

Appendix A

Air Quality/Energy/Greenhouse Gas Emissions Data

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Annual

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Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.67	Acre	0.67	29,315.88	0
City Park	0.56	Acre	0.56	24,524.28	0
Apartments Mid Rise	50.00	Dwelling Unit	0.79	50,000.00	143

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Assumes 50 Apartment Mid Rise units (34,199 sf or 0.785 acres). Approx. 24,543 sf of gross landscaping (i.e. park) (0.563 acres). Pavement coverage (29,296 sf or 0.673 acres). Total gross acres is 2.02 acres.

Construction Phase - Overall construction schedule as provided by project applicant.

Off-road Equipment -

Off-road Equipment - Project construction equipment provided by project applicant.

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Trips and VMT - Construction vehicle trips based on details provided by project applicant.

Demolition - Demolition of 16,770 sf of building square feet (according to the project applicant).

Grading - Assume entire site (2.02 acres) is graded. No material import or export.

Vehicle Trips - 5.44 trips per dwelling unit, as provided by the Traffic Study prepared by Kittelson & Associates, Inc. (June 2020)

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - Per SCAQMD Rule 445; No Woodstoves or wood fireplaces. No hearths.

Sequestration - Approximately 65 new trees to be planted (see Architectural Plans for the project).

Construction Off-road Equipment Mitigation - Reductions include: Water Exposed Area 3 times daily; Unpaved Road Mitigation (Moisture Content at 12%; Vehicle Speed 15 MPH).

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	6.00	16.00

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tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	220.00	259.00
tblConstructionPhase	NumDays	10.00	259.00
tblConstructionPhase	PhaseEndDate	2/18/2021	4/14/2021
tblConstructionPhase	PhaseEndDate	2/26/2021	6/22/2021
tblConstructionPhase	PhaseEndDate	1/14/2022	11/16/2021
tblConstructionPhase	PhaseEndDate	12/31/2021	5/29/2023
tblConstructionPhase	PhaseEndDate	1/28/2022	5/29/2023
tblConstructionPhase	PhaseStartDate	1/22/2021	3/17/2021
tblConstructionPhase	PhaseStartDate	2/19/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	1/1/2022	11/9/2021
tblConstructionPhase	PhaseStartDate	2/27/2021	6/1/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	6/1/2022
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	42.50	0.00
tblFireplaces	NumberNoFireplace	5.00	50.00
tblFireplaces	NumberWood	2.50	0.00
tblGrading	AcresOfGrading	8.00	2.02
tblLandUse	LotAcreage	1.32	0.79
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

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tblSequestration	NumberOfNewTrees	0.00	65.00
tblTripsAndVMT	HaulingTripNumber	76.00	60.00
tblTripsAndVMT	VendorTripNumber	14.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	9.00
tblTripsAndVMT	WorkerTripNumber	10.00	7.00
tblTripsAndVMT	WorkerTripNumber	59.00	36.00
tblTripsAndVMT	WorkerTripNumber	13.00	7.00
tblTripsAndVMT	WorkerTripNumber	12.00	8.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.44
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	5.86	5.44
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	2.50	0.00
tblWoodstoves	NumberNoncatalytic	2.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0507	0.5387	0.3133	6.7000e-004	0.0599	0.0237	0.0836	0.0285	0.0220	0.0504	0.0000	58.9638	58.9638	0.0165	0.0000	59.3753
2022	0.2671	1.2710	1.3637	2.5900e-003	0.0393	0.0603	0.0996	0.0105	0.0581	0.0686	0.0000	219.8702	219.8702	0.0334	0.0000	220.7044
2023	0.1761	0.8163	0.9301	1.7900e-003	0.0272	0.0365	0.0637	7.2700e-003	0.0351	0.0424	0.0000	151.3231	151.3231	0.0225	0.0000	151.8861
Maximum	0.2671	1.2710	1.3637	2.5900e-003	0.0599	0.0603	0.0996	0.0285	0.0581	0.0686	0.0000	219.8702	219.8702	0.0334	0.0000	220.7044

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0507	0.5387	0.3133	6.7000e-004	0.0248	0.0237	0.0485	0.0115	0.0220	0.0335	0.0000	58.9637	58.9637	0.0165	0.0000	59.3753
2022	0.2671	1.2710	1.3637	2.5900e-003	0.0393	0.0603	0.0996	0.0105	0.0581	0.0686	0.0000	219.8700	219.8700	0.0334	0.0000	220.7041
2023	0.1761	0.8163	0.9301	1.7900e-003	0.0272	0.0365	0.0637	7.2700e-003	0.0351	0.0424	0.0000	151.3229	151.3229	0.0225	0.0000	151.8860
Maximum	0.2671	1.2710	1.3637	2.5900e-003	0.0393	0.0603	0.0996	0.0115	0.0581	0.0686	0.0000	219.8700	219.8700	0.0334	0.0000	220.7041

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	27.75	0.00	14.21	36.74	0.00	10.52	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-22-2021	4-21-2021	0.3774	0.3774
2	4-22-2021	7-21-2021	0.1736	0.1736
4	10-22-2021	1-21-2022	0.0284	0.0284
6	4-22-2022	7-21-2022	0.3658	0.3658
7	7-22-2022	10-21-2022	0.6601	0.6601
8	10-22-2022	1-21-2023	0.6505	0.6505
9	1-22-2023	4-21-2023	0.6020	0.6020
10	4-22-2023	7-21-2023	0.2538	0.2538
		Highest	0.6601	0.6601

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2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2144	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626
Energy	3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	93.8214	93.8214	3.2000e-003	1.1000e-003	94.2292
Mobile	0.0773	0.3528	1.0826	4.1200e-003	0.3526	3.1200e-003	0.3557	0.0945	2.9000e-003	0.0974	0.0000	381.1667	381.1667	0.0186	0.0000	381.6323
Waste						0.0000	0.0000		0.0000	0.0000	4.6789	0.0000	4.6789	0.2765	0.0000	11.5919
Water						0.0000	0.0000		0.0000	0.0000	1.0335	23.1475	24.1810	0.1071	2.7000e-003	27.6645
Total	0.2947	0.3851	1.6096	4.3200e-003	0.3526	8.1000e-003	0.3607	0.0945	7.8800e-003	0.1024	5.7125	498.9779	504.6904	0.4063	3.8000e-003	515.9805

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2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	46.0200
Total	46.0200

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/17/2021	4/14/2021	5	21	
2	Grading	Grading	6/1/2021	6/22/2021	5	16	
3	Building Construction	Building Construction	6/1/2022	5/29/2023	5	259	
4	Paving	Paving	11/9/2021	11/16/2021	5	6	
5	Architectural Coating	Architectural Coating	6/1/2022	5/29/2023	5	259	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.02

Acres of Paving: 0.67

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Residential Indoor: 101,250; Residential Outdoor: 33,750; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,759 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Scrapers	1	8.00	367	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	9.00	0.00	60.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	36.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.2500e-003	0.0000	8.2500e-003	1.2500e-003	0.0000	1.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0315	0.3420	0.1971	4.2000e-004		0.0149	0.0149		0.0139	0.0139	0.0000	36.5379	36.5379	0.0103	0.0000	36.7958
Total	0.0315	0.3420	0.1971	4.2000e-004	8.2500e-003	0.0149	0.0232	1.2500e-003	0.0139	0.0151	0.0000	36.5379	36.5379	0.0103	0.0000	36.7958

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3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.3000e-003	1.9400e-003	2.0000e-005	5.2000e-004	2.0000e-005	5.4000e-004	1.4000e-004	2.0000e-005	1.7000e-004	0.0000	2.2869	2.2869	1.6000e-004	0.0000	2.2909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.2000e-004	3.5700e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0400e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9345	0.9345	3.0000e-005	0.0000	0.9352
Total	6.6000e-004	8.6200e-003	5.5100e-003	3.0000e-005	1.5600e-003	3.0000e-005	1.5800e-003	4.2000e-004	3.0000e-005	4.5000e-004	0.0000	3.2214	3.2214	1.9000e-004	0.0000	3.2261

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2200e-003	0.0000	3.2200e-003	4.9000e-004	0.0000	4.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0315	0.3420	0.1971	4.2000e-004		0.0149	0.0149		0.0139	0.0139	0.0000	36.5378	36.5378	0.0103	0.0000	36.7958
Total	0.0315	0.3420	0.1971	4.2000e-004	3.2200e-003	0.0149	0.0182	4.9000e-004	0.0139	0.0144	0.0000	36.5378	36.5378	0.0103	0.0000	36.7958

