

Attachment A

Air Quality Modeling Results



490 South Van Ness - Proposed Project - San Francisco County, Annual

490 South Van Ness - Proposed Project
San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.89	1000sqft	0.00	887.98	0
Apartments Mid Rise	81.00	Dwelling Unit	0.33	78,070.32	232

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	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 - Project site plans 9/20/17

Construction Phase - Grading assumed to last 1.5 months (according to GC); construction timeline ~18 months; architectural coating typically begins halfway through building construction.

Trips and VMT - Hauling trip load: 20 cubic yards (960 cy exported off site / 20 cy per trip = 48 trips)

Demolition - Demolish gas station and pumps (est. 4,100 sf on Google Earth).

Grading - 96 cy imported, 1,056 cy exported on 0.33 acre site

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves or fireplaces in site plans

Construction Off-road Equipment Mitigation - BAAQMD Basic Construction Mitigation Measure for All Projects

Mobile Land Use Mitigation - 81 DU/0.33 acre = 245.45 DU/acre

Energy Mitigation - 2016 Title 24 exceeds 2013 standards by 28%

Waste Mitigation - AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	190.00
tblConstructionPhase	NumDays	100.00	345.00
tblConstructionPhase	NumDays	2.00	31.00
tblConstructionPhase	PhaseEndDate	4/24/2020	8/2/2019
tblConstructionPhase	PhaseStartDate	8/3/2019	11/12/2018
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.15	0.00
tblFireplaces	NumberNoFireplace	3.24	0.00

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tblFireplaces	NumberWood	13.77	0.00
tblGrading	AcresOfGrading	0.00	0.33
tblGrading	MaterialExported	0.00	1,056.00
tblGrading	MaterialImported	0.00	96.00
tblLandUse	BuildingSpaceSquareFeet	890.00	887.98
tblLandUse	BuildingSpaceSquareFeet	81,000.00	78,070.32
tblLandUse	LandUseSquareFeet	890.00	887.98
tblLandUse	LandUseSquareFeet	81,000.00	78,070.32
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	2.13	0.33
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	144.00	48.00
tblWoodstoves	NumberCatalytic	1.62	0.00
tblWoodstoves	NumberNoncatalytic	1.62	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2018	4-30-2018	0.3850	0.3850
2	5-1-2018	7-31-2018	0.4527	0.4527
3	8-1-2018	10-31-2018	0.4536	0.4536
4	11-1-2018	1-31-2019	0.6747	0.6747
5	2-1-2019	4-30-2019	0.6481	0.6481
6	5-1-2019	7-31-2019	0.6618	0.6618
7	8-1-2019	9-30-2019	0.0120	0.0120
		Highest	0.6747	0.6747

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	0.3822	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064
Energy	5.0900e-003	0.0435	0.0189	2.8000e-004		3.5200e-003	3.5200e-003		3.5200e-003	3.5200e-003	0.0000	160.2075	160.2075	5.9300e-003	1.9500e-003	160.9372
Mobile	0.1541	0.6098	1.6832	5.6200e-003	0.4618	7.8100e-003	0.4696	0.1245	7.3500e-003	0.1318	0.0000	515.2964	515.2964	0.0230	0.0000	515.8714
Waste						0.0000	0.0000		0.0000	0.0000	7.7319	0.0000	7.7319	0.4569	0.0000	19.1555
Water						0.0000	0.0000		0.0000	0.0000	1.7245	12.0427	13.7672	0.1777	4.2900e-003	19.4887
Total	0.5413	0.6603	2.3055	5.9300e-003	0.4618	0.0147	0.4765	0.1245	0.0142	0.1387	9.4564	688.5291	697.9855	0.6645	6.2400e-003	716.4592

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3822	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064
Energy	3.9900e-003	0.0341	0.0148	2.2000e-004		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003	0.0000	145.6539	145.6539	5.5600e-003	1.7200e-003	146.3045
Mobile	0.1309	0.4689	1.2477	3.7300e-003	0.3002	5.2800e-003	0.3055	0.0809	4.9700e-003	0.0859	0.0000	341.9889	341.9889	0.0164	0.0000	342.3988
Waste						0.0000	0.0000		0.0000	0.0000	3.8660	0.0000	3.8660	0.2285	0.0000	9.5778
Water						0.0000	0.0000		0.0000	0.0000	1.7245	12.0427	13.7672	0.1777	4.2900e-003	19.4887
Total	0.5171	0.5100	1.8659	3.9800e-003	0.3002	0.0114	0.3115	0.0809	0.0110	0.0920	5.5904	500.6680	506.2585	0.4291	6.0100e-003	518.7762

	ROG	NOx	CO	SO2	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	4.48	22.77	19.07	32.88	35.00	22.53	34.62	35.00	22.20	33.69	40.88	27.28	27.47	35.43	3.69	27.59

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2018	2/14/2018	5	10	
2	Site Preparation	Site Preparation	2/15/2018	2/15/2018	5	1	
3	Grading	Grading	2/16/2018	3/30/2018	5	31	
4	Building Construction	Building Construction	3/31/2018	7/26/2019	5	345	
5	Paving	Paving	7/27/2019	8/2/2019	5	5	
6	Architectural Coating	Architectural Coating	11/12/2018	8/2/2019	5	190	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.33

Acres of Paving: 0

Residential Indoor: 158,092; Residential Outdoor: 52,697; Non-Residential Indoor: 1,332; Non-Residential Outdoor: 444; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	19.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	48.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	59.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1800e-003	0.0000	2.1800e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3297
Total	5.3200e-003	0.0472	0.0389	6.0000e-005	2.1800e-003	3.1100e-003	5.2900e-003	3.3000e-004	2.9700e-003	3.3000e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3297

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3.2 Demolition - 2018

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	9.0000e-005	3.7900e-003	9.8000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.8764	0.8764	1.5000e-004	0.0000	0.8802
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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4003	0.4003	1.0000e-005	0.0000	0.4005
Total	2.7000e-004	3.9200e-003	2.3500e-003	1.0000e-005	5.6000e-004	1.0000e-005	5.7000e-004	1.5000e-004	1.0000e-005	1.7000e-004	0.0000	1.2767	1.2767	1.6000e-004	0.0000	1.2807

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8000e-004	0.0000	9.8000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3296
Total	5.3200e-003	0.0472	0.0389	6.0000e-005	9.8000e-004	3.1100e-003	4.0900e-003	1.5000e-004	2.9700e-003	3.1200e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3296

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3.2 Demolition - 2018

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	9.0000e-005	3.7900e-003	9.8000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.8764	0.8764	1.5000e-004	0.0000	0.8802
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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4003	0.4003	1.0000e-005	0.0000	0.4005
Total	2.7000e-004	3.9200e-003	2.3500e-003	1.0000e-005	5.6000e-004	1.0000e-005	5.7000e-004	1.5000e-004	1.0000e-005	1.7000e-004	0.0000	1.2767	1.2767	1.6000e-004	0.0000	1.2807

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-004	4.8800e-003	2.1300e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492
Total	3.9000e-004	4.8800e-003	2.1300e-003	0.0000	2.7000e-004	2.1000e-004	4.8000e-004	3.0000e-005	1.9000e-004	2.2000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492

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3.3 Site Preparation - 2018

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200

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					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-004	4.8800e-003	2.1300e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492
Total	3.9000e-004	4.8800e-003	2.1300e-003	0.0000	1.2000e-004	2.1000e-004	3.3000e-004	1.0000e-005	1.9000e-004	2.0000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492

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3.3 Site Preparation - 2018

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200

3.4 Grading - 2018

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					0.0120	0.0000	0.0120	6.4600e-003	0.0000	6.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1462	0.1205	1.9000e-004		9.6500e-003	9.6500e-003		9.2100e-003	9.2100e-003	0.0000	16.4427	16.4427	3.1700e-003	0.0000	16.5219
Total	0.0165	0.1462	0.1205	1.9000e-004	0.0120	9.6500e-003	0.0217	6.4600e-003	9.2100e-003	0.0157	0.0000	16.4427	16.4427	3.1700e-003	0.0000	16.5219

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3.4 Grading - 2018

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	2.3000e-004	9.5900e-003	2.4600e-003	2.0000e-005	4.0000e-004	4.0000e-005	4.4000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	2.2141	2.2141	3.8000e-004	0.0000	2.2235
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	5.5000e-004	4.0000e-004	4.2300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.2409	1.2409	3.0000e-005	0.0000	1.2417
Total	7.8000e-004	9.9900e-003	6.6900e-003	3.0000e-005	1.6200e-003	5.0000e-005	1.6700e-003	4.4000e-004	5.0000e-005	4.8000e-004	0.0000	3.4550	3.4550	4.1000e-004	0.0000	3.4652

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					5.4100e-003	0.0000	5.4100e-003	2.9100e-003	0.0000	2.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1462	0.1205	1.9000e-004		9.6500e-003	9.6500e-003		9.2100e-003	9.2100e-003	0.0000	16.4426	16.4426	3.1700e-003	0.0000	16.5219
Total	0.0165	0.1462	0.1205	1.9000e-004	5.4100e-003	9.6500e-003	0.0151	2.9100e-003	9.2100e-003	0.0121	0.0000	16.4426	16.4426	3.1700e-003	0.0000	16.5219

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3.4 Grading - 2018

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	2.3000e-004	9.5900e-003	2.4600e-003	2.0000e-005	4.0000e-004	4.0000e-005	4.4000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	2.2141	2.2141	3.8000e-004	0.0000	2.2235
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	5.5000e-004	4.0000e-004	4.2300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.2409	1.2409	3.0000e-005	0.0000	1.2417
Total	7.8000e-004	9.9900e-003	6.6900e-003	3.0000e-005	1.6200e-003	5.0000e-005	1.6700e-003	4.4000e-004	5.0000e-005	4.8000e-004	0.0000	3.4550	3.4550	4.1000e-004	0.0000	3.4652

3.5 Building Construction - 2018

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	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9314	101.9314	0.0317	0.0000	102.7247
Total	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9314	101.9314	0.0317	0.0000	102.7247

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3.5 Building Construction - 2018

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	4.3900e-003	0.1271	0.0374	2.5000e-004	5.7700e-003	8.7000e-004	6.6300e-003	1.6700e-003	8.3000e-004	2.5000e-003	0.0000	24.9514	24.9514	3.3700e-003	0.0000	25.0356
Worker	0.0207	0.0148	0.1579	5.1000e-004	0.0457	3.5000e-004	0.0460	0.0122	3.2000e-004	0.0125	0.0000	46.2881	46.2881	1.2000e-003	0.0000	46.3181
Total	0.0251	0.1419	0.1953	7.6000e-004	0.0515	1.2200e-003	0.0527	0.0138	1.1500e-003	0.0150	0.0000	71.2395	71.2395	4.5700e-003	0.0000	71.3537

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	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9313	101.9313	0.0317	0.0000	102.7246
Total	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9313	101.9313	0.0317	0.0000	102.7246

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3.5 Building Construction - 2018

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	4.3900e-003	0.1271	0.0374	2.5000e-004	5.7700e-003	8.7000e-004	6.6300e-003	1.6700e-003	8.3000e-004	2.5000e-003	0.0000	24.9514	24.9514	3.3700e-003	0.0000	25.0356
Worker	0.0207	0.0148	0.1579	5.1000e-004	0.0457	3.5000e-004	0.0460	0.0122	3.2000e-004	0.0125	0.0000	46.2881	46.2881	1.2000e-003	0.0000	46.3181
Total	0.0251	0.1419	0.1953	7.6000e-004	0.0515	1.2200e-003	0.0527	0.0138	1.1500e-003	0.0150	0.0000	71.2395	71.2395	4.5700e-003	0.0000	71.3537

