

**Tierra Robles - Phase 1 Construction  
Shasta County, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	46.00	Dwelling Unit	14.94	82,800.00	132
Other Asphalt Surfaces	4.40	Acre	4.40	191,664.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

- Project Characteristics - PG&E's 2012 CO2 Intensity Factor
- Land Use - Accounts for the construction of 4.4 acres of internal roadway system
- Construction Phase - Building construction, paving, and painting assumed to occur simultaneously
- Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017

tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	VendorTripNumber	0.00	36.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	30.5240	69.6843	51.9125	0.0878	18.2141	3.3185	20.9695	9.9699	3.0530	12.5049						
2018	29.5571	48.4002	48.9752	0.0878	3.7315	2.6815	6.4130	0.9638	2.5090	3.4728						
<b>Total</b>	<b>60.0811</b>	<b>118.0845</b>	<b>100.8877</b>	<b>0.1756</b>	<b>21.9456</b>	<b>6.0000</b>	<b>27.3826</b>	<b>10.9337</b>	<b>5.5621</b>	<b>15.9777</b>						

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	26.4616	33.2618	53.7639	0.0878	18.2141	1.7009	19.1764	9.9699	1.6923	10.9321						
2018	26.2580	32.5664	51.6695	0.0878	3.7315	1.6929	5.4244	0.9638	1.6850	2.6488						
<b>Total</b>	<b>52.7196</b>	<b>65.8282</b>	<b>105.4334</b>	<b>0.1756</b>	<b>21.9456</b>	<b>3.3938</b>	<b>24.6008</b>	<b>10.9337</b>	<b>3.3773</b>	<b>13.5809</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
Percent Reduction	12.25	44.25	-4.51	0.00	0.00	43.44	10.16	0.00	39.28	15.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 0**

**Residential Indoor: 167,670; Residential Outdoor: 55,890; Non-Residential Indoor: 287,496; Non-Residential Outdoor: 95,832**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Grading	Excavators	2	8.00	162	0.38
Paving	Excavators	0		162	0.38
Paving	Cranes	0		226	0.29
Paving	Forklifts	0		89	0.20
Paving	Generator Sets	0		84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Rubber Tired Dozers	0		255	0.40
Paving	Tractors/Loaders/Backhoes	0		97	0.37
Paving	Graders	0		174	0.41
Paving	Tractors/Loaders/Backhoes	0		97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Tractors/Loaders/Backhoes	0		97	0.37
Paving	Rubber Tired Dozers	0		255	0.40
Paving	Scrapers	0		361	0.48
Paving	Welders	0		46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**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
Building Construction	9	97.00	36.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	36.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Cleaner Engines for Construction Equipment
- Clean Paved Roads

**3.2 Site Preparation - 2017**

**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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339						
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611						
<b>Total</b>	<b>0.9515</b>	<b>19.4584</b>	<b>23.4003</b>	<b>0.0391</b>	<b>18.0663</b>	<b>0.9611</b>	<b>19.0273</b>	<b>9.9307</b>	<b>0.9611</b>	<b>10.8918</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</b>						

**3.3 Grading - 2017**

**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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518						6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>8.6733</b>	<b>3.3172</b>	<b>11.9905</b>	<b>3.5965</b>	<b>3.0518</b>	<b>6.6483</b>						<b>6,353.9915</b>



**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234						
<b>Total</b>	<b>1.5128</b>	<b>29.7798</b>	<b>37.9432</b>	<b>0.0617</b>	<b>8.6733</b>	<b>1.3234</b>	<b>9.9967</b>	<b>3.5965</b>	<b>1.3234</b>	<b>4.9199</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</b>						

**3.4 Building Construction - 2017**

**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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730						
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>						

**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						
Vendor	0.4038	2.9271	3.7239	8.5900e-003	0.2397	0.0472	0.2869	0.0685	0.0434	0.1118						
Worker	0.4932	0.4476	5.3683	0.0102	0.7968	6.4800e-003	0.8033	0.2114	5.9100e-003	0.2173						
<b>Total</b>	<b>0.8970</b>	<b>3.3746</b>	<b>9.0922</b>	<b>0.0188</b>	<b>1.0366</b>	<b>0.0536</b>	<b>1.0902</b>	<b>0.2798</b>	<b>0.0493</b>	<b>0.3291</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						2,653.4490
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						<b>2,653.4490</b>

**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						
Vendor	0.4038	2.9271	3.7239	8.5900e-003	0.2397	0.0472	0.2869	0.0685	0.0434	0.1118						
Worker	0.4932	0.4476	5.3683	0.0102	0.7968	6.4800e-003	0.8033	0.2114	5.9100e-003	0.2173						
<b>Total</b>	<b>0.8970</b>	<b>3.3746</b>	<b>9.0922</b>	<b>0.0188</b>	<b>1.0366</b>	<b>0.0536</b>	<b>1.0902</b>	<b>0.2798</b>	<b>0.0493</b>	<b>0.3291</b>						

**3.4 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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048						
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>						

**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						
Vendor	0.3764	2.6339	3.4282	8.5700e-003	0.2397	0.0435	0.2832	0.0685	0.0400	0.1085						
Worker	0.4112	0.3875	4.5400	0.0102	0.7968	6.0800e-003	0.8029	0.2114	5.5900e-003	0.2170						
<b>Total</b>	<b>0.7876</b>	<b>3.0214</b>	<b>7.9682</b>	<b>0.0188</b>	<b>1.0366</b>	<b>0.0496</b>	<b>1.0861</b>	<b>0.2798</b>	<b>0.0456</b>	<b>0.3254</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.3764	2.6339	3.4282	8.5700e-003	0.2397	0.0435	0.2832	0.0685	0.0400	0.1085						
Worker	0.4112	0.3875	4.5400	0.0102	0.7968	6.0800e-003	0.8029	0.2114	5.5900e-003	0.2170						
<b>Total</b>	<b>0.7876</b>	<b>3.0214</b>	<b>7.9682</b>	<b>0.0188</b>	<b>1.0366</b>	<b>0.0496</b>	<b>1.0861</b>	<b>0.2798</b>	<b>0.0456</b>	<b>0.3254</b>						

**3.5 Paving - 2017**

**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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0384					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.9458</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>						

**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						
Vendor	0.4038	2.9271	3.7239	8.5900e-003	0.7609	0.0472	0.8081	0.1964	0.0434	0.2397						
Worker	0.3051	0.2769	3.3206	6.3300e-003	1.7780	4.0100e-003	1.7820	0.4462	3.6500e-003	0.4498						
<b>Total</b>	<b>0.7089</b>	<b>3.2039</b>	<b>7.0445</b>	<b>0.0149</b>	<b>2.5389</b>	<b>0.0512</b>	<b>2.5901</b>	<b>0.6426</b>	<b>0.0470</b>	<b>0.6896</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0384					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5874</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.4038	2.9271	3.7239	8.5900e-003	0.7609	0.0472	0.8081	0.1964	0.0434	0.2397						
Worker	0.3051	0.2769	3.3206	6.3300e-003	1.7780	4.0100e-003	1.7820	0.4462	3.6500e-003	0.4498						
<b>Total</b>	<b>0.7089</b>	<b>3.2039</b>	<b>7.0445</b>	<b>0.0149</b>	<b>2.5389</b>	<b>0.0512</b>	<b>2.5901</b>	<b>0.6426</b>	<b>0.0470</b>	<b>0.6896</b>						

**3.5 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635						
Paving	0.0384					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.6498</b>	<b>17.1628</b>	<b>14.4944</b>	<b>0.0223</b>		<b>0.9386</b>	<b>0.9386</b>		<b>0.8635</b>	<b>0.8635</b>						



**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						
Vendor	0.3764	2.6339	3.4282	8.5700e-003	0.7609	0.0435	0.8044	0.1964	0.0400	0.2364						
Worker	0.2544	0.2397	2.8083	6.3200e-003	1.7780	3.7600e-003	1.7817	0.4462	3.4600e-003	0.4496						
<b>Total</b>	<b>0.6308</b>	<b>2.8736</b>	<b>6.2364</b>	<b>0.0149</b>	<b>2.5389</b>	<b>0.0473</b>	<b>2.5861</b>	<b>0.6426</b>	<b>0.0435</b>	<b>0.6860</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0384					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5874</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.3764	2.6339	3.4282	8.5700e-003	0.7609	0.0435	0.8044	0.1964	0.0400	0.2364						
Worker	0.2544	0.2397	2.8083	6.3200e-003	1.7780	3.7600e-003	1.7817	0.4462	3.4600e-003	0.4496						
<b>Total</b>	<b>0.6308</b>	<b>2.8736</b>	<b>6.2364</b>	<b>0.0149</b>	<b>2.5389</b>	<b>0.0473</b>	<b>2.5861</b>	<b>0.6426</b>	<b>0.0435</b>	<b>0.6860</b>						

**3.6 Architectural Coating - 2017**

**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	23.4411					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733						
<b>Total</b>	<b>23.7734</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0966	0.0877	1.0515	2.0000e-003	0.1561	1.2700e-003	0.1574	0.0414	1.1600e-003	0.0426						
<b>Total</b>	<b>0.0966</b>	<b>0.0877</b>	<b>1.0515</b>	<b>2.0000e-003</b>	<b>0.1561</b>	<b>1.2700e-003</b>	<b>0.1574</b>	<b>0.0414</b>	<b>1.1600e-003</b>	<b>0.0426</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	23.4411					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>23.5005</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0966	0.0877	1.0515	2.0000e-003	0.1561	1.2700e-003	0.1574	0.0414	1.1600e-003	0.0426						
<b>Total</b>	<b>0.0966</b>	<b>0.0877</b>	<b>1.0515</b>	<b>2.0000e-003</b>	<b>0.1561</b>	<b>1.2700e-003</b>	<b>0.1574</b>	<b>0.0414</b>	<b>1.1600e-003</b>	<b>0.0426</b>						

**3.6 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	23.4411					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						
<b>Total</b>	<b>23.7397</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>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0806	0.0759	0.8893	2.0000e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425						
<b>Total</b>	<b>0.0806</b>	<b>0.0759</b>	<b>0.8893</b>	<b>2.0000e-003</b>	<b>0.1561</b>	<b>1.1900e-003</b>	<b>0.1573</b>	<b>0.0414</b>	<b>1.1000e-003</b>	<b>0.0425</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	23.4411					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>23.5005</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0806	0.0759	0.8893	2.0000e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425						
<b>Total</b>	<b>0.0806</b>	<b>0.0759</b>	<b>0.8893</b>	<b>2.0000e-003</b>	<b>0.1561</b>	<b>1.1900e-003</b>	<b>0.1573</b>	<b>0.0414</b>	<b>1.1000e-003</b>	<b>0.0425</b>						

**Tierra Robles - Phase 2 Construction  
Shasta County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	19.00	Dwelling Unit	6.17	34,200.00	54
Other Asphalt Surfaces	2.30	Acre	2.30	100,188.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

- Project Characteristics - PG&E's 2012 CO2 Intensity Factor
- Land Use - Accounts for the construction of 2.3 acres of internal roadway system
- Construction Phase - Building construction, paving, and painting assumed to occur simultaneously
- Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445



tblProjectCharacteristics	OperationalYear	2014	2018
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## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	20.6936	51.8365	40.6816	0.0642	18.2141	3.1215	20.9695	9.9699	2.9198	12.5049						
2018	19.8540	44.0419	39.0589	0.0642	0.7278	2.6099	3.3376	0.1955	2.4432	2.6386						
<b>Total</b>	<b>40.5476</b>	<b>95.8785</b>	<b>79.7405</b>	<b>0.1283</b>	<b>18.9419</b>	<b>5.7313</b>	<b>24.3072</b>	<b>10.1654</b>	<b>5.3630</b>	<b>15.1435</b>						

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	16.6312	28.4006	42.5330	0.0642	18.2141	1.6234	19.1764	9.9699	1.6210	10.9321						
2018	16.5549	28.2081	41.7532	0.0642	0.7278	1.6213	2.3490	0.1955	1.6191	1.8146						
<b>Total</b>	<b>33.1861</b>	<b>56.6087</b>	<b>84.2862</b>	<b>0.1283</b>	<b>18.9419</b>	<b>3.2446</b>	<b>21.5254</b>	<b>10.1654</b>	<b>3.2402</b>	<b>12.7467</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
Percent Reduction	18.16	40.96	-5.70	0.00	0.00	43.39	11.44	0.00	39.58	15.83	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/10/2017	5	20	
3	Building Construction	Building Construction	3/11/2017	1/26/2018	5	230	
4	Paving	Paving	3/11/2017	1/26/2018	5	230	
5	Architectural Coating	Architectural Coating	3/11/2017	1/26/2018	5	230	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 0**

**Residential Indoor: 69,255; Residential Outdoor: 23,085; Non-Residential Indoor: 150,282; Non-Residential Outdoor: 50,094**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

## 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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	49.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

### 3.2 Site Preparation - 2017

#### 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339						
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611						
<b>Total</b>	<b>0.9515</b>	<b>19.4584</b>	<b>23.4003</b>	<b>0.0391</b>	<b>18.0663</b>	<b>0.9611</b>	<b>19.0273</b>	<b>9.9307</b>	<b>0.9611</b>	<b>10.8918</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</b>						

### 3.3 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757						
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.5523</b>	<b>2.0388</b>	<b>8.5912</b>	<b>3.3675</b>	<b>1.8757</b>	<b>5.2432</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	0.7250	14.8148	20.3762	0.0297		0.7854	0.7854		0.7854	0.7854						
<b>Total</b>	<b>0.7250</b>	<b>14.8148</b>	<b>20.3762</b>	<b>0.0297</b>	<b>6.5523</b>	<b>0.7854</b>	<b>7.3378</b>	<b>3.3675</b>	<b>0.7854</b>	<b>4.1529</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.4 Building Construction - 2017

#### 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730						
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>						

#### 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						
Vendor	0.2019	1.4635	1.8620	4.3000e-003	0.1199	0.0236	0.1434	0.0342	0.0217	0.0559						
Worker	0.2492	0.2261	2.7118	5.1700e-003	0.4025	3.2700e-003	0.4058	0.1068	2.9800e-003	0.1098						
<b>Total</b>	<b>0.4511</b>	<b>1.6896</b>	<b>4.5738</b>	<b>9.4700e-003</b>	<b>0.5224</b>	<b>0.0269</b>	<b>0.5492</b>	<b>0.1410</b>	<b>0.0247</b>	<b>0.1657</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.2019	1.4635	1.8620	4.3000e-003	0.1199	0.0236	0.1434	0.0342	0.0217	0.0559						
Worker	0.2492	0.2261	2.7118	5.1700e-003	0.4025	3.2700e-003	0.4058	0.1068	2.9800e-003	0.1098						
<b>Total</b>	<b>0.4511</b>	<b>1.6896</b>	<b>4.5738</b>	<b>9.4700e-003</b>	<b>0.5224</b>	<b>0.0269</b>	<b>0.5492</b>	<b>0.1410</b>	<b>0.0247</b>	<b>0.1657</b>						