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3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.3000e-003	1.9400e-003	2.0000e-005	5.2000e-004	2.0000e-005	5.4000e-004	1.4000e-004	2.0000e-005	1.7000e-004	0.0000	2.2869	2.2869	1.6000e-004	0.0000	2.2909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.2000e-004	3.5700e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0400e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9345	0.9345	3.0000e-005	0.0000	0.9352
Total	6.6000e-004	8.6200e-003	5.5100e-003	3.0000e-005	1.5600e-003	3.0000e-005	1.5800e-003	4.2000e-004	3.0000e-005	4.5000e-004	0.0000	3.2214	3.2214	1.9000e-004	0.0000	3.2261

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0493	0.0000	0.0493	0.0266	0.0000	0.0266	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1617	0.0781	1.6000e-004		7.3300e-003	7.3300e-003		6.7400e-003	6.7400e-003	0.0000	14.4831	14.4831	4.6800e-003	0.0000	14.6002
Total	0.0146	0.1617	0.0781	1.6000e-004	0.0493	7.3300e-003	0.0566	0.0266	6.7400e-003	0.0333	0.0000	14.4831	14.4831	4.6800e-003	0.0000	14.6002

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3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.9000e-004	2.1200e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5538	0.5538	2.0000e-005	0.0000	0.5542
Total	2.4000e-004	1.9000e-004	2.1200e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5538	0.5538	2.0000e-005	0.0000	0.5542

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0192	0.0000	0.0192	0.0104	0.0000	0.0104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1617	0.0781	1.6000e-004		7.3300e-003	7.3300e-003		6.7400e-003	6.7400e-003	0.0000	14.4831	14.4831	4.6800e-003	0.0000	14.6002
Total	0.0146	0.1617	0.0781	1.6000e-004	0.0192	7.3300e-003	0.0265	0.0104	6.7400e-003	0.0171	0.0000	14.4831	14.4831	4.6800e-003	0.0000	14.6002

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3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.9000e-004	2.1200e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5538	0.5538	2.0000e-005	0.0000	0.5542
Total	2.4000e-004	1.9000e-004	2.1200e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5538	0.5538	2.0000e-005	0.0000	0.5542

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1420	1.1172	1.0980	1.9100e-003		0.0537	0.0537		0.0515	0.0515	0.0000	158.8753	158.8753	0.0307	0.0000	159.6416
Total	0.1420	1.1172	1.0980	1.9100e-003		0.0537	0.0537		0.0515	0.0515	0.0000	158.8753	158.8753	0.0307	0.0000	159.6416

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3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0359	9.6800e-003	1.0000e-004	2.4100e-003	7.0000e-005	2.4800e-003	7.0000e-004	6.0000e-005	7.6000e-004	0.0000	9.3457	9.3457	5.6000e-004	0.0000	9.3596
Worker	0.0111	8.3300e-003	0.0960	2.9000e-004	0.0302	2.4000e-004	0.0304	8.0200e-003	2.2000e-004	8.2400e-003	0.0000	26.2774	26.2774	7.2000e-004	0.0000	26.2955
Total	0.0122	0.0442	0.1056	3.9000e-004	0.0326	3.1000e-004	0.0329	8.7200e-003	2.8000e-004	9.0000e-003	0.0000	35.6231	35.6231	1.2800e-003	0.0000	35.6552

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1420	1.1172	1.0980	1.9100e-003		0.0537	0.0537		0.0515	0.0515	0.0000	158.8751	158.8751	0.0307	0.0000	159.6414
Total	0.1420	1.1172	1.0980	1.9100e-003		0.0537	0.0537		0.0515	0.0515	0.0000	158.8751	158.8751	0.0307	0.0000	159.6414

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3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0359	9.6800e-003	1.0000e-004	2.4100e-003	7.0000e-005	2.4800e-003	7.0000e-004	6.0000e-005	7.6000e-004	0.0000	9.3457	9.3457	5.6000e-004	0.0000	9.3596
Worker	0.0111	8.3300e-003	0.0960	2.9000e-004	0.0302	2.4000e-004	0.0304	8.0200e-003	2.2000e-004	8.2400e-003	0.0000	26.2774	26.2774	7.2000e-004	0.0000	26.2955
Total	0.0122	0.0442	0.1056	3.9000e-004	0.0326	3.1000e-004	0.0329	8.7200e-003	2.8000e-004	9.0000e-003	0.0000	35.6231	35.6231	1.2800e-003	0.0000	35.6552

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0908	0.7221	0.7534	1.3300e-003		0.0325	0.0325		0.0312	0.0312	0.0000	110.0821	110.0821	0.0208	0.0000	110.6026
Total	0.0908	0.7221	0.7534	1.3300e-003		0.0325	0.0325		0.0312	0.0312	0.0000	110.0821	110.0821	0.0208	0.0000	110.6026

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.7000e-004	0.0188	6.0200e-003	6.0000e-005	1.6700e-003	2.0000e-005	1.6900e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	6.2721	6.2721	3.4000e-004	0.0000	6.2806
Worker	7.2400e-003	5.2200e-003	0.0611	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.5391	17.5391	4.5000e-004	0.0000	17.5504
Total	7.8100e-003	0.0240	0.0672	2.5000e-004	0.0226	1.8000e-004	0.0228	6.0300e-003	1.7000e-004	6.2000e-003	0.0000	23.8112	23.8112	7.9000e-004	0.0000	23.8310

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0908	0.7221	0.7534	1.3300e-003		0.0325	0.0325		0.0312	0.0312	0.0000	110.0820	110.0820	0.0208	0.0000	110.6024
Total	0.0908	0.7221	0.7534	1.3300e-003		0.0325	0.0325		0.0312	0.0312	0.0000	110.0820	110.0820	0.0208	0.0000	110.6024

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.7000e-004	0.0188	6.0200e-003	6.0000e-005	1.6700e-003	2.0000e-005	1.6900e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	6.2721	6.2721	3.4000e-004	0.0000	6.2806
Worker	7.2400e-003	5.2200e-003	0.0611	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.5391	17.5391	4.5000e-004	0.0000	17.5504
Total	7.8100e-003	0.0240	0.0672	2.5000e-004	0.0226	1.8000e-004	0.0228	6.0300e-003	1.7000e-004	6.2000e-003	0.0000	23.8112	23.8112	7.9000e-004	0.0000	23.8310

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6200e-003	0.0262	0.0297	5.0000e-005		1.3900e-003	1.3900e-003		1.2900e-003	1.2900e-003	0.0000	3.9599	3.9599	1.2500e-003	0.0000	3.9912
Paving	8.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.5000e-003	0.0262	0.0297	5.0000e-005		1.3900e-003	1.3900e-003		1.2900e-003	1.2900e-003	0.0000	3.9599	3.9599	1.2500e-003	0.0000	3.9912

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3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	7.9000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2077	0.2077	1.0000e-005	0.0000	0.2078
Total	9.0000e-005	7.0000e-005	7.9000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2077	0.2077	1.0000e-005	0.0000	0.2078

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6200e-003	0.0262	0.0297	5.0000e-005		1.3900e-003	1.3900e-003		1.2900e-003	1.2900e-003	0.0000	3.9599	3.9599	1.2500e-003	0.0000	3.9912
Paving	8.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.5000e-003	0.0262	0.0297	5.0000e-005		1.3900e-003	1.3900e-003		1.2900e-003	1.2900e-003	0.0000	3.9599	3.9599	1.2500e-003	0.0000	3.9912

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3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	7.9000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2077	0.2077	1.0000e-005	0.0000	0.2078
Total	9.0000e-005	7.0000e-005	7.9000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2077	0.2077	1.0000e-005	0.0000	0.2078

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0948					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642
Total	0.1105	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642

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3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4700e-003	1.8500e-003	0.0213	6.0000e-005	6.7100e-003	5.0000e-005	6.7600e-003	1.7800e-003	5.0000e-005	1.8300e-003	0.0000	5.8394	5.8394	1.6000e-004	0.0000	5.8435
Total	2.4700e-003	1.8500e-003	0.0213	6.0000e-005	6.7100e-003	5.0000e-005	6.7600e-003	1.7800e-003	5.0000e-005	1.8300e-003	0.0000	5.8394	5.8394	1.6000e-004	0.0000	5.8435

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0948					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642
Total	0.1105	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642

