

## **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**

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**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**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2020
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	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
<b>Total</b>	<b>0.5413</b>	<b>0.6603</b>	<b>2.3055</b>	<b>5.9300e-003</b>	<b>0.4618</b>	<b>0.0147</b>	<b>0.4765</b>	<b>0.1245</b>	<b>0.0142</b>	<b>0.1387</b>	<b>9.4564</b>	<b>688.5291</b>	<b>697.9855</b>	<b>0.6645</b>	<b>6.2400e-003</b>	<b>716.4592</b>

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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
<b>Total</b>	<b>0.5171</b>	<b>0.5100</b>	<b>1.8659</b>	<b>3.9800e-003</b>	<b>0.3002</b>	<b>0.0114</b>	<b>0.3115</b>	<b>0.0809</b>	<b>0.0110</b>	<b>0.0920</b>	<b>5.5904</b>	<b>500.6680</b>	<b>506.2585</b>	<b>0.4291</b>	<b>6.0100e-003</b>	<b>518.7762</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>4.48</b>	<b>22.77</b>	<b>19.07</b>	<b>32.88</b>	<b>35.00</b>	<b>22.53</b>	<b>34.62</b>	<b>35.00</b>	<b>22.20</b>	<b>33.69</b>	<b>40.88</b>	<b>27.28</b>	<b>27.47</b>	<b>35.43</b>	<b>3.69</b>	<b>27.59</b>

**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
<b>Total</b>	<b>5.3200e-003</b>	<b>0.0472</b>	<b>0.0389</b>	<b>6.0000e-005</b>	<b>2.1800e-003</b>	<b>3.1100e-003</b>	<b>5.2900e-003</b>	<b>3.3000e-004</b>	<b>2.9700e-003</b>	<b>3.3000e-003</b>	<b>0.0000</b>	<b>5.3041</b>	<b>5.3041</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>5.3297</b>

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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
<b>Total</b>	<b>2.7000e-004</b>	<b>3.9200e-003</b>	<b>2.3500e-003</b>	<b>1.0000e-005</b>	<b>5.6000e-004</b>	<b>1.0000e-005</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>1.0000e-005</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.2767</b>	<b>1.2767</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>1.2807</b>

**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
<b>Total</b>	<b>5.3200e-003</b>	<b>0.0472</b>	<b>0.0389</b>	<b>6.0000e-005</b>	<b>9.8000e-004</b>	<b>3.1100e-003</b>	<b>4.0900e-003</b>	<b>1.5000e-004</b>	<b>2.9700e-003</b>	<b>3.1200e-003</b>	<b>0.0000</b>	<b>5.3041</b>	<b>5.3041</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>5.3296</b>

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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
<b>Total</b>	<b>2.7000e-004</b>	<b>3.9200e-003</b>	<b>2.3500e-003</b>	<b>1.0000e-005</b>	<b>5.6000e-004</b>	<b>1.0000e-005</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>1.0000e-005</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.2767</b>	<b>1.2767</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>1.2807</b>

**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
<b>Total</b>	<b>3.9000e-004</b>	<b>4.8800e-003</b>	<b>2.1300e-003</b>	<b>0.0000</b>	<b>2.7000e-004</b>	<b>2.1000e-004</b>	<b>4.8000e-004</b>	<b>3.0000e-005</b>	<b>1.9000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.4458</b>	<b>0.4458</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4492</b>

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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
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0200</b>	<b>0.0200</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0200</b>

**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
<b>Total</b>	<b>3.9000e-004</b>	<b>4.8800e-003</b>	<b>2.1300e-003</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>2.1000e-004</b>	<b>3.3000e-004</b>	<b>1.0000e-005</b>	<b>1.9000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.4458</b>	<b>0.4458</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4492</b>

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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
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0200</b>	<b>0.0200</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0200</b>

**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
<b>Total</b>	<b>0.0165</b>	<b>0.1462</b>	<b>0.1205</b>	<b>1.9000e-004</b>	<b>0.0120</b>	<b>9.6500e-003</b>	<b>0.0217</b>	<b>6.4600e-003</b>	<b>9.2100e-003</b>	<b>0.0157</b>	<b>0.0000</b>	<b>16.4427</b>	<b>16.4427</b>	<b>3.1700e-003</b>	<b>0.0000</b>	<b>16.5219</b>

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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
<b>Total</b>	<b>7.8000e-004</b>	<b>9.9900e-003</b>	<b>6.6900e-003</b>	<b>3.0000e-005</b>	<b>1.6200e-003</b>	<b>5.0000e-005</b>	<b>1.6700e-003</b>	<b>4.4000e-004</b>	<b>5.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>3.4550</b>	<b>3.4550</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>3.4652</b>

**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
<b>Total</b>	<b>0.0165</b>	<b>0.1462</b>	<b>0.1205</b>	<b>1.9000e-004</b>	<b>5.4100e-003</b>	<b>9.6500e-003</b>	<b>0.0151</b>	<b>2.9100e-003</b>	<b>9.2100e-003</b>	<b>0.0121</b>	<b>0.0000</b>	<b>16.4426</b>	<b>16.4426</b>	<b>3.1700e-003</b>	<b>0.0000</b>	<b>16.5219</b>

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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
<b>Total</b>	<b>7.8000e-004</b>	<b>9.9900e-003</b>	<b>6.6900e-003</b>	<b>3.0000e-005</b>	<b>1.6200e-003</b>	<b>5.0000e-005</b>	<b>1.6700e-003</b>	<b>4.4000e-004</b>	<b>5.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>3.4550</b>	<b>3.4550</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>3.4652</b>

**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
<b>Total</b>	<b>0.1063</b>	<b>1.0811</b>	<b>0.7596</b>	<b>1.1200e-003</b>		<b>0.0695</b>	<b>0.0695</b>		<b>0.0639</b>	<b>0.0639</b>	<b>0.0000</b>	<b>101.9314</b>	<b>101.9314</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.7247</b>



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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	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	
<b>Total</b>	<b>0.0251</b>	<b>0.1419</b>	<b>0.1953</b>	<b>7.6000e-004</b>	<b>0.0515</b>	<b>1.2200e-003</b>	<b>0.0527</b>	<b>0.0138</b>	<b>1.1500e-003</b>	<b>0.0150</b>	<b>0.0000</b>	<b>71.2395</b>	<b>71.2395</b>	<b>4.5700e-003</b>	<b>0.0000</b>	<b>71.3537</b>	

**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	
<b>Total</b>	<b>0.1063</b>	<b>1.0811</b>	<b>0.7596</b>	<b>1.1200e-003</b>		<b>0.0695</b>	<b>0.0695</b>		<b>0.0639</b>	<b>0.0639</b>	<b>0.0000</b>	<b>101.9313</b>	<b>101.9313</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.7246</b>	

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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
<b>Total</b>	<b>0.0251</b>	<b>0.1419</b>	<b>0.1953</b>	<b>7.6000e-004</b>	<b>0.0515</b>	<b>1.2200e-003</b>	<b>0.0527</b>	<b>0.0138</b>	<b>1.1500e-003</b>	<b>0.0150</b>	<b>0.0000</b>	<b>71.2395</b>	<b>71.2395</b>	<b>4.5700e-003</b>	<b>0.0000</b>	<b>71.3537</b>

**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
<b>Total</b>	<b>0.0713</b>	<b>0.7316</b>	<b>0.5620</b>	<b>8.5000e-004</b>		<b>0.0451</b>	<b>0.0451</b>		<b>0.0415</b>	<b>0.0415</b>	<b>0.0000</b>	<b>76.2139</b>	<b>76.2139</b>	<b>0.0241</b>	<b>0.0000</b>	<b>76.8167</b>

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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
<b>Total</b>	<b>0.0174</b>	<b>0.1014</b>	<b>0.1354</b>	<b>5.6000e-004</b>	<b>0.0391</b>	<b>8.4000e-004</b>	<b>0.0400</b>	<b>0.0105</b>	<b>7.9000e-004</b>	<b>0.0113</b>	<b>0.0000</b>	<b>52.8497</b>	<b>52.8497</b>	<b>3.3400e-003</b>	<b>0.0000</b>	<b>52.9331</b>