### 3.4 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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048						
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>						

#### 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						
Vendor	0.1882	1.3169	1.7141	4.2900e-003	0.1199	0.0218	0.1416	0.0342	0.0200	0.0542						
Worker	0.2077	0.1958	2.2934	5.1600e-003	0.4025	3.0700e-003	0.4056	0.1068	2.8200e-003	0.1096						
<b>Total</b>	<b>0.3959</b>	<b>1.5127</b>	<b>4.0075</b>	<b>9.4500e-003</b>	<b>0.5224</b>	<b>0.0248</b>	<b>0.5472</b>	<b>0.1410</b>	<b>0.0228</b>	<b>0.1638</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.1882	1.3169	1.7141	4.2900e-003	0.1199	0.0218	0.1416	0.0342	0.0200	0.0542						
Worker	0.2077	0.1958	2.2934	5.1600e-003	0.4025	3.0700e-003	0.4056	0.1068	2.8200e-003	0.1096						
<b>Total</b>	<b>0.3959</b>	<b>1.5127</b>	<b>4.0075</b>	<b>9.4500e-003</b>	<b>0.5224</b>	<b>0.0248</b>	<b>0.5472</b>	<b>0.1410</b>	<b>0.0228</b>	<b>0.1638</b>						

### 3.5 Paving - 2017

#### 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0262					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.9336</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0262					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5752</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.5 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635						
Paving	0.0262					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.6376</b>	<b>17.1628</b>	<b>14.4944</b>	<b>0.0223</b>		<b>0.9386</b>	<b>0.9386</b>		<b>0.8635</b>	<b>0.8635</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0262					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5752</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</b>						

### 3.6 Architectural Coating - 2017

#### 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	14.7472					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733						
<b>Total</b>	<b>15.0795</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0509	0.0461	0.5534	1.0500e-003	0.0822	6.7000e-004	0.0828	0.0218	6.1000e-004	0.0224						
<b>Total</b>	<b>0.0509</b>	<b>0.0461</b>	<b>0.5534</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.7000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>6.1000e-004</b>	<b>0.0224</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	14.7472					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>14.8066</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0509	0.0461	0.5534	1.0500e-003	0.0822	6.7000e-004	0.0828	0.0218	6.1000e-004	0.0224						
<b>Total</b>	<b>0.0509</b>	<b>0.0461</b>	<b>0.5534</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.7000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>6.1000e-004</b>	<b>0.0224</b>						

### 3.6 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	14.7472					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						
<b>Total</b>	<b>15.0458</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>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0424	0.0400	0.4680	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224						
<b>Total</b>	<b>0.0424</b>	<b>0.0400</b>	<b>0.4680</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.3000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>5.8000e-004</b>	<b>0.0224</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	14.7472					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>14.8066</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0424	0.0400	0.4680	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224						
<b>Total</b>	<b>0.0424</b>	<b>0.0400</b>	<b>0.4680</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.3000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>5.8000e-004</b>	<b>0.0224</b>						

**Tierra Robles - Phase 3 Construction  
Shasta County, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	24.00	Dwelling Unit	7.79	43,200.00	69
Other Asphalt Surfaces	2.30	Acre	2.30	100,188.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	445	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.3 acres of internal roadway system

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017

tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	18.2064	69.6843	47.9119	0.0646	18.2141	3.3185	20.9695	9.9699	3.0530	12.5049						
2018	17.3644	44.1231	39.2477	0.0646	0.7508	2.6112	3.3620	0.2017	2.4444	2.6461						
<b>Total</b>	<b>35.5708</b>	<b>113.8074</b>	<b>87.1596</b>	<b>0.1292</b>	<b>18.9650</b>	<b>5.9297</b>	<b>24.3316</b>	<b>10.1716</b>	<b>5.4974</b>	<b>15.1510</b>						

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	14.1440	29.8720	42.7471	0.0646	18.2141	1.6248	19.1764	9.9699	1.6224	10.9321						
2018	14.0653	28.2893	41.9421	0.0646	0.7508	1.6226	2.3734	0.2017	1.6204	1.8221						
<b>Total</b>	<b>28.2094</b>	<b>58.1613</b>	<b>84.6892</b>	<b>0.1292</b>	<b>18.9650</b>	<b>3.2474</b>	<b>21.5498</b>	<b>10.1716</b>	<b>3.2427</b>	<b>12.7541</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
Percent Reduction	20.70	48.89	2.83	0.00	0.00	45.24	11.43	0.00	41.01	15.82	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 87,480; Residential Outdoor: 29,160; Non-Residential Indoor: 150,282; Non-Residential Outdoor: 50,094

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

## 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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	51.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads



### 3.2 Site Preparation - 2017

#### 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307							
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339							
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>							

#### 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							
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403							
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611						
<b>Total</b>	<b>0.9515</b>	<b>19.4584</b>	<b>23.4003</b>	<b>0.0391</b>	<b>18.0663</b>	<b>0.9611</b>	<b>19.0273</b>	<b>9.9307</b>	<b>0.9611</b>	<b>10.8918</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</b>						

### 3.3 Grading - 2017

#### 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518						
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>8.6733</b>	<b>3.3172</b>	<b>11.9905</b>	<b>3.5965</b>	<b>3.0518</b>	<b>6.6483</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234						
<b>Total</b>	<b>1.5128</b>	<b>29.7798</b>	<b>37.9432</b>	<b>0.0617</b>	<b>8.6733</b>	<b>1.3234</b>	<b>9.9967</b>	<b>3.5965</b>	<b>1.3234</b>	<b>4.9199</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</b>						

### 3.4 Building Construction - 2017

#### 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730						
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>						

#### 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						
Vendor	0.2131	1.5448	1.9654	4.5300e-003	0.1265	0.0249	0.1514	0.0361	0.0229	0.0590						
Worker	0.2593	0.2353	2.8225	5.3800e-003	0.4190	3.4100e-003	0.4224	0.1111	3.1100e-003	0.1142						
<b>Total</b>	<b>0.4724</b>	<b>1.7802</b>	<b>4.7879</b>	<b>9.9100e-003</b>	<b>0.5455</b>	<b>0.0283</b>	<b>0.5738</b>	<b>0.1473</b>	<b>0.0260</b>	<b>0.1733</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	lb/day										lb/day					
Off-Road	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.2131	1.5448	1.9654	4.5300e-003	0.1265	0.0249	0.1514	0.0361	0.0229	0.0590						
Worker	0.2593	0.2353	2.8225	5.3800e-003	0.4190	3.4100e-003	0.4224	0.1111	3.1100e-003	0.1142						
<b>Total</b>	<b>0.4724</b>	<b>1.7802</b>	<b>4.7879</b>	<b>9.9100e-003</b>	<b>0.5455</b>	<b>0.0283</b>	<b>0.5738</b>	<b>0.1473</b>	<b>0.0260</b>	<b>0.1733</b>						

### 3.4 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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048						
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>						

#### 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						
Vendor	0.1987	1.3901	1.8093	4.5200e-003	0.1265	0.0230	0.1495	0.0361	0.0211	0.0573						
Worker	0.2162	0.2038	2.3870	5.3700e-003	0.4190	3.1900e-003	0.4222	0.1111	2.9400e-003	0.1141						
<b>Total</b>	<b>0.4149</b>	<b>1.5939</b>	<b>4.1963</b>	<b>9.8900e-003</b>	<b>0.5455</b>	<b>0.0262</b>	<b>0.5716</b>	<b>0.1473</b>	<b>0.0241</b>	<b>0.1713</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.1987	1.3901	1.8093	4.5200e-003	0.1265	0.0230	0.1495	0.0361	0.0211	0.0573						
Worker	0.2162	0.2038	2.3870	5.3700e-003	0.4190	3.1900e-003	0.4222	0.1111	2.9400e-003	0.1141						
<b>Total</b>	<b>0.4149</b>	<b>1.5939</b>	<b>4.1963</b>	<b>9.8900e-003</b>	<b>0.5455</b>	<b>0.0262</b>	<b>0.5716</b>	<b>0.1473</b>	<b>0.0241</b>	<b>0.1713</b>						



### 3.5 Paving - 2017

#### 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0201					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.9275</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0201					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5691</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.5 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635						
Paving	0.0201					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.6315</b>	<b>17.1628</b>	<b>14.4944</b>	<b>0.0223</b>		<b>0.9386</b>	<b>0.9386</b>		<b>0.8635</b>	<b>0.8635</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0201					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5691</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</b>						

### 3.6 Architectural Coating - 2017

#### 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	12.2447					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733						
<b>Total</b>	<b>12.5771</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0509	0.0461	0.5534	1.0500e-003	0.0822	6.7000e-004	0.0828	0.0218	6.1000e-004	0.0224						
<b>Total</b>	<b>0.0509</b>	<b>0.0461</b>	<b>0.5534</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.7000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>6.1000e-004</b>	<b>0.0224</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	12.2447					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>12.3042</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0509	0.0461	0.5534	1.0500e-003	0.0822	6.7000e-004	0.0828	0.0218	6.1000e-004	0.0224						
<b>Total</b>	<b>0.0509</b>	<b>0.0461</b>	<b>0.5534</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.7000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>6.1000e-004</b>	<b>0.0224</b>						

### 3.6 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	12.2447					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						
<b>Total</b>	<b>12.5434</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>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0424	0.0400	0.4680	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224						
<b>Total</b>	<b>0.0424</b>	<b>0.0400</b>	<b>0.4680</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.3000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>5.8000e-004</b>	<b>0.0224</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	12.2447					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>12.3042</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0424	0.0400	0.4680	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224						
<b>Total</b>	<b>0.0424</b>	<b>0.0400</b>	<b>0.4680</b>	<b>1.0500e-003</b>	<b>0.0822</b>	<b>6.3000e-004</b>	<b>0.0828</b>	<b>0.0218</b>	<b>5.8000e-004</b>	<b>0.0224</b>						



**Tierra Robles - Phase 4 Construction  
Shasta County, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	20.00	Dwelling Unit	6.49	36,000.00	57
Other Asphalt Surfaces	3.40	Acre	3.40	148,104.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	445	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

- Project Characteristics - PG&E's 2012 CO2 Intensity Factor
- Land Use - Accounts for the construction of 3.4 acres of internal roadway system
- Construction Phase - Building construction, paving, and painting assumed to occur simultaneously
- Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445

tblProjectCharacteristics	OperationalYear	2014	2018
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## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	25.9908	51.8365	42.8374	0.0686	18.2141	3.1336	20.9695	9.9699	2.9309	12.5049						
2018	25.1248	44.7231	40.9440	0.0686	0.9782	2.6210	3.5992	0.2630	2.4534	2.7164						
<b>Total</b>	<b>51.1156</b>	<b>96.5596</b>	<b>83.7814</b>	<b>0.1372</b>	<b>19.1923</b>	<b>5.7546</b>	<b>24.5687</b>	<b>10.2329</b>	<b>5.3843</b>	<b>15.2213</b>						

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	21.9284	29.1618	44.6888	0.0686	18.2141	1.6355	19.1764	9.9699	1.6321	10.9321						
2018	21.8257	28.8893	43.6383	0.0686	0.9782	1.6324	2.6106	0.2630	1.6294	1.8924						
<b>Total</b>	<b>43.7541</b>	<b>58.0511</b>	<b>88.3271</b>	<b>0.1372</b>	<b>19.1923</b>	<b>3.2679</b>	<b>21.7870</b>	<b>10.2329</b>	<b>3.2615</b>	<b>12.8244</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
Percent Reduction	14.40	39.88	-5.43	0.00	0.00	43.21	11.32	0.00	39.43	15.75	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/10/2017	5	20	
3	Building Construction	Building Construction	3/11/2017	1/26/2018	5	230	
4	Paving	Paving	3/11/2017	1/26/2018	5	230	
5	Architectural Coating	Architectural Coating	3/11/2017	1/26/2018	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 72,900; Residential Outdoor: 24,300; Non-Residential Indoor: 222,156; Non-Residential Outdoor: 74,052

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

## 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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	26.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

### 3.2 Site Preparation - 2017

#### 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339						
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611						
<b>Total</b>	<b>0.9515</b>	<b>19.4584</b>	<b>23.4003</b>	<b>0.0391</b>	<b>18.0663</b>	<b>0.9611</b>	<b>19.0273</b>	<b>9.9307</b>	<b>0.9611</b>	<b>10.8918</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</b>						

### 3.3 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757						
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.5523</b>	<b>2.0388</b>	<b>8.5912</b>	<b>3.3675</b>	<b>1.8757</b>	<b>5.2432</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	0.7250	14.8148	20.3762	0.0297		0.7854	0.7854		0.7854	0.7854						
<b>Total</b>	<b>0.7250</b>	<b>14.8148</b>	<b>20.3762</b>	<b>0.0297</b>	<b>6.5523</b>	<b>0.7854</b>	<b>7.3378</b>	<b>3.3675</b>	<b>0.7854</b>	<b>4.1529</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.4 Building Construction - 2017

#### 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730						
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>						

#### 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						
Vendor	0.2916	2.1140	2.6895	6.2100e-003	0.1731	0.0341	0.2072	0.0495	0.0313	0.0808						
Worker	0.3509	0.3184	3.8187	7.2700e-003	0.5668	4.6100e-003	0.5714	0.1504	4.2000e-003	0.1546						
<b>Total</b>	<b>0.6425</b>	<b>2.4324</b>	<b>6.5082</b>	<b>0.0135</b>	<b>0.7400</b>	<b>0.0387</b>	<b>0.7786</b>	<b>0.1998</b>	<b>0.0355</b>	<b>0.2353</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.2916	2.1140	2.6895	6.2100e-003	0.1731	0.0341	0.2072	0.0495	0.0313	0.0808						
Worker	0.3509	0.3184	3.8187	7.2700e-003	0.5668	4.6100e-003	0.5714	0.1504	4.2000e-003	0.1546						
<b>Total</b>	<b>0.6425</b>	<b>2.4324</b>	<b>6.5082</b>	<b>0.0135</b>	<b>0.7400</b>	<b>0.0387</b>	<b>0.7786</b>	<b>0.1998</b>	<b>0.0355</b>	<b>0.2353</b>						

### 3.4 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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048						
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>						