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3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4700e-003	1.8500e-003	0.0213	6.0000e-005	6.7100e-003	5.0000e-005	6.7600e-003	1.7800e-003	5.0000e-005	1.8300e-003	0.0000	5.8394	5.8394	1.6000e-004	0.0000	5.8435
Total	2.4700e-003	1.8500e-003	0.0213	6.0000e-005	6.7100e-003	5.0000e-005	6.7600e-003	1.7800e-003	5.0000e-005	1.8300e-003	0.0000	5.8394	5.8394	1.6000e-004	0.0000	5.8435

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0691	0.0960	1.6000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	13.5322	13.5322	8.1000e-004	0.0000	13.5525
Total	0.0759	0.0691	0.0960	1.6000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	13.5322	13.5322	8.1000e-004	0.0000	13.5525

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3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6100e-003	1.1600e-003	0.0136	4.0000e-005	4.6500e-003	4.0000e-005	4.6800e-003	1.2300e-003	3.0000e-005	1.2700e-003	0.0000	3.8976	3.8976	1.0000e-004	0.0000	3.9001
Total	1.6100e-003	1.1600e-003	0.0136	4.0000e-005	4.6500e-003	4.0000e-005	4.6800e-003	1.2300e-003	3.0000e-005	1.2700e-003	0.0000	3.8976	3.8976	1.0000e-004	0.0000	3.9001

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0691	0.0960	1.6000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	13.5322	13.5322	8.1000e-004	0.0000	13.5525
Total	0.0759	0.0691	0.0960	1.6000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	13.5322	13.5322	8.1000e-004	0.0000	13.5525

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3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6100e-003	1.1600e-003	0.0136	4.0000e-005	4.6500e-003	4.0000e-005	4.6800e-003	1.2300e-003	3.0000e-005	1.2700e-003	0.0000	3.8976	3.8976	1.0000e-004	0.0000	3.9001
Total	1.6100e-003	1.1600e-003	0.0136	4.0000e-005	4.6500e-003	4.0000e-005	4.6800e-003	1.2300e-003	3.0000e-005	1.2700e-003	0.0000	3.8976	3.8976	1.0000e-004	0.0000	3.9001

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0773	0.3528	1.0826	4.1200e-003	0.3526	3.1200e-003	0.3557	0.0945	2.9000e-003	0.0974	0.0000	381.1667	381.1667	0.0186	0.0000	381.6323
Unmitigated	0.0773	0.3528	1.0826	4.1200e-003	0.3526	3.1200e-003	0.3557	0.0945	2.9000e-003	0.0974	0.0000	381.1667	381.1667	0.0186	0.0000	381.6323

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	272.00	272.00	272.00	928,903	928,903
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	272.00	272.00	272.00	928,903	928,903

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
City Park	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Other Asphalt Surfaces	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.3308	63.3308	2.6100e-003	5.4000e-004	63.5574
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.3308	63.3308	2.6100e-003	5.4000e-004	63.5574
NaturalGas Mitigated	3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4906	30.4906	5.8000e-004	5.6000e-004	30.6718
NaturalGas Unmitigated	3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4906	30.4906	5.8000e-004	5.6000e-004	30.6718

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	571373	3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4906	30.4906	5.8000e-004	5.6000e-004	30.6718
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4906	30.4906	5.8000e-004	5.6000e-004	30.6718

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	571373	3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4906	30.4906	5.8000e-004	5.6000e-004	30.6718
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4906	30.4906	5.8000e-004	5.6000e-004	30.6718

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	198765	63.3308	2.6100e-003	5.4000e-004	63.5574
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		63.3308	2.6100e-003	5.4000e-004	63.5574

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	198765	63.3308	2.6100e-003	5.4000e-004	63.5574
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		63.3308	2.6100e-003	5.4000e-004	63.5574

6.0 Area Detail

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6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2144	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626
Unmitigated	0.2144	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0161					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1828					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0155	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626
Total	0.2144	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0161					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1828					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0155	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626
Total	0.2144	5.9500e-003	0.5158	3.0000e-005		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	0.8423	0.8423	8.1000e-004	0.0000	0.8626

7.0 Water Detail

7.1 Mitigation Measures Water

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	24.1810	0.1071	2.7000e-003	27.6645
Unmitigated	24.1810	0.1071	2.7000e-003	27.6645

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.2577 / 2.05377	21.8191	0.1070	2.6800e-003	25.2942
City Park	0 / 0.66723	2.3619	1.0000e-004	2.0000e-005	2.3704
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		24.1810	0.1071	2.7000e-003	27.6645

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.2577 / 2.05377	21.8191	0.1070	2.6800e-003	25.2942
City Park	0 / 0.66723	2.3619	1.0000e-004	2.0000e-005	2.3704
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		24.1810	0.1071	2.7000e-003	27.6645

8.0 Waste Detail

8.1 Mitigation Measures Waste

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.6789	0.2765	0.0000	11.5919
Unmitigated	4.6789	0.2765	0.0000	11.5919

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	23	4.6688	0.2759	0.0000	11.5667
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		4.6789	0.2765	0.0000	11.5919

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	23	4.6688	0.2759	0.0000	11.5667
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		4.6789	0.2765	0.0000	11.5919

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	46.0200	0.0000	0.0000	46.0200

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	65	46.0200	0.0000	0.0000	46.0200
Total		46.0200	0.0000	0.0000	46.0200

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

City of Gardena - Olson Company Residential
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.67	Acre	0.67	29,315.88	0
City Park	0.56	Acre	0.56	24,524.28	0
Apartments Mid Rise	50.00	Dwelling Unit	0.79	50,000.00	143

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

Project Characteristics -

Land Use - Assumes 50 Apartment Mid Rise units (34,199 sf or 0.785 acres). Approx. 24,543 sf of gross landscaping (i.e. park) (0.563 acres). Pavement coverage (29,296 sf or 0.673 acres). Total gross acres is 2.02 acres.

Construction Phase - Overall construction schedule as provided by project applicant.

Off-road Equipment -

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Trips and VMT - Construction vehicle trips based on details provided by project applicant.

Demolition - Demolition of 16,770 sf of building square feet (according to the project applicant).

Grading - Assume entire site (2.02 acres) is graded. No material import or export.

Vehicle Trips - 5.44 trips per dwelling unit, as provided by the Traffic Study prepared by Kittelson & Associates, Inc. (June 2020)

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - Per SCAQMD Rule 445; No Woodstoves or wood fireplaces. No hearths.

Sequestration - Approximately 65 new trees to be planted (see Architectural Plans for the project).

Construction Off-road Equipment Mitigation - Reductions include: Water Exposed Area 3 times daily; Unpaved Road Mitigation (Moisture Content at 12%; Vehicle Speed 15 MPH).

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	6.00	16.00

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tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	220.00	259.00
tblConstructionPhase	NumDays	10.00	259.00
tblConstructionPhase	PhaseEndDate	2/18/2021	4/14/2021
tblConstructionPhase	PhaseEndDate	2/26/2021	6/22/2021
tblConstructionPhase	PhaseEndDate	1/14/2022	11/16/2021
tblConstructionPhase	PhaseEndDate	12/31/2021	5/29/2023
tblConstructionPhase	PhaseEndDate	1/28/2022	5/29/2023
tblConstructionPhase	PhaseStartDate	1/22/2021	3/17/2021
tblConstructionPhase	PhaseStartDate	2/19/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	1/1/2022	11/9/2021
tblConstructionPhase	PhaseStartDate	2/27/2021	6/1/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	6/1/2022
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	42.50	0.00
tblFireplaces	NumberNoFireplace	5.00	50.00
tblFireplaces	NumberWood	2.50	0.00
tblGrading	AcresOfGrading	8.00	2.02
tblLandUse	LotAcreage	1.32	0.79
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

tblSequestration	NumberOfNewTrees	0.00	65.00
tblTripsAndVMT	HaulingTripNumber	76.00	60.00
tblTripsAndVMT	VendorTripNumber	14.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	9.00
tblTripsAndVMT	WorkerTripNumber	10.00	7.00
tblTripsAndVMT	WorkerTripNumber	59.00	36.00
tblTripsAndVMT	WorkerTripNumber	13.00	7.00
tblTripsAndVMT	WorkerTripNumber	12.00	8.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.44
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	5.86	5.44
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	2.50	0.00
tblWoodstoves	NumberNoncatalytic	2.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.0665	33.3600	19.3156	0.0430	6.2342	1.4261	7.1506	3.3454	1.3259	4.1885	0.0000	4,180.148 6	4,180.148 6	1.1028	0.0000	4,207.717 3
2022	3.4904	16.5913	17.9220	0.0341	0.5238	0.7886	1.3125	0.1397	0.7592	0.8989	0.0000	3,190.405 7	3,190.405 7	0.4812	0.0000	3,202.434 5
2023	3.3212	15.3831	17.6398	0.0339	0.5238	0.6886	1.2124	0.1397	0.6627	0.8023	0.0000	3,168.657 2	3,168.657 2	0.4688	0.0000	3,180.376 6
Maximum	3.4904	33.3600	19.3156	0.0430	6.2342	1.4261	7.1506	3.3454	1.3259	4.1885	0.0000	4,180.148 6	4,180.148 6	1.1028	0.0000	4,207.717 3