**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
<b>Total</b>	<b>0.0713</b>	<b>0.7316</b>	<b>0.5620</b>	<b>8.5000e-004</b>		<b>0.0451</b>	<b>0.0451</b>		<b>0.0415</b>	<b>0.0415</b>	<b>0.0000</b>	<b>76.2138</b>	<b>76.2138</b>	<b>0.0241</b>	<b>0.0000</b>	<b>76.8166</b>

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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
<b>Total</b>	<b>0.0174</b>	<b>0.1014</b>	<b>0.1354</b>	<b>5.6000e-004</b>	<b>0.0391</b>	<b>8.4000e-004</b>	<b>0.0400</b>	<b>0.0105</b>	<b>7.9000e-004</b>	<b>0.0113</b>	<b>0.0000</b>	<b>52.8497</b>	<b>52.8497</b>	<b>3.3400e-003</b>	<b>0.0000</b>	<b>52.9331</b>

**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
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0196</b>	<b>0.0179</b>	<b>3.0000e-005</b>		<b>1.1100e-003</b>	<b>1.1100e-003</b>		<b>1.0300e-003</b>	<b>1.0300e-003</b>	<b>0.0000</b>	<b>2.3931</b>	<b>2.3931</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.4102</b>

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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
<b>Total</b>	<b>1.5000e-004</b>	<b>1.0000e-004</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3491</b>	<b>0.3491</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3494</b>

**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
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0196</b>	<b>0.0179</b>	<b>3.0000e-005</b>		<b>1.1100e-003</b>	<b>1.1100e-003</b>		<b>1.0300e-003</b>	<b>1.0300e-003</b>	<b>0.0000</b>	<b>2.3931</b>	<b>2.3931</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.4102</b>

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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
<b>Total</b>	<b>1.5000e-004</b>	<b>1.0000e-004</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3491</b>	<b>0.3491</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3494</b>

**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
<b>Total</b>	<b>0.1104</b>	<b>0.0361</b>	<b>0.0334</b>	<b>5.0000e-005</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>4.5959</b>	<b>4.5959</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.6068</b>

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

**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
<b>Total</b>	<b>0.1104</b>	<b>0.0361</b>	<b>0.0334</b>	<b>5.0000e-005</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>4.5959</b>	<b>4.5959</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.6068</b>

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

**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
<b>Total</b>	<b>0.4697</b>	<b>0.1413</b>	<b>0.1418</b>	<b>2.3000e-004</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>	<b>0.0000</b>	<b>19.6601</b>	<b>19.6601</b>	<b>1.6600e-003</b>	<b>0.0000</b>	<b>19.7016</b>



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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
<b>Total</b>	<b>3.0300e-003</b>	<b>2.0900e-003</b>	<b>0.0228</b>	<b>8.0000e-005</b>	<b>7.3000e-003</b>	<b>6.0000e-005</b>	<b>7.3600e-003</b>	<b>1.9400e-003</b>	<b>5.0000e-005</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>7.1691</b>	<b>7.1691</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>7.1733</b>

**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
<b>Total</b>	<b>0.4697</b>	<b>0.1413</b>	<b>0.1418</b>	<b>2.3000e-004</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>	<b>0.0000</b>	<b>19.6600</b>	<b>19.6600</b>	<b>1.6600e-003</b>	<b>0.0000</b>	<b>19.7015</b>

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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
<b>Total</b>	<b>3.0300e-003</b>	<b>2.0900e-003</b>	<b>0.0228</b>	<b>8.0000e-005</b>	<b>7.3000e-003</b>	<b>6.0000e-005</b>	<b>7.3600e-003</b>	<b>1.9400e-003</b>	<b>5.0000e-005</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>7.1691</b>	<b>7.1691</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>7.1733</b>

**4.0 Operational Detail - Mobile**

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**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
<b>Total</b>		<b>5.0900e-003</b>	<b>0.0436</b>	<b>0.0189</b>	<b>2.8000e-004</b>		<b>3.5100e-003</b>	<b>3.5100e-003</b>		<b>3.5100e-003</b>	<b>3.5100e-003</b>	<b>0.0000</b>	<b>50.3675</b>	<b>50.3675</b>	<b>9.7000e-004</b>	<b>9.3000e-004</b>	<b>50.6668</b>

**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
<b>Total</b>		<b>3.9900e-003</b>	<b>0.0341</b>	<b>0.0148</b>	<b>2.1000e-004</b>		<b>2.7600e-003</b>	<b>2.7600e-003</b>		<b>2.7600e-003</b>	<b>2.7600e-003</b>	<b>0.0000</b>	<b>39.4429</b>	<b>39.4429</b>	<b>7.5000e-004</b>	<b>7.2000e-004</b>	<b>39.6773</b>

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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
<b>Total</b>		<b>109.8401</b>	<b>4.9700e-003</b>	<b>1.0300e-003</b>	<b>110.2704</b>

**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
<b>Total</b>		<b>106.2110</b>	<b>4.8100e-003</b>	<b>1.0000e-003</b>	<b>106.6272</b>

**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
<b>Total</b>	<b>0.3822</b>	<b>6.9800e-003</b>	<b>0.6034</b>	<b>3.0000e-005</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>0.9825</b>	<b>0.9825</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>1.0064</b>

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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
<b>Total</b>	<b>0.3822</b>	<b>6.9800e-003</b>	<b>0.6034</b>	<b>3.0000e-005</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>0.9825</b>	<b>0.9825</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>1.0064</b>

**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
<b>Total</b>		<b>13.7672</b>	<b>0.1777</b>	<b>4.2900e-003</b>	<b>19.4887</b>

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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
<b>Total</b>		<b>13.7672</b>	<b>0.1777</b>	<b>4.2900e-003</b>	<b>19.4887</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

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

**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
<b>Total</b>		<b>7.7319</b>	<b>0.4570</b>	<b>0.0000</b>	<b>19.1555</b>

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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
<b>Total</b>		<b>3.8660</b>	<b>0.2285</b>	<b>0.0000</b>	<b>9.5778</b>

**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 - Proposed Project - San Francisco County, Annual

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

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

**1.0 Project Characteristics**

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**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**

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

**1.3 User Entered Comments & Non-Default Data**

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

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

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

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

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	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
<b>Total</b>	<b>3.1713</b>	<b>3.6020</b>	<b>16.4489</b>	<b>0.0352</b>	<b>2.7077</b>	<b>0.1002</b>	<b>2.8079</b>	<b>0.7274</b>	<b>0.0976</b>	<b>0.8250</b>	<b>0.0000</b>	<b>3,681.9963</b>	<b>3,681.9963</b>	<b>0.1615</b>	<b>5.5800e-003</b>	<b>3,687.6969</b>

**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
<b>Total</b>	<b>3.0335</b>	<b>2.8057</b>	<b>13.7536</b>	<b>0.0236</b>	<b>1.7600</b>	<b>0.0817</b>	<b>1.8417</b>	<b>0.4728</b>	<b>0.0800</b>	<b>0.5528</b>	<b>0.0000</b>	<b>2,482.7536</b>	<b>2,482.7536</b>	<b>0.1179</b>	<b>4.3700e-003</b>	<b>2,487.0037</b>

## 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
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

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#### 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

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

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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

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

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.4369</b>	<b>0.6228</b>	<b>1.0597</b>	<b>0.0662</b>	<b>0.5943</b>	<b>0.6605</b>		<b>1,169.350 2</b>	<b>1,169.350 2</b>	<b>0.2254</b>		<b>1,174.985 7</b>

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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
<b>Total</b>	<b>0.0541</b>	<b>0.7618</b>	<b>0.4809</b>	<b>2.6200e-003</b>	<b>0.1151</b>	<b>3.5300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.3600e-003</b>	<b>0.0342</b>		<b>287.7210</b>	<b>287.7210</b>	<b>0.0350</b>		<b>288.5964</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.1966</b>	<b>0.6228</b>	<b>0.8194</b>	<b>0.0298</b>	<b>0.5943</b>	<b>0.6241</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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	0.0180	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
<b>Total</b>	<b>0.0541</b>	<b>0.7618</b>	<b>0.4809</b>	<b>2.6200e-003</b>	<b>0.1151</b>	<b>3.5300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.3600e-003</b>	<b>0.0342</b>		<b>287.7210</b>	<b>287.7210</b>	<b>0.0350</b>		<b>288.5964</b>

