



## Memorandum

Date: April 11, 2017

To: Ms. Rebecca Mitchell, Mt. San Antonio College

From: Fred Greve, Greve & Associates, LLC

Subject: West Parcel Solar Project Update (Report #17-022)

A previous analysis of the construction impacts ("West Parcel Solar Project - Air Quality Construction Analysis," Report #15-104C, memo from Fred Greve, Greve & Associates to Mikaela Klein, MtSAC, dated August 30, 2015) showed that the project would be under the SCAQMD air quality thresholds. However, the project proposed at that time was just under the thresholds for NO<sub>x</sub> during the "Grading with Import" and "Final Grading" phases. The grading plan for the project was changed slightly, and to be conservative it was decided that the construction emissions should be re-run to ensure that new impacts would not occur.

The entire site is approximately 27.7 acres, and approximately 17.25 acres of the site will be graded (previous grading area was 17.7 acres). Substantial grading and import of dirt will be required for the project. The current grading estimates are 177,500 cubic yards of cut (previously 172,708 cy), 316,500 cy of fill (previously 336,279 cy) with a net import of 139,000 cy (previously 163,571 cy). The import fill will come from the Physical Education Project (PEP) area.

### Construction Emissions

Table 1 reproduces Table 3 in the August 30, 2015 report. The highest daily construction emissions for each phase are presented.



The grading plan changes result in almost no changes in the emission projections (Table 2). The emission projections that change are bolded. These changes are very minor and do not affect the findings in the previous air assessment.

In 2016, the SCAQMD released an updated version of CalEEMod (version 2016.3.1). The updated grading plan was re-run with the latest version of CalEEMod to ensure that no new impacts were predicted. The results are presented in Table 3.

**Table 3 Construction Emissions for 2017 Grading Plan Using CalEEMod v.2016.3.1**

Activity	Pollutant Emissions (lbs./day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Collection, Clear & Grub	<b>1.8</b>	<b>17.5</b>	<b>8.4</b>	<b>0.2</b>	<b>8.1</b>	4.3
Grading with Import	<b>6.4</b>	<b>77.8</b>	<b>45.3</b>	0.1	<b>9.9</b>	<b>6.6</b>
Final Grading	<b>7.6</b>	<b>93.2</b>	<b>52.4</b>	0.1	<b>10.9</b>	<b>7.0</b>
Solar Installation	<b>0.5</b>	<b>3.4</b>	<b>3.5</b>	0.0	<b>0.6</b>	<b>0.3</b>
Restoration	<b>0.5</b>	<b>3.3</b>	<b>3.3</b>	0.0	<b>0.7</b>	<b>0.3</b>
Landscaping	<b>0.5</b>	<b>3.4</b>	<b>3.6</b>	0.0	<b>0.8</b>	<b>0.3</b>
Solar Install+Restoration +Landscaping	<b>1.4</b>	<b>10.1</b>	<b>10.4</b>	0.0	<b>2.1</b>	<b>1.0</b>
<i>SCQAMD Thresholds</i>	75	100	550	150	150	55
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

The values that have changed since the August 2015 analysis are bolded in Table 3. Most of the values have changed slightly, but not enough to change the conclusions or recommendations in the previous report. A major portion of the CalEEMod v.2016.3.1 update was to improve the emission rates for construction equipment. The emission rates for construction equipment went up for some equipment while they went down for other pieces of equipment. This accounts for most of the change in the forecast.

## CONCLUSION

Construction emissions were calculated for the updated grading plan with the version of CalEEMod used for the August 2015 analysis and with the CalEEMod version released in 2016. Both the analyses indicated that the no new impacts would occur with the updated

grading plan. The findings, recommendations, and conclusions in the August 2015 study for WPS do not need to be changed and are still valid.

## **Appendix**

**CalEEMod Output for Updated Grading CalEEMod v.2013.2.2**

**CalEEMod Output for Updated Grading CalEEMod v.2016.3.1**

**West Parcel Solar - WPS**  
**South Coast AQMD Air District, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	10.00	1000sqft	17.25	10,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2016
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<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 -

Land Use - 17.25 acres is the area that will be graded per email 4/10/17. 10,000 square feet of building was put into the model to represent a very rough approximation of the amount of construction that will be required for the installation of the solar panels.  
 Construction Phase - Schedule has been adjusted to match actual proposed schedule.

Off-road Equipment - Per discussions with Tilden Coil

Off-road Equipment - Per discussions with Tilden-Coil. No compactor in list, using one graders as a substitute for compactor.