3.5 Building Construction - 2019

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	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2139	76.2139	0.0241	0.0000	76.8167
Total	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2139	76.2139	0.0241	0.0000	76.8167

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3.5 Building Construction - 2019

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	3.0300e-003	0.0915	0.0272	1.8000e-004	4.3800e-003	5.7000e-004	4.9500e-003	1.2700e-003	5.4000e-004	1.8100e-003	0.0000	18.7462	18.7462	2.5300e-003	0.0000	18.8094
Worker	0.0144	9.9700e-003	0.1083	3.8000e-004	0.0347	2.7000e-004	0.0350	9.2400e-003	2.5000e-004	9.4900e-003	0.0000	34.1035	34.1035	8.1000e-004	0.0000	34.1238
Total	0.0174	0.1014	0.1354	5.6000e-004	0.0391	8.4000e-004	0.0400	0.0105	7.9000e-004	0.0113	0.0000	52.8497	52.8497	3.3400e-003	0.0000	52.9331

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	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2138	76.2138	0.0241	0.0000	76.8166
Total	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2138	76.2138	0.0241	0.0000	76.8166

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3.5 Building Construction - 2019

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	3.0300e-003	0.0915	0.0272	1.8000e-004	4.3800e-003	5.7000e-004	4.9500e-003	1.2700e-003	5.4000e-004	1.8100e-003	0.0000	18.7462	18.7462	2.5300e-003	0.0000	18.8094
Worker	0.0144	9.9700e-003	0.1083	3.8000e-004	0.0347	2.7000e-004	0.0350	9.2400e-003	2.5000e-004	9.4900e-003	0.0000	34.1035	34.1035	8.1000e-004	0.0000	34.1238
Total	0.0174	0.1014	0.1354	5.6000e-004	0.0391	8.4000e-004	0.0400	0.0105	7.9000e-004	0.0113	0.0000	52.8497	52.8497	3.3400e-003	0.0000	52.9331

3.6 Paving - 2019

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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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3.6 Paving - 2019

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	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494
Total	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494

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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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3.6 Paving - 2019

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	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494
Total	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494

3.7 Architectural Coating - 2018

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	0.1050					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3800e-003	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068
Total	0.1104	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068

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3.7 Architectural Coating - 2018

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	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303
Total	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303

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	0.1050					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3800e-003	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068
Total	0.1104	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068

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3.7 Architectural Coating - 2018

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	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303
Total	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303

3.7 Architectural Coating - 2019

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	0.4492					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6601	19.6601	1.6600e-003	0.0000	19.7016
Total	0.4697	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6601	19.6601	1.6600e-003	0.0000	19.7016

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3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733
Total	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733

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	0.4492					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6600	19.6600	1.6600e-003	0.0000	19.7015
Total	0.4697	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6600	19.6600	1.6600e-003	0.0000	19.7015

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3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733
Total	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Limit Parking Supply

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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	0.1309	0.4689	1.2477	3.7300e-003	0.3002	5.2800e-003	0.3055	0.0809	4.9700e-003	0.0859	0.0000	341.9889	341.9889	0.0164	0.0000	342.3988
Unmitigated	0.1541	0.6098	1.6832	5.6200e-003	0.4618	7.8100e-003	0.4696	0.1245	7.3500e-003	0.1318	0.0000	515.2964	515.2964	0.0230	0.0000	515.8714

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	538.65	517.59	474.66	1,216,008	790,405
General Office Building	9.82	2.19	0.93	17,823	11,585
Total	548.47	519.78	475.59	1,233,831	801,990

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	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
Apartments Mid Rise	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	106.2110	106.2110	4.8000e-003	9.9000e-004	106.6272
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	109.8401	109.8401	4.9700e-003	1.0300e-003	110.2704
NaturalGas Mitigated	3.9900e-003	0.0341	0.0148	2.2000e-004		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003	0.0000	39.4429	39.4429	7.6000e-004	7.2000e-004	39.6773
NaturalGas Unmitigated	5.0900e-003	0.0435	0.0189	2.8000e-004		3.5200e-003	3.5200e-003		3.5200e-003	3.5200e-003	0.0000	50.3675	50.3675	9.7000e-004	9.2000e-004	50.6668

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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	926606	5.0000e-003	0.0427	0.0182	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4472	49.4472	9.5000e-004	9.1000e-004	49.7411
General Office Building	17244.6	9.0000e-005	8.5000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9202	0.9202	2.0000e-005	2.0000e-005	0.9257
Total		5.0900e-003	0.0436	0.0189	2.8000e-004		3.5100e-003	3.5100e-003		3.5100e-003	3.5100e-003	0.0000	50.3675	50.3675	9.7000e-004	9.3000e-004	50.6668

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	726465	3.9200e-003	0.0335	0.0142	2.1000e-004		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	38.7669	38.7669	7.4000e-004	7.1000e-004	38.9973
General Office Building	12667.2	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6760	0.6760	1.0000e-005	1.0000e-005	0.6800
Total		3.9900e-003	0.0341	0.0148	2.1000e-004		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	39.4429	39.4429	7.5000e-004	7.2000e-004	39.6773

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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	366233	106.5413	4.8200e-003	1.0000e-003	106.9587
General Office Building	11339.5	3.2988	1.5000e-004	3.0000e-005	3.3117
Total		109.8401	4.9700e-003	1.0300e-003	110.2704

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	354827	103.2233	4.6700e-003	9.7000e-004	103.6277
General Office Building	10270.4	2.9878	1.4000e-004	3.0000e-005	2.9995
Total		106.2110	4.8100e-003	1.0000e-003	106.6272

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3822	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064
Unmitigated	0.3822	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064

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	0.0554					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3084					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	0.0184	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064
Total	0.3822	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064

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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	0.0554					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3084					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	0.0184	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064
Total	0.3822	6.9800e-003	0.6034	3.0000e-005		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	0.9825	0.9825	9.6000e-004	0.0000	1.0064

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.7672	0.1777	4.2900e-003	19.4887
Unmitigated	13.7672	0.1777	4.2900e-003	19.4887

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.27748 / 3.3271	13.3693	0.1725	4.1700e-003	18.9243
General Office Building	0.158183 / 0.0969509	0.3979	5.1700e-003	1.2000e-004	0.5644
Total		13.7672	0.1777	4.2900e-003	19.4887

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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	5.27748 / 3.3271	13.3693	0.1725	4.1700e-003	18.9243
General Office Building	0.158183 / 0.0969509	0.3979	5.1700e-003	1.2000e-004	0.5644
Total		13.7672	0.1777	4.2900e-003	19.4887

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.8660	0.2285	0.0000	9.5778
Unmitigated	7.7319	0.4569	0.0000	19.1555

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	37.26	7.5634	0.4470	0.0000	18.7381
General Office Building	0.83	0.1685	9.9600e-003	0.0000	0.4174
Total		7.7319	0.4570	0.0000	19.1555

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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	18.63	3.7817	0.2235	0.0000	9.3691
General Office Building	0.415	0.0842	4.9800e-003	0.0000	0.2087
Total		3.8660	0.2285	0.0000	9.5778

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
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.89	1000sqft	0.00	887.98	0
Apartment Mid Rise	81.00	Dwelling Unit	0.33	78,070.32	232

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	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 - Project site plans 9/20/17

Construction Phase - Grading assumed to last 1.5 months (according to GC); construction timeline ~18 months; architectural coating typically begins halfway through building construction.

Trips and VMT - Hauling trip load: 20 cubic yards (960 cy exported off site / 20 cy per trip = 48 trips)

Demolition - Demolish gas station and pumps (est. 4,100 sf on Google Earth).

Grading - 96 cy imported, 1,056 cy exported on 0.33 acre site

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves or fireplaces in site plans

Construction Off-road Equipment Mitigation - BAAQMD Basic Construction Mitigation Measure for All Projects

Mobile Land Use Mitigation - 81 DU/0.33 acre = 245.45 DU/acre

Energy Mitigation - 2016 Title 24 exceeds 2013 standards by 28%

Waste Mitigation - AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	190.00
tblConstructionPhase	NumDays	100.00	345.00
tblConstructionPhase	NumDays	2.00	31.00
tblConstructionPhase	PhaseEndDate	4/24/2020	8/2/2019
tblConstructionPhase	PhaseStartDate	8/3/2019	11/12/2018
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.15	0.00
tblFireplaces	NumberNoFireplace	3.24	0.00

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tblFireplaces	NumberWood	13.77	0.00
tblGrading	AcresOfGrading	0.00	0.33
tblGrading	MaterialExported	0.00	1,056.00
tblGrading	MaterialImported	0.00	96.00
tblLandUse	BuildingSpaceSquareFeet	890.00	887.98
tblLandUse	BuildingSpaceSquareFeet	81,000.00	78,070.32
tblLandUse	LandUseSquareFeet	890.00	887.98
tblLandUse	LandUseSquareFeet	81,000.00	78,070.32
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	2.13	0.33
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	144.00	48.00
tblWoodstoves	NumberCatalytic	1.62	0.00
tblWoodstoves	NumberNoncatalytic	1.62	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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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	lb/day										lb/day					
Area	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263
Energy	0.0279	0.2386	0.1035	1.5200e-003		0.0193	0.0193		0.0193	0.0193		304.2226	304.2226	5.8300e-003	5.5800e-003	306.0304
Mobile	0.9459	3.2859	9.6405	0.0333	2.7077	0.0441	2.7517	0.7274	0.0415	0.7689		3,365.7408	3,365.7408	0.1440		3,369.3402
Total	3.1713	3.6020	16.4489	0.0352	2.7077	0.1002	2.8079	0.7274	0.0976	0.8250	0.0000	3,681.9963	3,681.9963	0.1615	5.5800e-003	3,687.6969

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	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263
Energy	0.0218	0.1868	0.0809	1.1900e-003		0.0151	0.0151		0.0151	0.0151		238.2375	238.2375	4.5700e-003	4.3700e-003	239.6532
Mobile	0.8141	2.5414	6.9678	0.0221	1.7600	0.0298	1.7898	0.4728	0.0280	0.5008		2,232.4832	2,232.4832	0.1016		2,235.0243
Total	3.0335	2.8057	13.7536	0.0236	1.7600	0.0817	1.8417	0.4728	0.0800	0.5528	0.0000	2,482.7536	2,482.7536	0.1179	4.3700e-003	2,487.0037

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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	4.35	22.11	16.39	32.82	35.00	18.44	34.41	35.00	18.08	33.00	0.00	32.57	32.57	26.99	21.68	32.56

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	2/1/2018	2/14/2018	5	10	
2	Site Preparation	Site Preparation	2/15/2018	2/15/2018	5	1	
3	Grading	Grading	2/16/2018	3/30/2018	5	31	
4	Building Construction	Building Construction	3/31/2018	7/26/2019	5	345	
5	Paving	Paving	7/27/2019	8/2/2019	5	5	
6	Architectural Coating	Architectural Coating	11/12/2018	8/2/2019	5	190	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.33

Acres of Paving: 0

Residential Indoor: 158,092; Residential Outdoor: 52,697; Non-Residential Indoor: 1,332; Non-Residential Outdoor: 444; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	19.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	48.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	59.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