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.5303</b>	<b>0.4180</b>	<b>0.9483</b>	<b>0.0573</b>	<b>0.3846</b>	<b>0.4418</b>		<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>

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

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.2386</b>	<b>0.4180</b>	<b>0.6566</b>	<b>0.0258</b>	<b>0.3846</b>	<b>0.4103</b>	<b>0.0000</b>	<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>



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

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.7750</b>	<b>0.6228</b>	<b>1.3978</b>	<b>0.4167</b>	<b>0.5943</b>	<b>1.0110</b>		<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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
<b>Total</b>	<b>0.0507</b>	<b>0.6250</b>	<b>0.4455</b>	<b>2.3100e-003</b>	<b>0.1090</b>	<b>2.9900e-003</b>	<b>0.1120</b>	<b>0.0291</b>	<b>2.8400e-003</b>	<b>0.0320</b>		<b>251.8136</b>	<b>251.8136</b>	<b>0.0290</b>		<b>252.5381</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.3488</b>	<b>0.6228</b>	<b>0.9715</b>	<b>0.1875</b>	<b>0.5943</b>	<b>0.7818</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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
<b>Total</b>	<b>0.0507</b>	<b>0.6250</b>	<b>0.4455</b>	<b>2.3100e-003</b>	<b>0.1090</b>	<b>2.9900e-003</b>	<b>0.1120</b>	<b>0.0291</b>	<b>2.8400e-003</b>	<b>0.0320</b>		<b>251.8136</b>	<b>251.8136</b>	<b>0.0290</b>		<b>252.5381</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>		<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

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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
<b>Total</b>	<b>0.2564</b>	<b>1.4065</b>	<b>2.0732</b>	<b>8.0800e-003</b>	<b>0.5454</b>	<b>0.0123</b>	<b>0.5577</b>	<b>0.1460</b>	<b>0.0117</b>	<b>0.1577</b>		<b>835.4316</b>	<b>835.4316</b>	<b>0.0514</b>		<b>836.7164</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>	<b>0.0000</b>	<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

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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
<b>Total</b>	<b>0.2564</b>	<b>1.4065</b>	<b>2.0732</b>	<b>8.0800e-003</b>	<b>0.5454</b>	<b>0.0123</b>	<b>0.5577</b>	<b>0.1460</b>	<b>0.0117</b>	<b>0.1577</b>		<b>835.4316</b>	<b>835.4316</b>	<b>0.0514</b>		<b>836.7164</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>		<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

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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
<b>Total</b>	<b>0.2344</b>	<b>1.3244</b>	<b>1.8945</b>	<b>7.8600e-003</b>	<b>0.5454</b>	<b>0.0111</b>	<b>0.5565</b>	<b>0.1460</b>	<b>0.0105</b>	<b>0.1565</b>		<b>815.1150</b>	<b>815.1150</b>	<b>0.0494</b>		<b>816.3505</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>	<b>0.0000</b>	<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

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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
<b>Total</b>	<b>0.2344</b>	<b>1.3244</b>	<b>1.8945</b>	<b>7.8600e-003</b>	<b>0.5454</b>	<b>0.0111</b>	<b>0.5565</b>	<b>0.1460</b>	<b>0.0105</b>	<b>0.1565</b>		<b>815.1150</b>	<b>815.1150</b>	<b>0.0494</b>		<b>816.3505</b>

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>		<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>

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

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>	<b>0.0000</b>	<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>



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

**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
<b>Total</b>	<b>6.1323</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

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

**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
<b>Total</b>	<b>0.0432</b>	<b>0.0269</b>	<b>0.3479</b>	<b>1.1300e-003</b>	<b>0.0986</b>	<b>7.3000e-004</b>	<b>0.0993</b>	<b>0.0262</b>	<b>6.7000e-004</b>	<b>0.0268</b>		<b>112.4269</b>	<b>112.4269</b>	<b>2.9000e-003</b>		<b>112.4993</b>

**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
<b>Total</b>	<b>6.1323</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

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

**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
<b>Total</b>	<b>6.1001</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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

**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
<b>Total</b>	<b>6.1001</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

490 South Van Ness - Proposed 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
<b>Total</b>	<b>0.0396</b>	<b>0.0238</b>	<b>0.3148</b>	<b>1.0900e-003</b>	<b>0.0986</b>	<b>7.3000e-004</b>	<b>0.0993</b>	<b>0.0262</b>	<b>6.8000e-004</b>	<b>0.0268</b>		<b>108.9626</b>	<b>108.9626</b>	<b>2.5800e-003</b>		<b>109.0271</b>

**4.0 Operational Detail - Mobile**

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**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

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

**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

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	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
<b>Total</b>		<b>0.0279</b>	<b>0.2386</b>	<b>0.1034</b>	<b>1.5200e-003</b>		<b>0.0193</b>	<b>0.0193</b>		<b>0.0193</b>	<b>0.0193</b>		<b>304.2226</b>	<b>304.2226</b>	<b>5.8300e-003</b>	<b>5.5800e-003</b>	<b>306.0304</b>

**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
<b>Total</b>		<b>0.0218</b>	<b>0.1868</b>	<b>0.0809</b>	<b>1.1900e-003</b>		<b>0.0151</b>	<b>0.0151</b>		<b>0.0151</b>	<b>0.0151</b>		<b>238.2375</b>	<b>238.2375</b>	<b>4.5700e-003</b>	<b>4.3600e-003</b>	<b>239.6532</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



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	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
<b>Total</b>	<b>2.1976</b>	<b>0.0776</b>	<b>6.7049</b>	<b>3.5000e-004</b>		<b>0.0369</b>	<b>0.0369</b>		<b>0.0369</b>	<b>0.0369</b>	<b>0.0000</b>	<b>12.0329</b>	<b>12.0329</b>	<b>0.0117</b>	<b>0.0000</b>	<b>12.3263</b>

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

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3037					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
<b>Total</b>	<b>2.1976</b>	<b>0.0776</b>	<b>6.7049</b>	<b>3.5000e-004</b>		<b>0.0369</b>	<b>0.0369</b>		<b>0.0369</b>	<b>0.0369</b>	<b>0.0000</b>	<b>12.0329</b>	<b>12.0329</b>	<b>0.0117</b>	<b>0.0000</b>	<b>12.3263</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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

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

**1.0 Project Characteristics**

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**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**

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

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

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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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
<b>Total</b>	<b>3.1020</b>	<b>3.8326</b>	<b>16.7099</b>	<b>0.0335</b>	<b>2.7077</b>	<b>0.1004</b>	<b>2.8081</b>	<b>0.7274</b>	<b>0.0978</b>	<b>0.8252</b>	<b>0.0000</b>	<b>3,517.5000</b>	<b>3,517.5000</b>	<b>0.1629</b>	<b>5.5800e-003</b>	<b>3,523.2346</b>

**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
<b>Total</b>	<b>2.9640</b>	<b>2.9596</b>	<b>14.1975</b>	<b>0.0226</b>	<b>1.7600</b>	<b>0.0819</b>	<b>1.8419</b>	<b>0.4728</b>	<b>0.0801</b>	<b>0.5530</b>	<b>0.0000</b>	<b>2,373.7806</b>	<b>2,373.7806</b>	<b>0.1205</b>	<b>4.3700e-003</b>	<b>2,378.0947</b>



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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

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#### 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

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

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.4369</b>	<b>0.6228</b>	<b>1.0597</b>	<b>0.0662</b>	<b>0.5943</b>	<b>0.6605</b>		<b>1,169.350 2</b>	<b>1,169.350 2</b>	<b>0.2254</b>		<b>1,174.985 7</b>

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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
<b>Total</b>	<b>0.0585</b>	<b>0.7901</b>	<b>0.4816</b>	<b>2.5400e-003</b>	<b>0.1151</b>	<b>3.6300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.4500e-003</b>	<b>0.0343</b>		<b>280.1501</b>	<b>280.1501</b>	<b>0.0355</b>		<b>281.0386</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.1966</b>	<b>0.6228</b>	<b>0.8194</b>	<b>0.0298</b>	<b>0.5943</b>	<b>0.6241</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