Off-road Equipment - Per discussions with Tilden-Coil and EPT

Off-road Equipment - Per discussions with Tilden-Coil and EPT

Off-road Equipment - Per discussions with Tilden-Coil

Off-road Equipment - Per discussions with Borrego Solar

Trips and VMT - Distances for hauling represent actual proposed routes

Grading - Actual size of area to be graded/worked.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	76.00
tblConstructionPhase	NumDays	30.00	130.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/24/2016	7/14/2016
tblConstructionPhase	PhaseEndDate	9/8/2016	6/28/2016
tblConstructionPhase	PhaseStartDate	6/29/2016	4/17/2016
tblConstructionPhase	PhaseStartDate	6/29/2016	4/17/2016
tblGrading	AcresOfGrading	390.00	17.25
tblGrading	AcresOfGrading	90.00	17.25
tblGrading	AcresOfGrading	0.00	17.25
tblGrading	AcresOfGrading	0.00	17.25
tblGrading	AcresOfGrading	0.00	17.25
tblGrading	MaterialImported	0.00	139,000.00
tblLandUse	LotAcreage	0.23	17.25
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	5.60
tblTripsAndVMT	HaulingTripNumber	17,375.00	20,446.00
tblTripsAndVMT	HaulingTripNumber	17,375.00	20,446.00

## 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					
2015	9.7381	99.5853	104.9829	0.1070	10.2101	3.7723	13.9824	4.3404	3.4702	7.8106						10,997.8169



2016	9.0399	94.7193	99.5428	0.1068	9.6121	4.0668	13.1316	4.1936	3.7415	7.4313							10,875.5834
<b>Total</b>	<b>18.7780</b>	<b>194.3046</b>	<b>204.5256</b>	<b>0.2138</b>	<b>19.8222</b>	<b>7.8391</b>	<b>27.1140</b>	<b>8.5340</b>	<b>7.2117</b>	<b>15.2419</b>							<b>21,873.4003</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						
2015	9.7381	99.5853	104.9829	0.1070	10.2101	3.7723	13.9824	4.3404	3.4702	7.8106							10,997.8169
2016	9.0399	94.7193	99.5428	0.1068	9.6121	4.0668	13.1316	4.1936	3.7415	7.4313							10,875.5834
<b>Total</b>	<b>18.7780</b>	<b>194.3046</b>	<b>204.5256</b>	<b>0.2138</b>	<b>19.8222</b>	<b>7.8391</b>	<b>27.1140</b>	<b>8.5340</b>	<b>7.2117</b>	<b>15.2419</b>							<b>21,873.4003</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	0.2616	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3200e-003
Energy	5.5600e-003	0.0505	0.0424	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003						60.9975
Mobile	0.3037	1.0251	3.7839	9.2200e-003	0.6545	0.0145	0.6690	0.1749	0.0133	0.1882						812.4910

<b>Total</b>	<b>0.5709</b>	<b>1.0757</b>	<b>3.8274</b>	<b>9.5200e-003</b>	<b>0.6545</b>	<b>0.0183</b>	<b>0.6728</b>	<b>0.1749</b>	<b>0.0172</b>	<b>0.1920</b>							<b>873.4908</b>
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### 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	0.2616	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000							2.3200e-003
Energy	5.5600e-003	0.0505	0.0424	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003							60.9975
Mobile	0.3037	1.0251	3.7839	9.2200e-003	0.6545	0.0145	0.6690	0.1749	0.0133	0.1882							812.4910
<b>Total</b>	<b>0.5709</b>	<b>1.0757</b>	<b>3.8274</b>	<b>9.5200e-003</b>	<b>0.6545</b>	<b>0.0183</b>	<b>0.6728</b>	<b>0.1749</b>	<b>0.0172</b>	<b>0.1920</b>							<b>873.4908</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>

## 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	10/1/2015	10/24/2015	6	21	
2	Grading including Import	Grading	10/25/2015	3/24/2016	6	130	
3	Finish Grading	Grading	3/25/2016	4/16/2016	6	20	
4	Landscaping	Site Preparation	4/17/2016	6/28/2016	6	62	
5	Restoration	Site Preparation	4/17/2016	6/28/2016	6	62	
6	Solar Panel Installation	Building Construction	4/17/2016	7/14/2016	6	76	