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					0.4369	0.0000	0.4369	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.350 2	1,169.350 2	0.2254		1,174.985 7
Total	1.0643	9.4295	7.7762	0.0120	0.4369	0.6228	1.0597	0.0662	0.5943	0.6605		1,169.350 2	1,169.350 2	0.2254		1,174.985 7

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3.2 Demolition - 2018

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	0.0180	0.7394	0.1909	1.6800e-003	0.0330	2.9200e-003	0.0359	9.0200e-003	2.8000e-003	0.0118		194.0320	194.0320	0.0326		194.8469
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.0541	0.7618	0.4809	2.6200e-003	0.1151	3.5300e-003	0.1187	0.0308	3.3600e-003	0.0342		287.7210	287.7210	0.0350		288.5964

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					0.1966	0.0000	0.1966	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.1966	0.6228	0.8194	0.0298	0.5943	0.6241	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

490 South Van Ness - Proposed Project - San Francisco County, Summer

3.2 Demolition - 2018

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	0.0180	0.7394	0.1909	1.6800e-003	0.0330	2.9200e-003	0.0359	9.0200e-003	2.8000e-003	0.0118		194.0320	194.0320	0.0326		194.8469
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.0541	0.7618	0.4809	2.6200e-003	0.1151	3.5300e-003	0.1187	0.0308	3.3600e-003	0.0342		287.7210	287.7210	0.0350		288.5964

3.3 Site Preparation - 2018

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.5303	0.4180	0.9483	0.0573	0.3846	0.4418		982.7113	982.7113	0.3059		990.3596

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3.3 Site Preparation - 2018

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	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747
Total	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.2386	0.4180	0.6566	0.0258	0.3846	0.4103	0.0000	982.7113	982.7113	0.3059		990.3596

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3.3 Site Preparation - 2018

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	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747
Total	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747

3.4 Grading - 2018

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					0.7750	0.0000	0.7750	0.4167	0.0000	0.4167			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.7750	0.6228	1.3978	0.4167	0.5943	1.0110		1,169.3502	1,169.3502	0.2254		1,174.9857

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3.4 Grading - 2018

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	0.0147	0.6026	0.1556	1.3700e-003	0.0269	2.3800e-003	0.0293	7.3500e-003	2.2800e-003	9.6300e-003		158.1245	158.1245	0.0266		158.7887
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.0507	0.6250	0.4455	2.3100e-003	0.1090	2.9900e-003	0.1120	0.0291	2.8400e-003	0.0320		251.8136	251.8136	0.0290		252.5381

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					0.3488	0.0000	0.3488	0.1875	0.0000	0.1875			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.3488	0.6228	0.9715	0.1875	0.5943	0.7818	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

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3.4 Grading - 2018

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	0.0147	0.6026	0.1556	1.3700e-003	0.0269	2.3800e-003	0.0293	7.3500e-003	2.2800e-003	9.6300e-003		158.1245	158.1245	0.0266		158.7887
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.0507	0.6250	0.4455	2.3100e-003	0.1090	2.9900e-003	0.1120	0.0291	2.8400e-003	0.0320		251.8136	251.8136	0.0290		252.5381

3.5 Building Construction - 2018

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555

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3.5 Building Construction - 2018

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	0.0439	1.2745	0.3625	2.5400e-003	0.0607	8.7600e-003	0.0695	0.0175	8.3800e-003	0.0259		282.6662	282.6662	0.0371		283.5948
Worker	0.2125	0.1320	1.7107	5.5400e-003	0.4847	3.5800e-003	0.4883	0.1286	3.3000e-003	0.1319		552.7654	552.7654	0.0143		553.1216
Total	0.2564	1.4065	2.0732	8.0800e-003	0.5454	0.0123	0.5577	0.1460	0.0117	0.1577		835.4316	835.4316	0.0514		836.7164

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555

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3.5 Building Construction - 2018

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	0.0439	1.2745	0.3625	2.5400e-003	0.0607	8.7600e-003	0.0695	0.0175	8.3800e-003	0.0259		282.6662	282.6662	0.0371		283.5948
Worker	0.2125	0.1320	1.7107	5.5400e-003	0.4847	3.5800e-003	0.4883	0.1286	3.3000e-003	0.1319		552.7654	552.7654	0.0143		553.1216
Total	0.2564	1.4065	2.0732	8.0800e-003	0.5454	0.0123	0.5577	0.1460	0.0117	0.1577		835.4316	835.4316	0.0514		836.7164

3.5 Building Construction - 2019

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892

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3.5 Building Construction - 2019

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	0.0398	1.2076	0.3466	2.4900e-003	0.0607	7.5100e-003	0.0682	0.0175	7.1900e-003	0.0247		279.3823	279.3823	0.0367		280.3005
Worker	0.1946	0.1168	1.5479	5.3700e-003	0.4847	3.6100e-003	0.4883	0.1286	3.3200e-003	0.1319		535.7327	535.7327	0.0127		536.0500
Total	0.2344	1.3244	1.8945	7.8600e-003	0.5454	0.0111	0.5565	0.1460	0.0105	0.1565		815.1150	815.1150	0.0494		816.3505

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892

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3.5 Building Construction - 2019

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	0.0398	1.2076	0.3466	2.4900e-003	0.0607	7.5100e-003	0.0682	0.0175	7.1900e-003	0.0247		279.3823	279.3823	0.0367		280.3005
Worker	0.1946	0.1168	1.5479	5.3700e-003	0.4847	3.6100e-003	0.4883	0.1286	3.3200e-003	0.1319		535.7327	535.7327	0.0127		536.0500
Total	0.2344	1.3244	1.8945	7.8600e-003	0.5454	0.0111	0.5565	0.1460	0.0105	0.1565		815.1150	815.1150	0.0494		816.3505

3.6 Paving - 2019

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231

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3.6 Paving - 2019

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	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407
Total	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231

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3.6 Paving - 2019

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	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407
Total	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407

3.7 Architectural Coating - 2018

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	6.1323	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

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3.7 Architectural Coating - 2018

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	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993
Total	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	6.1323	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

490 South Van Ness - Proposed Project - San Francisco County, Summer

3.7 Architectural Coating - 2018

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	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993
Total	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993

3.7 Architectural Coating - 2019

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	6.1001	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

490 South Van Ness - Proposed Project - San Francisco County, Summer

3.7 Architectural Coating - 2019

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	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271
Total	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	6.1001	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

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3.7 Architectural Coating - 2019

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	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271
Total	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Limit Parking Supply

490 South Van Ness - Proposed Project - San Francisco 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	0.8141	2.5414	6.9678	0.0221	1.7600	0.0298	1.7898	0.4728	0.0280	0.5008		2,232.483 2	2,232.483 2	0.1016		2,235.024 3
Unmitigated	0.9459	3.2859	9.6405	0.0333	2.7077	0.0441	2.7517	0.7274	0.0415	0.7689		3,365.740 8	3,365.740 8	0.1440		3,369.340 2

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	538.65	517.59	474.66	1,216,008	790,405
General Office Building	9.82	2.19	0.93	17,823	11,585
Total	548.47	519.78	475.59	1,233,831	801,990

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	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
Apartments Mid Rise	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	0.0218	0.1868	0.0809	1.1900e-003		0.0151	0.0151		0.0151	0.0151		238.2375	238.2375	4.5700e-003	4.3700e-003	239.6532
NaturalGas Unmitigated	0.0279	0.2386	0.1035	1.5200e-003		0.0193	0.0193		0.0193	0.0193		304.2226	304.2226	5.8300e-003	5.5800e-003	306.0304

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	2538.65	0.0274	0.2340	0.0996	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.6643	298.6643	5.7200e-003	5.4800e-003	300.4391
General Office Building	47.2454	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5583	5.5583	1.1000e-004	1.0000e-004	5.5913
Total		0.0279	0.2386	0.1034	1.5200e-003		0.0193	0.0193		0.0193	0.0193		304.2226	304.2226	5.8300e-003	5.5800e-003	306.0304

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	1.99031	0.0215	0.1834	0.0781	1.1700e-003		0.0148	0.0148		0.0148	0.0148		234.1546	234.1546	4.4900e-003	4.2900e-003	235.5460
General Office Building	0.0347047	3.7000e-004	3.4000e-003	2.8600e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.0829	4.0829	8.0000e-005	7.0000e-005	4.1072
Total		0.0218	0.1868	0.0809	1.1900e-003		0.0151	0.0151		0.0151	0.0151		238.2375	238.2375	4.5700e-003	4.3600e-003	239.6532

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263
Unmitigated	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263

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	0.3037					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6897					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	0.2042	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369		12.0329	12.0329	0.0117		12.3263
Total	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263

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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	lb/day										lb/day					
Architectural Coating	0.3037					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6897					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	0.2042	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369		12.0329	12.0329	0.0117		12.3263
Total	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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490 South Van Ness - Proposed Project - San Francisco County, Summer

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

490 South Van Ness - Proposed Project - San Francisco County, Winter

490 South Van Ness - Proposed Project
San Francisco County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.89	1000sqft	0.00	887.98	0
Apartments Mid Rise	81.00	Dwelling Unit	0.33	78,070.32	232

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

490 South Van Ness - Proposed Project - San Francisco County, Winter

Project Characteristics -

Land Use - Project site plans 9/20/17

Construction Phase - Grading assumed to last 1.5 months (according to GC); construction timeline ~18 months; architectural coating typically begins halfway through building construction.

Trips and VMT - Hauling trip load: 20 cubic yards (960 cy exported off site / 20 cy per trip = 48 trips)

Demolition - Demolish gas station and pumps (est. 4,100 sf on Google Earth).

Grading - 96 cy imported, 1,056 cy exported on 0.33 acre site

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves or fireplaces in site plans

Construction Off-road Equipment Mitigation - BAAQMD Basic Construction Mitigation Measure for All Projects

Mobile Land Use Mitigation - 81 DU/0.33 acre = 245.45 DU/acre

Energy Mitigation - 2016 Title 24 exceeds 2013 standards by 28%

Waste Mitigation - AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	190.00
tblConstructionPhase	NumDays	100.00	345.00
tblConstructionPhase	NumDays	2.00	31.00
tblConstructionPhase	PhaseEndDate	4/24/2020	8/2/2019
tblConstructionPhase	PhaseStartDate	8/3/2019	11/12/2018
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.15	0.00
tblFireplaces	NumberNoFireplace	3.24	0.00

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tblFireplaces	NumberWood	13.77	0.00
tblGrading	AcresOfGrading	0.00	0.33
tblGrading	MaterialExported	0.00	1,056.00
tblGrading	MaterialImported	0.00	96.00
tblLandUse	BuildingSpaceSquareFeet	890.00	887.98
tblLandUse	BuildingSpaceSquareFeet	81,000.00	78,070.32
tblLandUse	LandUseSquareFeet	890.00	887.98
tblLandUse	LandUseSquareFeet	81,000.00	78,070.32
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	2.13	0.33
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	144.00	48.00
tblWoodstoves	NumberCatalytic	1.62	0.00
tblWoodstoves	NumberNoncatalytic	1.62	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

490 South Van Ness - Proposed Project - San Francisco 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	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263
Energy	0.0279	0.2386	0.1035	1.5200e-003		0.0193	0.0193		0.0193	0.0193		304.2226	304.2226	5.8300e-003	5.5800e-003	306.0304
Mobile	0.8766	3.5164	9.9015	0.0317	2.7077	0.0443	2.7519	0.7274	0.0417	0.7691		3,201.2445	3,201.2445	0.1453		3,204.8779
Total	3.1020	3.8326	16.7099	0.0335	2.7077	0.1004	2.8081	0.7274	0.0978	0.8252	0.0000	3,517.5000	3,517.5000	0.1629	5.5800e-003	3,523.2346

