1.70E+01**	**8.50E-03**

TIER 2 RESULTS **A/N:** 1 **Application deemed complete date:** 10/13/23

5a. MICR

MICR Resident = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Resident * CEF Resident * MP Resident * 1e-6 * MWAF

MICR Worker = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Worker * CEF Worker* MP Worker* WAF Worker* 1e-6 * MWAF

Compound	Residential	Commercial
Particulate Emissions from Diesel-Fueled Engines	2.66E-07	4.06E-07
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	0.00E+00	0.00E+00
	FALSE	0.00E+00
	0.00E+00	0.00E+00
Total	**2.66E-07**	**4.06E-07**
	PASS	**PASS**

5b. Is Cancer Burden Calculation Needed (MICR >1E-6)? **NO**

New X/Q at which MICR70yr is one-in-a-million [(µg/m³)/(tons/yr)]:	0.00E+00
New Distance, interpolated from X/Q table using New X/Q (meter):	
Zone Impact Area (km²):	0.00E+00
Zone of Impact Population (7000 person/km²):	0.00E+00
Cancer Burden:	**0.00E+00**

A/N: 1 **Application deemed complete date:** 10/13/23

6. Hazard Index Summary

HIA = [Q(lb/hr) * (X/Q)max * MWAF]/ Acute REL

HIC = [Q(ton/yr) * (X/Q) * MP * MWAF] / Chronic REL

HIC 8-hr= [Q(ton/yr) * (X/Q) * WAF * MWAF] / 8-hr Chronic REL

Target Organs	Acute	Chronic	8-hr Chronic	Acute Pass/Fail	Chronic Pass/Fail	8-hr Chronic Pass/Fail
Alimentary system (liver) - AL	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Bones and teeth - BN		0.00E+00	N/A	Pass	Pass	Pass
Cardiovascular system - CV	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Developmental - DEV	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Endocrine system - END		0.00E+00	N/A	Pass	Pass	Pass
Eye	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Hematopoietic system - HEM	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Immune system - IMM	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Kidney - KID		0.00E+00	N/A	Pass	Pass	Pass
Nervous system - NS	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Reproductive system - REP	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass
Respiratory system - RESP	0.00E+00	3.15E-04	N/A	Pass	Pass	Pass
Skin	0.00E+00	0.00E+00	N/A	Pass	Pass	Pass

A/N: 1 Application deemed complete date: 10/13/23

6a. Hazard Index Acute - Resident

HIA = [Q(lb/hr) * (X/Q)max resident * MWAF] / Acute REL

	HIA - Residential									
Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Particulate Emissions from Diesel-Fueled Engines										
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

6a. Hazard Index Acute - Worker **A/N:** 1 **Application deemed complete date:** 10/13/23

HIA = [Q(lb/hr) * (X/Q)max Worker * MWAF] / Acute REL

	HIA - Commercial									
Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Particulate Emissions from Diesel-Fueled Engines										
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

A/N: 1 Application deemed complete date: 10/13/23

6b. Hazard Index Chronic - Resident

HIC = [Q(ton/yr) * (X/Q) Resident * MP Chronic Resident * MWAF] / Chronic REL

	HIC - Residential												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Particulate Emissions from Diesel-Fueled Engines												7.14E-05	
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E-05	0.00E+00

A/N: 1 Application deemed complete date: 10/13/23

6b. Hazard Index Chronic - Worker

HIC = [Q(ton/yr) * (X/Q) * MP Chronic Worker * MWAF] / Chronic REL

	HIC - Commercial												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Particulate Emissions from Diesel-Fueled Engines												3.15E-04	
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-04	0.00E+00

6c. 8-hour Hazard Index Chronic - Resident **A/N:** 1 **Application deemed complete date:** 10/13/23

HIC 8-hr = [Q(ton/yr) * (X/Q) Resident * WAF Resident * MWAF] / 8-hr Chronic REL

	HIC - Residential												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Particulate Emissions from Diesel-Fueled Engines													
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

A/N: 1 **Application deemed complete date:** 10/13/23

6c. 8-hour Hazard Index Chronic - Worker

HIC 8-hr = [Q(ton/yr) * (X/Q) Worker * WAF Worker * MWAF] / 8-hr Chronic REL

	HIC - Commercial												
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Particulate Emissions from Diesel-Fueled Engines													
Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table B15

Global Warming Potentials (GWP)

CO2	CH4	N2O
1	25	298

IPCC 2007. Intergovernmental Panel on Climate Change. 4*th Assessment Report, Climate Change 2007: The Physical Science Basis, Chapter 2, Table 2.14. June, 2007.*

GWP values used in this analysis reflect the Intergovernmental Panel on Climate Change (IPCC) 2007 Fourth Assessment Report. Although the Assessment Report has been revised several times since 2007, most recently in 2021, EPA will continue using the 2007 Fourth Assessment Report for reporting the GHG inventory until 2024 at which point the 2013 Fifth Assessment Report will be used (EPA 2023b).

Table B16

EPA AVERT Output

Solar Distributed Roof Top Capacity (MW)	1.4
This load profile will displace 3 **GWh** of regional fossil fuel generation over the course of a year. For reference, this equals the annual electricity consumed by 232 average homes in the United States.	
Original (MWh)	81,596,320
Post Change (MWh)	81,593,510
Change (MWh)	-2,810
Original CO2 (ton/yr)	40,443,900
Post Change CO2 (ton/yr)	40,442,570
Change CO2 (ton/yr)	-1,320
AVERT-derived Emission Rates	
CO2 (tons/MWh)	0.496

Source:

EPA's AVoided Emissions and geneRation Tool (AVERT) Calculator, v4.3

https://www.epa.gov/avert/avert-web-edition

Web-based calculator

Last accessed October 2024

Basic Equation:

Capacity (MW) * 8760 hr/yr * capacity factor (%) * avoided emission rate (lb/MW-hr)

Capacity Factor	20.95%
Avoided Emission Rate CO2 (lb/MW-hr)	1068

Source:

https://www.epa.gov/avert/avoided-emission-rates-generated-avert

avert_emission_rates_04-11-24_0.xlsx