Acres of Grading (Site Preparation Phase): 17.25

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading including Import	Concrete/Industrial Saws	0		81	0.73
Grading including Import	Crawler Tractors	0	8.00	208	0.37
Grading including Import	Excavators	0	8.00	162	0.38
Grading including Import	Graders	0	8.00	174	0.41
Grading including Import	Rubber Tired Dozers	1	8.00	255	0.40
Grading including Import	Rubber Tired Dozers	0	8.00	255	0.40
Grading including Import	Scrapers	3	8.00	361	0.48
Grading including Import	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Finish Grading	Excavators	0	8.00	162	0.38
Finish Grading	Graders	1	8.00	174	0.41
Finish Grading	Rubber Tired Dozers	1	8.00	255	0.40
Finish Grading	Scrapers	4	8.00	361	0.48
Finish Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Landscaping	Pavers	0	8.00	125	0.42
Landscaping	Paving Equipment	0	8.00	130	0.36
Landscaping	Rollers	0	8.00	80	0.38
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Restoration	Air Compressors	0	6.00	78	0.48
Restoration	Rubber Tired Dozers	0	8.00	255	0.40
Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Solar Panel Installation	Cranes	0	7.00	226	0.29
Solar Panel Installation	Forklifts	0	8.00	89	0.20
Solar Panel Installation	Generator Sets	0	8.00	84	0.74
Solar Panel Installation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Solar Panel Installation	Welders	0	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	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading including Import	6	15.00	0.00	20,446.00	14.70	6.90	1.00	LD_Mix	HDT_Mix	HHDT
Grading including Import	6	15.00	0.00	20,446.00	14.70	6.90	5.60	LD_Mix	HDT_Mix	HHDT
Finish Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Restoration	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Solar Panel Installation	1	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Site Preparation - 2015

#### 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					6.8932	0.0000	6.8932	3.4043	0.0000	3.4043							0.0000
Off-Road	1.6335	17.8192	13.4021	0.0120		0.9399	0.9399		0.8647	0.8647							1,269.3272
<b>Total</b>	<b>1.6335</b>	<b>17.8192</b>	<b>13.4021</b>	<b>0.0120</b>	<b>6.8932</b>	<b>0.9399</b>	<b>7.8331</b>	<b>3.4043</b>	<b>0.8647</b>	<b>4.2690</b>							<b>1,269.3272</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0237	0.0318	0.3318	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153						57.8527
<b>Total</b>	<b>0.0237</b>	<b>0.0318</b>	<b>0.3318</b>	<b>6.6000e-004</b>	<b>0.0559</b>	<b>4.9000e-004</b>	<b>0.0564</b>	<b>0.0148</b>	<b>4.5000e-004</b>	<b>0.0153</b>						<b>57.8527</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					6.8932	0.0000	6.8932	3.4043	0.0000	3.4043						0.0000
Off-Road	1.6335	17.8192	13.4021	0.0120		0.9399	0.9399		0.8647	0.8647						1,269.3272
<b>Total</b>	<b>1.6335</b>	<b>17.8192</b>	<b>13.4021</b>	<b>0.0120</b>	<b>6.8932</b>	<b>0.9399</b>	<b>7.8331</b>	<b>3.4043</b>	<b>0.8647</b>	<b>4.2690</b>						<b>1,269.3272</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
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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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0237	0.0318	0.3318	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153						57.8527
<b>Total</b>	<b>0.0237</b>	<b>0.0318</b>	<b>0.3318</b>	<b>6.6000e-004</b>	<b>0.0559</b>	<b>4.9000e-004</b>	<b>0.0564</b>	<b>0.0148</b>	<b>4.5000e-004</b>	<b>0.0153</b>						<b>57.8527</b>

### 3.3 Grading including Import - 2015

#### 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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437						0.0000
Off-Road	6.3233	77.0481	50.5576	0.0598		3.4620	3.4620		3.1851	3.1851						6,322.0350
<b>Total</b>	<b>6.3233</b>	<b>77.0481</b>	<b>50.5576</b>	<b>0.0598</b>	<b>6.2837</b>	<b>3.4620</b>	<b>9.7458</b>	<b>3.3437</b>	<b>3.1851</b>	<b>6.5288</b>						<b>6,322.0350</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	3.2728	22.3465	52.4345	0.0432	3.2995	0.3073	3.6068	0.8362	0.2824	1.1186						4,328.6658
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1421	0.1907	1.9908	3.9800e-003	0.6269	2.9500e-003	0.6298	0.1605	2.7000e-003	0.1632						347.1161