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	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263
Energy	0.0218	0.1868	0.0809	1.1900e-003		0.0151	0.0151		0.0151	0.0151		238.2375	238.2375	4.5700e-003	4.3700e-003	239.6532
Mobile	0.7446	2.6953	7.4116	0.0210	1.7600	0.0300	1.7900	0.4728	0.0282	0.5010		2,123.5103	2,123.5103	0.1042		2,126.1152
Total	2.9640	2.9596	14.1975	0.0226	1.7600	0.0819	1.8419	0.4728	0.0801	0.5530	0.0000	2,373.7806	2,373.7806	0.1205	4.3700e-003	2,378.0947

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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	4.45	22.78	15.04	32.75	35.00	18.41	34.41	35.00	18.06	32.99	0.00	32.52	32.52	26.02	21.68	32.50

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	2/1/2018	2/14/2018	5	10	
2	Site Preparation	Site Preparation	2/15/2018	2/15/2018	5	1	
3	Grading	Grading	2/16/2018	3/30/2018	5	31	
4	Building Construction	Building Construction	3/31/2018	7/26/2019	5	345	
5	Paving	Paving	7/27/2019	8/2/2019	5	5	
6	Architectural Coating	Architectural Coating	11/12/2018	8/2/2019	5	190	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.33

Acres of Paving: 0

Residential Indoor: 158,092; Residential Outdoor: 52,697; Non-Residential Indoor: 1,332; Non-Residential Outdoor: 444; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	19.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	48.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	59.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

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					0.4369	0.0000	0.4369	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.350 2	1,169.350 2	0.2254		1,174.985 7
Total	1.0643	9.4295	7.7762	0.0120	0.4369	0.6228	1.0597	0.0662	0.5943	0.6605		1,169.350 2	1,169.350 2	0.2254		1,174.985 7

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3.2 Demolition - 2018

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	0.0186	0.7624	0.2008	1.6600e-003	0.0330	3.0200e-003	0.0360	9.0200e-003	2.8900e-003	0.0119		192.0950	192.0950	0.0332		192.9260
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.0585	0.7901	0.4816	2.5400e-003	0.1151	3.6300e-003	0.1187	0.0308	3.4500e-003	0.0343		280.1501	280.1501	0.0355		281.0386

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					0.1966	0.0000	0.1966	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.1966	0.6228	0.8194	0.0298	0.5943	0.6241	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

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3.2 Demolition - 2018

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	0.0186	0.7624	0.2008	1.6600e-003	0.0330	3.0200e-003	0.0360	9.0200e-003	2.8900e-003	0.0119		192.0950	192.0950	0.0332		192.9260
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.0585	0.7901	0.4816	2.5400e-003	0.1151	3.6300e-003	0.1187	0.0308	3.4500e-003	0.0343		280.1501	280.1501	0.0355		281.0386

3.3 Site Preparation - 2018

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.5303	0.4180	0.9483	0.0573	0.3846	0.4418		982.7113	982.7113	0.3059		990.3596

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3.3 Site Preparation - 2018

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	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563
Total	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.2386	0.4180	0.6566	0.0258	0.3846	0.4103	0.0000	982.7113	982.7113	0.3059		990.3596

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3.3 Site Preparation - 2018

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	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563
Total	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563

3.4 Grading - 2018

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					0.7750	0.0000	0.7750	0.4167	0.0000	0.4167			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.7750	0.6228	1.3978	0.4167	0.5943	1.0110		1,169.3502	1,169.3502	0.2254		1,174.9857

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3.4 Grading - 2018

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	0.0151	0.6213	0.1637	1.3500e-003	0.0269	2.4600e-003	0.0293	7.3500e-003	2.3500e-003	9.7000e-003		156.5460	156.5460	0.0271		157.2233
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.0551	0.6490	0.4445	2.2300e-003	0.1090	3.0700e-003	0.1121	0.0291	2.9100e-003	0.0321		244.6011	244.6011	0.0294		245.3358

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					0.3488	0.0000	0.3488	0.1875	0.0000	0.1875			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.3488	0.6228	0.9715	0.1875	0.5943	0.7818	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

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3.4 Grading - 2018

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	0.0151	0.6213	0.1637	1.3500e-003	0.0269	2.4600e-003	0.0293	7.3500e-003	2.3500e-003	9.7000e-003		156.5460	156.5460	0.0271		157.2233
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.0551	0.6490	0.4445	2.2300e-003	0.1090	3.0700e-003	0.1121	0.0291	2.9100e-003	0.0321		244.6011	244.6011	0.0294		245.3358

3.5 Building Construction - 2018

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555

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3.5 Building Construction - 2018

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	0.0461	1.2961	0.4021	2.4900e-003	0.0607	9.0000e-003	0.0697	0.0175	8.6100e-003	0.0261		277.8819	277.8819	0.0388		278.8511
Worker	0.2355	0.1633	1.6569	5.2100e-003	0.4847	3.5800e-003	0.4883	0.1286	3.3000e-003	0.1319		519.5250	519.5250	0.0136		519.8640
Total	0.2816	1.4594	2.0589	7.7000e-003	0.5454	0.0126	0.5580	0.1460	0.0119	0.1579		797.4069	797.4069	0.0523		798.7151

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555

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3.5 Building Construction - 2018

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	0.0461	1.2961	0.4021	2.4900e-003	0.0607	9.0000e-003	0.0697	0.0175	8.6100e-003	0.0261		277.8819	277.8819	0.0388		278.8511
Worker	0.2355	0.1633	1.6569	5.2100e-003	0.4847	3.5800e-003	0.4883	0.1286	3.3000e-003	0.1319		519.5250	519.5250	0.0136		519.8640
Total	0.2816	1.4594	2.0589	7.7000e-003	0.5454	0.0126	0.5580	0.1460	0.0119	0.1579		797.4069	797.4069	0.0523		798.7151

3.5 Building Construction - 2019

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892

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3.5 Building Construction - 2019

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	0.0419	1.2266	0.3835	2.4500e-003	0.0607	7.7300e-003	0.0685	0.0175	7.3900e-003	0.0249		274.5967	274.5967	0.0382		275.5522
Worker	0.2160	0.1446	1.4926	5.0500e-003	0.4847	3.6100e-003	0.4883	0.1286	3.3200e-003	0.1319		503.5072	503.5072	0.0120		503.8081
Total	0.2579	1.3712	1.8761	7.5000e-003	0.5454	0.0113	0.5567	0.1460	0.0107	0.1567		778.1039	778.1039	0.0503		779.3604

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892

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3.5 Building Construction - 2019

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	0.0419	1.2266	0.3835	2.4500e-003	0.0607	7.7300e-003	0.0685	0.0175	7.3900e-003	0.0249		274.5967	274.5967	0.0382		275.5522
Worker	0.2160	0.1446	1.4926	5.0500e-003	0.4847	3.6100e-003	0.4883	0.1286	3.3200e-003	0.1319		503.5072	503.5072	0.0120		503.8081
Total	0.2579	1.3712	1.8761	7.5000e-003	0.5454	0.0113	0.5567	0.1460	0.0107	0.1567		778.1039	778.1039	0.0503		779.3604

3.6 Paving - 2019

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231

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3.6 Paving - 2019

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	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042
Total	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231

490 South Van Ness - Proposed Project - San Francisco County, Winter

3.6 Paving - 2019

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	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042
Total	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042

3.7 Architectural Coating - 2018

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	6.1323	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

490 South Van Ness - Proposed Project - San Francisco County, Winter

3.7 Architectural Coating - 2018

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	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350
Total	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	6.1323	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

490 South Van Ness - Proposed Project - San Francisco County, Winter

3.7 Architectural Coating - 2018

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	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350
Total	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350

3.7 Architectural Coating - 2019

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	6.1001	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

490 South Van Ness - Proposed Project - San Francisco County, Winter

3.7 Architectural Coating - 2019

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	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695
Total	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695

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	5.8337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	6.1001	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

490 South Van Ness - Proposed Project - San Francisco County, Winter

3.7 Architectural Coating - 2019

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	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695
Total	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Limit Parking Supply

490 South Van Ness - Proposed Project - San Francisco 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	0.7446	2.6953	7.4116	0.0210	1.7600	0.0300	1.7900	0.4728	0.0282	0.5010		2,123.5103	2,123.5103	0.1042		2,126.1152
Unmitigated	0.8766	3.5164	9.9015	0.0317	2.7077	0.0443	2.7519	0.7274	0.0417	0.7691		3,201.2445	3,201.2445	0.1453		3,204.8779

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	538.65	517.59	474.66	1,216,008	790,405
General Office Building	9.82	2.19	0.93	17,823	11,585
Total	548.47	519.78	475.59	1,233,831	801,990

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	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
Apartments Mid Rise	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	0.0218	0.1868	0.0809	1.1900e-003		0.0151	0.0151		0.0151	0.0151		238.2375	238.2375	4.5700e-003	4.3700e-003	239.6532
NaturalGas Unmitigated	0.0279	0.2386	0.1035	1.5200e-003		0.0193	0.0193		0.0193	0.0193		304.2226	304.2226	5.8300e-003	5.5800e-003	306.0304

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	2538.65	0.0274	0.2340	0.0996	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.6643	298.6643	5.7200e-003	5.4800e-003	300.4391
General Office Building	47.2454	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5583	5.5583	1.1000e-004	1.0000e-004	5.5913
Total		0.0279	0.2386	0.1034	1.5200e-003		0.0193	0.0193		0.0193	0.0193		304.2226	304.2226	5.8300e-003	5.5800e-003	306.0304

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	1.99031	0.0215	0.1834	0.0781	1.1700e-003		0.0148	0.0148		0.0148	0.0148		234.1546	234.1546	4.4900e-003	4.2900e-003	235.5460
General Office Building	0.0347047	3.7000e-004	3.4000e-003	2.8600e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.0829	4.0829	8.0000e-005	7.0000e-005	4.1072
Total		0.0218	0.1868	0.0809	1.1900e-003		0.0151	0.0151		0.0151	0.0151		238.2375	238.2375	4.5700e-003	4.3600e-003	239.6532

6.0 Area Detail

6.1 Mitigation Measures Area

490 South Van Ness - Proposed Project - San Francisco 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	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263
Unmitigated	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263

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	0.3037					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6897					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	0.2042	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369		12.0329	12.0329	0.0117		12.3263
Total	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263

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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	lb/day										lb/day					
Architectural Coating	0.3037					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6897					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	0.2042	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369		12.0329	12.0329	0.0117		12.3263
Total	2.1976	0.0776	6.7049	3.5000e-004		0.0369	0.0369		0.0369	0.0369	0.0000	12.0329	12.0329	0.0117	0.0000	12.3263

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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490 South Van Ness - Proposed Project - San Francisco County, Winter

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

490 South Van Ness - Comparison Project - San Francisco County, Annual

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San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	72.00	Dwelling Unit	0.33	71,379.00	206
General Office Building	0.66	1000sqft	0.00	655.00	0
Enclosed Parking Structure	48.00	Space	0.00	18,913.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Project site plans

Construction Phase - Grading assumed to last 1.5 months (according to GC); construction timeline ~18 months; architectural coating typically begins halfway through building construction.

Grading - Project site is 0.33 acres

Demolition - Demolish gas station and pumps (est. 4,100 sf on Google Earth).