#### 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						
Vendor	0.2718	1.9022	2.4759	6.1900e-003	0.1731	0.0314	0.2046	0.0495	0.0289	0.0783						
Worker	0.2925	0.2757	3.2295	7.2600e-003	0.5668	4.3200e-003	0.5711	0.1504	3.9800e-003	0.1543						
<b>Total</b>	<b>0.5644</b>	<b>2.1779</b>	<b>5.7054</b>	<b>0.0135</b>	<b>0.7400</b>	<b>0.0357</b>	<b>0.7757</b>	<b>0.1998</b>	<b>0.0329</b>	<b>0.2327</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.2718	1.9022	2.4759	6.1900e-003	0.1731	0.0314	0.2046	0.0495	0.0289	0.0783						
Worker	0.2925	0.2757	3.2295	7.2600e-003	0.5668	4.3200e-003	0.5711	0.1504	3.9800e-003	0.1543						
<b>Total</b>	<b>0.5644</b>	<b>2.1779</b>	<b>5.7054</b>	<b>0.0135</b>	<b>0.7400</b>	<b>0.0357</b>	<b>0.7757</b>	<b>0.1998</b>	<b>0.0329</b>	<b>0.2327</b>						

### 3.5 Paving - 2017

#### 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0387					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.9461</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0387					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5877</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.5 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635						
Paving	0.0387					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.6501</b>	<b>17.1628</b>	<b>14.4944</b>	<b>0.0223</b>		<b>0.9386</b>	<b>0.9386</b>		<b>0.8635</b>	<b>0.8635</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0387					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5877</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</b>						

### 3.6 Architectural Coating - 2017

#### 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	19.8201					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733						
<b>Total</b>	<b>20.1524</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0712	0.0646	0.7748	1.4800e-003	0.1150	9.4000e-004	0.1159	0.0305	8.5000e-004	0.0314						
<b>Total</b>	<b>0.0712</b>	<b>0.0646</b>	<b>0.7748</b>	<b>1.4800e-003</b>	<b>0.1150</b>	<b>9.4000e-004</b>	<b>0.1159</b>	<b>0.0305</b>	<b>8.5000e-004</b>	<b>0.0314</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	19.8201					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>19.8795</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0712	0.0646	0.7748	1.4800e-003	0.1150	9.4000e-004	0.1159	0.0305	8.5000e-004	0.0314						
<b>Total</b>	<b>0.0712</b>	<b>0.0646</b>	<b>0.7748</b>	<b>1.4800e-003</b>	<b>0.1150</b>	<b>9.4000e-004</b>	<b>0.1159</b>	<b>0.0305</b>	<b>8.5000e-004</b>	<b>0.0314</b>						

### 3.6 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	19.8201					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						
<b>Total</b>	<b>20.1187</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>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0559	0.6553	1.4700e-003	0.1150	8.8000e-004	0.1159	0.0305	8.1000e-004	0.0313						
<b>Total</b>	<b>0.0594</b>	<b>0.0559</b>	<b>0.6553</b>	<b>1.4700e-003</b>	<b>0.1150</b>	<b>8.8000e-004</b>	<b>0.1159</b>	<b>0.0305</b>	<b>8.1000e-004</b>	<b>0.0313</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	19.8201					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>19.8795</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0559	0.6553	1.4700e-003	0.1150	8.8000e-004	0.1159	0.0305	8.1000e-004	0.0313						
<b>Total</b>	<b>0.0594</b>	<b>0.0559</b>	<b>0.6553</b>	<b>1.4700e-003</b>	<b>0.1150</b>	<b>8.8000e-004</b>	<b>0.1159</b>	<b>0.0305</b>	<b>8.1000e-004</b>	<b>0.0313</b>						

**Tierra Robles - Phase 5 Construction  
Shasta County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	43.00	Dwelling Unit	13.96	77,400.00	123
Other Asphalt Surfaces	2.70	Acre	2.70	117,612.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.7 acres of internal roadway construction

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017

tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	23.2651	69.6843	47.9119	0.0676	18.2141	3.3185	20.9695	9.9699	3.0530	12.5049						
2018	22.4049	44.5568	40.5195	0.0676	0.9238	2.6183	3.5421	0.2483	2.4509	2.6992						
<b>Total</b>	<b>45.6700</b>	<b>114.2411</b>	<b>88.4314</b>	<b>0.1352</b>	<b>19.1379</b>	<b>5.9368</b>	<b>24.5116</b>	<b>10.2182</b>	<b>5.5039</b>	<b>15.2041</b>						

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	19.2027	29.8720	44.2052	0.0676	18.2141	1.6325	19.1764	9.9699	1.6294	10.9321						
2018	19.1058	28.7230	43.2139	0.0676	0.9238	1.6297	2.5535	0.2483	1.6269	1.8752						
<b>Total</b>	<b>38.3085</b>	<b>58.5951</b>	<b>87.4190</b>	<b>0.1352</b>	<b>19.1379</b>	<b>3.2622</b>	<b>21.7299</b>	<b>10.2182</b>	<b>3.2563</b>	<b>12.8072</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
Percent Reduction	16.12	48.71	1.14	0.00	0.00	45.05	11.35	0.00	40.84	15.76	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 156,735; Residential Outdoor: 52,245; Non-Residential Indoor: 176,418; Non-Residential Outdoor: 58,806

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

## 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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	65.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

### 3.2 Site Preparation - 2017

#### 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307							
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339							
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>							

#### 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							
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403							
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611						
<b>Total</b>	<b>0.9515</b>	<b>19.4584</b>	<b>23.4003</b>	<b>0.0391</b>	<b>18.0663</b>	<b>0.9611</b>	<b>19.0273</b>	<b>9.9307</b>	<b>0.9611</b>	<b>10.8918</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</b>						

### 3.3 Grading - 2017

#### 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518						
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>8.6733</b>	<b>3.3172</b>	<b>11.9905</b>	<b>3.5965</b>	<b>3.0518</b>	<b>6.6483</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234						
<b>Total</b>	<b>1.5128</b>	<b>29.7798</b>	<b>37.9432</b>	<b>0.0617</b>	<b>8.6733</b>	<b>1.3234</b>	<b>9.9967</b>	<b>3.5965</b>	<b>1.3234</b>	<b>4.9199</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</b>						

### 3.4 Building Construction - 2017

#### 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730						
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>						

#### 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						
Vendor	0.2692	1.9514	2.4826	5.7300e-003	0.1598	0.0314	0.1913	0.0457	0.0289	0.0746						
Worker	0.3305	0.2999	3.5973	6.8500e-003	0.5340	4.3400e-003	0.5383	0.1416	3.9600e-003	0.1456						
<b>Total</b>	<b>0.5997</b>	<b>2.2513</b>	<b>6.0799</b>	<b>0.0126</b>	<b>0.6938</b>	<b>0.0358</b>	<b>0.7296</b>	<b>0.1873</b>	<b>0.0329</b>	<b>0.2201</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.2692	1.9514	2.4826	5.7300e-003	0.1598	0.0314	0.1913	0.0457	0.0289	0.0746						
Worker	0.3305	0.2999	3.5973	6.8500e-003	0.5340	4.3400e-003	0.5383	0.1416	3.9600e-003	0.1456						
<b>Total</b>	<b>0.5997</b>	<b>2.2513</b>	<b>6.0799</b>	<b>0.0126</b>	<b>0.6938</b>	<b>0.0358</b>	<b>0.7296</b>	<b>0.1873</b>	<b>0.0329</b>	<b>0.2201</b>						



### 3.4 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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048						
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>						

#### 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						
Vendor	0.2509	1.7559	2.2854	5.7200e-003	0.1598	0.0290	0.1888	0.0457	0.0267	0.0723						
Worker	0.2756	0.2597	3.0423	6.8400e-003	0.5340	4.0700e-003	0.5380	0.1416	3.7500e-003	0.1454						
<b>Total</b>	<b>0.5265</b>	<b>2.0156</b>	<b>5.3277</b>	<b>0.0126</b>	<b>0.6938</b>	<b>0.0331</b>	<b>0.7269</b>	<b>0.1873</b>	<b>0.0304</b>	<b>0.2177</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.2509	1.7559	2.2854	5.7200e-003	0.1598	0.0290	0.1888	0.0457	0.0267	0.0723						
Worker	0.2756	0.2597	3.0423	6.8400e-003	0.5340	4.0700e-003	0.5380	0.1416	3.7500e-003	0.1454						
<b>Total</b>	<b>0.5265</b>	<b>2.0156</b>	<b>5.3277</b>	<b>0.0126</b>	<b>0.6938</b>	<b>0.0331</b>	<b>0.7269</b>	<b>0.1873</b>	<b>0.0304</b>	<b>0.2177</b>						

### 3.5 Paving - 2017

#### 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0236					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.9310</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0236					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5726</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.5 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635						
Paving	0.0236					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.6350</b>	<b>17.1628</b>	<b>14.4944</b>	<b>0.0223</b>		<b>0.9386</b>	<b>0.9386</b>		<b>0.8635</b>	<b>0.8635</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0236					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.5726</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</b>						

### 3.6 Architectural Coating - 2017

#### 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	17.1574					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733						
<b>Total</b>	<b>17.4897</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0661	0.0600	0.7195	1.3700e-003	0.1068	8.7000e-004	0.1077	0.0283	7.9000e-004	0.0291						
<b>Total</b>	<b>0.0661</b>	<b>0.0600</b>	<b>0.7195</b>	<b>1.3700e-003</b>	<b>0.1068</b>	<b>8.7000e-004</b>	<b>0.1077</b>	<b>0.0283</b>	<b>7.9000e-004</b>	<b>0.0291</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					
Archit. Coating	17.1574					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>17.2168</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0661	0.0600	0.7195	1.3700e-003	0.1068	8.7000e-004	0.1077	0.0283	7.9000e-004	0.0291						
<b>Total</b>	<b>0.0661</b>	<b>0.0600</b>	<b>0.7195</b>	<b>1.3700e-003</b>	<b>0.1068</b>	<b>8.7000e-004</b>	<b>0.1077</b>	<b>0.0283</b>	<b>7.9000e-004</b>	<b>0.0291</b>						



### 3.6 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	17.1574					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						
<b>Total</b>	<b>17.4560</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>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0551	0.0519	0.6085	1.3700e-003	0.1068	8.1000e-004	0.1076	0.0283	7.5000e-004	0.0291						
<b>Total</b>	<b>0.0551</b>	<b>0.0519</b>	<b>0.6085</b>	<b>1.3700e-003</b>	<b>0.1068</b>	<b>8.1000e-004</b>	<b>0.1076</b>	<b>0.0283</b>	<b>7.5000e-004</b>	<b>0.0291</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					
Archit. Coating	17.1574					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>17.2168</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0551	0.0519	0.6085	1.3700e-003	0.1068	8.1000e-004	0.1076	0.0283	7.5000e-004	0.0291						
<b>Total</b>	<b>0.0551</b>	<b>0.0519</b>	<b>0.6085</b>	<b>1.3700e-003</b>	<b>0.1068</b>	<b>8.1000e-004</b>	<b>0.1076</b>	<b>0.0283</b>	<b>7.5000e-004</b>	<b>0.0291</b>						

**Tierra Robles - Phase 6 Construction & Off-Site Road Work  
Shasta County, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	14.00	Dwelling Unit	4.55	25,200.00	40
Other Asphalt Surfaces	7.30	Acre	7.30	317,988.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.1 acres of internal roadway system and 5.2 acres of off-site road construction

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017

tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	34.1295	69.6843	50.3826	0.0842	18.2141	3.3185	20.9695	9.9699	3.0530	12.5049						
2018	33.1712	47.1073	47.5419	0.0841	1.8547	2.6601	4.5148	0.4993	2.4894	2.9886						
<b>Total</b>	<b>67.3008</b>	<b>116.7915</b>	<b>97.9245</b>	<b>0.1683</b>	<b>20.0688</b>	<b>5.9787</b>	<b>25.4843</b>	<b>10.4692</b>	<b>5.5424</b>	<b>15.4935</b>						

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	30.0671	31.8260	52.2340	0.0842	18.2141	1.6778	19.1764	9.9699	1.6710	10.9321						
2018	29.8722	31.2735	50.2363	0.0841	1.8547	1.6715	3.5262	0.4993	1.6654	2.1646						
<b>Total</b>	<b>59.9393</b>	<b>63.0994</b>	<b>102.4702</b>	<b>0.1683</b>	<b>20.0688</b>	<b>3.3493</b>	<b>22.7026</b>	<b>10.4692</b>	<b>3.3363</b>	<b>13.0967</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
Percent Reduction	10.94	45.97	-4.64	0.00	0.00	43.98	10.92	0.00	39.80	15.47	0.00	0.00	0.00	0.00	0.00	0.00

### 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	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 0**

**Residential Indoor: 51,030; Residential Outdoor: 17,010; Non-Residential Indoor: 476,982; Non-Residential Outdoor: 158,994**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

## 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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	139.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

### 3.2 Site Preparation - 2017

#### 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339						
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611						
<b>Total</b>	<b>0.9515</b>	<b>19.4584</b>	<b>23.4003</b>	<b>0.0391</b>	<b>18.0663</b>	<b>0.9611</b>	<b>19.0273</b>	<b>9.9307</b>	<b>0.9611</b>	<b>10.8918</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0915	0.0831	0.9962	1.9000e-003	0.1479	1.2000e-003	0.1491	0.0392	1.1000e-003	0.0403						
<b>Total</b>	<b>0.0915</b>	<b>0.0831</b>	<b>0.9962</b>	<b>1.9000e-003</b>	<b>0.1479</b>	<b>1.2000e-003</b>	<b>0.1491</b>	<b>0.0392</b>	<b>1.1000e-003</b>	<b>0.0403</b>						

### 3.3 Grading - 2017

#### 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518						
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>8.6733</b>	<b>3.3172</b>	<b>11.9905</b>	<b>3.5965</b>	<b>3.0518</b>	<b>6.6483</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234						
<b>Total</b>	<b>1.5128</b>	<b>29.7798</b>	<b>37.9432</b>	<b>0.0617</b>	<b>8.6733</b>	<b>1.3234</b>	<b>9.9967</b>	<b>3.5965</b>	<b>1.3234</b>	<b>4.9199</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1017	0.0923	1.1069	2.1100e-003	0.1643	1.3400e-003	0.1656	0.0436	1.2200e-003	0.0448						
<b>Total</b>	<b>0.1017</b>	<b>0.0923</b>	<b>1.1069</b>	<b>2.1100e-003</b>	<b>0.1643</b>	<b>1.3400e-003</b>	<b>0.1656</b>	<b>0.0436</b>	<b>1.2200e-003</b>	<b>0.0448</b>						

### 3.4 Building Construction - 2017

#### 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730						
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>						