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.0665	33.3600	19.3156	0.0430	2.4791	1.4261	3.3955	1.3174	1.3259	2.1605	0.0000	4,180.148 6	4,180.148 6	1.1028	0.0000	4,207.717 3
2022	3.4904	16.5913	17.9220	0.0341	0.5238	0.7886	1.3125	0.1397	0.7592	0.8989	0.0000	3,190.405 7	3,190.405 7	0.4812	0.0000	3,202.434 5
2023	3.3212	15.3831	17.6398	0.0339	0.5238	0.6886	1.2124	0.1397	0.6627	0.8023	0.0000	3,168.657 2	3,168.657 2	0.4688	0.0000	3,180.376 6
Maximum	3.4904	33.3600	19.3156	0.0430	2.4791	1.4261	3.3955	1.3174	1.3259	2.1605	0.0000	4,180.148 6	4,180.148 6	1.1028	0.0000	4,207.717 3

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.57	0.00	38.81	55.95	0.00	34.43	0.00	0.00	0.00	0.00	0.00	0.00

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065
Energy	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
Mobile	0.4484	1.8574	6.1943	0.0235	1.9752	0.0171	1.9924	0.5286	0.0159	0.5445		2,391.2734	2,391.2734	0.1137		2,394.1154
Total	1.6792	2.0492	10.3818	0.0246	1.9752	0.0516	2.0269	0.5286	0.0504	0.5790	0.0000	2,582.8666	2,582.8666	0.1244	3.3800e-003	2,586.9816

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065
Energy	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
Mobile	0.4484	1.8574	6.1943	0.0235	1.9752	0.0171	1.9924	0.5286	0.0159	0.5445		2,391.2734	2,391.2734	0.1137		2,394.1154
Total	1.6792	2.0492	10.3818	0.0246	1.9752	0.0516	2.0269	0.5286	0.0504	0.5790	0.0000	2,582.8666	2,582.8666	0.1244	3.3800e-003	2,586.9816

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/17/2021	4/14/2021	5	21	
2	Grading	Grading	6/1/2021	6/22/2021	5	16	
3	Building Construction	Building Construction	6/1/2022	5/29/2023	5	259	
4	Paving	Paving	11/9/2021	11/16/2021	5	6	
5	Architectural Coating	Architectural Coating	6/1/2022	5/29/2023	5	259	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.02

Acres of Paving: 0.67

Residential Indoor: 101,250; Residential Outdoor: 33,750; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,759 (Architectural Coating – sqft)

OffRoad Equipment

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Scrapers	1	8.00	367	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	9.00	0.00	60.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	36.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7861	0.0000	0.7861	0.1190	0.0000	0.1190			0.0000			0.0000
Off-Road	3.0041	32.5671	18.7734	0.0397		1.4229	1.4229		1.3229	1.3229		3,835.8175	3,835.8175	1.0833		3,862.9004
Total	3.0041	32.5671	18.7734	0.0397	0.7861	1.4229	2.2090	0.1190	1.3229	1.4419		3,835.8175	3,835.8175	1.0833		3,862.9004

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0238	0.7664	0.1797	2.2300e-003	0.0500	2.3500e-003	0.0523	0.0137	2.2500e-003	0.0160		241.8418	241.8418	0.0164		242.2521
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0386	0.0265	0.3625	1.0300e-003	0.1006	8.1000e-004	0.1014	0.0267	7.5000e-004	0.0274		102.4893	102.4893	3.0200e-003		102.5648
Total	0.0624	0.7929	0.5422	3.2600e-003	0.1506	3.1600e-003	0.1537	0.0404	3.0000e-003	0.0434		344.3311	344.3311	0.0194		344.8169

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3066	0.0000	0.3066	0.0464	0.0000	0.0464			0.0000			0.0000
Off-Road	3.0041	32.5671	18.7734	0.0397		1.4229	1.4229		1.3229	1.3229	0.0000	3,835.8175	3,835.8175	1.0833		3,862.9004
Total	3.0041	32.5671	18.7734	0.0397	0.3066	1.4229	1.7295	0.0464	1.3229	1.3693	0.0000	3,835.8175	3,835.8175	1.0833		3,862.9004

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0238	0.7664	0.1797	2.2300e-003	0.0500	2.3500e-003	0.0523	0.0137	2.2500e-003	0.0160		241.8418	241.8418	0.0164		242.2521
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0386	0.0265	0.3625	1.0300e-003	0.1006	8.1000e-004	0.1014	0.0267	7.5000e-004	0.0274		102.4893	102.4893	3.0200e-003		102.5648
Total	0.0624	0.7929	0.5422	3.2600e-003	0.1506	3.1600e-003	0.1537	0.0404	3.0000e-003	0.0434		344.3311	344.3311	0.0194		344.8169

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1560	0.0000	6.1560	3.3247	0.0000	3.3247			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	6.1560	0.9158	7.0717	3.3247	0.8425	4.1672		1,995.6114	1,995.6114	0.6454		2,011.7470

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726
Total	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4008	0.0000	2.4008	1.2966	0.0000	1.2966			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	2.4008	0.9158	3.3166	1.2966	0.8425	2.1391	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726
Total	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0143	0.4617	0.1201	1.2700e-003	0.0320	8.7000e-004	0.0329	9.2200e-003	8.3000e-004	0.0101		136.2429	136.2429	7.8200e-003		136.4384
Worker	0.1446	0.0958	1.3378	3.9700e-003	0.4024	3.1500e-003	0.4056	0.1067	2.9000e-003	0.1096		395.5364	395.5364	0.0109		395.8094
Total	0.1588	0.5575	1.4578	5.2400e-003	0.4344	4.0200e-003	0.4384	0.1159	3.7300e-003	0.1197		531.7794	531.7794	0.0187		532.2478

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0143	0.4617	0.1201	1.2700e-003	0.0320	8.7000e-004	0.0329	9.2200e-003	8.3000e-004	0.0101		136.2429	136.2429	7.8200e-003		136.4384
Worker	0.1446	0.0958	1.3378	3.9700e-003	0.4024	3.1500e-003	0.4056	0.1067	2.9000e-003	0.1096		395.5364	395.5364	0.0109		395.8094
Total	0.1588	0.5575	1.4578	5.2400e-003	0.4344	4.0200e-003	0.4384	0.1159	3.7300e-003	0.1197		531.7794	531.7794	0.0187		532.2478

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0106	0.3503	0.1084	1.2300e-003	0.0320	4.0000e-004	0.0324	9.2200e-003	3.9000e-004	9.6000e-003		131.9537	131.9537	6.9300e-003		132.1269
Worker	0.1357	0.0867	1.2320	3.8200e-003	0.4024	3.0600e-003	0.4055	0.1067	2.8200e-003	0.1095		381.0535	381.0535	9.8400e-003		381.2996
Total	0.1463	0.4370	1.3404	5.0500e-003	0.4344	3.4600e-003	0.4379	0.1159	3.2100e-003	0.1191		513.0072	513.0072	0.0168		513.4265

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0106	0.3503	0.1084	1.2300e-003	0.0320	4.0000e-004	0.0324	9.2200e-003	3.9000e-004	9.6000e-003		131.9537	131.9537	6.9300e-003		132.1269
Worker	0.1357	0.0867	1.2320	3.8200e-003	0.4024	3.0600e-003	0.4055	0.1067	2.8200e-003	0.1095		381.0535	381.0535	9.8400e-003		381.2996
Total	0.1463	0.4370	1.3404	5.0500e-003	0.4344	3.4600e-003	0.4379	0.1159	3.2100e-003	0.1191		513.0072	513.0072	0.0168		513.4265

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289		1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.2926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1664	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289		1,455.0218	1,455.0218	0.4595		1,466.5091