490 South Van Ness - Proposed 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
<b>Total</b>	<b>0.0585</b>	<b>0.7901</b>	<b>0.4816</b>	<b>2.5400e-003</b>	<b>0.1151</b>	<b>3.6300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.4500e-003</b>	<b>0.0343</b>		<b>280.1501</b>	<b>280.1501</b>	<b>0.0355</b>		<b>281.0386</b>

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.5303</b>	<b>0.4180</b>	<b>0.9483</b>	<b>0.0573</b>	<b>0.3846</b>	<b>0.4418</b>		<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>

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

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.2386</b>	<b>0.4180</b>	<b>0.6566</b>	<b>0.0258</b>	<b>0.3846</b>	<b>0.4103</b>	<b>0.0000</b>	<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>

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

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.7750</b>	<b>0.6228</b>	<b>1.3978</b>	<b>0.4167</b>	<b>0.5943</b>	<b>1.0110</b>		<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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
<b>Total</b>	<b>0.0551</b>	<b>0.6490</b>	<b>0.4445</b>	<b>2.2300e-003</b>	<b>0.1090</b>	<b>3.0700e-003</b>	<b>0.1121</b>	<b>0.0291</b>	<b>2.9100e-003</b>	<b>0.0321</b>		<b>244.6011</b>	<b>244.6011</b>	<b>0.0294</b>		<b>245.3358</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.3488</b>	<b>0.6228</b>	<b>0.9715</b>	<b>0.1875</b>	<b>0.5943</b>	<b>0.7818</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>



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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
<b>Total</b>	<b>0.0551</b>	<b>0.6490</b>	<b>0.4445</b>	<b>2.2300e-003</b>	<b>0.1090</b>	<b>3.0700e-003</b>	<b>0.1121</b>	<b>0.0291</b>	<b>2.9100e-003</b>	<b>0.0321</b>		<b>244.6011</b>	<b>244.6011</b>	<b>0.0294</b>		<b>245.3358</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>		<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

490 South Van Ness - Proposed 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	0.0461	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
<b>Total</b>	<b>0.2816</b>	<b>1.4594</b>	<b>2.0589</b>	<b>7.7000e-003</b>	<b>0.5454</b>	<b>0.0126</b>	<b>0.5580</b>	<b>0.1460</b>	<b>0.0119</b>	<b>0.1579</b>		<b>797.4069</b>	<b>797.4069</b>	<b>0.0523</b>		<b>798.7151</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>	<b>0.0000</b>	<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

490 South Van Ness - Proposed 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	0.0461	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
<b>Total</b>	<b>0.2816</b>	<b>1.4594</b>	<b>2.0589</b>	<b>7.7000e-003</b>	<b>0.5454</b>	<b>0.0126</b>	<b>0.5580</b>	<b>0.1460</b>	<b>0.0119</b>	<b>0.1579</b>		<b>797.4069</b>	<b>797.4069</b>	<b>0.0523</b>		<b>798.7151</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>		<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

490 South Van Ness - Proposed 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	0.0419	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
<b>Total</b>	<b>0.2579</b>	<b>1.3712</b>	<b>1.8761</b>	<b>7.5000e-003</b>	<b>0.5454</b>	<b>0.0113</b>	<b>0.5567</b>	<b>0.1460</b>	<b>0.0107</b>	<b>0.1567</b>		<b>778.1039</b>	<b>778.1039</b>	<b>0.0503</b>		<b>779.3604</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>	<b>0.0000</b>	<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

490 South Van Ness - Proposed 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	0.0419	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
<b>Total</b>	<b>0.2579</b>	<b>1.3712</b>	<b>1.8761</b>	<b>7.5000e-003</b>	<b>0.5454</b>	<b>0.0113</b>	<b>0.5567</b>	<b>0.1460</b>	<b>0.0107</b>	<b>0.1567</b>		<b>778.1039</b>	<b>778.1039</b>	<b>0.0503</b>		<b>779.3604</b>

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>		<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>

490 South Van Ness - Proposed 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
<b>Total</b>	<b>0.0659</b>	<b>0.0441</b>	<b>0.4554</b>	<b>1.5400e-003</b>	<b>0.1479</b>	<b>1.1000e-003</b>	<b>0.1490</b>	<b>0.0392</b>	<b>1.0100e-003</b>	<b>0.0402</b>		<b>153.6124</b>	<b>153.6124</b>	<b>3.6700e-003</b>		<b>153.7042</b>

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>	<b>0.0000</b>	<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>

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

**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
<b>Total</b>	<b>6.1323</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

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

**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
<b>Total</b>	<b>6.1323</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>



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

**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
<b>Total</b>	<b>6.1001</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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

**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
<b>Total</b>	<b>6.1001</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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

**4.0 Operational Detail - Mobile**

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**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
<b>Total</b>		<b>0.0279</b>	<b>0.2386</b>	<b>0.1034</b>	<b>1.5200e-003</b>		<b>0.0193</b>	<b>0.0193</b>		<b>0.0193</b>	<b>0.0193</b>		<b>304.2226</b>	<b>304.2226</b>	<b>5.8300e-003</b>	<b>5.5800e-003</b>	<b>306.0304</b>

**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
<b>Total</b>		<b>0.0218</b>	<b>0.1868</b>	<b>0.0809</b>	<b>1.1900e-003</b>		<b>0.0151</b>	<b>0.0151</b>		<b>0.0151</b>	<b>0.0151</b>		<b>238.2375</b>	<b>238.2375</b>	<b>4.5700e-003</b>	<b>4.3600e-003</b>	<b>239.6532</b>

**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
<b>Total</b>	<b>2.1976</b>	<b>0.0776</b>	<b>6.7049</b>	<b>3.5000e-004</b>		<b>0.0369</b>	<b>0.0369</b>		<b>0.0369</b>	<b>0.0369</b>	<b>0.0000</b>	<b>12.0329</b>	<b>12.0329</b>	<b>0.0117</b>	<b>0.0000</b>	<b>12.3263</b>

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

**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3037					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
<b>Total</b>	<b>2.1976</b>	<b>0.0776</b>	<b>6.7049</b>	<b>3.5000e-004</b>		<b>0.0369</b>	<b>0.0369</b>		<b>0.0369</b>	<b>0.0369</b>	<b>0.0000</b>	<b>12.0329</b>	<b>12.0329</b>	<b>0.0117</b>	<b>0.0000</b>	<b>12.3263</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

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

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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

**490 South Van Ness - Comparison Project**  
**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**

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

**1.3 User Entered Comments & Non-Default Data**

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

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

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

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
<b>Total</b>	<b>0.4910</b>	<b>0.5855</b>	<b>2.0460</b>	<b>5.2600e-003</b>	<b>0.4095</b>	<b>0.0130</b>	<b>0.4225</b>	<b>0.1104</b>	<b>0.0126</b>	<b>0.1230</b>	<b>8.3724</b>	<b>646.2385</b>	<b>654.6109</b>	<b>0.5899</b>	<b>5.8600e-003</b>	<b>671.1064</b>

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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
<b>Total</b>	<b>0.4725</b>	<b>0.4700</b>	<b>1.7114</b>	<b>3.7600e-003</b>	<b>0.2866</b>	<b>0.0104</b>	<b>0.2970</b>	<b>0.0773</b>	<b>0.0101</b>	<b>0.0874</b>	<b>4.9489</b>	<b>495.6314</b>	<b>500.5803</b>	<b>0.3820</b>	<b>5.6000e-003</b>	<b>511.7987</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>3.79</b>	<b>19.72</b>	<b>16.35</b>	<b>28.52</b>	<b>30.00</b>	<b>20.02</b>	<b>29.69</b>	<b>30.00</b>	<b>19.78</b>	<b>28.95</b>	<b>40.89</b>	<b>23.31</b>	<b>23.53</b>	<b>35.25</b>	<b>4.44</b>	<b>23.74</b>

**3.0 Construction Detail**

**Construction Phase**

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

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
<b>Total</b>	<b>5.3200e-003</b>	<b>0.0472</b>	<b>0.0389</b>	<b>6.0000e-005</b>	<b>2.1800e-003</b>	<b>3.1100e-003</b>	<b>5.2900e-003</b>	<b>3.3000e-004</b>	<b>2.9700e-003</b>	<b>3.3000e-003</b>	<b>0.0000</b>	<b>5.3041</b>	<b>5.3041</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>5.3297</b>