#### 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						
Vendor	0.6057	4.3906	5.5859	0.0129	0.3596	0.0707	0.4303	0.1027	0.0650	0.1677						
Worker	0.7068	0.6414	7.6927	0.0147	1.1419	9.2900e-003	1.1511	0.3029	8.4600e-003	0.3113						
<b>Total</b>	<b>1.3125</b>	<b>5.0320</b>	<b>13.2786</b>	<b>0.0275</b>	<b>1.5014</b>	<b>0.0800</b>	<b>1.5815</b>	<b>0.4056</b>	<b>0.0735</b>	<b>0.4791</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.6057	4.3906	5.5859	0.0129	0.3596	0.0707	0.4303	0.1027	0.0650	0.1677						
Worker	0.7068	0.6414	7.6927	0.0147	1.1419	9.2900e-003	1.1511	0.3029	8.4600e-003	0.3113						
<b>Total</b>	<b>1.3125</b>	<b>5.0320</b>	<b>13.2786</b>	<b>0.0275</b>	<b>1.5014</b>	<b>0.0800</b>	<b>1.5815</b>	<b>0.4056</b>	<b>0.0735</b>	<b>0.4791</b>						

### 3.4 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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048						
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>						

#### 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						
Vendor	0.5646	3.9508	5.1423	0.0129	0.3596	0.0653	0.4248	0.1027	0.0600	0.1627						
Worker	0.5893	0.5553	6.5058	0.0146	1.1419	8.7100e-003	1.1506	0.3029	8.0100e-003	0.3109						
<b>Total</b>	<b>1.1539</b>	<b>4.5061</b>	<b>11.6481</b>	<b>0.0275</b>	<b>1.5014</b>	<b>0.0740</b>	<b>1.5754</b>	<b>0.4056</b>	<b>0.0680</b>	<b>0.4736</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	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016						
<b>Total</b>	<b>0.6712</b>	<b>14.1741</b>	<b>17.8156</b>	<b>0.0268</b>		<b>0.9016</b>	<b>0.9016</b>		<b>0.9016</b>	<b>0.9016</b>						

**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						
Vendor	0.5646	3.9508	5.1423	0.0129	0.3596	0.0653	0.4248	0.1027	0.0600	0.1627						
Worker	0.5893	0.5553	6.5058	0.0146	1.1419	8.7100e-003	1.1506	0.3029	8.0100e-003	0.3109						
<b>Total</b>	<b>1.1539</b>	<b>4.5061</b>	<b>11.6481</b>	<b>0.0275</b>	<b>1.5014</b>	<b>0.0740</b>	<b>1.5754</b>	<b>0.4056</b>	<b>0.0680</b>	<b>0.4736</b>						

### 3.5 Paving - 2017

#### 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0638					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.9711</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0638					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.6128</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0763	0.0692	0.8302	1.5800e-003	0.1232	1.0000e-003	0.1242	0.0327	9.1000e-004	0.0336						
<b>Total</b>	<b>0.0763</b>	<b>0.0692</b>	<b>0.8302</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>1.0000e-003</b>	<b>0.1242</b>	<b>0.0327</b>	<b>9.1000e-004</b>	<b>0.0336</b>						

### 3.5 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635						
Paving	0.0638					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.6752</b>	<b>17.1628</b>	<b>14.4944</b>	<b>0.0223</b>		<b>0.9386</b>	<b>0.9386</b>		<b>0.8635</b>	<b>0.8635</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</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	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982						
Paving	0.0638					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.6128</b>	<b>11.0645</b>	<b>16.9276</b>	<b>0.0223</b>		<b>0.5982</b>	<b>0.5982</b>		<b>0.5982</b>	<b>0.5982</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0636	0.0599	0.7021	1.5800e-003	0.1232	9.4000e-004	0.1242	0.0327	8.6000e-004	0.0336						
<b>Total</b>	<b>0.0636</b>	<b>0.0599</b>	<b>0.7021</b>	<b>1.5800e-003</b>	<b>0.1232</b>	<b>9.4000e-004</b>	<b>0.1242</b>	<b>0.0327</b>	<b>8.6000e-004</b>	<b>0.0336</b>						

### 3.6 Architectural Coating - 2017

#### 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	27.1926					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733						
<b>Total</b>	<b>27.5249</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1424	0.1292	1.5496	2.9500e-003	0.2300	1.8700e-003	0.2319	0.0610	1.7000e-003	0.0627						
<b>Total</b>	<b>0.1424</b>	<b>0.1292</b>	<b>1.5496</b>	<b>2.9500e-003</b>	<b>0.2300</b>	<b>1.8700e-003</b>	<b>0.2319</b>	<b>0.0610</b>	<b>1.7000e-003</b>	<b>0.0627</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	27.1926					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>27.2521</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1424	0.1292	1.5496	2.9500e-003	0.2300	1.8700e-003	0.2319	0.0610	1.7000e-003	0.0627						
<b>Total</b>	<b>0.1424</b>	<b>0.1292</b>	<b>1.5496</b>	<b>2.9500e-003</b>	<b>0.2300</b>	<b>1.8700e-003</b>	<b>0.2319</b>	<b>0.0610</b>	<b>1.7000e-003</b>	<b>0.0627</b>						

### 3.6 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	27.1926					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						
<b>Total</b>	<b>27.4913</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>						

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1187	0.1119	1.3105	2.9500e-003	0.2300	1.7500e-003	0.2318	0.0610	1.6100e-003	0.0626						
<b>Total</b>	<b>0.1187</b>	<b>0.1119</b>	<b>1.3105</b>	<b>2.9500e-003</b>	<b>0.2300</b>	<b>1.7500e-003</b>	<b>0.2318</b>	<b>0.0610</b>	<b>1.6100e-003</b>	<b>0.0626</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	27.1926					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						
<b>Total</b>	<b>27.2521</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>						

**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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1187	0.1119	1.3105	2.9500e-003	0.2300	1.7500e-003	0.2318	0.0610	1.6100e-003	0.0626						
<b>Total</b>	<b>0.1187</b>	<b>0.1119</b>	<b>1.3105</b>	<b>2.9500e-003</b>	<b>0.2300</b>	<b>1.7500e-003</b>	<b>0.2318</b>	<b>0.0610</b>	<b>1.6100e-003</b>	<b>0.0626</b>						

Tierra Robles - Operational Buildout - Shasta County, Summer

## Tierra Robles - Operational Buildout Shasta County, Summer

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	166.00	Dwelling Unit	473.40	298,800.00	475

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics - PG&E's projected 2020 CO2 Intensity Factor

Land Use - Residential Development spread out of 473.4 acres.

Construction Phase - On construction this model

Off-road Equipment - no construction this model

Trips and VMT -

Vehicle Trips - Trip generation per traffic impact study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Area Mitigation -



Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	10.00
tblConstructionPhase	PhaseEndDate	9/11/2017	1/14/2025
tblConstructionPhase	PhaseStartDate	8/29/2017	1/1/2025
tblLandUse	LotAcreage	53.90	473.40
tblVehicleTrips	ST_TR	9.91	10.69
tblVehicleTrips	SU_TR	8.62	9.37
tblVehicleTrips	WD_TR	9.52	10.69

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	935.0462	1.1669	2.1005	3.8600e-003	0.0986	0.0521	0.1507	0.0262	0.0521	0.0782	0.0000	369.6959	369.6959	0.0175	0.0000	370.1321
<b>Maximum</b>	<b>935.0462</b>	<b>1.1669</b>	<b>2.1005</b>	<b>3.8600e-003</b>	<b>0.0986</b>	<b>0.0521</b>	<b>0.1507</b>	<b>0.0262</b>	<b>0.0521</b>	<b>0.0782</b>	<b>0.0000</b>	<b>369.6959</b>	<b>369.6959</b>	<b>0.0175</b>	<b>0.0000</b>	<b>370.1321</b>

## Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	935.0462	1.1669	2.1005	3.8600e-003	0.0986	0.0521	0.1507	0.0262	0.0521	0.0782	0.0000	369.6959	369.6959	0.0175	0.0000	370.1321
Maximum	935.0462	1.1669	2.1005	3.8600e-003	0.0986	0.0521	0.1507	0.0262	0.0521	0.0782	0.0000	369.6959	369.6959	0.0175	0.0000	370.1321

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

## 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	263.4262	5.1213	327.3837	0.5689		44.0438	44.0438		44.0438	44.0438	4,610.1073	1,958.0715	6,568.1788	4.2788	0.3626	6,783.2095
Energy	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
Mobile	7.4635	44.6126	70.3702	0.1915	10.8555	0.3110	11.1666	2.9142	0.2953	3.2095		19,418.2104	19,418.2104	1.3801		19,452.7119
<b>Total</b>	<b>271.0471</b>	<b>51.0795</b>	<b>398.3265</b>	<b>0.7689</b>	<b>10.8555</b>	<b>44.4636</b>	<b>55.3192</b>	<b>2.9142</b>	<b>44.4479</b>	<b>47.3621</b>	<b>4,610.1073</b>	<b>23,094.0986</b>	<b>27,704.2059</b>	<b>5.6918</b>	<b>0.3941</b>	<b>27,963.9462</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	9.6707	2.6384	14.8467	0.0165		0.2757	0.2757		0.2757	0.2757	0.0000	3,188.4244	3,188.4244	0.0851	0.0580	3,207.8360
Energy	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
Mobile	7.4635	44.6126	70.3702	0.1915	10.8555	0.3110	11.1666	2.9142	0.2953	3.2095		19,418.2104	19,418.2104	1.3801		19,452.7119
<b>Total</b>	<b>17.2916</b>	<b>48.5966</b>	<b>85.7895</b>	<b>0.2166</b>	<b>10.8555</b>	<b>0.6955</b>	<b>11.5510</b>	<b>2.9142</b>	<b>0.6797</b>	<b>3.5939</b>	<b>0.0000</b>	<b>24,324.4515</b>	<b>24,324.4515</b>	<b>1.4981</b>	<b>0.0895</b>	<b>24,388.5727</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
Percent Reduction	93.62	4.86	78.46	71.83	0.00	98.44	79.12	0.00	98.47	92.41	100.00	-5.33	12.20	73.68	77.29	12.79

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2025	1/14/2025	5	10	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 605,070; Residential Outdoor: 201,690; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Architectural Coating - 2025**

**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	934.8332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>935.0040</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

**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	0.0422	0.0214	0.2914	8.9000e-004	0.0986	6.2000e-004	0.0992	0.0262	5.7000e-004	0.0267		88.2478	88.2478	2.1000e-003		88.3002
<b>Total</b>	<b>0.0422</b>	<b>0.0214</b>	<b>0.2914</b>	<b>8.9000e-004</b>	<b>0.0986</b>	<b>6.2000e-004</b>	<b>0.0992</b>	<b>0.0262</b>	<b>5.7000e-004</b>	<b>0.0267</b>		<b>88.2478</b>	<b>88.2478</b>	<b>2.1000e-003</b>		<b>88.3002</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	934.8332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>935.0040</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

**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	0.0422	0.0214	0.2914	8.9000e-004	0.0986	6.2000e-004	0.0992	0.0262	5.7000e-004	0.0267		88.2478	88.2478	2.1000e-003		88.3002
<b>Total</b>	<b>0.0422</b>	<b>0.0214</b>	<b>0.2914</b>	<b>8.9000e-004</b>	<b>0.0986</b>	<b>6.2000e-004</b>	<b>0.0992</b>	<b>0.0262</b>	<b>5.7000e-004</b>	<b>0.0267</b>		<b>88.2478</b>	<b>88.2478</b>	<b>2.1000e-003</b>		<b>88.3002</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.4635	44.6126	70.3702	0.1915	10.8555	0.3110	11.1666	2.9142	0.2953	3.2095		19,418.2104	19,418.2104	1.3801		19,452.7119
Unmitigated	7.4635	44.6126	70.3702	0.1915	10.8555	0.3110	11.1666	2.9142	0.2953	3.2095		19,418.2104	19,418.2104	1.3801		19,452.7119

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,774.54	1,774.54	1555.42	4,963,617	4,963,617
Total	1,774.54	1,774.54	1,555.42	4,963,617	4,963,617

#### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.00	21.20	37.80	86	11	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.480510	0.036223	0.187789	0.127406	0.047049	0.008695	0.013360	0.086016	0.001398	0.001477	0.006677	0.001371	0.002029

#### 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

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	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
NaturalGas Unmitigated	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248

## 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					
Single Family Housing	14601.4	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
<b>Total</b>		<b>0.1575</b>	<b>1.3456</b>	<b>0.5726</b>	<b>8.5900e-003</b>		<b>0.1088</b>	<b>0.1088</b>		<b>0.1088</b>	<b>0.1088</b>		<b>1,717.8167</b>	<b>1,717.8167</b>	<b>0.0329</b>	<b>0.0315</b>	<b>1,728.0248</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					
Single Family Housing	14.6014	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
<b>Total</b>		<b>0.1575</b>	<b>1.3456</b>	<b>0.5726</b>	<b>8.5900e-003</b>		<b>0.1088</b>	<b>0.1088</b>		<b>0.1088</b>	<b>0.1088</b>		<b>1,717.8167</b>	<b>1,717.8167</b>	<b>0.0329</b>	<b>0.0315</b>	<b>1,728.0248</b>



## 6.0 Area Detail

### 6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	9.6707	2.6384	14.8467	0.0165		0.2757	0.2757		0.2757	0.2757	0.0000	3,188.4244	3,188.4244	0.0851	0.0580	3,207.8360
Unmitigated	263.4262	5.1213	327.3837	0.5689		44.0438	44.0438		44.0438	44.0438	4,610.1073	1,958.0715	6,568.1788	4.2788	0.3626	6,783.2095

### 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	2.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	254.0456	4.9612	313.5917	0.5681		43.9685	43.9685		43.9685	43.9685	4,610.1073	1,933.4118	6,543.5191	4.2544	0.3626	6,757.9389
Landscaping	0.4252	0.1601	13.7921	7.2000e-004		0.0753	0.0753		0.0753	0.0753		24.6597	24.6597	0.0244		25.2706
<b>Total</b>	<b>263.4262</b>	<b>5.1213</b>	<b>327.3837</b>	<b>0.5689</b>		<b>44.0438</b>	<b>44.0438</b>		<b>44.0438</b>	<b>44.0438</b>	<b>4,610.1073</b>	<b>1,958.0714</b>	<b>6,568.1788</b>	<b>4.2788</b>	<b>0.3626</b>	<b>6,783.2095</b>

**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	2.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2900	2.4783	1.0546	0.0158		0.2004	0.2004		0.2004	0.2004	0.0000	3,163.7647	3,163.7647	0.0606	0.0580	3,182.5654
Landscaping	0.4252	0.1601	13.7921	7.2000e-004		0.0753	0.0753		0.0753	0.0753		24.6597	24.6597	0.0244		25.2706
<b>Total</b>	<b>9.6707</b>	<b>2.6384</b>	<b>14.8467</b>	<b>0.0165</b>		<b>0.2757</b>	<b>0.2757</b>		<b>0.2757</b>	<b>0.2757</b>	<b>0.0000</b>	<b>3,188.4244</b>	<b>3,188.4244</b>	<b>0.0851</b>	<b>0.0580</b>	<b>3,207.8360</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**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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Tierra Robles - Operational Buildout - Shasta County, Winter

**Tierra Robles - Operational Buildout  
Shasta County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	166.00	Dwelling Unit	473.40	298,800.00	475

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics - PG&E's projected 2020 CO2 Intensity Factor

Land Use - Residential Development spread out of 473.4 acres.