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726
Total	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289	0.0000	1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.2926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1664	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289	0.0000	1,455.0218	1,455.0218	0.4595		1,466.5091

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726
Total	0.0300	0.0206	0.2819	8.0000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		79.7139	79.7139	2.3500e-003		79.7726

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	1.4440	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	1.4440	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	1.4311	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0302	0.0193	0.2738	8.5000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		84.6786	84.6786	2.1900e-003		84.7332
Total	0.0302	0.0193	0.2738	8.5000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		84.6786	84.6786	2.1900e-003		84.7332

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	1.4311	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0302	0.0193	0.2738	8.5000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		84.6786	84.6786	2.1900e-003		84.7332
Total	0.0302	0.0193	0.2738	8.5000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		84.6786	84.6786	2.1900e-003		84.7332

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4484	1.8574	6.1943	0.0235	1.9752	0.0171	1.9924	0.5286	0.0159	0.5445		2,391.2734	2,391.2734	0.1137		2,394.1154
Unmitigated	0.4484	1.8574	6.1943	0.0235	1.9752	0.0171	1.9924	0.5286	0.0159	0.5445		2,391.2734	2,391.2734	0.1137		2,394.1154

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	272.00	272.00	272.00	928,903	928,903
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	272.00	272.00	272.00	928,903	928,903

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
City Park	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Other Asphalt Surfaces	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
NaturalGas Unmitigated	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1565.41	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.56541	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598

6.0 Area Detail

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065
Unmitigated	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0017					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1243	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4279	7.4279	7.1400e-003		7.6065
Total	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0017					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1243	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4279	7.4279	7.1400e-003		7.6065
Total	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Summer

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

City of Gardena - Olson Company Residential
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.67	Acre	0.67	29,315.88	0
City Park	0.56	Acre	0.56	24,524.28	0
Apartments Mid Rise	50.00	Dwelling Unit	0.79	50,000.00	143

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use - Assumes 50 Apartment Mid Rise units (34,199 sf or 0.785 acres). Approx. 24,543 sf of gross landscaping (i.e. park) (0.563 acres). Pavement coverage (29,296 sf or 0.673 acres). Total gross acres is 2.02 acres.

Construction Phase - Overall construction schedule as provided by project applicant.

Off-road Equipment -

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Off-road Equipment - Project construction equipment provided by project applicant.

Trips and VMT - Construction vehicle trips based on details provided by project applicant.

Demolition - Demolition of 16,770 sf of building square feet (according to the project applicant).

Grading - Assume entire site (2.02 acres) is graded. No material import or export.

Vehicle Trips - 5.44 trips per dwelling unit, as provided by the Traffic Study prepared by Kittelson & Associates, Inc. (June 2020)

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - Per SCAQMD Rule 445; No Woodstoves or wood fireplaces. No hearths.

Sequestration - Approximately 65 new trees to be planted (see Architectural Plans for the project).

Construction Off-road Equipment Mitigation - Reductions include: Water Exposed Area 3 times daily; Unpaved Road Mitigation (Moisture Content at 12%; Vehicle Speed 15 MPH).

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	6.00	16.00

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	220.00	259.00
tblConstructionPhase	NumDays	10.00	259.00
tblConstructionPhase	PhaseEndDate	2/18/2021	4/14/2021
tblConstructionPhase	PhaseEndDate	2/26/2021	6/22/2021
tblConstructionPhase	PhaseEndDate	1/14/2022	11/16/2021
tblConstructionPhase	PhaseEndDate	12/31/2021	5/29/2023
tblConstructionPhase	PhaseEndDate	1/28/2022	5/29/2023
tblConstructionPhase	PhaseStartDate	1/22/2021	3/17/2021
tblConstructionPhase	PhaseStartDate	2/19/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	1/1/2022	11/9/2021
tblConstructionPhase	PhaseStartDate	2/27/2021	6/1/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	6/1/2022
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	42.50	0.00
tblFireplaces	NumberNoFireplace	5.00	50.00
tblFireplaces	NumberWood	2.50	0.00
tblGrading	AcresOfGrading	8.00	2.02
tblLandUse	LotAcreage	1.32	0.79
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

tblSequestration	NumberOfNewTrees	0.00	65.00
tblTripsAndVMT	HaulingTripNumber	76.00	60.00
tblTripsAndVMT	VendorTripNumber	14.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	9.00
tblTripsAndVMT	WorkerTripNumber	10.00	7.00
tblTripsAndVMT	WorkerTripNumber	59.00	36.00
tblTripsAndVMT	WorkerTripNumber	13.00	7.00
tblTripsAndVMT	WorkerTripNumber	12.00	8.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.44
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	5.86	5.44
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	2.50	0.00
tblWoodstoves	NumberNoncatalytic	2.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.0714	33.3722	19.2953	0.0429	6.2342	1.4261	7.1506	3.3454	1.3260	4.1885	0.0000	4,169.9724	4,169.9724	1.1032	0.0000	4,197.5511
2022	3.5115	16.6025	17.7921	0.0338	0.5238	0.7887	1.3125	0.1397	0.7592	0.8989	0.0000	3,158.4250	3,158.4250	0.4809	0.0000	3,170.4463
2023	3.3415	15.3928	17.5154	0.0336	0.5238	0.6886	1.2125	0.1397	0.6627	0.8024	0.0000	3,137.8991	3,137.8991	0.4684	0.0000	3,149.6100
Maximum	3.5115	33.3722	19.2953	0.0429	6.2342	1.4261	7.1506	3.3454	1.3260	4.1885	0.0000	4,169.9724	4,169.9724	1.1032	0.0000	4,197.5511

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.0714	33.3722	19.2953	0.0429	2.4791	1.4261	3.3955	1.3174	1.3260	2.1605	0.0000	4,169.9724	4,169.9724	1.1032	0.0000	4,197.5511
2022	3.5115	16.6025	17.7921	0.0338	0.5238	0.7887	1.3125	0.1397	0.7592	0.8989	0.0000	3,158.4250	3,158.4250	0.4809	0.0000	3,170.4463
2023	3.3415	15.3928	17.5154	0.0336	0.5238	0.6886	1.2125	0.1397	0.6627	0.8024	0.0000	3,137.8991	3,137.8991	0.4684	0.0000	3,149.6100
Maximum	3.5115	33.3722	19.2953	0.0429	2.4791	1.4261	3.3955	1.3174	1.3260	2.1605	0.0000	4,169.9724	4,169.9724	1.1032	0.0000	4,197.5511

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.57	0.00	38.81	55.95	0.00	34.43	0.00	0.00	0.00	0.00	0.00	0.00

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065
Energy	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
Mobile	0.4343	1.9055	5.8568	0.0223	1.9752	0.0172	1.9925	0.5286	0.0160	0.5446		2,276.8719	2,276.8719	0.1131		2,279.7003
Total	1.6651	2.0973	10.0443	0.0235	1.9752	0.0517	2.0270	0.5286	0.0505	0.5791	0.0000	2,468.4651	2,468.4651	0.1238	3.3800e-003	2,472.5665

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065
Energy	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
Mobile	0.4343	1.9055	5.8568	0.0223	1.9752	0.0172	1.9925	0.5286	0.0160	0.5446		2,276.8719	2,276.8719	0.1131		2,279.7003
Total	1.6651	2.0973	10.0443	0.0235	1.9752	0.0517	2.0270	0.5286	0.0505	0.5791	0.0000	2,468.4651	2,468.4651	0.1238	3.3800e-003	2,472.5665

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/17/2021	4/14/2021	5	21	
2	Grading	Grading	6/1/2021	6/22/2021	5	16	
3	Building Construction	Building Construction	6/1/2022	5/29/2023	5	259	
4	Paving	Paving	11/9/2021	11/16/2021	5	6	
5	Architectural Coating	Architectural Coating	6/1/2022	5/29/2023	5	259	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.02

Acres of Paving: 0.67

Residential Indoor: 101,250; Residential Outdoor: 33,750; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,759 (Architectural Coating – sqft)

OffRoad Equipment

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Scrapers	1	8.00	367	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	9.00	0.00	60.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	36.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7861	0.0000	0.7861	0.1190	0.0000	0.1190			0.0000			0.0000
Off-Road	3.0041	32.5671	18.7734	0.0397		1.4229	1.4229		1.3229	1.3229		3,835.8175	3,835.8175	1.0833		3,862.9004
Total	3.0041	32.5671	18.7734	0.0397	0.7861	1.4229	2.2090	0.1190	1.3229	1.4419		3,835.8175	3,835.8175	1.0833		3,862.9004