<b>Total</b>	<b>3.4148</b>	<b>22.5372</b>	<b>54.4253</b>	<b>0.0471</b>	<b>3.9264</b>	<b>0.3103</b>	<b>4.2367</b>	<b>0.9967</b>	<b>0.2851</b>	<b>1.2818</b>						<b>4,675.7820</b>
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**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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437							0.0000
Off-Road	6.3233	77.0481	50.5576	0.0598		3.4620	3.4620		3.1851	3.1851							6,322.0350
<b>Total</b>	<b>6.3233</b>	<b>77.0481</b>	<b>50.5576</b>	<b>0.0598</b>	<b>6.2837</b>	<b>3.4620</b>	<b>9.7458</b>	<b>3.3437</b>	<b>3.1851</b>	<b>6.5288</b>							<b>6,322.0350</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	3.2728	22.3465	52.4345	0.0432	3.2995	0.3073	3.6068	0.8362	0.2824	1.1186							4,328.6658
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1421	0.1907	1.9908	3.9800e-003	0.6269	2.9500e-003	0.6298	0.1605	2.7000e-003	0.1632							347.1161
<b>Total</b>	<b>3.4148</b>	<b>22.5372</b>	<b>54.4253</b>	<b>0.0471</b>	<b>3.9264</b>	<b>0.3103</b>	<b>4.2367</b>	<b>0.9967</b>	<b>0.2851</b>	<b>1.2818</b>							<b>4,675.7820</b>

**3.3 Grading including Import - 2016**

**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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437						0.0000
Off-Road	6.0668	73.1679	48.3745	0.0598		3.2743	3.2743		3.0124	3.0124						6,252.5697
<b>Total</b>	<b>6.0668</b>	<b>73.1679</b>	<b>48.3745</b>	<b>0.0598</b>	<b>6.2837</b>	<b>3.2743</b>	<b>9.5580</b>	<b>3.3437</b>	<b>3.0124</b>	<b>6.3561</b>						<b>6,252.5697</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	2.8451	19.9887	49.3716	0.0431	2.7016	0.2423	2.9439	0.6894	0.2228	0.9122						4,279.1941
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1280	0.1720	1.7967	3.9800e-003	0.6269	2.8000e-003	0.6297	0.1605	2.5800e-003	0.1631						335.0991
<b>Total</b>	<b>2.9731</b>	<b>20.1607</b>	<b>51.1683</b>	<b>0.0470</b>	<b>3.3284</b>	<b>0.2451</b>	<b>3.5736</b>	<b>0.8499</b>	<b>0.2253</b>	<b>1.0752</b>						<b>4,614.2931</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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437						0.0000
Off-Road	6.0668	73.1679	48.3745	0.0598		3.2743	3.2743		3.0124	3.0124						6,252.5697



<b>Total</b>	<b>6.0668</b>	<b>73.1679</b>	<b>48.3745</b>	<b>0.0598</b>	<b>6.2837</b>	<b>3.2743</b>	<b>9.5580</b>	<b>3.3437</b>	<b>3.0124</b>	<b>6.3561</b>						<b>6,252.5697</b>
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**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8451	19.9887	49.3716	0.0431	2.7016	0.2423	2.9439	0.6894	0.2228	0.9122						4,279.1941
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1280	0.1720	1.7967	3.9800e-003	0.6269	2.8000e-003	0.6297	0.1605	2.5800e-003	0.1631						335.0991
<b>Total</b>	<b>2.9731</b>	<b>20.1607</b>	<b>51.1683</b>	<b>0.0470</b>	<b>3.3284</b>	<b>0.2451</b>	<b>3.5736</b>	<b>0.8499</b>	<b>0.2253</b>	<b>1.0752</b>						<b>4,614.2931</b>

**3.4 Finish Grading - 2016**

**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					6.9368	0.0000	6.9368	3.4090	0.0000	3.4090						0.0000
Off-Road	7.7869	94.6333	59.4982	0.0747		4.0654	4.0654		3.7402	3.7402						7,811.9129
<b>Total</b>	<b>7.7869</b>	<b>94.6333</b>	<b>59.4982</b>	<b>0.0747</b>	<b>6.9368</b>	<b>4.0654</b>	<b>11.0022</b>	<b>3.4090</b>	<b>3.7402</b>	<b>7.1492</b>						<b>7,811.9129</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						167.5495
<b>Total</b>	<b>0.0640</b>	<b>0.0860</b>	<b>0.8984</b>	<b>1.9900e-003</b>	<b>0.1677</b>	<b>1.4000e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.2900e-003</b>	<b>0.0458</b>						<b>167.5495</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					6.9368	0.0000	6.9368	3.4090	0.0000	3.4090						0.0000
Off-Road	7.7869	94.6333	59.4982	0.0747		4.0654	4.0654		3.7402	3.7402						7,811.9129
<b>Total</b>	<b>7.7869</b>	<b>94.6333</b>	<b>59.4982</b>	<b>0.0747</b>	<b>6.9368</b>	<b>4.0654</b>	<b>11.0022</b>	<b>3.4090</b>	<b>3.7402</b>	<b>7.1492</b>						<b>7,811.9129</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					