Construction Phase - On construction this model

Off-road Equipment - no construction this model

Trips and VMT -

Vehicle Trips - Trip generation per traffic impact study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Area Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	10.00
tblConstructionPhase	PhaseEndDate	9/11/2017	1/14/2025
tblConstructionPhase	PhaseStartDate	8/29/2017	1/1/2025
tblLandUse	LotAcreage	53.90	473.40
tblVehicleTrips	ST_TR	9.91	10.69
tblVehicleTrips	SU_TR	8.62	9.37
tblVehicleTrips	WD_TR	9.52	10.69

**2.0 Emissions Summary**

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**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	935.0417	1.1710	2.0483	3.7400e-003	0.0986	0.0521	0.1507	0.0262	0.0521	0.0782	0.0000	357.9941	357.9941	0.0171	0.0000	358.4226
<b>Maximum</b>	<b>935.0417</b>	<b>1.1710</b>	<b>2.0483</b>	<b>3.7400e-003</b>	<b>0.0986</b>	<b>0.0521</b>	<b>0.1507</b>	<b>0.0262</b>	<b>0.0521</b>	<b>0.0782</b>	<b>0.0000</b>	<b>357.9941</b>	<b>357.9941</b>	<b>0.0171</b>	<b>0.0000</b>	<b>358.4226</b>

## Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	935.0417	1.1710	2.0483	3.7400e-003	0.0986	0.0521	0.1507	0.0262	0.0521	0.0782	0.0000	357.9941	357.9941	0.0171	0.0000	358.4226
<b>Maximum</b>	<b>935.0417</b>	<b>1.1710</b>	<b>2.0483</b>	<b>3.7400e-003</b>	<b>0.0986</b>	<b>0.0521</b>	<b>0.1507</b>	<b>0.0262</b>	<b>0.0521</b>	<b>0.0782</b>	<b>0.0000</b>	<b>357.9941</b>	<b>357.9941</b>	<b>0.0171</b>	<b>0.0000</b>	<b>358.4226</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>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 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	263.4262	5.1213	327.3837	0.5689		44.0438	44.0438		44.0438	44.0438	4,610.1073	1,958.0715	6,568.1788	4.2788	0.3626	6,783.2095
Energy	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
Mobile	5.8146	46.6627	65.5476	0.1743	10.8555	0.3171	11.1726	2.9142	0.3011	3.2153		17,695.0741	17,695.0741	1.4309		17,730.8458
<b>Total</b>	<b>269.3983</b>	<b>53.1296</b>	<b>393.5040</b>	<b>0.7517</b>	<b>10.8555</b>	<b>44.4697</b>	<b>55.3253</b>	<b>2.9142</b>	<b>44.4537</b>	<b>47.3679</b>	<b>4,610.1073</b>	<b>21,370.9623</b>	<b>25,981.0696</b>	<b>5.7426</b>	<b>0.3941</b>	<b>26,242.0801</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	9.6707	2.6384	14.8467	0.0165		0.2757	0.2757		0.2757	0.2757	0.0000	3,188.424 4	3,188.424 4	0.0851	0.0580	3,207.836 0
Energy	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.816 7	1,717.816 7	0.0329	0.0315	1,728.024 8
Mobile	5.8146	46.6627	65.5476	0.1743	10.8555	0.3171	11.1726	2.9142	0.3011	3.2153		17,695.07 41	17,695.07 41	1.4309		17,730.84 58
<b>Total</b>	<b>15.6427</b>	<b>50.6466</b>	<b>80.9669</b>	<b>0.1994</b>	<b>10.8555</b>	<b>0.7016</b>	<b>11.5571</b>	<b>2.9142</b>	<b>0.6855</b>	<b>3.5997</b>	<b>0.0000</b>	<b>22,601.31 52</b>	<b>22,601.31 52</b>	<b>1.5489</b>	<b>0.0895</b>	<b>22,666.70 66</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
Percent Reduction	94.19	4.67	79.42	73.47	0.00	98.42	79.11	0.00	98.46	92.40	100.00	-5.76	13.01	73.03	77.29	13.62

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2025	1/14/2025	5	10	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 605,070; Residential Outdoor: 201,690; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Architectural Coating - 2025**

**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	934.8332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>935.0040</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>



**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	0.0376	0.0255	0.2392	7.7000e-004	0.0986	6.2000e-004	0.0992	0.0262	5.7000e-004	0.0267		76.5460	76.5460	1.7900e-003		76.5907
<b>Total</b>	<b>0.0376</b>	<b>0.0255</b>	<b>0.2392</b>	<b>7.7000e-004</b>	<b>0.0986</b>	<b>6.2000e-004</b>	<b>0.0992</b>	<b>0.0262</b>	<b>5.7000e-004</b>	<b>0.0267</b>		<b>76.5460</b>	<b>76.5460</b>	<b>1.7900e-003</b>		<b>76.5907</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	934.8332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>935.0040</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

**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	0.0376	0.0255	0.2392	7.7000e-004	0.0986	6.2000e-004	0.0992	0.0262	5.7000e-004	0.0267		76.5460	76.5460	1.7900e-003		76.5907
<b>Total</b>	<b>0.0376</b>	<b>0.0255</b>	<b>0.2392</b>	<b>7.7000e-004</b>	<b>0.0986</b>	<b>6.2000e-004</b>	<b>0.0992</b>	<b>0.0262</b>	<b>5.7000e-004</b>	<b>0.0267</b>		<b>76.5460</b>	<b>76.5460</b>	<b>1.7900e-003</b>		<b>76.5907</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.8146	46.6627	65.5476	0.1743	10.8555	0.3171	11.1726	2.9142	0.3011	3.2153		17,695.0741	17,695.0741	1.4309		17,730.8458
Unmitigated	5.8146	46.6627	65.5476	0.1743	10.8555	0.3171	11.1726	2.9142	0.3011	3.2153		17,695.0741	17,695.0741	1.4309		17,730.8458

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,774.54	1,774.54	1555.42	4,963,617	4,963,617
Total	1,774.54	1,774.54	1,555.42	4,963,617	4,963,617

#### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.00	21.20	37.80	86	11	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.480510	0.036223	0.187789	0.127406	0.047049	0.008695	0.013360	0.086016	0.001398	0.001477	0.006677	0.001371	0.002029

#### 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

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	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
NaturalGas Unmitigated	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248

## 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					
Single Family Housing	14601.4	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
<b>Total</b>		<b>0.1575</b>	<b>1.3456</b>	<b>0.5726</b>	<b>8.5900e-003</b>		<b>0.1088</b>	<b>0.1088</b>		<b>0.1088</b>	<b>0.1088</b>		<b>1,717.8167</b>	<b>1,717.8167</b>	<b>0.0329</b>	<b>0.0315</b>	<b>1,728.0248</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					
Single Family Housing	14.6014	0.1575	1.3456	0.5726	8.5900e-003		0.1088	0.1088		0.1088	0.1088		1,717.8167	1,717.8167	0.0329	0.0315	1,728.0248
<b>Total</b>		<b>0.1575</b>	<b>1.3456</b>	<b>0.5726</b>	<b>8.5900e-003</b>		<b>0.1088</b>	<b>0.1088</b>		<b>0.1088</b>	<b>0.1088</b>		<b>1,717.8167</b>	<b>1,717.8167</b>	<b>0.0329</b>	<b>0.0315</b>	<b>1,728.0248</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	9.6707	2.6384	14.8467	0.0165		0.2757	0.2757		0.2757	0.2757	0.0000	3,188.4244	3,188.4244	0.0851	0.0580	3,207.8360
Unmitigated	263.4262	5.1213	327.3837	0.5689		44.0438	44.0438		44.0438	44.0438	4,610.1073	1,958.0715	6,568.1788	4.2788	0.3626	6,783.2095

### 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	2.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	254.0456	4.9612	313.5917	0.5681		43.9685	43.9685		43.9685	43.9685	4,610.1073	1,933.4118	6,543.5191	4.2544	0.3626	6,757.9389
Landscaping	0.4252	0.1601	13.7921	7.2000e-004		0.0753	0.0753		0.0753	0.0753		24.6597	24.6597	0.0244		25.2706
<b>Total</b>	<b>263.4262</b>	<b>5.1213</b>	<b>327.3837</b>	<b>0.5689</b>		<b>44.0438</b>	<b>44.0438</b>		<b>44.0438</b>	<b>44.0438</b>	<b>4,610.1073</b>	<b>1,958.0714</b>	<b>6,568.1788</b>	<b>4.2788</b>	<b>0.3626</b>	<b>6,783.2095</b>

**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	2.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2900	2.4783	1.0546	0.0158		0.2004	0.2004		0.2004	0.2004	0.0000	3,163.7647	3,163.7647	0.0606	0.0580	3,182.5654
Landscaping	0.4252	0.1601	13.7921	7.2000e-004		0.0753	0.0753		0.0753	0.0753		24.6597	24.6597	0.0244		25.2706
<b>Total</b>	<b>9.6707</b>	<b>2.6384</b>	<b>14.8467</b>	<b>0.0165</b>		<b>0.2757</b>	<b>0.2757</b>		<b>0.2757</b>	<b>0.2757</b>	<b>0.0000</b>	<b>3,188.4244</b>	<b>3,188.4244</b>	<b>0.0851</b>	<b>0.0580</b>	<b>3,207.8360</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**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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## Tierra Robles - Phase 1 Construction Shasta County, Annual

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	4.40	Acre	4.40	191,664.00	0
Single Family Housing	46.00	Dwelling Unit	14.94	82,800.00	132

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 4.4 acres of internal roadway system

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation



Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017

tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017											0.0000	779.3467	779.3467	0.1646	0.0000	782.8041
2018											0.0000	330.2458	330.2458	0.0653	0.0000	331.6165
<b>Total</b>											<b>0.0000</b>	<b>1,109.5925</b>	<b>1,109.5925</b>	<b>0.2299</b>	<b>0.0000</b>	<b>1,114.4206</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017											0.0000	779.3460	779.3460	0.1646	0.0000	782.8034
2018											0.0000	330.2455	330.2455	0.0653	0.0000	331.6162
<b>Total</b>											<b>0.0000</b>	<b>1,109.5915</b>	<b>1,109.5915</b>	<b>0.2299</b>	<b>0.0000</b>	<b>1,114.4196</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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 0**

**Residential Indoor: 167,670; Residential Outdoor: 55,890; Non-Residential Indoor: 287,496; Non-Residential Outdoor: 95,832**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cranes	0		226	0.29
Paving	Excavators	0		162	0.38
Paving	Forklifts	0		89	0.20
Paving	Generator Sets	0		84	0.74
Paving	Graders	0		174	0.41
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Dozers	0		255	0.40
Paving	Rubber Tired Dozers	0		255	0.40
Paving	Scrapers	0		361	0.48
Paving	Tractors/Loaders/Backhoes	0		97	0.37
Paving	Tractors/Loaders/Backhoes	0		97	0.37
Paving	Tractors/Loaders/Backhoes	0		97	0.37
Paving	Welders	0		46	0.45
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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	97.00	36.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

**3.2 Site Preparation - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</b>

**3.3 Grading - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9109	85.9109	0.0263	0.0000	86.4637
<b>Total</b>											<b>0.0000</b>	<b>85.9109</b>	<b>85.9109</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4637</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9108	85.9108	0.0263	0.0000	86.4636
<b>Total</b>											<b>0.0000</b>	<b>85.9108</b>	<b>85.9108</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4636</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</b>

**3.4 Building Construction - 2017**

**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											0.0000	239.4791	239.4791	0.0589	0.0000	240.7169
<b>Total</b>											<b>0.0000</b>	<b>239.4791</b>	<b>239.4791</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7169</b>

**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
Vendor											0.0000	76.7385	76.7385	5.8000e-004	0.0000	76.7507
Worker											0.0000	68.2579	68.2579	3.8500e-003	0.0000	68.3387
<b>Total</b>											<b>0.0000</b>	<b>144.9964</b>	<b>144.9964</b>	<b>4.4300e-003</b>	<b>0.0000</b>	<b>145.0894</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											0.0000	239.4788	239.4788	0.0589	0.0000	240.7166
<b>Total</b>											<b>0.0000</b>	<b>239.4788</b>	<b>239.4788</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7166</b>

**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
Vendor											0.0000	76.7385	76.7385	5.8000e-004	0.0000	76.7507
Worker											0.0000	68.2579	68.2579	3.8500e-003	0.0000	68.3387
<b>Total</b>											<b>0.0000</b>	<b>144.9964</b>	<b>144.9964</b>	<b>4.4300e-003</b>	<b>0.0000</b>	<b>145.0894</b>

**3.4 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											0.0000	118.3848	118.3848	0.0290	0.0000	118.9932
<b>Total</b>											<b>0.0000</b>	<b>118.3848</b>	<b>118.3848</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9932</b>

**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
Vendor											0.0000	37.7043	37.7043	2.8000e-004	0.0000	37.7103
Worker											0.0000	32.8183	32.8183	1.7100e-003	0.0000	32.8542
<b>Total</b>											<b>0.0000</b>	<b>70.5226</b>	<b>70.5226</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>70.5644</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											0.0000	118.3847	118.3847	0.0290	0.0000	118.9931
<b>Total</b>											<b>0.0000</b>	<b>118.3847</b>	<b>118.3847</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9931</b>

**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
Vendor											0.0000	37.7043	37.7043	2.8000e-004	0.0000	37.7103
Worker											0.0000	32.8183	32.8183	1.7100e-003	0.0000	32.8542
<b>Total</b>											<b>0.0000</b>	<b>70.5226</b>	<b>70.5226</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>70.5644</b>

**3.5 Paving - 2017**

**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											0.0000	206.9342	206.9342	0.0634	0.0000	208.2657
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9342</b>	<b>206.9342</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2657</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	42.2214	42.2214	2.3800e-003	0.0000	42.2714
<b>Total</b>											<b>0.0000</b>	<b>42.2214</b>	<b>42.2214</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>42.2714</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											0.0000	206.9339	206.9339	0.0634	0.0000	208.2654
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9339</b>	<b>206.9339</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2654</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	42.2214	42.2214	2.3800e-003	0.0000	42.2714
<b>Total</b>											<b>0.0000</b>	<b>42.2214</b>	<b>42.2214</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>42.2714</b>