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0244	0.7758	0.1906	2.1900e-003	0.0500	2.3900e-003	0.0524	0.0137	2.2800e-003	0.0160		237.6523	237.6523	0.0170		238.0771
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0294	0.3314	9.7000e-004	0.1006	8.1000e-004	0.1014	0.0267	7.5000e-004	0.0274		96.5026	96.5026	2.8400e-003		96.5736
Total	0.0673	0.8052	0.5220	3.1600e-003	0.1506	3.2000e-003	0.1538	0.0404	3.0300e-003	0.0434		334.1549	334.1549	0.0198		334.6507

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3066	0.0000	0.3066	0.0464	0.0000	0.0464			0.0000			0.0000
Off-Road	3.0041	32.5671	18.7734	0.0397		1.4229	1.4229		1.3229	1.3229	0.0000	3,835.8175	3,835.8175	1.0833		3,862.9004
Total	3.0041	32.5671	18.7734	0.0397	0.3066	1.4229	1.7295	0.0464	1.3229	1.3693	0.0000	3,835.8175	3,835.8175	1.0833		3,862.9004

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0244	0.7758	0.1906	2.1900e-003	0.0500	2.3900e-003	0.0524	0.0137	2.2800e-003	0.0160		237.6523	237.6523	0.0170		238.0771
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0294	0.3314	9.7000e-004	0.1006	8.1000e-004	0.1014	0.0267	7.5000e-004	0.0274		96.5026	96.5026	2.8400e-003		96.5736
Total	0.0673	0.8052	0.5220	3.1600e-003	0.1506	3.2000e-003	0.1538	0.0404	3.0300e-003	0.0434		334.1549	334.1549	0.0198		334.6507

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1560	0.0000	6.1560	3.3247	0.0000	3.3247			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	6.1560	0.9158	7.0717	3.3247	0.8425	4.1672		1,995.6114	1,995.6114	0.6454		2,011.7470

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128
Total	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4008	0.0000	2.4008	1.2966	0.0000	1.2966			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	2.4008	0.9158	3.3166	1.2966	0.8425	2.1391	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128
Total	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4604	0.1329	1.2400e-003	0.0320	9.0000e-004	0.0329	9.2200e-003	8.6000e-004	0.0101		132.4851	132.4851	8.3300e-003		132.6933
Worker	0.1612	0.1060	1.2210	3.7400e-003	0.4024	3.1500e-003	0.4056	0.1067	2.9000e-003	0.1096		372.4450	372.4450	0.0103		372.7014
Total	0.1762	0.5664	1.3539	4.9800e-003	0.4344	4.0500e-003	0.4385	0.1159	3.7600e-003	0.1197		504.9301	504.9301	0.0186		505.3947

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4604	0.1329	1.2400e-003	0.0320	9.0000e-004	0.0329	9.2200e-003	8.6000e-004	0.0101		132.4851	132.4851	8.3300e-003		132.6933
Worker	0.1612	0.1060	1.2210	3.7400e-003	0.4024	3.1500e-003	0.4056	0.1067	2.9000e-003	0.1096		372.4450	372.4450	0.0103		372.7014
Total	0.1762	0.5664	1.3539	4.9800e-003	0.4344	4.0500e-003	0.4385	0.1159	3.7600e-003	0.1197		504.9301	504.9301	0.0186		505.3947

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3487	0.1181	1.2000e-003	0.0320	4.3000e-004	0.0324	9.2200e-003	4.1000e-004	9.6200e-003		128.3707	128.3707	7.3300e-003		128.5539
Worker	0.1519	0.0959	1.1224	3.6000e-003	0.4024	3.0600e-003	0.4055	0.1067	2.8200e-003	0.1095		358.8194	358.8194	9.2300e-003		359.0503
Total	0.1630	0.4446	1.2404	4.8000e-003	0.4344	3.4900e-003	0.4379	0.1159	3.2300e-003	0.1192		487.1901	487.1901	0.0166		487.6042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3487	0.1181	1.2000e-003	0.0320	4.3000e-004	0.0324	9.2200e-003	4.1000e-004	9.6200e-003		128.3707	128.3707	7.3300e-003		128.5539
Worker	0.1519	0.0959	1.1224	3.6000e-003	0.4024	3.0600e-003	0.4055	0.1067	2.8200e-003	0.1095		358.8194	358.8194	9.2300e-003		359.0503
Total	0.1630	0.4446	1.2404	4.8000e-003	0.4344	3.4900e-003	0.4379	0.1159	3.2300e-003	0.1192		487.1901	487.1901	0.0166		487.6042

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289		1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.2926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1664	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289		1,455.0218	1,455.0218	0.4595		1,466.5091

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128
Total	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289	0.0000	1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.2926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1664	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289	0.0000	1,455.0218	1,455.0218	0.4595		1,466.5091

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128
Total	0.0334	0.0228	0.2578	7.5000e-004	0.0782	6.3000e-004	0.0789	0.0208	5.8000e-004	0.0213		75.0576	75.0576	2.2100e-003		75.1128

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	1.4440	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	1.4440	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	1.4311	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0338	0.0213	0.2494	8.0000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		79.7377	79.7377	2.0500e-003		79.7890
Total	0.0338	0.0213	0.2494	8.0000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		79.7377	79.7377	2.0500e-003		79.7890

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.2394					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	1.4311	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0338	0.0213	0.2494	8.0000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		79.7377	79.7377	2.0500e-003		79.7890
Total	0.0338	0.0213	0.2494	8.0000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		79.7377	79.7377	2.0500e-003		79.7890

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4343	1.9055	5.8568	0.0223	1.9752	0.0172	1.9925	0.5286	0.0160	0.5446		2,276.8719	2,276.8719	0.1131		2,279.7003
Unmitigated	0.4343	1.9055	5.8568	0.0223	1.9752	0.0172	1.9925	0.5286	0.0160	0.5446		2,276.8719	2,276.8719	0.1131		2,279.7003

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	272.00	272.00	272.00	928,903	928,903
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	272.00	272.00	272.00	928,903	928,903

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
City Park	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Other Asphalt Surfaces	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
NaturalGas Unmitigated	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1565.41	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.56541	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1654	184.1654	3.5300e-003	3.3800e-003	185.2598

6.0 Area Detail

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065
Unmitigated	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0017					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1243	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4279	7.4279	7.1400e-003		7.6065
Total	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0017					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1243	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4279	7.4279	7.1400e-003		7.6065
Total	1.2139	0.0476	4.1261	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4279	7.4279	7.1400e-003	0.0000	7.6065

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

City of Gardena - Olson Company Residential - Los Angeles-South Coast County, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: County