**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2951	0.0000	0.2951	0.0319	0.0000	0.0319						0.0000
Off-Road	0.1703	1.6275	1.2063	1.5600e-003		0.1253	0.1253		0.1153	0.1153						162.8638
<b>Total</b>	<b>0.1703</b>	<b>1.6275</b>	<b>1.2063</b>	<b>1.5600e-003</b>	<b>0.2951</b>	<b>0.1253</b>	<b>0.4204</b>	<b>0.0319</b>	<b>0.1153</b>	<b>0.1471</b>						<b>162.8638</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003						33.5099
<b>Total</b>	<b>0.0128</b>	<b>0.0172</b>	<b>0.1797</b>	<b>4.0000e-004</b>	<b>0.0335</b>	<b>2.8000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.6000e-004</b>	<b>9.1500e-003</b>						<b>33.5099</b>

**3.6 Restoration - 2016**

**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
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Category	lb/day										lb/day					
Fugitive Dust					0.2951	0.0000	0.2951	0.0319	0.0000	0.0319						0.0000
Off-Road	0.1703	1.6275	1.2063	1.5600e-003			0.1253	0.1253		0.1153	0.1153					162.8638
<b>Total</b>	<b>0.1703</b>	<b>1.6275</b>	<b>1.2063</b>	<b>1.5600e-003</b>	<b>0.2951</b>	<b>0.1253</b>	<b>0.4204</b>	<b>0.0319</b>	<b>0.1153</b>	<b>0.1471</b>					<b>162.8638</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003						33.5099
<b>Total</b>	<b>0.0128</b>	<b>0.0172</b>	<b>0.1797</b>	<b>4.0000e-004</b>	<b>0.0335</b>	<b>2.8000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.6000e-004</b>	<b>9.1500e-003</b>						<b>33.5099</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2951	0.0000	0.2951	0.0319	0.0000	0.0319						0.0000
Off-Road	0.1703	1.6275	1.2063	1.5600e-003			0.1253	0.1253		0.1153	0.1153					162.8638
<b>Total</b>	<b>0.1703</b>	<b>1.6275</b>	<b>1.2063</b>	<b>1.5600e-003</b>	<b>0.2951</b>	<b>0.1253</b>	<b>0.4204</b>	<b>0.0319</b>	<b>0.1153</b>	<b>0.1471</b>						<b>162.8638</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003						33.5099
<b>Total</b>	<b>0.0128</b>	<b>0.0172</b>	<b>0.1797</b>	<b>4.0000e-004</b>	<b>0.0335</b>	<b>2.8000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.6000e-004</b>	<b>9.1500e-003</b>						<b>33.5099</b>

**3.7 Solar Panel Installation - 2016**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2980	2.8482	2.1110	2.7200e-003		0.2193	0.2193		0.2018	0.2018						285.0116
<b>Total</b>	<b>0.2980</b>	<b>2.8482</b>	<b>2.1110</b>	<b>2.7200e-003</b>		<b>0.2193</b>	<b>0.2193</b>		<b>0.2018</b>	<b>0.2018</b>						<b>285.0116</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
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Total	0.0353	0.2000	0.4787	9.6000e-004	0.0572	3.2400e-003	0.0605	0.0154	2.9800e-003	0.0184							87.9267
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#### 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	0.3037	1.0251	3.7839	9.2200e-003	0.6545	0.0145	0.6690	0.1749	0.0133	0.1882							812.4910
Unmitigated	0.3037	1.0251	3.7839	9.2200e-003	0.6545	0.0145	0.6690	0.1749	0.0133	0.1882							812.4910

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	69.70	13.20	6.80	233,117	233,117
Total	69.70	13.20	6.80	233,117	233,117

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513363	0.060352	0.180146	0.139338	0.042155	0.006672	0.015739	0.030749	0.001928	0.002503	0.004351	0.000593	0.002111

#### 5.0 Energy Detail



#### 4.4 Fleet Mix

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
NaturalGas Mitigated	5.5600e-003	0.0505	0.0424	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003							60.9975
NaturalGas Unmitigated	5.5600e-003	0.0505	0.0424	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003							60.9975