**3.5 Paving - 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											0.0000	101.8437	101.8437	0.0317	0.0000	102.5095
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8437</b>	<b>101.8437</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5095</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	20.3000	20.3000	1.0600e-003	0.0000	20.3222
<b>Total</b>											<b>0.0000</b>	<b>20.3000</b>	<b>20.3000</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>20.3222</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											0.0000	101.8436	101.8436	0.0317	0.0000	102.5094
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8436</b>	<b>101.8436</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5094</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	20.3000	20.3000	1.0600e-003	0.0000	20.3222
<b>Total</b>											<b>0.0000</b>	<b>20.3000</b>	<b>20.3000</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>20.3222</b>

**3.6 Architectural Coating - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5892
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5892</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	13.3701	13.3701	7.5000e-004	0.0000	13.3859
<b>Total</b>											<b>0.0000</b>	<b>13.3701</b>	<b>13.3701</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>13.3859</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5891
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5891</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	13.3701	13.3701	7.5000e-004	0.0000	13.3859
<b>Total</b>											<b>0.0000</b>	<b>13.3701</b>	<b>13.3701</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>13.3859</b>

**3.6 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.4283	6.4283	3.3000e-004	0.0000	6.4354
<b>Total</b>											<b>0.0000</b>	<b>6.4283</b>	<b>6.4283</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>6.4354</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.4283	6.4283	3.3000e-004	0.0000	6.4354
<b>Total</b>											<b>0.0000</b>	<b>6.4283</b>	<b>6.4283</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>6.4354</b>

## Tierra Robles - Phase 2 Construction Shasta County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.30	Acre	2.30	100,188.00	0
Single Family Housing	19.00	Dwelling Unit	6.17	34,200.00	54

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.3 acres of internal roadway system

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018





### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/10/2017	5	20	
3	Building Construction	Building Construction	3/11/2017	1/26/2018	5	230	
4	Paving	Paving	3/11/2017	1/26/2018	5	230	
5	Architectural Coating	Architectural Coating	3/11/2017	1/26/2018	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 69,255; Residential Outdoor: 23,085; Non-Residential Indoor: 150,282; Non-Residential Outdoor: 50,094

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Architectural Coating	Air Compressors	1	6.00	78	0.48
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**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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	49.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

**3.2 Site Preparation - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</b>

**3.3 Grading - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	27.6117	27.6117	8.4600e-003	0.0000	27.7893
<b>Total</b>											<b>0.0000</b>	<b>27.6117</b>	<b>27.6117</b>	<b>8.4600e-003</b>	<b>0.0000</b>	<b>27.7893</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0555	1.0555	6.0000e-005	0.0000	1.0568
<b>Total</b>											<b>0.0000</b>	<b>1.0555</b>	<b>1.0555</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.0568</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	27.6117	27.6117	8.4600e-003	0.0000	27.7893
<b>Total</b>											<b>0.0000</b>	<b>27.6117</b>	<b>27.6117</b>	<b>8.4600e-003</b>	<b>0.0000</b>	<b>27.7893</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0555	1.0555	6.0000e-005	0.0000	1.0568
<b>Total</b>											<b>0.0000</b>	<b>1.0555</b>	<b>1.0555</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.0568</b>

**3.4 Building Construction - 2017**

**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											0.0000	251.4531	251.4531	0.0619	0.0000	252.7527
<b>Total</b>											<b>0.0000</b>	<b>251.4531</b>	<b>251.4531</b>	<b>0.0619</b>	<b>0.0000</b>	<b>252.7527</b>

**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
Vendor											0.0000	40.2877	40.2877	3.1000e-004	0.0000	40.2941
Worker											0.0000	36.2049	36.2049	2.0400e-003	0.0000	36.2477
<b>Total</b>											<b>0.0000</b>	<b>76.4926</b>	<b>76.4926</b>	<b>2.3500e-003</b>	<b>0.0000</b>	<b>76.5418</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											0.0000	251.4528	251.4528	0.0619	0.0000	252.7524
<b>Total</b>											<b>0.0000</b>	<b>251.4528</b>	<b>251.4528</b>	<b>0.0619</b>	<b>0.0000</b>	<b>252.7524</b>

**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
Vendor											0.0000	40.2877	40.2877	3.1000e-004	0.0000	40.2941
Worker											0.0000	36.2049	36.2049	2.0400e-003	0.0000	36.2477
<b>Total</b>											<b>0.0000</b>	<b>76.4926</b>	<b>76.4926</b>	<b>2.3500e-003</b>	<b>0.0000</b>	<b>76.5418</b>

**3.4 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											0.0000	23.6770	23.6770	5.7900e-003	0.0000	23.7987
<b>Total</b>											<b>0.0000</b>	<b>23.6770</b>	<b>23.6770</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>23.7987</b>



**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
Vendor											0.0000	3.7704	3.7704	3.0000e-005	0.0000	3.7710
Worker											0.0000	3.3157	3.3157	1.7000e-004	0.0000	3.3193
<b>Total</b>											<b>0.0000</b>	<b>7.0861</b>	<b>7.0861</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>7.0903</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											0.0000	23.6769	23.6769	5.7900e-003	0.0000	23.7986
<b>Total</b>											<b>0.0000</b>	<b>23.6769</b>	<b>23.6769</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>23.7986</b>

**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
Vendor											0.0000	3.7704	3.7704	3.0000e-005	0.0000	3.7710
Worker											0.0000	3.3157	3.3157	1.7000e-004	0.0000	3.3193
<b>Total</b>											<b>0.0000</b>	<b>7.0861</b>	<b>7.0861</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>7.0903</b>

**3.5 Paving - 2017**

**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											0.0000	217.2809	217.2809	0.0666	0.0000	218.6790
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>217.2809</b>	<b>217.2809</b>	<b>0.0666</b>	<b>0.0000</b>	<b>218.6790</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	11.0831	11.0831	6.2000e-004	0.0000	11.0962
<b>Total</b>											<b>0.0000</b>	<b>11.0831</b>	<b>11.0831</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>11.0962</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											0.0000	217.2806	217.2806	0.0666	0.0000	218.6787
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>217.2806</b>	<b>217.2806</b>	<b>0.0666</b>	<b>0.0000</b>	<b>218.6787</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	11.0831	11.0831	6.2000e-004	0.0000	11.0962
<b>Total</b>											<b>0.0000</b>	<b>11.0831</b>	<b>11.0831</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>11.0962</b>

**3.5 Paving - 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											0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0150	1.0150	5.0000e-005	0.0000	1.0161
<b>Total</b>											<b>0.0000</b>	<b>1.0150</b>	<b>1.0150</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.0161</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											0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0150	1.0150	5.0000e-005	0.0000	1.0161
<b>Total</b>											<b>0.0000</b>	<b>1.0150</b>	<b>1.0150</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.0161</b>

**3.6 Architectural Coating - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	26.8092	26.8092	2.8300e-003	0.0000	26.8686
<b>Total</b>											<b>0.0000</b>	<b>26.8092</b>	<b>26.8092</b>	<b>2.8300e-003</b>	<b>0.0000</b>	<b>26.8686</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	7.3887	7.3887	4.2000e-004	0.0000	7.3975
<b>Total</b>											<b>0.0000</b>	<b>7.3887</b>	<b>7.3887</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>7.3975</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	26.8091	26.8091	2.8300e-003	0.0000	26.8686
<b>Total</b>											<b>0.0000</b>	<b>26.8091</b>	<b>26.8091</b>	<b>2.8300e-003</b>	<b>0.0000</b>	<b>26.8686</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	7.3887	7.3887	4.2000e-004	0.0000	7.3975
<b>Total</b>											<b>0.0000</b>	<b>7.3887</b>	<b>7.3887</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>7.3975</b>

**3.6 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>											<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6767	0.6767	4.0000e-005	0.0000	0.6774
<b>Total</b>											<b>0.0000</b>	<b>0.6767</b>	<b>0.6767</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6774</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>											<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6767	0.6767	4.0000e-005	0.0000	0.6774
<b>Total</b>											<b>0.0000</b>	<b>0.6767</b>	<b>0.6767</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6774</b>

## Tierra Robles - Phase 3 Construction Shasta County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.30	Acre	2.30	100,188.00	0
Single Family Housing	24.00	Dwelling Unit	7.79	43,200.00	69

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.3 acres of internal roadway system

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018



### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 87,480; Residential Outdoor: 29,160; Non-Residential Indoor: 150,282; Non-Residential Outdoor: 50,094

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	51.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

### 3.2 Site Preparation - 2017

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</b>

**3.3 Grading - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9109	85.9109	0.0263	0.0000	86.4637
<b>Total</b>											<b>0.0000</b>	<b>85.9109</b>	<b>85.9109</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4637</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9108	85.9108	0.0263	0.0000	86.4636
<b>Total</b>											<b>0.0000</b>	<b>85.9108</b>	<b>85.9108</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4636</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</b>

**3.4 Building Construction - 2017**

**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											0.0000	239.4791	239.4791	0.0589	0.0000	240.7169
<b>Total</b>											<b>0.0000</b>	<b>239.4791</b>	<b>239.4791</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7169</b>

**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
Vendor											0.0000	40.5009	40.5009	3.1000e-004	0.0000	40.5073
Worker											0.0000	35.8882	35.8882	2.0200e-003	0.0000	35.9306
<b>Total</b>											<b>0.0000</b>	<b>76.3891</b>	<b>76.3891</b>	<b>2.3300e-003</b>	<b>0.0000</b>	<b>76.4380</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											0.0000	239.4788	239.4788	0.0589	0.0000	240.7166
<b>Total</b>											<b>0.0000</b>	<b>239.4788</b>	<b>239.4788</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7166</b>

**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
Vendor											0.0000	40.5009	40.5009	3.1000e-004	0.0000	40.5073
Worker											0.0000	35.8882	35.8882	2.0200e-003	0.0000	35.9306
<b>Total</b>											<b>0.0000</b>	<b>76.3891</b>	<b>76.3891</b>	<b>2.3300e-003</b>	<b>0.0000</b>	<b>76.4380</b>

**3.4 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											0.0000	118.3848	118.3848	0.0290	0.0000	118.9932
<b>Total</b>											<b>0.0000</b>	<b>118.3848</b>	<b>118.3848</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9932</b>

**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
Vendor											0.0000	19.8995	19.8995	1.5000e-004	0.0000	19.9026
Worker											0.0000	17.2550	17.2550	9.0000e-004	0.0000	17.2738
<b>Total</b>											<b>0.0000</b>	<b>37.1545</b>	<b>37.1545</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>37.1765</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											0.0000	118.3847	118.3847	0.0290	0.0000	118.9931
<b>Total</b>											<b>0.0000</b>	<b>118.3847</b>	<b>118.3847</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9931</b>

**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
Vendor											0.0000	19.8995	19.8995	1.5000e-004	0.0000	19.9026

Worker												0.0000	17.2550	17.2550	9.0000e-004	0.0000	17.2738
<b>Total</b>												<b>0.0000</b>	<b>37.1545</b>	<b>37.1545</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>37.1765</b>

### 3.5 Paving - 2017

#### 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											0.0000	206.9342	206.9342	0.0634	0.0000	208.2657
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9342</b>	<b>206.9342</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2657</b>

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5554	10.5554	5.9000e-004	0.0000	10.5678
<b>Total</b>											<b>0.0000</b>	<b>10.5554</b>	<b>10.5554</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>10.5678</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											0.0000	206.9339	206.9339	0.0634	0.0000	208.2654
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9339</b>	<b>206.9339</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2654</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5554	10.5554	5.9000e-004	0.0000	10.5678
<b>Total</b>											<b>0.0000</b>	<b>10.5554</b>	<b>10.5554</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>10.5678</b>



### 3.5 Paving - 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											0.0000	101.8437	101.8437	0.0317	0.0000	102.5095
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8437</b>	<b>101.8437</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5095</b>

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.0750	5.0750	2.6000e-004	0.0000	5.0805
<b>Total</b>											<b>0.0000</b>	<b>5.0750</b>	<b>5.0750</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>5.0805</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											0.0000	101.8436	101.8436	0.0317	0.0000	102.5094
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8436</b>	<b>101.8436</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5094</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.0750	5.0750	2.6000e-004	0.0000	5.0805
<b>Total</b>											<b>0.0000</b>	<b>5.0750</b>	<b>5.0750</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>5.0805</b>

### 3.6 Architectural Coating - 2017

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5892
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5892</b>

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	7.0369	7.0369	4.0000e-004	0.0000	7.0452
<b>Total</b>											<b>0.0000</b>	<b>7.0369</b>	<b>7.0369</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>7.0452</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5891
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5891</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	7.0369	7.0369	4.0000e-004	0.0000	7.0452
<b>Total</b>											<b>0.0000</b>	<b>7.0369</b>	<b>7.0369</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>7.0452</b>

### 3.6 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.3833	3.3833	1.8000e-004	0.0000	3.3870
<b>Total</b>											<b>0.0000</b>	<b>3.3833</b>	<b>3.3833</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.3870</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.3833	3.3833	1.8000e-004	0.0000	3.3870
<b>Total</b>											<b>0.0000</b>	<b>3.3833</b>	<b>3.3833</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.3870</b>

## Tierra Robles - Phase 4 Construction Shasta County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.40	Acre	3.40	148,104.00	0
Single Family Housing	20.00	Dwelling Unit	6.49	36,000.00	57

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3	<b>Operational Year</b>	2018		
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	445	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 3.4 acres of internal roadway system

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	1/26/2018
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblConstructionPhase	PhaseStartDate	1/27/2018	3/11/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018





### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/10/2017	5	20	
3	Building Construction	Building Construction	3/11/2017	1/26/2018	5	230	
4	Paving	Paving	3/11/2017	1/26/2018	5	230	
5	Architectural Coating	Architectural Coating	3/11/2017	1/26/2018	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 72,900; Residential Outdoor: 24,300; Non-Residential Indoor: 222,156; Non-Residential Outdoor: 74,052

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Architectural Coating	Air Compressors	1	6.00	78	0.48
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**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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	26.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

**3.2 Site Preparation - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</b>

**3.3 Grading - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	27.6117	27.6117	8.4600e-003	0.0000	27.7893
<b>Total</b>											<b>0.0000</b>	<b>27.6117</b>	<b>27.6117</b>	<b>8.4600e-003</b>	<b>0.0000</b>	<b>27.7893</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0555	1.0555	6.0000e-005	0.0000	1.0568
<b>Total</b>											<b>0.0000</b>	<b>1.0555</b>	<b>1.0555</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.0568</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	27.6117	27.6117	8.4600e-003	0.0000	27.7893
<b>Total</b>											<b>0.0000</b>	<b>27.6117</b>	<b>27.6117</b>	<b>8.4600e-003</b>	<b>0.0000</b>	<b>27.7893</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0555	1.0555	6.0000e-005	0.0000	1.0568
<b>Total</b>											<b>0.0000</b>	<b>1.0555</b>	<b>1.0555</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.0568</b>