Region: LOS ANGELES

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption	MPG (Derived)
LOS ANGELES	2022	All Other Buses	Aggregated	Aggregated	DSL	2,427	146,502	14	10.21
LOS ANGELES	2022	LDA	Aggregated	Aggregated	GAS	4,040,505	154,312,636	5,097	30.28
LOS ANGELES	2022	LDA	Aggregated	Aggregated	DSL	35,581	1,405,949	30	47.31
LOS ANGELES	2022	LDA	Aggregated	Aggregated	ELEC	79,346	3,237,232	-	#DIV/0!
LOS ANGELES	2022	LDT1	Aggregated	Aggregated	GAS	466,456	17,402,686	667	26.11
LOS ANGELES	2022	LDT1	Aggregated	Aggregated	DSL	276	6,756	0	21.82
LOS ANGELES	2022	LDT1	Aggregated	Aggregated	ELEC	3,551	146,697	-	#DIV/0!
LOS ANGELES	2022	LDT2	Aggregated	Aggregated	GAS	1,395,328	52,851,239	2,173	24.32
LOS ANGELES	2022	LDT2	Aggregated	Aggregated	DSL	9,029	384,253	11	34.80
LOS ANGELES	2022	LDT2	Aggregated	Aggregated	ELEC	14,573	476,540	-	#DIV/0!
LOS ANGELES	2022	LHD1	Aggregated	Aggregated	GAS	107,665	3,912,115	374	10.45
LOS ANGELES	2022	LHD1	Aggregated	Aggregated	DSL	66,439	2,829,556	130	21.74
LOS ANGELES	2022	LHD2	Aggregated	Aggregated	GAS	18,107	636,816	70	9.10
LOS ANGELES	2022	LHD2	Aggregated	Aggregated	DSL	26,822	1,100,164	56	19.58
LOS ANGELES	2022	MCY	Aggregated	Aggregated	GAS	181,917	1,290,804	36	35.77
LOS ANGELES	2022	MDV	Aggregated	Aggregated	GAS	941,584	33,063,464	1,673	19.77
LOS ANGELES	2022	MDV	Aggregated	Aggregated	DSL	19,913	791,157	29	26.88
LOS ANGELES	2022	MDV	Aggregated	Aggregated	ELEC	7,530	254,508	-	#DIV/0!
LOS ANGELES	2022	MH	Aggregated	Aggregated	GAS	19,672	198,292	39	5.13
LOS ANGELES	2022	MH	Aggregated	Aggregated	DSL	6,143	64,186	6	10.53
LOS ANGELES	2022	Motor Coach	Aggregated	Aggregated	DSL	690	93,044	14	6.51
LOS ANGELES	2022	OBUS	Aggregated	Aggregated	GAS	4,028	167,753	34	5.00
LOS ANGELES	2022	PTO	Aggregated	Aggregated	DSL	-	79,209	16	4.93
LOS ANGELES	2022	SBUS	Aggregated	Aggregated	GAS	1,394	56,948	6	9.20
LOS ANGELES	2022	SBUS	Aggregated	Aggregated	DSL	3,867	122,197	16	7.61 MHD
LOS ANGELES	2022	T6 Ag	Aggregated	Aggregated	DSL	12	102	0	8.37 8.970169
LOS ANGELES	2022	T6 CAIRP heavy	Aggregated	Aggregated	DSL	339	67,084	6	11.55
LOS ANGELES	2022	T6 CAIRP small	Aggregated	Aggregated	DSL	182	9,464	1	10.81
LOS ANGELES	2022	T6 instate construction heavy	Aggregated	Aggregated	DSL	2,542	170,127	17	10.18
LOS ANGELES	2022	T6 instate construction small	Aggregated	Aggregated	DSL	8,462	450,146	44	10.24
LOS ANGELES	2022	T6 instate heavy	Aggregated	Aggregated	DSL	10,547	1,455,515	132	11.04
LOS ANGELES	2022	T6 instate small	Aggregated	Aggregated	DSL	38,737	1,972,425	191	10.34
LOS ANGELES	2022	T6 OOS heavy	Aggregated	Aggregated	DSL	196	38,839	3	11.56
LOS ANGELES	2022	T6 OOS small	Aggregated	Aggregated	DSL	104	5,388	0	10.79
LOS ANGELES	2022	T6 Public	Aggregated	Aggregated	DSL	4,527	70,713	9	8.16
LOS ANGELES	2022	T6 utility	Aggregated	Aggregated	DSL	1,014	17,106	2	9.69
LOS ANGELES	2022	T6TS	Aggregated	Aggregated	GAS	14,670	811,415	161	5.05 HHD
LOS ANGELES	2022	T7 Ag	Aggregated	Aggregated	DSL	5	103	0	5.56 6.413361
LOS ANGELES	2022	T7 CAIRP	Aggregated	Aggregated	DSL	6,382	1,134,601	165	6.89
LOS ANGELES	2022	T7 CAIRP construction	Aggregated	Aggregated	DSL	678	122,204	17	7.32
LOS ANGELES	2022	T7 NNOOS	Aggregated	Aggregated	DSL	6,909	1,383,135	190	7.27
LOS ANGELES	2022	T7 NOOS	Aggregated	Aggregated	DSL	2,521	445,790	66	6.72
LOS ANGELES	2022	T7 POLA	Aggregated	Aggregated	DSL	8,290	1,076,132	189	5.68
LOS ANGELES	2022	T7 Public	Aggregated	Aggregated	DSL	5,502	111,458	19	5.81
LOS ANGELES	2022	T7 Single	Aggregated	Aggregated	DSL	6,004	398,913	61	6.55
LOS ANGELES	2022	T7 single construction	Aggregated	Aggregated	DSL	4,340	303,165	45	6.76
LOS ANGELES	2022	T7 SWCV	Aggregated	Aggregated	DSL	1,393	56,894	28	2.03
LOS ANGELES	2022	T7 SWCV	Aggregated	Aggregated	NG	2,627	106,987	48	2.24
LOS ANGELES	2022	T7 tractor	Aggregated	Aggregated	DSL	12,304	1,664,071	233	7.13
LOS ANGELES	2022	T7 tractor construction	Aggregated	Aggregated	DSL	3,625	250,084	38	6.62
LOS ANGELES	2022	T7 utility	Aggregated	Aggregated	DSL	407	8,267	1	6.30
LOS ANGELES	2022	T7IS	Aggregated	Aggregated	GAS	55	5,861	1	4.11
LOS ANGELES	2022	UBUS	Aggregated	Aggregated	GAS	464	33,581	8	4.23
LOS ANGELES	2022	UBUS	Aggregated	Aggregated	DSL	37	5,105	1	6.33
LOS ANGELES	2022	UBUS	Aggregated	Aggregated	ELEC	14	1,218	-	#DIV/0!
LOS ANGELES	2022	UBUS	Aggregated	Aggregated	NG	4,177	442,636	113	3.93