#### 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					
General Light Industry	515.342	5.5600e-003	0.0505	0.0424	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003						60.9975
<b>Total</b>		<b>5.5600e-003</b>	<b>0.0505</b>	<b>0.0424</b>	<b>3.0000e-004</b>		<b>3.8400e-003</b>	<b>3.8400e-003</b>		<b>3.8400e-003</b>	<b>3.8400e-003</b>						<b>60.9975</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	lb/day										lb/day					
General Light Industry	0.515342	5.5600e-003	0.0505	0.0424	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003						60.9975
<b>Total</b>		<b>5.5600e-003</b>	<b>0.0505</b>	<b>0.0424</b>	<b>3.0000e-004</b>		<b>3.8400e-003</b>	<b>3.8400e-003</b>		<b>3.8400e-003</b>	<b>3.8400e-003</b>						<b>60.9975</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2616	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3200e-003
Unmitigated	0.2616	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3200e-003

### 6.2 Area by SubCategory

#### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0635					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.1980					0.0000	0.0000		0.0000	0.0000						0.0000

Landscaping	1.0000e-004	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3200e-003
<b>Total</b>	<b>0.2616</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						<b>2.3200e-003</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	0.0635					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.1980					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3200e-003
<b>Total</b>	<b>0.2616</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						<b>2.3200e-003</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 Vegetation**



Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	30.00	130.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDays	300.00	76.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/30/2015	10/24/2015
tblConstructionPhase	PhaseEndDate	9/30/2015	3/24/2016
tblConstructionPhase	PhaseEndDate	9/30/2015	4/16/2016
tblConstructionPhase	PhaseEndDate	9/30/2015	6/28/2016
tblConstructionPhase	PhaseEndDate	9/30/2015	6/28/2016
tblConstructionPhase	PhaseEndDate	9/30/2015	7/14/2016
tblConstructionPhase	PhaseStartDate	10/1/2015	10/25/2015
tblConstructionPhase	PhaseStartDate	10/1/2015	3/25/2016
tblConstructionPhase	PhaseStartDate	10/1/2015	4/17/2016
tblConstructionPhase	PhaseStartDate	10/1/2015	4/17/2016
tblConstructionPhase	PhaseStartDate	10/1/2015	4/17/2016
tblGrading	AcresOfGrading	0.00	17.25
tblGrading	AcresOfGrading	0.00	17.25
tblGrading	AcresOfGrading	390.00	17.25
tblGrading	AcresOfGrading	90.00	17.25
tblGrading	AcresOfGrading	0.00	17.25
tblGrading	MaterialImported	0.00	139,000.00

tblLandUse	LotAcreage	0.23	17.25
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	17,375.00	0.00
tblTripsAndVMT	VendorTripNumber	2.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	1.00
tblTripsAndVMT	WorkerTripNumber	15.00	4.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	3.00	15.00

tblTripsAndVMT	WorkerTripNumber	4.00	18.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00

## 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					
2015	6.4383	77.8230	45.2621	0.0612	7.0944	3.5186	9.8598	3.4577	3.2372	6.5965						6,474.9102
2016	7.5537	93.2252	52.4343	0.0776	7.1044	3.8230	10.9275	3.4535	3.5172	6.9707						8,112.7311
<b>Maximum</b>	<b>7.5537</b>	<b>93.2252</b>	<b>52.4343</b>	<b>0.0776</b>	<b>7.1044</b>	<b>3.8230</b>	<b>10.9275</b>	<b>3.4577</b>	<b>3.5172</b>	<b>6.9707</b>						<b>8,112.7311</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					
2015	6.4383	77.8230	45.2621	0.0612	7.0944	3.5186	9.8598	3.4577	3.2372	6.5965						6,474.9102
2016	7.5537	93.2252	52.4343	0.0776	7.1044	3.8230	10.9275	3.4535	3.5172	6.9707						8,112.7311
<b>Maximum</b>	<b>7.5537</b>	<b>93.2252</b>	<b>52.4343</b>	<b>0.0776</b>	<b>7.1044</b>	<b>3.8230</b>	<b>10.9275</b>	<b>3.4577</b>	<b>3.5172</b>	<b>6.9707</b>						<b>8,112.7311</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
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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
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## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2235	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3400e-003
Energy	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003						58.8813
Mobile	0.2057	1.0859	2.9760	8.4800e-003	0.6564	0.0117	0.6682	0.1757	0.0111	0.1868						860.5973
<b>Total</b>	<b>0.4346</b>	<b>1.1347</b>	<b>3.0180</b>	<b>8.7700e-003</b>	<b>0.6564</b>	<b>0.0154</b>	<b>0.6719</b>	<b>0.1757</b>	<b>0.0148</b>	<b>0.1905</b>						<b>919.4809</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	0.2235	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000						2.3400e-003
Energy	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003						58.8813
Mobile	0.2057	1.0859	2.9760	8.4800e-003	0.6564	0.0117	0.6682	0.1757	0.0111	0.1868						860.5973
<b>Total</b>	<b>0.4346</b>	<b>1.1347</b>	<b>3.0180</b>	<b>8.7700e-003</b>	<b>0.6564</b>	<b>0.0154</b>	<b>0.6719</b>	<b>0.1757</b>	<b>0.0148</b>	<b>0.1905</b>						<b>919.4809</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
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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
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### 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	10/1/2015	10/24/2015	6	21	
2	Grading Including Import	Grading	10/25/2015	3/24/2016	6	130	
3	Finish Grading	Grading	3/25/2016	4/16/2016	6	20	
4	Landscaping	Site Preparation	4/17/2016	6/28/2016	6	62	
5	Restoration	Site Preparation	4/17/2016	6/28/2016	6	62	
6	Solar Panel Installation	Building Construction	4/17/2016	7/14/2016	6	76	