**3.4 Building Construction - 2017**

**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											0.0000	251.4531	251.4531	0.0619	0.0000	252.7527
<b>Total</b>											<b>0.0000</b>	<b>251.4531</b>	<b>251.4531</b>	<b>0.0619</b>	<b>0.0000</b>	<b>252.7527</b>

**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
Vendor											0.0000	58.1933	58.1933	4.4000e-004	0.0000	58.2026
Worker											0.0000	50.9823	50.9823	2.8700e-003	0.0000	51.0427
<b>Total</b>											<b>0.0000</b>	<b>109.1757</b>	<b>109.1757</b>	<b>3.3100e-003</b>	<b>0.0000</b>	<b>109.2453</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											0.0000	251.4528	251.4528	0.0619	0.0000	252.7524
<b>Total</b>											<b>0.0000</b>	<b>251.4528</b>	<b>251.4528</b>	<b>0.0619</b>	<b>0.0000</b>	<b>252.7524</b>



**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
Vendor											0.0000	58.1933	58.1933	4.4000e-004	0.0000	58.2026
Worker											0.0000	50.9823	50.9823	2.8700e-003	0.0000	51.0427
<b>Total</b>											<b>0.0000</b>	<b>109.1757</b>	<b>109.1757</b>	<b>3.3100e-003</b>	<b>0.0000</b>	<b>109.2453</b>

**3.4 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											0.0000	23.6770	23.6770	5.7900e-003	0.0000	23.7987
<b>Total</b>											<b>0.0000</b>	<b>23.6770</b>	<b>23.6770</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>23.7987</b>

**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
Vendor											0.0000	5.4462	5.4462	4.0000e-005	0.0000	5.4470
Worker											0.0000	4.6690	4.6690	2.4000e-004	0.0000	4.6741
<b>Total</b>											<b>0.0000</b>	<b>10.1152</b>	<b>10.1152</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>10.1211</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											0.0000	23.6769	23.6769	5.7900e-003	0.0000	23.7986
<b>Total</b>											<b>0.0000</b>	<b>23.6769</b>	<b>23.6769</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>23.7986</b>

**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
Vendor											0.0000	5.4462	5.4462	4.0000e-005	0.0000	5.4470
Worker											0.0000	4.6690	4.6690	2.4000e-004	0.0000	4.6741
<b>Total</b>											<b>0.0000</b>	<b>10.1152</b>	<b>10.1152</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>10.1211</b>

**3.5 Paving - 2017**

**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											0.0000	217.2809	217.2809	0.0666	0.0000	218.6790
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>217.2809</b>	<b>217.2809</b>	<b>0.0666</b>	<b>0.0000</b>	<b>218.6790</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	11.0831	11.0831	6.2000e-004	0.0000	11.0962
<b>Total</b>											<b>0.0000</b>	<b>11.0831</b>	<b>11.0831</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>11.0962</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											0.0000	217.2806	217.2806	0.0666	0.0000	218.6787
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>217.2806</b>	<b>217.2806</b>	<b>0.0666</b>	<b>0.0000</b>	<b>218.6787</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	11.0831	11.0831	6.2000e-004	0.0000	11.0962
<b>Total</b>											<b>0.0000</b>	<b>11.0831</b>	<b>11.0831</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>11.0962</b>

**3.5 Paving - 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											0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0150	1.0150	5.0000e-005	0.0000	1.0161
<b>Total</b>											<b>0.0000</b>	<b>1.0150</b>	<b>1.0150</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.0161</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											0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.0150	1.0150	5.0000e-005	0.0000	1.0161
<b>Total</b>											<b>0.0000</b>	<b>1.0150</b>	<b>1.0150</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.0161</b>

**3.6 Architectural Coating - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	26.8092	26.8092	2.8300e-003	0.0000	26.8686
<b>Total</b>											<b>0.0000</b>	<b>26.8092</b>	<b>26.8092</b>	<b>2.8300e-003</b>	<b>0.0000</b>	<b>26.8686</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.3442	10.3442	5.8000e-004	0.0000	10.3565
<b>Total</b>											<b>0.0000</b>	<b>10.3442</b>	<b>10.3442</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>10.3565</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	26.8091	26.8091	2.8300e-003	0.0000	26.8686
<b>Total</b>											<b>0.0000</b>	<b>26.8091</b>	<b>26.8091</b>	<b>2.8300e-003</b>	<b>0.0000</b>	<b>26.8686</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.3442	10.3442	5.8000e-004	0.0000	10.3565
<b>Total</b>											<b>0.0000</b>	<b>10.3442</b>	<b>10.3442</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>10.3565</b>

**3.6 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>											<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.9473	0.9473	5.0000e-005	0.0000	0.9484
<b>Total</b>											<b>0.0000</b>	<b>0.9473</b>	<b>0.9473</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9484</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>											<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.9473	0.9473	5.0000e-005	0.0000	0.9484
<b>Total</b>											<b>0.0000</b>	<b>0.9473</b>	<b>0.9473</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9484</b>

**Tierra Robles - Phase 5 Construction  
Shasta County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.70	Acre	2.70	117,612.00	0
Single Family Housing	43.00	Dwelling Unit	13.96	77,400.00	123

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3	<b>Operational Year</b>	2018		
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	445	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.7 acres of internal roadway construction

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018



### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 156,735; Residential Outdoor: 52,245; Non-Residential Indoor: 176,418; Non-Residential Outdoor: 58,806

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	65.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

### 3.2 Site Preparation - 2017

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</b>

**3.3 Grading - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9109	85.9109	0.0263	0.0000	86.4637
<b>Total</b>											<b>0.0000</b>	<b>85.9109</b>	<b>85.9109</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4637</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9108	85.9108	0.0263	0.0000	86.4636
<b>Total</b>											<b>0.0000</b>	<b>85.9108</b>	<b>85.9108</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4636</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</b>

**3.4 Building Construction - 2017**

**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											0.0000	239.4791	239.4791	0.0589	0.0000	240.7169
<b>Total</b>											<b>0.0000</b>	<b>239.4791</b>	<b>239.4791</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7169</b>

**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
Vendor											0.0000	51.1590	51.1590	3.9000e-004	0.0000	51.1671
Worker											0.0000	45.7399	45.7399	2.5800e-003	0.0000	45.7940
<b>Total</b>											<b>0.0000</b>	<b>96.8988</b>	<b>96.8988</b>	<b>2.9700e-003</b>	<b>0.0000</b>	<b>96.9611</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											0.0000	239.4788	239.4788	0.0589	0.0000	240.7166
<b>Total</b>											<b>0.0000</b>	<b>239.4788</b>	<b>239.4788</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7166</b>

**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
Vendor											0.0000	51.1590	51.1590	3.9000e-004	0.0000	51.1671
Worker											0.0000	45.7399	45.7399	2.5800e-003	0.0000	45.7940
<b>Total</b>											<b>0.0000</b>	<b>96.8988</b>	<b>96.8988</b>	<b>2.9700e-003</b>	<b>0.0000</b>	<b>96.9611</b>

**3.4 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											0.0000	118.3848	118.3848	0.0290	0.0000	118.9932
<b>Total</b>											<b>0.0000</b>	<b>118.3848</b>	<b>118.3848</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9932</b>

**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
Vendor											0.0000	25.1362	25.1362	1.9000e-004	0.0000	25.1402
Worker											0.0000	21.9917	21.9917	1.1400e-003	0.0000	22.0157
<b>Total</b>											<b>0.0000</b>	<b>47.1279</b>	<b>47.1279</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>47.1559</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											0.0000	118.3847	118.3847	0.0290	0.0000	118.9931
<b>Total</b>											<b>0.0000</b>	<b>118.3847</b>	<b>118.3847</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9931</b>

**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
Vendor											0.0000	25.1362	25.1362	1.9000e-004	0.0000	25.1402
Worker											0.0000	21.9917	21.9917	1.1400e-003	0.0000	22.0157
<b>Total</b>											<b>0.0000</b>	<b>47.1279</b>	<b>47.1279</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>47.1559</b>

**3.5 Paving - 2017**

**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											0.0000	206.9342	206.9342	0.0634	0.0000	208.2657
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9342</b>	<b>206.9342</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2657</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5554	10.5554	5.9000e-004	0.0000	10.5678
<b>Total</b>											<b>0.0000</b>	<b>10.5554</b>	<b>10.5554</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>10.5678</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											0.0000	206.9339	206.9339	0.0634	0.0000	208.2654
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9339</b>	<b>206.9339</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2654</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5554	10.5554	5.9000e-004	0.0000	10.5678
<b>Total</b>											<b>0.0000</b>	<b>10.5554</b>	<b>10.5554</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>10.5678</b>

**3.5 Paving - 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											0.0000	101.8437	101.8437	0.0317	0.0000	102.5095
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8437</b>	<b>101.8437</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5095</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.0750	5.0750	2.6000e-004	0.0000	5.0805
<b>Total</b>											<b>0.0000</b>	<b>5.0750</b>	<b>5.0750</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>5.0805</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											0.0000	101.8436	101.8436	0.0317	0.0000	102.5094
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8436</b>	<b>101.8436</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5094</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.0750	5.0750	2.6000e-004	0.0000	5.0805
<b>Total</b>											<b>0.0000</b>	<b>5.0750</b>	<b>5.0750</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>5.0805</b>

**3.6 Architectural Coating - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5892
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5892</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	9.1480	9.1480	5.2000e-004	0.0000	9.1588
<b>Total</b>											<b>0.0000</b>	<b>9.1480</b>	<b>9.1480</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>9.1588</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5891
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5891</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	9.1480	9.1480	5.2000e-004	0.0000	9.1588
<b>Total</b>											<b>0.0000</b>	<b>9.1480</b>	<b>9.1480</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>9.1588</b>

**3.6 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	4.3983	4.3983	2.3000e-004	0.0000	4.4031
<b>Total</b>											<b>0.0000</b>	<b>4.3983</b>	<b>4.3983</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>4.4031</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	4.3983	4.3983	2.3000e-004	0.0000	4.4031
<b>Total</b>											<b>0.0000</b>	<b>4.3983</b>	<b>4.3983</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>4.4031</b>



## Tierra Robles - Phase 6 Construction & Off-Site Road Work Shasta County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	7.30	Acre	7.30	317,988.00	0
Single Family Housing	14.00	Dwelling Unit	4.55	25,200.00	40

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3	<b>Operational Year</b>	2018		
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWahr)</b>	445	<b>CH4 Intensity (lb/MWahr)</b>	0.029	<b>N2O Intensity (lb/MWahr)</b>	0.006

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

Project Characteristics - PG&E's 2012 CO2 Intensity Factor

Land Use - Accounts for the construction of 2.1 acres of internal roadway system and 5.2 acres of off-site road construction

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Construction Off-road Equipment Mitigation - Tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseEndDate	7/12/2019	5/18/2018
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblConstructionPhase	PhaseStartDate	5/19/2018	3/25/2017
tblProjectCharacteristics	CO2IntensityFactor	641.35	445
tblProjectCharacteristics	OperationalYear	2014	2018



### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
2	Grading	Grading	2/11/2017	3/24/2017	5	30	
3	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
4	Paving	Paving	3/25/2017	5/18/2018	5	300	
5	Architectural Coating	Architectural Coating	3/25/2017	5/18/2018	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 51,030; Residential Outdoor: 17,010; Non-Residential Indoor: 476,982; Non-Residential Outdoor: 158,994

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	139.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

### 3.2 Site Preparation - 2017

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>											<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.6333	0.6333	4.0000e-005	0.0000	0.6341
<b>Total</b>											<b>0.0000</b>	<b>0.6333</b>	<b>0.6333</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6341</b>

**3.3 Grading - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9109	85.9109	0.0263	0.0000	86.4637
<b>Total</b>											<b>0.0000</b>	<b>85.9109</b>	<b>85.9109</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4637</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	85.9108	85.9108	0.0263	0.0000	86.4636
<b>Total</b>											<b>0.0000</b>	<b>85.9108</b>	<b>85.9108</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4636</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.1111	2.1111	1.2000e-004	0.0000	2.1136
<b>Total</b>											<b>0.0000</b>	<b>2.1111</b>	<b>2.1111</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.1136</b>

**3.4 Building Construction - 2017**

**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											0.0000	239.4791	239.4791	0.0589	0.0000	240.7169
<b>Total</b>											<b>0.0000</b>	<b>239.4791</b>	<b>239.4791</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7169</b>

**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
Vendor											0.0000	115.1077	115.1077	8.7000e-004	0.0000	115.1260
Worker											0.0000	97.8129	97.8129	5.5100e-003	0.0000	97.9286
<b>Total</b>											<b>0.0000</b>	<b>212.9206</b>	<b>212.9206</b>	<b>6.3800e-003</b>	<b>0.0000</b>	<b>213.0547</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											0.0000	239.4788	239.4788	0.0589	0.0000	240.7166
<b>Total</b>											<b>0.0000</b>	<b>239.4788</b>	<b>239.4788</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7166</b>

**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
Vendor											0.0000	115.1077	115.1077	8.7000e-004	0.0000	115.1260
Worker											0.0000	97.8129	97.8129	5.5100e-003	0.0000	97.9286
<b>Total</b>											<b>0.0000</b>	<b>212.9206</b>	<b>212.9206</b>	<b>6.3800e-003</b>	<b>0.0000</b>	<b>213.0547</b>

**3.4 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											0.0000	118.3848	118.3848	0.0290	0.0000	118.9932
<b>Total</b>											<b>0.0000</b>	<b>118.3848</b>	<b>118.3848</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9932</b>

**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
Vendor											0.0000	56.5565	56.5565	4.3000e-004	0.0000	56.5654
Worker											0.0000	47.0283	47.0283	2.4500e-003	0.0000	47.0797
<b>Total</b>											<b>0.0000</b>	<b>103.5848</b>	<b>103.5848</b>	<b>2.8800e-003</b>	<b>0.0000</b>	<b>103.6451</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											0.0000	118.3847	118.3847	0.0290	0.0000	118.9931
<b>Total</b>											<b>0.0000</b>	<b>118.3847</b>	<b>118.3847</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9931</b>

**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
Vendor											0.0000	56.5565	56.5565	4.3000e-004	0.0000	56.5654
Worker											0.0000	47.0283	47.0283	2.4500e-003	0.0000	47.0797
<b>Total</b>											<b>0.0000</b>	<b>103.5848</b>	<b>103.5848</b>	<b>2.8800e-003</b>	<b>0.0000</b>	<b>103.6451</b>