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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
<b>Total</b>	<b>2.7000e-004</b>	<b>3.9200e-003</b>	<b>2.3500e-003</b>	<b>1.0000e-005</b>	<b>5.6000e-004</b>	<b>1.0000e-005</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>1.0000e-005</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.2767</b>	<b>1.2767</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>1.2807</b>

**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
<b>Total</b>	<b>5.3200e-003</b>	<b>0.0472</b>	<b>0.0389</b>	<b>6.0000e-005</b>	<b>9.8000e-004</b>	<b>3.1100e-003</b>	<b>4.0900e-003</b>	<b>1.5000e-004</b>	<b>2.9700e-003</b>	<b>3.1200e-003</b>	<b>0.0000</b>	<b>5.3041</b>	<b>5.3041</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>5.3296</b>

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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
<b>Total</b>	<b>2.7000e-004</b>	<b>3.9200e-003</b>	<b>2.3500e-003</b>	<b>1.0000e-005</b>	<b>5.6000e-004</b>	<b>1.0000e-005</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>1.0000e-005</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.2767</b>	<b>1.2767</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>1.2807</b>

**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
<b>Total</b>	<b>3.9000e-004</b>	<b>4.8800e-003</b>	<b>2.1300e-003</b>	<b>0.0000</b>	<b>2.7000e-004</b>	<b>2.1000e-004</b>	<b>4.8000e-004</b>	<b>3.0000e-005</b>	<b>1.9000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.4458</b>	<b>0.4458</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4492</b>

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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
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0200</b>	<b>0.0200</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0200</b>

**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
<b>Total</b>	<b>3.9000e-004</b>	<b>4.8800e-003</b>	<b>2.1300e-003</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>2.1000e-004</b>	<b>3.3000e-004</b>	<b>1.0000e-005</b>	<b>1.9000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.4458</b>	<b>0.4458</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4492</b>

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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
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0200</b>	<b>0.0200</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0200</b>

**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
<b>Total</b>	<b>0.0165</b>	<b>0.1462</b>	<b>0.1205</b>	<b>1.9000e-004</b>	<b>0.0133</b>	<b>9.6500e-003</b>	<b>0.0229</b>	<b>6.6500e-003</b>	<b>9.2100e-003</b>	<b>0.0159</b>	<b>0.0000</b>	<b>16.4427</b>	<b>16.4427</b>	<b>3.1700e-003</b>	<b>0.0000</b>	<b>16.5219</b>

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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
<b>Total</b>	<b>4.6800e-003</b>	<b>0.1722</b>	<b>0.0484</b>	<b>3.9000e-004</b>	<b>8.4300e-003</b>	<b>6.8000e-004</b>	<b>9.1100e-003</b>	<b>2.3100e-003</b>	<b>6.5000e-004</b>	<b>2.9500e-003</b>	<b>0.0000</b>	<b>40.9106</b>	<b>40.9106</b>	<b>6.7800e-003</b>	<b>0.0000</b>	<b>41.0802</b>

**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
<b>Total</b>	<b>0.0165</b>	<b>0.1462</b>	<b>0.1205</b>	<b>1.9000e-004</b>	<b>5.9800e-003</b>	<b>9.6500e-003</b>	<b>0.0156</b>	<b>2.9900e-003</b>	<b>9.2100e-003</b>	<b>0.0122</b>	<b>0.0000</b>	<b>16.4426</b>	<b>16.4426</b>	<b>3.1700e-003</b>	<b>0.0000</b>	<b>16.5219</b>

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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
<b>Total</b>	<b>4.6800e-003</b>	<b>0.1722</b>	<b>0.0484</b>	<b>3.9000e-004</b>	<b>8.4300e-003</b>	<b>6.8000e-004</b>	<b>9.1100e-003</b>	<b>2.3100e-003</b>	<b>6.5000e-004</b>	<b>2.9500e-003</b>	<b>0.0000</b>	<b>40.9106</b>	<b>40.9106</b>	<b>6.7800e-003</b>	<b>0.0000</b>	<b>41.0802</b>

**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
<b>Total</b>	<b>0.1063</b>	<b>1.0811</b>	<b>0.7596</b>	<b>1.1200e-003</b>		<b>0.0695</b>	<b>0.0695</b>		<b>0.0639</b>	<b>0.0639</b>	<b>0.0000</b>	<b>101.9314</b>	<b>101.9314</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.7247</b>



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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
<b>Total</b>	<b>0.0264</b>	<b>0.1704</b>	<b>0.2063</b>	<b>8.2000e-004</b>	<b>0.0535</b>	<b>1.4200e-003</b>	<b>0.0549</b>	<b>0.0144</b>	<b>1.3500e-003</b>	<b>0.0157</b>	<b>0.0000</b>	<b>77.5687</b>	<b>77.5687</b>	<b>5.3400e-003</b>	<b>0.0000</b>	<b>77.7022</b>

**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
<b>Total</b>	<b>0.1063</b>	<b>1.0811</b>	<b>0.7596</b>	<b>1.1200e-003</b>		<b>0.0695</b>	<b>0.0695</b>		<b>0.0639</b>	<b>0.0639</b>	<b>0.0000</b>	<b>101.9313</b>	<b>101.9313</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.7246</b>

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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
<b>Total</b>	<b>0.0264</b>	<b>0.1704</b>	<b>0.2063</b>	<b>8.2000e-004</b>	<b>0.0535</b>	<b>1.4200e-003</b>	<b>0.0549</b>	<b>0.0144</b>	<b>1.3500e-003</b>	<b>0.0157</b>	<b>0.0000</b>	<b>77.5687</b>	<b>77.5687</b>	<b>5.3400e-003</b>	<b>0.0000</b>	<b>77.7022</b>

**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
<b>Total</b>	<b>0.0713</b>	<b>0.7316</b>	<b>0.5620</b>	<b>8.5000e-004</b>		<b>0.0451</b>	<b>0.0451</b>		<b>0.0415</b>	<b>0.0415</b>	<b>0.0000</b>	<b>76.2139</b>	<b>76.2139</b>	<b>0.0241</b>	<b>0.0000</b>	<b>76.8167</b>

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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
<b>Total</b>	<b>0.0184</b>	<b>0.1219</b>	<b>0.1433</b>	<b>6.1000e-004</b>	<b>0.0407</b>	<b>9.6000e-004</b>	<b>0.0416</b>	<b>0.0110</b>	<b>9.1000e-004</b>	<b>0.0119</b>	<b>0.0000</b>	<b>57.5935</b>	<b>57.5935</b>	<b>3.9200e-003</b>	<b>0.0000</b>	<b>57.6914</b>

**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
<b>Total</b>	<b>0.0713</b>	<b>0.7316</b>	<b>0.5620</b>	<b>8.5000e-004</b>		<b>0.0451</b>	<b>0.0451</b>		<b>0.0415</b>	<b>0.0415</b>	<b>0.0000</b>	<b>76.2138</b>	<b>76.2138</b>	<b>0.0241</b>	<b>0.0000</b>	<b>76.8166</b>

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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
<b>Total</b>	<b>0.0184</b>	<b>0.1219</b>	<b>0.1433</b>	<b>6.1000e-004</b>	<b>0.0407</b>	<b>9.6000e-004</b>	<b>0.0416</b>	<b>0.0110</b>	<b>9.1000e-004</b>	<b>0.0119</b>	<b>0.0000</b>	<b>57.5935</b>	<b>57.5935</b>	<b>3.9200e-003</b>	<b>0.0000</b>	<b>57.6914</b>

**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
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0196</b>	<b>0.0179</b>	<b>3.0000e-005</b>		<b>1.1100e-003</b>	<b>1.1100e-003</b>		<b>1.0300e-003</b>	<b>1.0300e-003</b>	<b>0.0000</b>	<b>2.3931</b>	<b>2.3931</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.4102</b>

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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
<b>Total</b>	<b>1.5000e-004</b>	<b>1.0000e-004</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3491</b>	<b>0.3491</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3494</b>