Acres of Grading (Site Preparation Phase): 17.25

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Solar Panel Installation	Air Compressors	0	6.00	78	0.48
Finish Grading	Excavators	0	8.00	158	0.38
Finish Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Landscaping	Excavators	0	8.00	158	0.38
Grading Including Import	Cranes	0		231	0.29
Grading Including Import	Forklifts	0		89	0.20
Grading Including Import	Generator Sets	0		84	0.74
Restoration	Pavers	0	8.00	130	0.42
Restoration	Rollers	0	8.00	80	0.38
Finish Grading	Rubber Tired Dozers	1	8.00	247	0.40

Landscaping	Rubber Tired Dozers	0	8.00	247	0.40
Grading Including Import	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Landscaping	Graders	0	8.00	187	0.41
Landscaping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Restoration	Paving Equipment	0	8.00	132	0.36
Solar Panel Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Solar Panel Installation	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping	Scrapers	0	8.00	367	0.48
Grading Including Import	Welders	0		46	0.45
Solar Panel Installation	Cranes	0	7.00	231	0.29
Grading Including Import	Excavators	0	8.00	158	0.38
Solar Panel Installation	Forklifts	0	8.00	89	0.20
Solar Panel Installation	Generator Sets	0	8.00	84	0.74
Grading Including Import	Graders	0	8.00	187	0.41
Finish Grading	Graders	1	8.00	187	0.41
Grading Including Import	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Restoration	Rubber Tired Dozers	0	8.00	247	0.40
Grading Including Import	Scrapers	3	8.00	367	0.48
Finish Grading	Scrapers	4	8.00	367	0.48
Finish Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Restoration	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Solar Panel Installation	Welders	0	8.00	46	0.45
Architectural Coating	Rubber Tired Dozers	1	8.00	247	0.40
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	97	0.37

### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1502	0.1147	1.2093	2.2400e-003	0.2012	1.8400e-003	0.2030	0.0534	1.7000e-003	0.0551						222.5559
<b>Total</b>	<b>0.1502</b>	<b>0.1147</b>	<b>1.2093</b>	<b>2.2400e-003</b>	<b>0.2012</b>	<b>1.8400e-003</b>	<b>0.2030</b>	<b>0.0534</b>	<b>1.7000e-003</b>	<b>0.0551</b>						<b>222.5559</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					6.8932	0.0000	6.8932	3.4043	0.0000	3.4043						0.0000
Off-Road	1.6296	17.3440	7.1660	0.0117		0.9550	0.9550		0.8786	0.8786						1,233.5709
<b>Total</b>	<b>1.6296</b>	<b>17.3440</b>	<b>7.1660</b>	<b>0.0117</b>	<b>6.8932</b>	<b>0.9550</b>	<b>7.8482</b>	<b>3.4043</b>	<b>0.8786</b>	<b>4.2829</b>						<b>1,233.5709</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1502	0.1147	1.2093	2.2400e-003	0.2012	1.8400e-003	0.2030	0.0534	1.7000e-003	0.0551						222.5559
<b>Total</b>	<b>0.1502</b>	<b>0.1147</b>	<b>1.2093</b>	<b>2.2400e-003</b>	<b>0.2012</b>	<b>1.8400e-003</b>	<b>0.2030</b>	<b>0.0534</b>	<b>1.7000e-003</b>	<b>0.0551</b>						<b>222.5559</b>