Trips and VMT - Hauling trip load: 20 cubic yards

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves or fireplaces in site plans

Construction Off-road Equipment Mitigation - BAAQMD Basic Construction Mitigation Measure for All Projects

Mobile Land Use Mitigation - 72 DU/0.33 acre = 218.18 DU/acre

Energy Mitigation - 2016 Title 24 exceeds 2013 standards by 28%

Waste Mitigation - AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	190.00
tblConstructionPhase	NumDays	100.00	345.00
tblConstructionPhase	NumDays	2.00	31.00
tblConstructionPhase	PhaseEndDate	4/24/2020	8/2/2019
tblConstructionPhase	PhaseStartDate	8/3/2019	11/12/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	4/2/2018
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	10.80	0.00

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tblFireplaces	NumberNoFireplace	2.88	0.00
tblFireplaces	NumberWood	12.24	0.00
tblGrading	AcresOfGrading	0.00	0.33
tblGrading	MaterialExported	0.00	9,010.10
tblGrading	MaterialImported	0.00	819.10
tblLandUse	BuildingSpaceSquareFeet	72,000.00	71,379.00
tblLandUse	BuildingSpaceSquareFeet	19,200.00	18,913.00
tblLandUse	LandUseSquareFeet	72,000.00	71,379.00
tblLandUse	LandUseSquareFeet	19,200.00	18,913.00
tblLandUse	LotAcreage	1.89	0.33
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	0.43	0.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	1,229.00	860.00
tblWoodstoves	NumberCatalytic	1.44	0.00
tblWoodstoves	NumberNoncatalytic	1.44	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2018	4-30-2018	0.5436	0.5436
2	5-1-2018	7-31-2018	0.4626	0.4626
3	8-1-2018	10-31-2018	0.4635	0.4635
4	11-1-2018	1-31-2019	0.6710	0.6710
5	2-1-2019	4-30-2019	0.6423	0.6423
6	5-1-2019	7-31-2019	0.6552	0.6552
7	8-1-2019	9-30-2019	0.0116	0.0116
		Highest	0.6710	0.6710

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	0.3499	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955
Energy	4.5100e-003	0.0386	0.0167	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003	0.0000	177.8067	177.8067	6.8800e-003	2.0600e-003	178.5937
Mobile	0.1366	0.5407	1.4925	4.9800e-003	0.4095	6.9200e-003	0.4164	0.1104	6.5200e-003	0.1169	0.0000	456.9043	456.9043	0.0204	0.0000	457.4141
Waste						0.0000	0.0000		0.0000	0.0000	6.8469	0.0000	6.8469	0.4046	0.0000	16.9629
Water						0.0000	0.0000		0.0000	0.0000	1.5255	10.6534	12.1789	0.1572	3.8000e-003	17.2402
Total	0.4910	0.5855	2.0460	5.2600e-003	0.4095	0.0130	0.4225	0.1104	0.0126	0.1230	8.3724	646.2385	654.6109	0.5899	5.8600e-003	671.1064

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3499	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955
Energy	3.5300e-003	0.0302	0.0131	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	158.9151	158.9151	6.2800e-003	1.8000e-003	159.6086
Mobile	0.1190	0.4336	1.1615	3.5400e-003	0.2866	5.0000e-003	0.2916	0.0773	4.7100e-003	0.0820	0.0000	325.1887	325.1887	0.0154	0.0000	325.5731
Waste						0.0000	0.0000		0.0000	0.0000	3.4234	0.0000	3.4234	0.2023	0.0000	8.4814
Water						0.0000	0.0000		0.0000	0.0000	1.5255	10.6534	12.1789	0.1572	3.8000e-003	17.2402
Total	0.4725	0.4700	1.7114	3.7600e-003	0.2866	0.0104	0.2970	0.0773	0.0101	0.0874	4.9489	495.6314	500.5803	0.3820	5.6000e-003	511.7987

	ROG	NOx	CO	SO2	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	3.79	19.72	16.35	28.52	30.00	20.02	29.69	30.00	19.78	28.95	40.89	23.31	23.53	35.25	4.44	23.74

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2018	2/14/2018	5	10	
2	Site Preparation	Site Preparation	2/15/2018	2/15/2018	5	1	
3	Grading	Grading	2/16/2018	3/30/2018	5	31	
4	Building Construction	Building Construction	4/2/2018	7/26/2019	5	345	
5	Paving	Paving	7/27/2019	8/2/2019	5	5	
6	Architectural Coating	Architectural Coating	11/12/2018	8/2/2019	5	190	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.33

Acres of Paving: 0

Residential Indoor: 144,542; Residential Outdoor: 48,181; Non-Residential Indoor: 983; Non-Residential Outdoor: 328; Striped Parking Area: 1,135 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	60.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	19.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	860.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1800e-003	0.0000	2.1800e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3297
Total	5.3200e-003	0.0472	0.0389	6.0000e-005	2.1800e-003	3.1100e-003	5.2900e-003	3.3000e-004	2.9700e-003	3.3000e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3297

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3.2 Demolition - 2018

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	9.0000e-005	3.7900e-003	9.8000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.8764	0.8764	1.5000e-004	0.0000	0.8802
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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4003	0.4003	1.0000e-005	0.0000	0.4005
Total	2.7000e-004	3.9200e-003	2.3500e-003	1.0000e-005	5.6000e-004	1.0000e-005	5.7000e-004	1.5000e-004	1.0000e-005	1.7000e-004	0.0000	1.2767	1.2767	1.6000e-004	0.0000	1.2807

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8000e-004	0.0000	9.8000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3296
Total	5.3200e-003	0.0472	0.0389	6.0000e-005	9.8000e-004	3.1100e-003	4.0900e-003	1.5000e-004	2.9700e-003	3.1200e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3296

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3.2 Demolition - 2018

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	9.0000e-005	3.7900e-003	9.8000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.8764	0.8764	1.5000e-004	0.0000	0.8802
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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4003	0.4003	1.0000e-005	0.0000	0.4005
Total	2.7000e-004	3.9200e-003	2.3500e-003	1.0000e-005	5.6000e-004	1.0000e-005	5.7000e-004	1.5000e-004	1.0000e-005	1.7000e-004	0.0000	1.2767	1.2767	1.6000e-004	0.0000	1.2807

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-004	4.8800e-003	2.1300e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492
Total	3.9000e-004	4.8800e-003	2.1300e-003	0.0000	2.7000e-004	2.1000e-004	4.8000e-004	3.0000e-005	1.9000e-004	2.2000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492

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3.3 Site Preparation - 2018

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200

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					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-004	4.8800e-003	2.1300e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492
Total	3.9000e-004	4.8800e-003	2.1300e-003	0.0000	1.2000e-004	2.1000e-004	3.3000e-004	1.0000e-005	1.9000e-004	2.0000e-004	0.0000	0.4458	0.4458	1.4000e-004	0.0000	0.4492

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3.3 Site Preparation - 2018

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0200	0.0200	0.0000	0.0000	0.0200

3.4 Grading - 2018

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					0.0133	0.0000	0.0133	6.6500e-003	0.0000	6.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1462	0.1205	1.9000e-004		9.6500e-003	9.6500e-003		9.2100e-003	9.2100e-003	0.0000	16.4427	16.4427	3.1700e-003	0.0000	16.5219
Total	0.0165	0.1462	0.1205	1.9000e-004	0.0133	9.6500e-003	0.0229	6.6500e-003	9.2100e-003	0.0159	0.0000	16.4427	16.4427	3.1700e-003	0.0000	16.5219

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3.4 Grading - 2018

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	4.1300e-003	0.1718	0.0442	3.8000e-004	7.2100e-003	6.7000e-004	7.8800e-003	1.9800e-003	6.4000e-004	2.6200e-003	0.0000	39.6697	39.6697	6.7500e-003	0.0000	39.8385
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	5.5000e-004	4.0000e-004	4.2300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.2409	1.2409	3.0000e-005	0.0000	1.2417
Total	4.6800e-003	0.1722	0.0484	3.9000e-004	8.4300e-003	6.8000e-004	9.1100e-003	2.3100e-003	6.5000e-004	2.9500e-003	0.0000	40.9106	40.9106	6.7800e-003	0.0000	41.0802

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					5.9800e-003	0.0000	5.9800e-003	2.9900e-003	0.0000	2.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1462	0.1205	1.9000e-004		9.6500e-003	9.6500e-003		9.2100e-003	9.2100e-003	0.0000	16.4426	16.4426	3.1700e-003	0.0000	16.5219
Total	0.0165	0.1462	0.1205	1.9000e-004	5.9800e-003	9.6500e-003	0.0156	2.9900e-003	9.2100e-003	0.0122	0.0000	16.4426	16.4426	3.1700e-003	0.0000	16.5219

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3.4 Grading - 2018

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	4.1300e-003	0.1718	0.0442	3.8000e-004	7.2100e-003	6.7000e-004	7.8800e-003	1.9800e-003	6.4000e-004	2.6200e-003	0.0000	39.6697	39.6697	6.7500e-003	0.0000	39.8385
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	5.5000e-004	4.0000e-004	4.2300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.2409	1.2409	3.0000e-005	0.0000	1.2417
Total	4.6800e-003	0.1722	0.0484	3.9000e-004	8.4300e-003	6.8000e-004	9.1100e-003	2.3100e-003	6.5000e-004	2.9500e-003	0.0000	40.9106	40.9106	6.7800e-003	0.0000	41.0802

3.5 Building Construction - 2018

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	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9314	101.9314	0.0317	0.0000	102.7247
Total	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9314	101.9314	0.0317	0.0000	102.7247

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3.5 Building Construction - 2018

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	5.3700e-003	0.1553	0.0457	3.0000e-004	7.0500e-003	1.0600e-003	8.1100e-003	2.0400e-003	1.0200e-003	3.0500e-003	0.0000	30.4962	30.4962	4.1200e-003	0.0000	30.5991
Worker	0.0210	0.0151	0.1606	5.2000e-004	0.0465	3.6000e-004	0.0468	0.0124	3.3000e-004	0.0127	0.0000	47.0726	47.0726	1.2200e-003	0.0000	47.1032
Total	0.0264	0.1704	0.2063	8.2000e-004	0.0535	1.4200e-003	0.0549	0.0144	1.3500e-003	0.0157	0.0000	77.5687	77.5687	5.3400e-003	0.0000	77.7022

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	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9313	101.9313	0.0317	0.0000	102.7246
Total	0.1063	1.0811	0.7596	1.1200e-003		0.0695	0.0695		0.0639	0.0639	0.0000	101.9313	101.9313	0.0317	0.0000	102.7246

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3.5 Building Construction - 2018

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	5.3700e-003	0.1553	0.0457	3.0000e-004	7.0500e-003	1.0600e-003	8.1100e-003	2.0400e-003	1.0200e-003	3.0500e-003	0.0000	30.4962	30.4962	4.1200e-003	0.0000	30.5991
Worker	0.0210	0.0151	0.1606	5.2000e-004	0.0465	3.6000e-004	0.0468	0.0124	3.3000e-004	0.0127	0.0000	47.0726	47.0726	1.2200e-003	0.0000	47.1032
Total	0.0264	0.1704	0.2063	8.2000e-004	0.0535	1.4200e-003	0.0549	0.0144	1.3500e-003	0.0157	0.0000	77.5687	77.5687	5.3400e-003	0.0000	77.7022

3.5 Building Construction - 2019

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	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2139	76.2139	0.0241	0.0000	76.8167
Total	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2139	76.2139	0.0241	0.0000	76.8167

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3.5 Building Construction - 2019