**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
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0196</b>	<b>0.0179</b>	<b>3.0000e-005</b>		<b>1.1100e-003</b>	<b>1.1100e-003</b>		<b>1.0300e-003</b>	<b>1.0300e-003</b>	<b>0.0000</b>	<b>2.3931</b>	<b>2.3931</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.4102</b>

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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
<b>Total</b>	<b>1.5000e-004</b>	<b>1.0000e-004</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3491</b>	<b>0.3491</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3494</b>

**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
<b>Total</b>	<b>0.1020</b>	<b>0.0361</b>	<b>0.0334</b>	<b>5.0000e-005</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>4.5959</b>	<b>4.5959</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.6068</b>

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

**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
<b>Total</b>	<b>0.1020</b>	<b>0.0361</b>	<b>0.0334</b>	<b>5.0000e-005</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>		<b>2.7100e-003</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>4.5959</b>	<b>4.5959</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.6068</b>

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

**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
<b>Total</b>	<b>0.4338</b>	<b>0.1413</b>	<b>0.1418</b>	<b>2.3000e-004</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>	<b>0.0000</b>	<b>19.6601</b>	<b>19.6601</b>	<b>1.6600e-003</b>	<b>0.0000</b>	<b>19.7016</b>



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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
<b>Total</b>	<b>3.0300e-003</b>	<b>2.0900e-003</b>	<b>0.0228</b>	<b>8.0000e-005</b>	<b>7.3000e-003</b>	<b>6.0000e-005</b>	<b>7.3600e-003</b>	<b>1.9400e-003</b>	<b>5.0000e-005</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>7.1691</b>	<b>7.1691</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>7.1733</b>

**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
<b>Total</b>	<b>0.4338</b>	<b>0.1413</b>	<b>0.1418</b>	<b>2.3000e-004</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>		<b>9.9100e-003</b>	<b>9.9100e-003</b>	<b>0.0000</b>	<b>19.6600</b>	<b>19.6600</b>	<b>1.6600e-003</b>	<b>0.0000</b>	<b>19.7015</b>

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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
<b>Total</b>	<b>3.0300e-003</b>	<b>2.0900e-003</b>	<b>0.0228</b>	<b>8.0000e-005</b>	<b>7.3000e-003</b>	<b>6.0000e-005</b>	<b>7.3600e-003</b>	<b>1.9400e-003</b>	<b>5.0000e-005</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>7.1691</b>	<b>7.1691</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>7.1733</b>

**4.0 Operational Detail - Mobile**

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**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		
<b>Total</b>	<b>486.02</b>	<b>461.69</b>	<b>422.61</b>	<b>1,094,013</b>	<b>765,809</b>

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

	ROG	NOx	CO	SO2	Fugitive 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	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
<b>Total</b>		<b>4.5100e-003</b>	<b>0.0386</b>	<b>0.0167</b>	<b>2.4000e-004</b>		<b>3.1200e-003</b>	<b>3.1200e-003</b>		<b>3.1200e-003</b>	<b>3.1200e-003</b>	<b>0.0000</b>	<b>44.6319</b>	<b>44.6319</b>	<b>8.5000e-004</b>	<b>8.2000e-004</b>	<b>44.8971</b>

**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
<b>Total</b>		<b>3.5300e-003</b>	<b>0.0302</b>	<b>0.0130</b>	<b>1.9000e-004</b>		<b>2.4400e-003</b>	<b>2.4400e-003</b>		<b>2.4400e-003</b>	<b>2.4400e-003</b>	<b>0.0000</b>	<b>34.9581</b>	<b>34.9581</b>	<b>6.7000e-004</b>	<b>6.4000e-004</b>	<b>35.1658</b>

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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
<b>Total</b>		<b>133.1748</b>	<b>6.0200e-003</b>	<b>1.2500e-003</b>	<b>133.6966</b>

**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
<b>Total</b>		<b>123.9570</b>	<b>5.6100e-003</b>	<b>1.1600e-003</b>	<b>124.4427</b>

**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
<b>Total</b>	<b>0.3499</b>	<b>6.2100e-003</b>	<b>0.5368</b>	<b>3.0000e-005</b>		<b>2.9500e-003</b>	<b>2.9500e-003</b>		<b>2.9500e-003</b>	<b>2.9500e-003</b>	<b>0.0000</b>	<b>0.8741</b>	<b>0.8741</b>	<b>8.5000e-004</b>	<b>0.0000</b>	<b>0.8955</b>



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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
<b>Total</b>	<b>0.3499</b>	<b>6.2100e-003</b>	<b>0.5368</b>	<b>3.0000e-005</b>		<b>2.9500e-003</b>	<b>2.9500e-003</b>		<b>2.9500e-003</b>	<b>2.9500e-003</b>	<b>0.0000</b>	<b>0.8741</b>	<b>0.8741</b>	<b>8.5000e-004</b>	<b>0.0000</b>	<b>0.8955</b>

**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
<b>Total</b>		<b>12.1789</b>	<b>0.1572</b>	<b>3.8000e-003</b>	<b>17.2402</b>

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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
<b>Total</b>		<b>12.1789</b>	<b>0.1572</b>	<b>3.8000e-003</b>	<b>17.2402</b>

**8.0 Waste Detail**

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**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
<b>Total</b>		<b>6.8469</b>	<b>0.4046</b>	<b>0.0000</b>	<b>16.9629</b>

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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
<b>Total</b>		<b>3.4234</b>	<b>0.2023</b>	<b>0.0000</b>	<b>8.4814</b>

**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**

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

**490 South Van Ness - Comparison Project**  
**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**

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

**1.3 User Entered Comments & Non-Default Data**

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

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



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

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

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	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
<b>Total</b>	<b>2.8724</b>	<b>3.1920</b>	<b>14.5984</b>	<b>0.0312</b>	<b>2.3992</b>	<b>0.0889</b>	<b>2.4881</b>	<b>0.6445</b>	<b>0.0866</b>	<b>0.7311</b>	<b>0.0000</b>	<b>3,262.5406</b>	<b>3,262.5406</b>	<b>0.1432</b>	<b>4.9400e-003</b>	<b>3,267.5933</b>

**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
<b>Total</b>	<b>2.7670</b>	<b>2.5807</b>	<b>12.5487</b>	<b>0.0224</b>	<b>1.6794</b>	<b>0.0743</b>	<b>1.7538</b>	<b>0.4512</b>	<b>0.0727</b>	<b>0.5238</b>	<b>0.0000</b>	<b>2,343.4254</b>	<b>2,343.4254</b>	<b>0.1099</b>	<b>3.8700e-003</b>	<b>2,347.3271</b>

## 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
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

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#### 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

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

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.4369</b>	<b>0.6228</b>	<b>1.0597</b>	<b>0.0662</b>	<b>0.5943</b>	<b>0.6605</b>		<b>1,169.350 2</b>	<b>1,169.350 2</b>	<b>0.2254</b>		<b>1,174.985 7</b>

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
<b>Total</b>	<b>0.0541</b>	<b>0.7618</b>	<b>0.4809</b>	<b>2.6200e-003</b>	<b>0.1151</b>	<b>3.5300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.3600e-003</b>	<b>0.0342</b>		<b>287.7210</b>	<b>287.7210</b>	<b>0.0350</b>		<b>288.5964</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.1966</b>	<b>0.6228</b>	<b>0.8194</b>	<b>0.0298</b>	<b>0.5943</b>	<b>0.6241</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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
<b>Total</b>	<b>0.0541</b>	<b>0.7618</b>	<b>0.4809</b>	<b>2.6200e-003</b>	<b>0.1151</b>	<b>3.5300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.3600e-003</b>	<b>0.0342</b>		<b>287.7210</b>	<b>287.7210</b>	<b>0.0350</b>		<b>288.5964</b>

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.5303</b>	<b>0.4180</b>	<b>0.9483</b>	<b>0.0573</b>	<b>0.3846</b>	<b>0.4418</b>		<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>



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

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.2386</b>	<b>0.4180</b>	<b>0.6566</b>	<b>0.0258</b>	<b>0.3846</b>	<b>0.4103</b>	<b>0.0000</b>	<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>