**3.5 Paving - 2017**

**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											0.0000	206.9342	206.9342	0.0634	0.0000	208.2657
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9342</b>	<b>206.9342</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2657</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5554	10.5554	5.9000e-004	0.0000	10.5678
<b>Total</b>											<b>0.0000</b>	<b>10.5554</b>	<b>10.5554</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>10.5678</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											0.0000	206.9339	206.9339	0.0634	0.0000	208.2654
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>206.9339</b>	<b>206.9339</b>	<b>0.0634</b>	<b>0.0000</b>	<b>208.2654</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5554	10.5554	5.9000e-004	0.0000	10.5678
<b>Total</b>											<b>0.0000</b>	<b>10.5554</b>	<b>10.5554</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>10.5678</b>

**3.5 Paving - 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											0.0000	101.8437	101.8437	0.0317	0.0000	102.5095
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8437</b>	<b>101.8437</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5095</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.0750	5.0750	2.6000e-004	0.0000	5.0805
<b>Total</b>											<b>0.0000</b>	<b>5.0750</b>	<b>5.0750</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>5.0805</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											0.0000	101.8436	101.8436	0.0317	0.0000	102.5094
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>101.8436</b>	<b>101.8436</b>	<b>0.0317</b>	<b>0.0000</b>	<b>102.5094</b>



**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.0750	5.0750	2.6000e-004	0.0000	5.0805
<b>Total</b>											<b>0.0000</b>	<b>5.0750</b>	<b>5.0750</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>5.0805</b>

**3.6 Architectural Coating - 2017**

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5892
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5892</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	19.7033	19.7033	1.1100e-003	0.0000	19.7266
<b>Total</b>											<b>0.0000</b>	<b>19.7033</b>	<b>19.7033</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>19.7266</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	25.5325	25.5325	2.7000e-003	0.0000	25.5891
<b>Total</b>											<b>0.0000</b>	<b>25.5325</b>	<b>25.5325</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>25.5891</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	19.7033	19.7033	1.1100e-003	0.0000	19.7266
<b>Total</b>											<b>0.0000</b>	<b>19.7033</b>	<b>19.7033</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>19.7266</b>

**3.6 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	9.4733	9.4733	4.9000e-004	0.0000	9.4837
<b>Total</b>											<b>0.0000</b>	<b>9.4733</b>	<b>9.4733</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>9.4837</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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	12.7663	12.7663	1.2100e-003	0.0000	12.7918
<b>Total</b>											<b>0.0000</b>	<b>12.7663</b>	<b>12.7663</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>12.7918</b>

**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	9.4733	9.4733	4.9000e-004	0.0000	9.4837
<b>Total</b>											<b>0.0000</b>	<b>9.4733</b>	<b>9.4733</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>9.4837</b>

Tierra Robles - Operational Buildout - Shasta County, Annual

**Tierra Robles - Operational Buildout  
Shasta County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	166.00	Dwelling Unit	473.40	298,800.00	475

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	82
<b>Climate Zone</b>	3			<b>Operational Year</b>	2025
<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**

Project Characteristics - PG&E's projected 2020 CO2 Intensity Factor

Land Use - Residential Development spread out of 473.4 acres.

Construction Phase - On construction this model

Off-road Equipment - no construction this model

Trips and VMT -

Vehicle Trips - Trip generation per traffic impact study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Area Mitigation -

- Fleet Mix -
- Energy Mitigation -
- Water Mitigation -
- Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	10.00
tblConstructionPhase	PhaseEndDate	9/11/2017	1/14/2025
tblConstructionPhase	PhaseStartDate	8/29/2017	1/1/2025
tblLandUse	LotAcreage	53.90	473.40
tblProjectCharacteristics	OperationalYear	2018	2025
tblVehicleTrips	ST_TR	9.91	10.69
tblVehicleTrips	SU_TR	8.62	9.37
tblVehicleTrips	WD_TR	9.52	10.69

## 2.0 Emissions Summary

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### 2.1 Overall Construction Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	4.6752	5.8400e-003	0.0103	2.0000e-005	4.7000e-004	2.6000e-004	7.3000e-004	1.2000e-004	2.6000e-004	3.9000e-004	0.0000	1.6354	1.6354	8.0000e-005	0.0000	1.6373
<b>Maximum</b>	<b>4.6752</b>	<b>5.8400e-003</b>	<b>0.0103</b>	<b>2.0000e-005</b>	<b>4.7000e-004</b>	<b>2.6000e-004</b>	<b>7.3000e-004</b>	<b>1.2000e-004</b>	<b>2.6000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.6354</b>	<b>1.6354</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.6373</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	4.6752	5.8400e-003	0.0103	2.0000e-005	4.7000e-004	2.6000e-004	7.3000e-004	1.2000e-004	2.6000e-004	3.9000e-004	0.0000	1.6354	1.6354	8.0000e-005	0.0000	1.6373
<b>Maximum</b>	<b>4.6752</b>	<b>5.8400e-003</b>	<b>0.0103</b>	<b>2.0000e-005</b>	<b>4.7000e-004</b>	<b>2.6000e-004</b>	<b>7.3000e-004</b>	<b>1.2000e-004</b>	<b>2.6000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.6354</b>	<b>1.6354</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.6373</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>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
30	11-29-2024	2-27-2025	4.6811	4.6811
		Highest	4.6811	4.6811



**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	12.0872	0.2176	14.0887	0.0234		1.8095	1.8095		1.8095	1.8095	171.4710	73.9258	245.3968	0.1602	0.0135	253.4202
Energy	0.0287	0.2456	0.1045	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	739.1703	739.1703	0.0260	9.4700e-003	742.6423
Mobile	0.5440	4.7885	5.6133	0.0271	1.8429	0.0205	1.8635	0.4957	0.0193	0.5150	0.0000	2,506.2731	2,506.2731	0.1290	0.0000	2,509.4979
Waste						0.0000	0.0000		0.0000	0.0000	24.1052	0.0000	24.1052	1.4246	0.0000	59.7196
Water						0.0000	0.0000		0.0000	0.0000	3.4313	23.9676	27.3988	0.3535	8.5500e-003	38.7832
<b>Total</b>	<b>12.6599</b>	<b>5.2517</b>	<b>19.8065</b>	<b>0.0520</b>	<b>1.8429</b>	<b>1.8499</b>	<b>3.6929</b>	<b>0.4957</b>	<b>1.8487</b>	<b>2.3444</b>	<b>199.0074</b>	<b>3,343.3367</b>	<b>3,542.3442</b>	<b>2.0933</b>	<b>0.0315</b>	<b>3,604.0632</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	tons/yr										MT/yr					
Area	1.6832	0.1158	1.2746	7.1000e-004		0.0151	0.0151		0.0151	0.0151	0.0000	119.6883	119.6883	4.1800e-003	2.1600e-003	120.4358
Energy	0.0249	0.2130	0.0906	1.3600e-003		0.0172	0.0172		0.0172	0.0172	0.0000	613.0893	613.0893	0.0213	7.9500e-003	615.9909
Mobile	0.5440	4.7885	5.6133	0.0271	1.8429	0.0205	1.8635	0.4957	0.0193	0.5150	0.0000	2,506.2731	2,506.2731	0.1290	0.0000	2,509.4979
Waste						0.0000	0.0000		0.0000	0.0000	12.0526	0.0000	12.0526	0.7123	0.0000	29.8598
Water						0.0000	0.0000		0.0000	0.0000	2.7450	13.6200	16.3650	0.2826	6.7800e-003	25.4508
<b>Total</b>	<b>2.2521</b>	<b>5.1173</b>	<b>6.9786</b>	<b>0.0291</b>	<b>1.8429</b>	<b>0.0528</b>	<b>1.8957</b>	<b>0.4957</b>	<b>0.0515</b>	<b>0.5473</b>	<b>14.7976</b>	<b>3,252.6706</b>	<b>3,267.4682</b>	<b>1.1493</b>	<b>0.0169</b>	<b>3,301.2351</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	N20	CO2e
Percent Reduction	82.21	2.56	64.77	43.97	0.00	97.15	48.66	0.00	97.21	76.66	92.56	2.71	7.76	45.09	46.40	8.40

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2025	1/14/2025	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 605,070; Residential Outdoor: 201,690; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Architectural Coating - 2025

#### 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	4.6742					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
<b>Total</b>	<b>4.6750</b>	<b>5.7300e-003</b>	<b>9.0500e-003</b>	<b>1.0000e-005</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.2784</b>

#### 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	1.8000e-004	1.1000e-004	1.2000e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3587	0.3587	1.0000e-005	0.0000	0.3589
<b>Total</b>	<b>1.8000e-004</b>	<b>1.1000e-004</b>	<b>1.2000e-003</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3587</b>	<b>0.3587</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3589</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	4.6742					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
<b>Total</b>	<b>4.6750</b>	<b>5.7300e-003</b>	<b>9.0500e-003</b>	<b>1.0000e-005</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>		<b>2.6000e-004</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.2784</b>

**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	1.8000e-004	1.1000e-004	1.2000e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3587	0.3587	1.0000e-005	0.0000	0.3589
<b>Total</b>	<b>1.8000e-004</b>	<b>1.1000e-004</b>	<b>1.2000e-003</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3587</b>	<b>0.3587</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3589</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive 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	0.5440	4.7885	5.6133	0.0271	1.8429	0.0205	1.8635	0.4957	0.0193	0.5150	0.0000	2,506.273	2,506.273	0.1290	0.0000	2,509.4979
Unmitigated	0.5440	4.7885	5.6133	0.0271	1.8429	0.0205	1.8635	0.4957	0.0193	0.5150	0.0000	2,506.273	2,506.273	0.1290	0.0000	2,509.4979

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,774.54	1,774.54	1555.42	4,963,617	4,963,617
Total	1,774.54	1,774.54	1,555.42	4,963,617	4,963,617

### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.00	21.20	37.80	86	11	3

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.545380	0.030786	0.179742	0.096075	0.023578	0.005330	0.012536	0.096768	0.001298	0.001145	0.005079	0.001245	0.001036

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	366.3990	366.3990	0.0166	3.4300e-003	367.8347
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	454.7665	454.7665	0.0206	4.2500e-003	456.5484
NaturalGas Mitigated	0.0249	0.2130	0.0906	1.3600e-003		0.0172	0.0172		0.0172	0.0172	0.0000	246.6902	246.6902	4.7300e-003	4.5200e-003	248.1562
NaturalGas Unmitigated	0.0287	0.2456	0.1045	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.4038	284.4038	5.4500e-003	5.2100e-003	286.0939

### 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					
Single Family Housing	5.32953e+006	0.0287	0.2456	0.1045	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.4038	284.4038	5.4500e-003	5.2100e-003	286.0939
<b>Total</b>		<b>0.0287</b>	<b>0.2456</b>	<b>0.1045</b>	<b>1.5700e-003</b>		<b>0.0199</b>	<b>0.0199</b>		<b>0.0199</b>	<b>0.0199</b>	<b>0.0000</b>	<b>284.4038</b>	<b>284.4038</b>	<b>5.4500e-003</b>	<b>5.2100e-003</b>	<b>286.0939</b>

**Mitigated**

	Natural Gas 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					
Single Family Housing	4.6228e+06	0.0249	0.2130	0.0906	1.3600e-003		0.0172	0.0172		0.0172	0.0172	0.0000	246.6902	246.6902	4.7300e-003	4.5200e-003	248.1562
<b>Total</b>		<b>0.0249</b>	<b>0.2130</b>	<b>0.0906</b>	<b>1.3600e-003</b>		<b>0.0172</b>	<b>0.0172</b>		<b>0.0172</b>	<b>0.0172</b>	<b>0.0000</b>	<b>246.6902</b>	<b>246.6902</b>	<b>4.7300e-003</b>	<b>4.5200e-003</b>	<b>248.1562</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.56325e+006	454.7665	0.0206	4.2500e-003	456.5484
<b>Total</b>		<b>454.7665</b>	<b>0.0206</b>	<b>4.2500e-003</b>	<b>456.5484</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.25949e+006	366.3990	0.0166	3.4300e-003	367.8347

Total		366.3990	0.0166	3.4300e-003	367.8347
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## 6.0 Area Detail

### 6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	1.6832	0.1158	1.2746	7.1000e-004		0.0151	0.0151		0.0151	0.0151	0.0000	119.6883	119.6883	4.1800e-003	2.1600e-003	120.4358
Unmitigated	12.0872	0.2176	14.0887	0.0234		1.8095	1.8095		1.8095	1.8095	171.4710	73.9258	245.3968	0.1602	0.0135	253.4202

### 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	0.4674					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1670					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	10.4159	0.2034	12.8573	0.0233		1.8027	1.8027		1.8027	1.8027	171.4710	71.9124	243.3834	0.1582	0.0135	251.3587
Landscaping	0.0370	0.0142	1.2314	7.0000e-005		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	2.0134	2.0134	1.9300e-003	0.0000	2.0616



Total	12.0872	0.2176	14.0887	0.0234		1.8095	1.8095		1.8095	1.8095	171.4710	73.9258	245.3968	0.1602	0.0135	253.4202
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**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	0.4674					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1670					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0119	0.1016	0.0432	6.5000e-004		8.2200e-003	8.2200e-003		8.2200e-003	8.2200e-003	0.0000	117.6749	117.6749	2.2600e-003	2.1600e-003	118.3742
Landscaping	0.0370	0.0142	1.2314	7.0000e-005		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	2.0134	2.0134	1.9300e-003	0.0000	2.0616
<b>Total</b>	<b>1.6832</b>	<b>0.1158</b>	<b>1.2746</b>	<b>7.2000e-004</b>		<b>0.0151</b>	<b>0.0151</b>		<b>0.0151</b>	<b>0.0151</b>	<b>0.0000</b>	<b>119.6883</b>	<b>119.6883</b>	<b>4.1900e-003</b>	<b>2.1600e-003</b>	<b>120.4357</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Use Grey Water
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.3650	0.2826	6.7800e-003	25.4508
Unmitigated	27.3988	0.3535	8.5500e-003	38.7832

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	10.8156 / 6.81851	27.3988	0.3535	8.5500e-003	38.7832
<b>Total</b>		<b>27.3988</b>	<b>0.3535</b>	<b>8.5500e-003</b>	<b>38.7832</b>

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.65245 / 0	16.3650	0.2826	6.7800e-003	25.4508
<b>Total</b>		<b>16.3650</b>	<b>0.2826</b>	<b>6.7800e-003</b>	<b>25.4508</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.0526	0.7123	0.0000	29.8598
Unmitigated	24.1052	1.4246	0.0000	59.7196

### 8.2 Waste by Land Use

#### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	118.75	24.1052	1.4246	0.0000	59.7196
<b>Total</b>		<b>24.1052</b>	<b>1.4246</b>	<b>0.0000</b>	<b>59.7196</b>

## Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	59.375	12.0526	0.7123	0.0000	29.8598
<b>Total</b>		<b>12.0526</b>	<b>0.7123</b>	<b>0.0000</b>	<b>29.8598</b>

## 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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