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: County

Region: LOS ANGELES

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

Region	Calendar Y	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption	MPG (Derived)
LOS ANGELES	2020	All Other Buses	Aggregated	Aggregated	DSL	2,343	137,564	14	9.75
LOS ANGELES	2020	LDA	Aggregated	Aggregated	GAS	3,953,775	155,194,410	5,389	28.80
LOS ANGELES	2020	LDA	Aggregated	Aggregated	DSL	31,076	1,254,452	28	44.95
LOS ANGELES	2020	LDA	Aggregated	Aggregated	ELEC	57,357	2,261,367	-	#DIV/0!
LOS ANGELES	2020	LDT1	Aggregated	Aggregated	GAS	437,140	16,649,906	670	24.85
LOS ANGELES	2020	LDT1	Aggregated	Aggregated	DSL	319	7,980	0	21.40
LOS ANGELES	2020	LDT1	Aggregated	Aggregated	ELEC	1,699	63,018	-	#DIV/0!
LOS ANGELES	2020	LDT2	Aggregated	Aggregated	GAS	1,346,079	52,129,905	2,299	22.68
LOS ANGELES	2020	LDT2	Aggregated	Aggregated	DSL	7,213	323,322	10	32.92
LOS ANGELES	2020	LDT2	Aggregated	Aggregated	ELEC	8,126	276,686	-	#DIV/0!
LOS ANGELES	2020	LHD1	Aggregated	Aggregated	GAS	108,459	4,003,593	391	10.25
LOS ANGELES	2020	LHD1	Aggregated	Aggregated	DSL	56,903	2,486,530	118	21.11
LOS ANGELES	2020	LHD2	Aggregated	Aggregated	GAS	17,784	634,396	71	8.93
LOS ANGELES	2020	LHD2	Aggregated	Aggregated	DSL	22,880	965,315	51	19.02
LOS ANGELES	2020	MCY	Aggregated	Aggregated	GAS	167,287	1,221,839	34	35.85
LOS ANGELES	2020	MDV	Aggregated	Aggregated	GAS	921,419	33,053,258	1,783	18.54
LOS ANGELES	2020	MDV	Aggregated	Aggregated	DSL	16,089	669,900	26	25.38
LOS ANGELES	2020	MDV	Aggregated	Aggregated	ELEC	2,584	90,675	-	#DIV/0!
LOS ANGELES	2020	MH	Aggregated	Aggregated	GAS	19,817	197,548	40	4.98
LOS ANGELES	2020	MH	Aggregated	Aggregated	DSL	5,531	58,524	6	10.25
LOS ANGELES	2020	Motor Coach	Aggregated	Aggregated	DSL	702	89,665	14	6.20
LOS ANGELES	2020	OBUS	Aggregated	Aggregated	GAS	4,050	176,715	36	4.87
LOS ANGELES	2020	PTO	Aggregated	Aggregated	DSL	-	77,604	16	4.73
LOS ANGELES	2020	SBUS	Aggregated	Aggregated	GAS	1,187	49,914	6	9.00
LOS ANGELES	2020	SBUS	Aggregated	Aggregated	DSL	3,809	120,609	16	7.46 MHD
LOS ANGELES	2020	T6 Ag	Aggregated	Aggregated	DSL	12	107	0	8.40 8.491201
LOS ANGELES	2020	T6 CAIRP heavy	Aggregated	Aggregated	DSL	325	64,529	6	10.93
LOS ANGELES	2020	T6 CAIRP small	Aggregated	Aggregated	DSL	171	9,062	1	10.32
LOS ANGELES	2020	T6 instate construction heavy	Aggregated	Aggregated	DSL	2,426	164,958	17	9.61
LOS ANGELES	2020	T6 instate construction small	Aggregated	Aggregated	DSL	8,537	435,827	45	9.75
LOS ANGELES	2020	T6 instate heavy	Aggregated	Aggregated	DSL	10,102	1,359,860	132	10.31
LOS ANGELES	2020	T6 instate small	Aggregated	Aggregated	DSL	37,541	1,865,391	190	9.82
LOS ANGELES	2020	T6 OOS heavy	Aggregated	Aggregated	DSL	186	37,251	3	10.94
LOS ANGELES	2020	T6 OOS small	Aggregated	Aggregated	DSL	99	5,170	1	10.30
LOS ANGELES	2020	T6 Public	Aggregated	Aggregated	DSL	4,476	69,103	9	7.85
LOS ANGELES	2020	T6 utility	Aggregated	Aggregated	DSL	1,007	16,810	2	9.16
LOS ANGELES	2020	T6TS	Aggregated	Aggregated	GAS	14,534	804,969	164	4.90 HHD
LOS ANGELES	2020	T7 Ag	Aggregated	Aggregated	DSL	4	121	0	5.57 6.140757
LOS ANGELES	2020	T7 CAIRP	Aggregated	Aggregated	DSL	6,042	1,093,836	164	6.66
LOS ANGELES	2020	T7 CAIRP construction	Aggregated	Aggregated	DSL	644	118,491	17	7.03
LOS ANGELES	2020	T7 NNOOS	Aggregated	Aggregated	DSL	6,606	1,333,461	194	6.88
LOS ANGELES	2020	T7 NOOS	Aggregated	Aggregated	DSL	2,375	429,768	66	6.51
LOS ANGELES	2020	T7 POLA	Aggregated	Aggregated	DSL	7,813	956,448	173	5.52
LOS ANGELES	2020	T7 Public	Aggregated	Aggregated	DSL	5,389	109,151	19	5.64
LOS ANGELES	2020	T7 Single	Aggregated	Aggregated	DSL	5,737	390,830	63	6.20
LOS ANGELES	2020	T7 single construction	Aggregated	Aggregated	DSL	4,168	293,954	46	6.35
LOS ANGELES	2020	T7 SWCV	Aggregated	Aggregated	DSL	1,728	70,608	35	2.02
LOS ANGELES	2020	T7 SWCV	Aggregated	Aggregated	NG	2,261	92,031	42	2.17
LOS ANGELES	2020	T7 tractor	Aggregated	Aggregated	DSL	11,762	1,618,822	240	6.74
LOS ANGELES	2020	T7 tractor construction	Aggregated	Aggregated	DSL	3,451	242,486	38	6.33
LOS ANGELES	2020	T7 utility	Aggregated	Aggregated	DSL	400	8,126	1	5.99
LOS ANGELES	2020	T7IS	Aggregated	Aggregated	GAS	62	5,725	1	3.88
LOS ANGELES	2020	UBUS	Aggregated	Aggregated	GAS	456	33,185	8	4.15
LOS ANGELES	2020	UBUS	Aggregated	Aggregated	DSL	41	5,505	1	6.42
LOS ANGELES	2020	UBUS	Aggregated	Aggregated	ELEC	14	1,218	-	#DIV/0!
LOS ANGELES	2020	UBUS	Aggregated	Aggregated	NG	4,123	436,939	111	3.95

On-road Mobile (Operational) Energy Usage

Note: Assumes that all vehicles that are generated as part of proposed project use gasoline as a fuel source (for simplicity), since the vast majority of vehicles generated by the project would use gasoline.

Unmitigated:

Step 1:

Therefore:

Average Daily VMT:

2,545 Note: Estimated via CalEEMod output (928,903 annual VMT, divided by 365 days per year).

Step 2:

Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
54.65%	4.50%	20.40%	12.04%	1.57%	0.62%	2.01%	3.07%	0.25%	0.22%	0.51%	0.07%	0.09%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2022 (EMFAC2017 Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
30.28	26.11	24.32	19.77	10.45	9.10	N/A	N/A	5.00	4.11	35.77	9.20	5.13

Therefore:

Weighted Average MPG Factors

Gasoline: 25.50

Step 3:

Therefore:

100 daily gallons of gasoline

or

36,430 annual gallons of gasoline

Off-road (i.e. On-site) Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source. Demolition, Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	51.4 metric tons	CO2	(provided in CalEEMod Output File)
Conversion Factor:	2204.6262 pounds	per metric ton	
Intermediate Result:	113,309 pounds	CO2	
Conversion Factor:	22.38 pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016
Final Result:	5,062.96 gallons	diesel fuel	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Demolition	36.7958
Site Preparation	0.0000
Grading	14.6002

Note: no distinct site preparation phase for this project (site preparation is included in demolition phase).

On-road Mobile (Construction) Energy Usage - Demolition

Note: Year 2020 MPG factors were derived for construction-related energy consumption (for the sake of a conservative est

Step 1: **Total Daily Worker Trips (CalEEMod output)**

9

Worker Trip Length (miles) (CalEEMod output)

14.7

Therefore:

Average Worker Daily VMT:

132

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEI)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2020 (EMFAC2017 output)

LDA	LDT1	LDT2
28.80	24.85	22.68

Therefore:

Weighted Average Worker MPG Factor

26.28

Step 3: **Therefore:**

5 Worker daily gallons of gasoline (all workers)

Step 4: 21 # of Days (CalEEMod output)

Therefore:

Result: 106 Total gallons of gasoline (all workers)

On-road Mobile (Construction) Energy Usage - Grading

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

7

Worker Trip Length (miles) (CalEEMod Output)

14.7

Therefore:

Average Worker Daily VMT:

103

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2020

LDA	LDT1	LDT2
28.80	24.85	22.68

Therefore:

Weighted Average Worker MPG Factor

26.28

Step 3: **Therefore:**

4 Worker daily gallons of gasoline

Step 4: 16 # of Days (CalEEMod Output)

Therefore:

Result: 63 Total gallons of gasoline

On-road Mobile (Construction) Energy Usage - Building Construction

Step 1: **Total Daily Worker Trips (CalEEMod Output)** **Total Daily Vendor Trips (CalEEMod Output)**
36 5

Worker Trip Length (miles) (CalEEMod Output) **Vendor Trip Length (miles) (CalEEMod Output)**
14.7 6.9

Therefore:
Average Worker Daily VMT: **Average Vendor Daily VMT:**
529 35

Step 2: Given: **Assumed Fleet Mix for Workers** (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2	Fleet Mix for Workers (CalEEMod Output)
0.5	0.25	0.25	MHD
Assumed Fleet Mix for Vendors			HHD
			0% 100%

And:
MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2020

Gasoline:			Diesel:	
LDA	LDT1	LDT2	MHD	HHD
28.80	24.85	22.68	8.49	6.14

Therefore:
Weighted Average Worker (Gasoline) MPG Factor **Weighted Average Vendor (Diesel) MPG Factor**
26.28 6.14

Step 3: **Therefore:** **Therefore:**
20 Worker daily gallons of gasoline 6 Vendor daily gallons of diesel

Step 4: 259 # of Days (CalEEMod Output)
Therefore: Therefore:
5,215 Total gallons of gasoline 1,455 Total gallons of diesel

On-road Mobile (Construction) Energy Usage - Paving

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

7

Worker Trip Length (miles) (CalEEMod Output)

14.7

Therefore:

Average Worker Daily VMT:

103

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2020

LDA	LDT1	LDT2
28.80	24.85	22.68

Therefore:

Weighted Average Worker MPG Factor

26.3

Step 3: **Therefore:**

4 Worker daily gallons of gasoline

Step 4: 6 # of Days (CalEEMod Output)

Therefore:

Result: 23 Total gallons of gasoline

On-road Mobile (Construction) Energy Usage - Architectural Coating

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

8

Worker Trip Length (miles) (CalEEMod Output)

14.7

Therefore:

Average Worker Daily VMT:

118

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (EMFAC2017 Output) - Year 2020

LDA	LDT1	LDT2
28.80	24.85	22.68

Therefore:

Weighted Average Worker MPG Factor

26.3

Step 3: **Therefore:**

4 Worker daily gallons of gasoline

Step 4: 259 # of Days (CalEEMod Output)

Therefore:

Result: 1,159 Total gallons of gasoline