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

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.8576</b>	<b>0.6228</b>	<b>1.4803</b>	<b>0.4292</b>	<b>0.5943</b>	<b>1.0235</b>		<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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	0.2634	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
<b>Total</b>	<b>0.2994</b>	<b>10.8185</b>	<b>3.0774</b>	<b>0.0255</b>	<b>0.5637</b>	<b>0.0433</b>	<b>0.6070</b>	<b>0.1535</b>	<b>0.0414</b>	<b>0.1949</b>		<b>2,926.7536</b>	<b>2,926.7536</b>	<b>0.4784</b>		<b>2,938.7130</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.3859</b>	<b>0.6228</b>	<b>1.0087</b>	<b>0.1931</b>	<b>0.5943</b>	<b>0.7874</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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

**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
<b>Total</b>	<b>0.2994</b>	<b>10.8185</b>	<b>3.0774</b>	<b>0.0255</b>	<b>0.5637</b>	<b>0.0433</b>	<b>0.6070</b>	<b>0.1535</b>	<b>0.0414</b>	<b>0.1949</b>		<b>2,926.7536</b>	<b>2,926.7536</b>	<b>0.4784</b>		<b>2,938.7130</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>		<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

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

**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
<b>Total</b>	<b>0.2698</b>	<b>1.6920</b>	<b>2.1828</b>	<b>8.7400e-003</b>	<b>0.5671</b>	<b>0.0144</b>	<b>0.5815</b>	<b>0.1521</b>	<b>0.0136</b>	<b>0.1657</b>		<b>907.6152</b>	<b>907.6152</b>	<b>0.0599</b>		<b>909.1124</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>	<b>0.0000</b>	<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

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

**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
<b>Total</b>	<b>0.2698</b>	<b>1.6920</b>	<b>2.1828</b>	<b>8.7400e-003</b>	<b>0.5671</b>	<b>0.0144</b>	<b>0.5815</b>	<b>0.1521</b>	<b>0.0136</b>	<b>0.1657</b>		<b>907.6152</b>	<b>907.6152</b>	<b>0.0599</b>		<b>909.1124</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>		<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

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

**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
<b>Total</b>	<b>0.2466</b>	<b>1.5947</b>	<b>1.9977</b>	<b>8.5100e-003</b>	<b>0.5671</b>	<b>0.0129</b>	<b>0.5800</b>	<b>0.1521</b>	<b>0.0122</b>	<b>0.1642</b>		<b>886.2802</b>	<b>886.2802</b>	<b>0.0578</b>		<b>887.7250</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>	<b>0.0000</b>	<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

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
<b>Total</b>	<b>0.2466</b>	<b>1.5947</b>	<b>1.9977</b>	<b>8.5100e-003</b>	<b>0.5671</b>	<b>0.0129</b>	<b>0.5800</b>	<b>0.1521</b>	<b>0.0122</b>	<b>0.1642</b>		<b>886.2802</b>	<b>886.2802</b>	<b>0.0578</b>		<b>887.7250</b>

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>		<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>



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

**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
<b>Total</b>	<b>0.0594</b>	<b>0.0356</b>	<b>0.4722</b>	<b>1.6400e-003</b>	<b>0.1479</b>	<b>1.1000e-003</b>	<b>0.1490</b>	<b>0.0392</b>	<b>1.0100e-003</b>	<b>0.0402</b>		<b>163.4439</b>	<b>163.4439</b>	<b>3.8700e-003</b>		<b>163.5407</b>

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>	<b>0.0000</b>	<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>

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

**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
<b>Total</b>	<b>0.0594</b>	<b>0.0356</b>	<b>0.4722</b>	<b>1.6400e-003</b>	<b>0.1479</b>	<b>1.1000e-003</b>	<b>0.1490</b>	<b>0.0392</b>	<b>1.0100e-003</b>	<b>0.0402</b>		<b>163.4439</b>	<b>163.4439</b>	<b>3.8700e-003</b>		<b>163.5407</b>

**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
<b>Total</b>	<b>5.6653</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

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

**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
<b>Total</b>	<b>0.0432</b>	<b>0.0269</b>	<b>0.3479</b>	<b>1.1300e-003</b>	<b>0.0986</b>	<b>7.3000e-004</b>	<b>0.0993</b>	<b>0.0262</b>	<b>6.7000e-004</b>	<b>0.0268</b>		<b>112.4269</b>	<b>112.4269</b>	<b>2.9000e-003</b>		<b>112.4993</b>

**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
<b>Total</b>	<b>5.6653</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

490 South Van Ness - Comparison 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
<b>Total</b>	<b>0.0432</b>	<b>0.0269</b>	<b>0.3479</b>	<b>1.1300e-003</b>	<b>0.0986</b>	<b>7.3000e-004</b>	<b>0.0993</b>	<b>0.0262</b>	<b>6.7000e-004</b>	<b>0.0268</b>		<b>112.4269</b>	<b>112.4269</b>	<b>2.9000e-003</b>		<b>112.4993</b>

**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
<b>Total</b>	<b>5.6331</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

490 South Van Ness - Comparison 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
<b>Total</b>	<b>0.0396</b>	<b>0.0238</b>	<b>0.3148</b>	<b>1.0900e-003</b>	<b>0.0986</b>	<b>7.3000e-004</b>	<b>0.0993</b>	<b>0.0262</b>	<b>6.8000e-004</b>	<b>0.0268</b>		<b>108.9626</b>	<b>108.9626</b>	<b>2.5800e-003</b>		<b>109.0271</b>

**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
<b>Total</b>	<b>5.6331</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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

**4.0 Operational Detail - Mobile**

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**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

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

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



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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	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
<b>Total</b>		<b>0.0247</b>	<b>0.2114</b>	<b>0.0914</b>	<b>1.3500e-003</b>		<b>0.0171</b>	<b>0.0171</b>		<b>0.0171</b>	<b>0.0171</b>		<b>269.5793</b>	<b>269.5793</b>	<b>5.1700e-003</b>	<b>4.9500e-003</b>	<b>271.1813</b>

**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
<b>Total</b>		<b>0.0194</b>	<b>0.1656</b>	<b>0.0715</b>	<b>1.0600e-003</b>		<b>0.0134</b>	<b>0.0134</b>		<b>0.0134</b>	<b>0.0134</b>		<b>211.1491</b>	<b>211.1491</b>	<b>4.0500e-003</b>	<b>3.8800e-003</b>	<b>212.4038</b>

**6.0 Area Detail**

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

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	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
<b>Total</b>	<b>2.0095</b>	<b>0.0690</b>	<b>5.9648</b>	<b>3.1000e-004</b>		<b>0.0328</b>	<b>0.0328</b>		<b>0.0328</b>	<b>0.0328</b>	<b>0.0000</b>	<b>10.7064</b>	<b>10.7064</b>	<b>0.0105</b>	<b>0.0000</b>	<b>10.9679</b>

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

**6.2 Area by SubCategory**

Mitigated

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

**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 - Comparison Project - San Francisco County, Summer

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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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**

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

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

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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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
<b>Total</b>	<b>2.8110</b>	<b>3.3962</b>	<b>14.8298</b>	<b>0.0297</b>	<b>2.3992</b>	<b>0.0891</b>	<b>2.4882</b>	<b>0.6445</b>	<b>0.0868</b>	<b>0.7313</b>	<b>0.0000</b>	<b>3,116.7867</b>	<b>3,116.7867</b>	<b>0.1444</b>	<b>4.9400e-003</b>	<b>3,121.8695</b>

**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
<b>Total</b>	<b>2.7054</b>	<b>2.7267</b>	<b>12.9189</b>	<b>0.0213</b>	<b>1.6794</b>	<b>0.0745</b>	<b>1.7539</b>	<b>0.4512</b>	<b>0.0728</b>	<b>0.5240</b>	<b>0.0000</b>	<b>2,239.8403</b>	<b>2,239.8403</b>	<b>0.1121</b>	<b>3.8700e-003</b>	<b>2,243.7949</b>

## 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
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

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#### 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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.4369</b>	<b>0.6228</b>	<b>1.0597</b>	<b>0.0662</b>	<b>0.5943</b>	<b>0.6605</b>		<b>1,169.350 2</b>	<b>1,169.350 2</b>	<b>0.2254</b>		<b>1,174.985 7</b>