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	3.7000e-003	0.1118	0.0332	2.3000e-004	5.3600e-003	6.9000e-004	6.0500e-003	1.5500e-003	6.6000e-004	2.2100e-003	0.0000	22.9120	22.9120	3.0900e-003	0.0000	22.9892
Worker	0.0147	0.0101	0.1101	3.8000e-004	0.0353	2.7000e-004	0.0356	9.4000e-003	2.5000e-004	9.6500e-003	0.0000	34.6815	34.6815	8.3000e-004	0.0000	34.7021
Total	0.0184	0.1219	0.1433	6.1000e-004	0.0407	9.6000e-004	0.0416	0.0110	9.1000e-004	0.0119	0.0000	57.5935	57.5935	3.9200e-003	0.0000	57.6914

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	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2138	76.2138	0.0241	0.0000	76.8166
Total	0.0713	0.7316	0.5620	8.5000e-004		0.0451	0.0451		0.0415	0.0415	0.0000	76.2138	76.2138	0.0241	0.0000	76.8166

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3.5 Building Construction - 2019

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	3.7000e-003	0.1118	0.0332	2.3000e-004	5.3600e-003	6.9000e-004	6.0500e-003	1.5500e-003	6.6000e-004	2.2100e-003	0.0000	22.9120	22.9120	3.0900e-003	0.0000	22.9892
Worker	0.0147	0.0101	0.1101	3.8000e-004	0.0353	2.7000e-004	0.0356	9.4000e-003	2.5000e-004	9.6500e-003	0.0000	34.6815	34.6815	8.3000e-004	0.0000	34.7021
Total	0.0184	0.1219	0.1433	6.1000e-004	0.0407	9.6000e-004	0.0416	0.0110	9.1000e-004	0.0119	0.0000	57.5935	57.5935	3.9200e-003	0.0000	57.6914

3.6 Paving - 2019

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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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3.6 Paving - 2019

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	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494
Total	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494

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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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3.6 Paving - 2019

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	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494
Total	1.5000e-004	1.0000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3491	0.3491	1.0000e-005	0.0000	0.3494

3.7 Architectural Coating - 2018

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	0.0966					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3800e-003	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068
Total	0.1020	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068

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3.7 Architectural Coating - 2018

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	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303
Total	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303

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	0.0966					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3800e-003	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068
Total	0.1020	0.0361	0.0334	5.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	4.5959	4.5959	4.4000e-004	0.0000	4.6068

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3.7 Architectural Coating - 2018

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	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303
Total	7.7000e-004	5.5000e-004	5.9000e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.7000e-004	0.0000	1.7292	1.7292	4.0000e-005	0.0000	1.7303

3.7 Architectural Coating - 2019

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	0.4132					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6601	19.6601	1.6600e-003	0.0000	19.7016
Total	0.4338	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6601	19.6601	1.6600e-003	0.0000	19.7016

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3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733
Total	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733

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	0.4132					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6600	19.6600	1.6600e-003	0.0000	19.7015
Total	0.4338	0.1413	0.1418	2.3000e-004		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	19.6600	19.6600	1.6600e-003	0.0000	19.7015

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3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733
Total	3.0300e-003	2.0900e-003	0.0228	8.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	7.1691	7.1691	1.7000e-004	0.0000	7.1733

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

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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	0.1190	0.4336	1.1615	3.5400e-003	0.2866	5.0000e-003	0.2916	0.0773	4.7100e-003	0.0820	0.0000	325.1887	325.1887	0.0154	0.0000	325.5731
Unmitigated	0.1366	0.5407	1.4925	4.9800e-003	0.4095	6.9200e-003	0.4164	0.1104	6.5200e-003	0.1169	0.0000	456.9043	456.9043	0.0204	0.0000	457.4141

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	478.80	460.08	421.92	1,080,896	756,627
General Office Building	7.22	1.61	0.69	13,117	9,182
Enclosed Parking Structure	0.00	0.00	0.00		
Total	486.02	461.69	422.61	1,094,013	765,809

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	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Enclosed Parking Structure	9.50	7.30	7.30	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	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
General Office Building	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
Enclosed Parking Structure	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	123.9570	123.9570	5.6000e-003	1.1600e-003	124.4427
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	133.1748	133.1748	6.0200e-003	1.2500e-003	133.6966
NaturalGas Mitigated	3.5300e-003	0.0302	0.0131	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9581	34.9581	6.7000e-004	6.4000e-004	35.1658
NaturalGas Unmitigated	4.5100e-003	0.0386	0.0167	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003	0.0000	44.6319	44.6319	8.6000e-004	8.2000e-004	44.8971

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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	823650	4.4400e-003	0.0380	0.0162	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003	0.0000	43.9531	43.9531	8.4000e-004	8.1000e-004	44.2143
Enclosed Parking Structure	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
General Office Building	12720.1	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6788	0.6788	1.0000e-005	1.0000e-005	0.6828
Total		4.5100e-003	0.0386	0.0167	2.4000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003	0.0000	44.6319	44.6319	8.5000e-004	8.2000e-004	44.8971

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	645746	3.4800e-003	0.0298	0.0127	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	34.4595	34.4595	6.6000e-004	6.3000e-004	34.6643
Enclosed Parking Structure	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
General Office Building	9343.71	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4986	0.4986	1.0000e-005	1.0000e-005	0.5016
Total		3.5300e-003	0.0302	0.0130	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9581	34.9581	6.7000e-004	6.4000e-004	35.1658

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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	325540	94.7033	4.2800e-003	8.9000e-004	95.0744
Enclosed Parking Structure	123880	36.0382	1.6300e-003	3.4000e-004	36.1794
General Office Building	8364.35	2.4333	1.1000e-004	2.0000e-005	2.4428
Total		133.1748	6.0200e-003	1.2500e-003	133.6966

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	315402	91.7540	4.1500e-003	8.6000e-004	92.1135
Enclosed Parking Structure	103121	29.9992	1.3600e-003	2.8000e-004	30.1167
General Office Building	7575.73	2.2039	1.0000e-004	2.0000e-005	2.2125
Total		123.9570	5.6100e-003	1.1600e-003	124.4427

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	0.3499	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955
Unmitigated	0.3499	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955

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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	0.0510					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2826					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	0.0164	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955
Total	0.3499	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955

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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	0.0510					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2826					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	0.0164	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955
Total	0.3499	6.2100e-003	0.5368	3.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	0.8741	0.8741	8.5000e-004	0.0000	0.8955

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.1789	0.1572	3.8000e-003	17.2402
Unmitigated	12.1789	0.1572	3.8000e-003	17.2402

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	4.69109 / 2.95743	11.8838	0.1533	3.7100e-003	16.8216
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.117304 / 0.0718962	0.2951	3.8300e-003	9.0000e-005	0.4185
Total		12.1789	0.1572	3.8000e-003	17.2402

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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	4.69109 / 2.95743	11.8838	0.1533	3.7100e-003	16.8216
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.117304 / 0.0718962	0.2951	3.8300e-003	9.0000e-005	0.4185
Total		12.1789	0.1572	3.8000e-003	17.2402

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.4234	0.2023	0.0000	8.4814
Unmitigated	6.8469	0.4046	0.0000	16.9629

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	33.12	6.7231	0.3973	0.0000	16.6561
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.61	0.1238	7.3200e-003	0.0000	0.3068
Total		6.8469	0.4046	0.0000	16.9629

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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	16.56	3.3615	0.1987	0.0000	8.3281
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.305	0.0619	3.6600e-003	0.0000	0.1534
Total		3.4234	0.2023	0.0000	8.4814

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	72.00	Dwelling Unit	0.33	71,379.00	206
General Office Building	0.66	1000sqft	0.00	655.00	0
Enclosed Parking Structure	48.00	Space	0.00	18,913.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	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 - Project site plans

Construction Phase - Grading assumed to last 1.5 months (according to GC); construction timeline ~18 months; architectural coating typically begins halfway through building construction.

Grading - Project site is 0.33 acres

Demolition - Demolish gas station and pumps (est. 4,100 sf on Google Earth).

Trips and VMT - Hauling trip load: 20 cubic yards

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves or fireplaces in site plans

Construction Off-road Equipment Mitigation - BAAQMD Basic Construction Mitigation Measure for All Projects

Mobile Land Use Mitigation - 72 DU/0.33 acre = 218.18 DU/acre

Energy Mitigation - 2016 Title 24 exceeds 2013 standards by 28%

Waste Mitigation - AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	190.00
tblConstructionPhase	NumDays	100.00	345.00
tblConstructionPhase	NumDays	2.00	31.00
tblConstructionPhase	PhaseEndDate	4/24/2020	8/2/2019
tblConstructionPhase	PhaseStartDate	8/3/2019	11/12/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	4/2/2018
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	10.80	0.00

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tblFireplaces	NumberNoFireplace	2.88	0.00
tblFireplaces	NumberWood	12.24	0.00
tblGrading	AcresOfGrading	0.00	0.33
tblGrading	MaterialExported	0.00	9,010.10
tblGrading	MaterialImported	0.00	819.10
tblLandUse	BuildingSpaceSquareFeet	72,000.00	71,379.00
tblLandUse	BuildingSpaceSquareFeet	19,200.00	18,913.00
tblLandUse	LandUseSquareFeet	72,000.00	71,379.00
tblLandUse	LandUseSquareFeet	19,200.00	18,913.00
tblLandUse	LotAcreage	1.89	0.33
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	0.43	0.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	1,229.00	860.00
tblWoodstoves	NumberCatalytic	1.44	0.00
tblWoodstoves	NumberNoncatalytic	1.44	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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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	lb/day										lb/day					
Area	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679
Energy	0.0247	0.2114	0.0914	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.5793	269.5793	5.1700e-003	4.9400e-003	271.1813
Mobile	0.8381	2.9116	8.5422	0.0295	2.3992	0.0390	2.4382	0.6445	0.0367	0.6813		2,982.2548	2,982.2548	0.1276		2,985.4441
Total	2.8724	3.1920	14.5984	0.0312	2.3992	0.0889	2.4881	0.6445	0.0866	0.7311	0.0000	3,262.5406	3,262.5406	0.1432	4.9400e-003	3,267.5933

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	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679
Energy	0.0194	0.1656	0.0715	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.1491	211.1491	4.0500e-003	3.8700e-003	212.4038
Mobile	0.7381	2.3462	6.5123	0.0210	1.6794	0.0282	1.7076	0.4512	0.0265	0.4777		2,121.5699	2,121.5699	0.0954		2,123.9554
Total	2.7670	2.5807	12.5487	0.0224	1.6794	0.0743	1.7538	0.4512	0.0727	0.5238	0.0000	2,343.4254	2,343.4254	0.1099	3.8700e-003	2,347.3271

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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	3.67	19.15	14.04	28.27	30.00	16.38	29.51	30.00	16.09	28.35	0.00	28.17	28.17	23.23	21.66	28.16

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	2/1/2018	2/14/2018	5	10	
2	Site Preparation	Site Preparation	2/15/2018	2/15/2018	5	1	
3	Grading	Grading	2/16/2018	3/30/2018	5	31	
4	Building Construction	Building Construction	4/2/2018	7/26/2019	5	345	
5	Paving	Paving	7/27/2019	8/2/2019	5	5	
6	Architectural Coating	Architectural Coating	11/12/2018	8/2/2019	5	190	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.33

Acres of Paving: 0

Residential Indoor: 144,542; Residential Outdoor: 48,181; Non-Residential Indoor: 983; Non-Residential Outdoor: 328; Striped Parking Area: 1,135 (Architectural Coating – sqft)

OffRoad Equipment

490 South Van Ness - Comparison Project - San Francisco County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	60.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	19.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	860.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

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					0.4369	0.0000	0.4369	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.350 2	1,169.350 2	0.2254		1,174.985 7
Total	1.0643	9.4295	7.7762	0.0120	0.4369	0.6228	1.0597	0.0662	0.5943	0.6605		1,169.350 2	1,169.350 2	0.2254		1,174.985 7

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.2 Demolition - 2018

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	0.0180	0.7394	0.1909	1.6800e-003	0.0330	2.9200e-003	0.0359	9.0200e-003	2.8000e-003	0.0118		194.0320	194.0320	0.0326		194.8469
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.0541	0.7618	0.4809	2.6200e-003	0.1151	3.5300e-003	0.1187	0.0308	3.3600e-003	0.0342		287.7210	287.7210	0.0350		288.5964

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					0.1966	0.0000	0.1966	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.1966	0.6228	0.8194	0.0298	0.5943	0.6241	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.2 Demolition - 2018

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	0.0180	0.7394	0.1909	1.6800e-003	0.0330	2.9200e-003	0.0359	9.0200e-003	2.8000e-003	0.0118		194.0320	194.0320	0.0326		194.8469
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.0541	0.7618	0.4809	2.6200e-003	0.1151	3.5300e-003	0.1187	0.0308	3.3600e-003	0.0342		287.7210	287.7210	0.0350		288.5964

3.3 Site Preparation - 2018

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.5303	0.4180	0.9483	0.0573	0.3846	0.4418		982.7113	982.7113	0.3059		990.3596

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.3 Site Preparation - 2018

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	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747
Total	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.2386	0.4180	0.6566	0.0258	0.3846	0.4103	0.0000	982.7113	982.7113	0.3059		990.3596

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.3 Site Preparation - 2018

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	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747
Total	0.0180	0.0112	0.1450	4.7000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		46.8445	46.8445	1.2100e-003		46.8747

3.4 Grading - 2018

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					0.8576	0.0000	0.8576	0.4292	0.0000	0.4292			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.8576	0.6228	1.4803	0.4292	0.5943	1.0235		1,169.3502	1,169.3502	0.2254		1,174.9857

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.4 Grading - 2018

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	0.2634	10.7961	2.7874	0.0245	0.4815	0.0427	0.5242	0.1317	0.0409	0.1725		2,833.0645	2,833.0645	0.4760		2,844.9636
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.2994	10.8185	3.0774	0.0255	0.5637	0.0433	0.6070	0.1535	0.0414	0.1949		2,926.7536	2,926.7536	0.4784		2,938.7130

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					0.3859	0.0000	0.3859	0.1931	0.0000	0.1931			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.3859	0.6228	1.0087	0.1931	0.5943	0.7874	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

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3.4 Grading - 2018

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	0.2634	10.7961	2.7874	0.0245	0.4815	0.0427	0.5242	0.1317	0.0409	0.1725		2,833.0645	2,833.0645	0.4760		2,844.9636
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	0.0360	0.0224	0.2900	9.4000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		93.6891	93.6891	2.4100e-003		93.7494
Total	0.2994	10.8185	3.0774	0.0255	0.5637	0.0433	0.6070	0.1535	0.0414	0.1949		2,926.7536	2,926.7536	0.4784		2,938.7130

3.5 Building Construction - 2018

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555

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3.5 Building Construction - 2018

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	0.0537	1.5577	0.4431	3.1000e-003	0.0742	0.0107	0.0849	0.0214	0.0103	0.0316		345.4809	345.4809	0.0454		346.6159
Worker	0.2161	0.1343	1.7397	5.6400e-003	0.4929	3.6400e-003	0.4965	0.1307	3.3600e-003	0.1341		562.1343	562.1343	0.0145		562.4966
Total	0.2698	1.6920	2.1828	8.7400e-003	0.5671	0.0144	0.5815	0.1521	0.0136	0.1657		907.6152	907.6152	0.0599		909.1124

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555

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3.5 Building Construction - 2018

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	0.0537	1.5577	0.4431	3.1000e-003	0.0742	0.0107	0.0849	0.0214	0.0103	0.0316		345.4809	345.4809	0.0454		346.6159
Worker	0.2161	0.1343	1.7397	5.6400e-003	0.4929	3.6400e-003	0.4965	0.1307	3.3600e-003	0.1341		562.1343	562.1343	0.0145		562.4966
Total	0.2698	1.6920	2.1828	8.7400e-003	0.5671	0.0144	0.5815	0.1521	0.0136	0.1657		907.6152	907.6152	0.0599		909.1124

3.5 Building Construction - 2019

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892

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3.5 Building Construction - 2019

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	0.0487	1.4759	0.4236	3.0500e-003	0.0742	9.1800e-003	0.0834	0.0214	8.7800e-003	0.0301		341.4673	341.4673	0.0449		342.5895
Worker	0.1979	0.1188	1.5741	5.4600e-003	0.4929	3.6700e-003	0.4966	0.1307	3.3800e-003	0.1341		544.8129	544.8129	0.0129		545.1356
Total	0.2466	1.5947	1.9977	8.5100e-003	0.5671	0.0129	0.5800	0.1521	0.0122	0.1642		886.2802	886.2802	0.0578		887.7250

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.5 Building Construction - 2019

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	0.0487	1.4759	0.4236	3.0500e-003	0.0742	9.1800e-003	0.0834	0.0214	8.7800e-003	0.0301		341.4673	341.4673	0.0449		342.5895
Worker	0.1979	0.1188	1.5741	5.4600e-003	0.4929	3.6700e-003	0.4966	0.1307	3.3800e-003	0.1341		544.8129	544.8129	0.0129		545.1356
Total	0.2466	1.5947	1.9977	8.5100e-003	0.5671	0.0129	0.5800	0.1521	0.0122	0.1642		886.2802	886.2802	0.0578		887.7250

3.6 Paving - 2019

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231

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3.6 Paving - 2019

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	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407
Total	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231

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3.6 Paving - 2019

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	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407
Total	0.0594	0.0356	0.4722	1.6400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		163.4439	163.4439	3.8700e-003		163.5407

3.7 Architectural Coating - 2018

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	5.6653	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

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3.7 Architectural Coating - 2018

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	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993
Total	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	5.6653	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

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3.7 Architectural Coating - 2018

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	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993
Total	0.0432	0.0269	0.3479	1.1300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		112.4269	112.4269	2.9000e-003		112.4993

3.7 Architectural Coating - 2019

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	5.6331	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

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3.7 Architectural Coating - 2019

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	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271
Total	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	5.6331	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

490 South Van Ness - Comparison Project - San Francisco County, Summer

3.7 Architectural Coating - 2019

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	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271
Total	0.0396	0.0238	0.3148	1.0900e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		108.9626	108.9626	2.5800e-003		109.0271

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

490 South Van Ness - Comparison Project - San Francisco 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	0.7381	2.3462	6.5123	0.0210	1.6794	0.0282	1.7076	0.4512	0.0265	0.4777		2,121.5699	2,121.5699	0.0954		2,123.9554
Unmitigated	0.8381	2.9116	8.5422	0.0295	2.3992	0.0390	2.4382	0.6445	0.0367	0.6813		2,982.2548	2,982.2548	0.1276		2,985.4441

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	478.80	460.08	421.92	1,080,896	756,627
General Office Building	7.22	1.61	0.69	13,117	9,182
Enclosed Parking Structure	0.00	0.00	0.00		
Total	486.02	461.69	422.61	1,094,013	765,809

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	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Enclosed Parking Structure	9.50	7.30	7.30	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	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
General Office Building	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
Enclosed Parking Structure	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0194	0.1656	0.0715	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.1491	211.1491	4.0500e-003	3.8700e-003	212.4038
NaturalGas Unmitigated	0.0247	0.2114	0.0914	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.5793	269.5793	5.1700e-003	4.9400e-003	271.1813

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	2256.57	0.0243	0.2080	0.0885	1.3300e-003		0.0168	0.0168		0.0168	0.0168		265.4794	265.4794	5.0900e-003	4.8700e-003	267.0570
Enclosed Parking Structure	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
General Office Building	34.8496	3.8000e-004	3.4200e-003	2.8700e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.1000	4.1000	8.0000e-005	8.0000e-005	4.1243
Total		0.0247	0.2114	0.0914	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.5793	269.5793	5.1700e-003	4.9500e-003	271.1813

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	1.76917	0.0191	0.1630	0.0694	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.1374	208.1374	3.9900e-003	3.8200e-003	209.3742
Enclosed Parking Structure	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
General Office Building	0.0255992	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		3.0117	3.0117	6.0000e-005	6.0000e-005	3.0296
Total		0.0194	0.1656	0.0715	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.1491	211.1491	4.0500e-003	3.8800e-003	212.4038

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	lb/day										lb/day					
Mitigated	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679
Unmitigated	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5482					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	0.1820	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328		10.7064	10.7064	0.0105		10.9679
Total	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679

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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	lb/day										lb/day					
Architectural Coating	0.2794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5482					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	0.1820	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328		10.7064	10.7064	0.0105		10.9679
Total	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

490 South Van Ness - Comparison Project - San Francisco County, Winter

490 South Van Ness - Comparison Project
San Francisco County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	72.00	Dwelling Unit	0.33	71,379.00	206
General Office Building	0.66	1000sqft	0.00	655.00	0
Enclosed Parking Structure	48.00	Space	0.00	18,913.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

490 South Van Ness - Comparison Project - San Francisco County, Winter

Project Characteristics -

Land Use - Project site plans

Construction Phase - Grading assumed to last 1.5 months (according to GC); construction timeline ~18 months; architectural coating typically begins halfway through building construction.

Grading - Project site is 0.33 acres

Demolition - Demolish gas station and pumps (est. 4,100 sf on Google Earth).