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
<b>Total</b>	<b>0.0585</b>	<b>0.7901</b>	<b>0.4816</b>	<b>2.5400e-003</b>	<b>0.1151</b>	<b>3.6300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.4500e-003</b>	<b>0.0343</b>		<b>280.1501</b>	<b>280.1501</b>	<b>0.0355</b>		<b>281.0386</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.1966</b>	<b>0.6228</b>	<b>0.8194</b>	<b>0.0298</b>	<b>0.5943</b>	<b>0.6241</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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
<b>Total</b>	<b>0.0585</b>	<b>0.7901</b>	<b>0.4816</b>	<b>2.5400e-003</b>	<b>0.1151</b>	<b>3.6300e-003</b>	<b>0.1187</b>	<b>0.0308</b>	<b>3.4500e-003</b>	<b>0.0343</b>		<b>280.1501</b>	<b>280.1501</b>	<b>0.0355</b>		<b>281.0386</b>

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.5303</b>	<b>0.4180</b>	<b>0.9483</b>	<b>0.0573</b>	<b>0.3846</b>	<b>0.4418</b>		<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>

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

**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
<b>Total</b>	<b>0.7858</b>	<b>9.7572</b>	<b>4.2514</b>	<b>9.7600e-003</b>	<b>0.2386</b>	<b>0.4180</b>	<b>0.6566</b>	<b>0.0258</b>	<b>0.3846</b>	<b>0.4103</b>	<b>0.0000</b>	<b>982.7113</b>	<b>982.7113</b>	<b>0.3059</b>		<b>990.3596</b>



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

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.8576</b>	<b>0.6228</b>	<b>1.4803</b>	<b>0.4292</b>	<b>0.5943</b>	<b>1.0235</b>		<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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	0.2713	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
<b>Total</b>	<b>0.3112</b>	<b>11.1590</b>	<b>3.2129</b>	<b>0.0251</b>	<b>0.5637</b>	<b>0.0447</b>	<b>0.6083</b>	<b>0.1535</b>	<b>0.0427</b>	<b>0.1962</b>		<b>2,892.8371</b>	<b>2,892.8371</b>	<b>0.4877</b>		<b>2,905.0291</b>

**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
<b>Total</b>	<b>1.0643</b>	<b>9.4295</b>	<b>7.7762</b>	<b>0.0120</b>	<b>0.3859</b>	<b>0.6228</b>	<b>1.0087</b>	<b>0.1931</b>	<b>0.5943</b>	<b>0.7874</b>	<b>0.0000</b>	<b>1,169.3502</b>	<b>1,169.3502</b>	<b>0.2254</b>		<b>1,174.9857</b>

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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	0.2713	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
<b>Total</b>	<b>0.3112</b>	<b>11.1590</b>	<b>3.2129</b>	<b>0.0251</b>	<b>0.5637</b>	<b>0.0447</b>	<b>0.6083</b>	<b>0.1535</b>	<b>0.0427</b>	<b>0.1962</b>		<b>2,892.8371</b>	<b>2,892.8371</b>	<b>0.4877</b>		<b>2,905.0291</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>		<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

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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	0.0564	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
<b>Total</b>	<b>0.2958</b>	<b>1.7502</b>	<b>2.1763</b>	<b>8.3500e-003</b>	<b>0.5671</b>	<b>0.0146</b>	<b>0.5818</b>	<b>0.1521</b>	<b>0.0139</b>	<b>0.1660</b>		<b>867.9639</b>	<b>867.9639</b>	<b>0.0612</b>		<b>869.4932</b>

**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
<b>Total</b>	<b>1.0848</b>	<b>11.0316</b>	<b>7.7512</b>	<b>0.0114</b>		<b>0.7087</b>	<b>0.7087</b>		<b>0.6520</b>	<b>0.6520</b>	<b>0.0000</b>	<b>1,146.5323</b>	<b>1,146.5323</b>	<b>0.3569</b>		<b>1,155.4555</b>

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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	0.0564	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
<b>Total</b>	<b>0.2958</b>	<b>1.7502</b>	<b>2.1763</b>	<b>8.3500e-003</b>	<b>0.5671</b>	<b>0.0146</b>	<b>0.5818</b>	<b>0.1521</b>	<b>0.0139</b>	<b>0.1660</b>		<b>867.9639</b>	<b>867.9639</b>	<b>0.0612</b>		<b>869.4932</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>		<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

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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	0.0512	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
<b>Total</b>	<b>0.2708</b>	<b>1.6462</b>	<b>1.9866</b>	<b>8.1400e-003</b>	<b>0.5671</b>	<b>0.0131</b>	<b>0.5802</b>	<b>0.1521</b>	<b>0.0124</b>	<b>0.1645</b>		<b>847.6594</b>	<b>847.6594</b>	<b>0.0590</b>		<b>849.1333</b>

**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
<b>Total</b>	<b>0.9576</b>	<b>9.8207</b>	<b>7.5432</b>	<b>0.0114</b>		<b>0.6054</b>	<b>0.6054</b>		<b>0.5569</b>	<b>0.5569</b>	<b>0.0000</b>	<b>1,127.6696</b>	<b>1,127.6696</b>	<b>0.3568</b>		<b>1,136.5892</b>

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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	0.0512	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
<b>Total</b>	<b>0.2708</b>	<b>1.6462</b>	<b>1.9866</b>	<b>8.1400e-003</b>	<b>0.5671</b>	<b>0.0131</b>	<b>0.5802</b>	<b>0.1521</b>	<b>0.0124</b>	<b>0.1645</b>		<b>847.6594</b>	<b>847.6594</b>	<b>0.0590</b>		<b>849.1333</b>

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>		<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>

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

**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
<b>Total</b>	<b>0.8300</b>	<b>7.8446</b>	<b>7.1478</b>	<b>0.0113</b>		<b>0.4425</b>	<b>0.4425</b>		<b>0.4106</b>	<b>0.4106</b>	<b>0.0000</b>	<b>1,055.1823</b>	<b>1,055.1823</b>	<b>0.3016</b>		<b>1,062.7231</b>



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

**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
<b>Total</b>	<b>5.6653</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

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

**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
<b>Total</b>	<b>5.6653</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

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

**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
<b>Total</b>	<b>5.6331</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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

**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
<b>Total</b>	<b>5.6331</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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

**4.0 Operational Detail - Mobile**

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**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	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		
<b>Total</b>	<b>486.02</b>	<b>461.69</b>	<b>422.61</b>	<b>1,094,013</b>	<b>765,809</b>

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
<b>Total</b>		<b>0.0247</b>	<b>0.2114</b>	<b>0.0914</b>	<b>1.3500e-003</b>		<b>0.0171</b>	<b>0.0171</b>		<b>0.0171</b>	<b>0.0171</b>		<b>269.5793</b>	<b>269.5793</b>	<b>5.1700e-003</b>	<b>4.9500e-003</b>	<b>271.1813</b>

**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
<b>Total</b>		<b>0.0194</b>	<b>0.1656</b>	<b>0.0715</b>	<b>1.0600e-003</b>		<b>0.0134</b>	<b>0.0134</b>		<b>0.0134</b>	<b>0.0134</b>		<b>211.1491</b>	<b>211.1491</b>	<b>4.0500e-003</b>	<b>3.8800e-003</b>	<b>212.4038</b>

**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
<b>Total</b>	<b>2.0095</b>	<b>0.0690</b>	<b>5.9648</b>	<b>3.1000e-004</b>		<b>0.0328</b>	<b>0.0328</b>		<b>0.0328</b>	<b>0.0328</b>	<b>0.0000</b>	<b>10.7064</b>	<b>10.7064</b>	<b>0.0105</b>	<b>0.0000</b>	<b>10.9679</b>

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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
<b>Total</b>	<b>2.0095</b>	<b>0.0690</b>	<b>5.9648</b>	<b>3.1000e-004</b>		<b>0.0328</b>	<b>0.0328</b>		<b>0.0328</b>	<b>0.0328</b>	<b>0.0000</b>	<b>10.7064</b>	<b>10.7064</b>	<b>0.0105</b>	<b>0.0000</b>	<b>10.9679</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

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

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### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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