Trips and VMT - Hauling trip load: 20 cubic yards

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves or fireplaces in site plans

Construction Off-road Equipment Mitigation - BAAQMD Basic Construction Mitigation Measure for All Projects

Mobile Land Use Mitigation - 72 DU/0.33 acre = 218.18 DU/acre

Energy Mitigation - 2016 Title 24 exceeds 2013 standards by 28%

Waste Mitigation - AB 939

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	190.00
tblConstructionPhase	NumDays	100.00	345.00
tblConstructionPhase	NumDays	2.00	31.00
tblConstructionPhase	PhaseEndDate	4/24/2020	8/2/2019
tblConstructionPhase	PhaseStartDate	8/3/2019	11/12/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	4/2/2018
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	10.80	0.00

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tblFireplaces	NumberNoFireplace	2.88	0.00
tblFireplaces	NumberWood	12.24	0.00
tblGrading	AcresOfGrading	0.00	0.33
tblGrading	MaterialExported	0.00	9,010.10
tblGrading	MaterialImported	0.00	819.10
tblLandUse	BuildingSpaceSquareFeet	72,000.00	71,379.00
tblLandUse	BuildingSpaceSquareFeet	19,200.00	18,913.00
tblLandUse	LandUseSquareFeet	72,000.00	71,379.00
tblLandUse	LandUseSquareFeet	19,200.00	18,913.00
tblLandUse	LotAcreage	1.89	0.33
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	0.43	0.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	1,229.00	860.00
tblWoodstoves	NumberCatalytic	1.44	0.00
tblWoodstoves	NumberNoncatalytic	1.44	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

490 South Van Ness - Comparison Project - San Francisco 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	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679
Energy	0.0247	0.2114	0.0914	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.5793	269.5793	5.1700e-003	4.9400e-003	271.1813
Mobile	0.7768	3.1159	8.7736	0.0281	2.3992	0.0392	2.4384	0.6445	0.0369	0.6814		2,836.5009	2,836.5009	0.1288		2,839.7204
Total	2.8110	3.3962	14.8298	0.0297	2.3992	0.0891	2.4882	0.6445	0.0868	0.7313	0.0000	3,116.7867	3,116.7867	0.1444	4.9400e-003	3,121.8695

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	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679
Energy	0.0194	0.1656	0.0715	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.1491	211.1491	4.0500e-003	3.8700e-003	212.4038
Mobile	0.6765	2.4922	6.8826	0.0200	1.6794	0.0284	1.7078	0.4512	0.0267	0.4779		2,017.9848	2,017.9848	0.0975		2,020.4232
Total	2.7054	2.7267	12.9189	0.0213	1.6794	0.0745	1.7539	0.4512	0.0728	0.5240	0.0000	2,239.8403	2,239.8403	0.1121	3.8700e-003	2,243.7949

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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	3.76	19.71	12.89	28.21	30.00	16.35	29.51	30.00	16.05	28.35	0.00	28.14	28.14	22.41	21.66	28.13

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	2/1/2018	2/14/2018	5	10	
2	Site Preparation	Site Preparation	2/15/2018	2/15/2018	5	1	
3	Grading	Grading	2/16/2018	3/30/2018	5	31	
4	Building Construction	Building Construction	4/2/2018	7/26/2019	5	345	
5	Paving	Paving	7/27/2019	8/2/2019	5	5	
6	Architectural Coating	Architectural Coating	11/12/2018	8/2/2019	5	190	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.33

Acres of Paving: 0

Residential Indoor: 144,542; Residential Outdoor: 48,181; Non-Residential Indoor: 983; Non-Residential Outdoor: 328; Striped Parking Area: 1,135 (Architectural Coating – sqft)

OffRoad Equipment

490 South Van Ness - Comparison Project - San Francisco County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	60.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	19.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	860.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

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					0.4369	0.0000	0.4369	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.350 2	1,169.350 2	0.2254		1,174.985 7
Total	1.0643	9.4295	7.7762	0.0120	0.4369	0.6228	1.0597	0.0662	0.5943	0.6605		1,169.350 2	1,169.350 2	0.2254		1,174.985 7

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.2 Demolition - 2018

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	0.0186	0.7624	0.2008	1.6600e-003	0.0330	3.0200e-003	0.0360	9.0200e-003	2.8900e-003	0.0119		192.0950	192.0950	0.0332		192.9260
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.0585	0.7901	0.4816	2.5400e-003	0.1151	3.6300e-003	0.1187	0.0308	3.4500e-003	0.0343		280.1501	280.1501	0.0355		281.0386

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					0.1966	0.0000	0.1966	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.1966	0.6228	0.8194	0.0298	0.5943	0.6241	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.2 Demolition - 2018

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	0.0186	0.7624	0.2008	1.6600e-003	0.0330	3.0200e-003	0.0360	9.0200e-003	2.8900e-003	0.0119		192.0950	192.0950	0.0332		192.9260
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.0585	0.7901	0.4816	2.5400e-003	0.1151	3.6300e-003	0.1187	0.0308	3.4500e-003	0.0343		280.1501	280.1501	0.0355		281.0386

3.3 Site Preparation - 2018

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.5303	0.4180	0.9483	0.0573	0.3846	0.4418		982.7113	982.7113	0.3059		990.3596

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.3 Site Preparation - 2018

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	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563
Total	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	0.7858	9.7572	4.2514	9.7600e-003	0.2386	0.4180	0.6566	0.0258	0.3846	0.4103	0.0000	982.7113	982.7113	0.3059		990.3596

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.3 Site Preparation - 2018

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	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563
Total	0.0200	0.0138	0.1404	4.4000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112		44.0275	44.0275	1.1500e-003		44.0563

3.4 Grading - 2018

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					0.8576	0.0000	0.8576	0.4292	0.0000	0.4292			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.8576	0.6228	1.4803	0.4292	0.5943	1.0235		1,169.3502	1,169.3502	0.2254		1,174.9857

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.4 Grading - 2018

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	0.2713	11.1313	2.9321	0.0243	0.4815	0.0441	0.5256	0.1317	0.0421	0.1738		2,804.7820	2,804.7820	0.4854		2,816.9165
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.3112	11.1590	3.2129	0.0251	0.5637	0.0447	0.6083	0.1535	0.0427	0.1962		2,892.8371	2,892.8371	0.4877		2,905.0291

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					0.3859	0.0000	0.3859	0.1931	0.0000	0.1931			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.3859	0.6228	1.0087	0.1931	0.5943	0.7874	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.4 Grading - 2018

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	0.2713	11.1313	2.9321	0.0243	0.4815	0.0441	0.5256	0.1317	0.0421	0.1738		2,804.7820	2,804.7820	0.4854		2,816.9165
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	0.0399	0.0277	0.2808	8.8000e-004	0.0822	6.1000e-004	0.0828	0.0218	5.6000e-004	0.0224		88.0551	88.0551	2.3000e-003		88.1125
Total	0.3112	11.1590	3.2129	0.0251	0.5637	0.0447	0.6083	0.1535	0.0427	0.1962		2,892.8371	2,892.8371	0.4877		2,905.0291

3.5 Building Construction - 2018

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.5 Building Construction - 2018

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	0.0564	1.5841	0.4914	3.0500e-003	0.0742	0.0110	0.0852	0.0214	0.0105	0.0319		339.6334	339.6334	0.0474		340.8180
Worker	0.2395	0.1661	1.6849	5.3000e-003	0.4929	3.6400e-003	0.4965	0.1307	3.3600e-003	0.1341		528.3305	528.3305	0.0138		528.6752
Total	0.2958	1.7502	2.1763	8.3500e-003	0.5671	0.0146	0.5818	0.1521	0.0139	0.1660		867.9639	867.9639	0.0612		869.4932

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.5 Building Construction - 2018

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	0.0564	1.5841	0.4914	3.0500e-003	0.0742	0.0110	0.0852	0.0214	0.0105	0.0319		339.6334	339.6334	0.0474		340.8180
Worker	0.2395	0.1661	1.6849	5.3000e-003	0.4929	3.6400e-003	0.4965	0.1307	3.3600e-003	0.1341		528.3305	528.3305	0.0138		528.6752
Total	0.2958	1.7502	2.1763	8.3500e-003	0.5671	0.0146	0.5818	0.1521	0.0139	0.1660		867.9639	867.9639	0.0612		869.4932

3.5 Building Construction - 2019

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.5 Building Construction - 2019

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	0.0512	1.4992	0.4687	3.0000e-003	0.0742	9.4400e-003	0.0837	0.0214	9.0400e-003	0.0304		335.6182	335.6182	0.0467		336.7861
Worker	0.2197	0.1470	1.5179	5.1400e-003	0.4929	3.6700e-003	0.4966	0.1307	3.3800e-003	0.1341		512.0412	512.0412	0.0122		512.3472
Total	0.2708	1.6462	1.9866	8.1400e-003	0.5671	0.0131	0.5802	0.1521	0.0124	0.1645		847.6594	847.6594	0.0590		849.1333

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.5 Building Construction - 2019

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	0.0512	1.4992	0.4687	3.0000e-003	0.0742	9.4400e-003	0.0837	0.0214	9.0400e-003	0.0304		335.6182	335.6182	0.0467		336.7861
Worker	0.2197	0.1470	1.5179	5.1400e-003	0.4929	3.6700e-003	0.4966	0.1307	3.3800e-003	0.1341		512.0412	512.0412	0.0122		512.3472
Total	0.2708	1.6462	1.9866	8.1400e-003	0.5671	0.0131	0.5802	0.1521	0.0124	0.1645		847.6594	847.6594	0.0590		849.1333

3.6 Paving - 2019

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.6 Paving - 2019

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	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042
Total	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042

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	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.6 Paving - 2019

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	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042
Total	0.0659	0.0441	0.4554	1.5400e-003	0.1479	1.1000e-003	0.1490	0.0392	1.0100e-003	0.0402		153.6124	153.6124	3.6700e-003		153.7042

3.7 Architectural Coating - 2018

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	5.6653	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.7 Architectural Coating - 2018

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	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350
Total	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	5.6653	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.7 Architectural Coating - 2018

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	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350
Total	0.0479	0.0332	0.3370	1.0600e-003	0.0986	7.3000e-004	0.0993	0.0262	6.7000e-004	0.0268		105.6661	105.6661	2.7600e-003		105.7350

3.7 Architectural Coating - 2019

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	5.6331	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.7 Architectural Coating - 2019

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	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695
Total	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695

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	5.3666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	5.6331	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

490 South Van Ness - Comparison Project - San Francisco County, Winter

3.7 Architectural Coating - 2019

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	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695
Total	0.0439	0.0294	0.3036	1.0300e-003	0.0986	7.3000e-004	0.0993	0.0262	6.8000e-004	0.0268		102.4082	102.4082	2.4500e-003		102.4695

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

490 South Van Ness - Comparison Project - San Francisco 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	0.6765	2.4922	6.8826	0.0200	1.6794	0.0284	1.7078	0.4512	0.0267	0.4779		2,017.9848	2,017.9848	0.0975		2,020.4232
Unmitigated	0.7768	3.1159	8.7736	0.0281	2.3992	0.0392	2.4384	0.6445	0.0369	0.6814		2,836.5009	2,836.5009	0.1288		2,839.7204

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	478.80	460.08	421.92	1,080,896	756,627
General Office Building	7.22	1.61	0.69	13,117	9,182
Enclosed Parking Structure	0.00	0.00	0.00		
Total	486.02	461.69	422.61	1,094,013	765,809

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	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

490 South Van Ness - Comparison Project - San Francisco County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
General Office Building	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460
Enclosed Parking Structure	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0194	0.1656	0.0715	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.1491	211.1491	4.0500e-003	3.8700e-003	212.4038
NaturalGas Unmitigated	0.0247	0.2114	0.0914	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.5793	269.5793	5.1700e-003	4.9400e-003	271.1813

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	2256.57	0.0243	0.2080	0.0885	1.3300e-003		0.0168	0.0168		0.0168	0.0168		265.4794	265.4794	5.0900e-003	4.8700e-003	267.0570
Enclosed Parking Structure	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
General Office Building	34.8496	3.8000e-004	3.4200e-003	2.8700e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.1000	4.1000	8.0000e-005	8.0000e-005	4.1243
Total		0.0247	0.2114	0.0914	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.5793	269.5793	5.1700e-003	4.9500e-003	271.1813

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	1.76917	0.0191	0.1630	0.0694	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.1374	208.1374	3.9900e-003	3.8200e-003	209.3742
Enclosed Parking Structure	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
General Office Building	0.0255992	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		3.0117	3.0117	6.0000e-005	6.0000e-005	3.0296
Total		0.0194	0.1656	0.0715	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.1491	211.1491	4.0500e-003	3.8800e-003	212.4038

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	lb/day										lb/day					
Mitigated	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679
Unmitigated	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5482					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	0.1820	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328		10.7064	10.7064	0.0105		10.9679
Total	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679

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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	lb/day										lb/day					
Architectural Coating	0.2794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5482					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	0.1820	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328		10.7064	10.7064	0.0105		10.9679
Total	2.0095	0.0690	5.9648	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	10.7064	10.7064	0.0105	0.0000	10.9679

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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