**3.3 Grading Including Import - 2015**

**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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437							0.0000
Off-Road	6.3914	77.5003	44.8988	0.0602		3.5146	3.5146		3.2334	3.2334							6,370.8694
<b>Total</b>	<b>6.3914</b>	<b>77.5003</b>	<b>44.8988</b>	<b>0.0602</b>	<b>6.2837</b>	<b>3.5146</b>	<b>9.7983</b>	<b>3.3437</b>	<b>3.2334</b>	<b>6.5772</b>							<b>6,370.8694</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
Vendor	0.0135	0.2972	0.0946	5.1000e-004	0.0128	3.5500e-003	0.0164	3.6900e-003	3.4000e-003	7.0800e-003							54.5839
Worker	0.0334	0.0255	0.2687	5.0000e-004	0.0447	4.1000e-004	0.0451	0.0119	3.8000e-004	0.0122							49.4569
<b>Total</b>	<b>0.0469</b>	<b>0.3227</b>	<b>0.3634</b>	<b>1.0100e-003</b>	<b>0.0575</b>	<b>3.9600e-003</b>	<b>0.0615</b>	<b>0.0156</b>	<b>3.7800e-003</b>	<b>0.0193</b>							<b>104.0408</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
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Category	lb/day										lb/day					
Fugitive Dust					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437						0.0000
Off-Road	6.3914	77.5003	44.8988	0.0602		3.5146	3.5146		3.2334	3.2334						6,370.8694
<b>Total</b>	<b>6.3914</b>	<b>77.5003</b>	<b>44.8988</b>	<b>0.0602</b>	<b>6.2837</b>	<b>3.5146</b>	<b>9.7983</b>	<b>3.3437</b>	<b>3.2334</b>	<b>6.5772</b>						<b>6,370.8694</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
Vendor	0.0135	0.2972	0.0946	5.1000e-004	0.0128	3.5500e-003	0.0164	3.6900e-003	3.4000e-003	7.0800e-003						54.5839
Worker	0.0334	0.0255	0.2687	5.0000e-004	0.0447	4.1000e-004	0.0451	0.0119	3.8000e-004	0.0122						49.4569
<b>Total</b>	<b>0.0469</b>	<b>0.3227</b>	<b>0.3634</b>	<b>1.0100e-003</b>	<b>0.0575</b>	<b>3.9600e-003</b>	<b>0.0615</b>	<b>0.0156</b>	<b>3.7800e-003</b>	<b>0.0193</b>						<b>104.0408</b>

**3.3 Grading Including Import - 2016**

**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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437						0.0000
Off-Road	6.1795	74.1062	43.1952	0.0602		3.3531	3.3531		3.0848	3.0848						6,301.8602
<b>Total</b>	<b>6.1795</b>	<b>74.1062</b>	<b>43.1952</b>	<b>0.0602</b>	<b>6.2837</b>	<b>3.3531</b>	<b>9.6368</b>	<b>3.3437</b>	<b>3.0848</b>	<b>6.4285</b>						<b>6,301.8602</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
Vendor	0.0118	0.2787	0.0837	5.1000e-004	0.0128	2.9800e-003	0.0158	3.6900e-003	2.8500e-003	6.5400e-003						54.5502
Worker	0.0297	0.0223	0.2364	4.8000e-004	0.0447	3.9000e-004	0.0451	0.0119	3.6000e-004	0.0122						48.2404
<b>Total</b>	<b>0.0415</b>	<b>0.3010</b>	<b>0.3201</b>	<b>9.9000e-004</b>	<b>0.0575</b>	<b>3.3700e-003</b>	<b>0.0609</b>	<b>0.0156</b>	<b>3.2100e-003</b>	<b>0.0188</b>						<b>102.7907</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					6.2837	0.0000	6.2837	3.3437	0.0000	3.3437						0.0000
Off-Road	6.1795	74.1062	43.1952	0.0602		3.3531	3.3531		3.0848	3.0848						6,301.8602
<b>Total</b>	<b>6.1795</b>	<b>74.1062</b>	<b>43.1952</b>	<b>0.0602</b>	<b>6.2837</b>	<b>3.3531</b>	<b>9.6368</b>	<b>3.3437</b>	<b>3.0848</b>	<b>6.4285</b>						<b>6,301.8602</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
Vendor	0.0118	0.2787	0.0837	5.1000e-004	0.0128	2.9800e-003	0.0158	3.6900e-003	2.8500e-003	6.5400e-003						54.5502
Worker	0.0297	0.0223	0.2364	4.8000e-004	0.0447	3.9000e-004	0.0451	0.0119	3.6000e-004	0.0122						48.2404
<b>Total</b>	<b>0.0415</b>	<b>0.3010</b>	<b>0.3201</b>	<b>9.9000e-004</b>	<b>0.0575</b>	<b>3.3700e-003</b>	<b>0.0609</b>	<b>0.0156</b>	<b>3.2100e-003</b>	<b>0.0188</b>						<b>102.7907</b>

### 3.4 Finish Grading - 2016

#### 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					6.9368	0.0000	6.9368	3.4090	0.0000	3.4090						0.0000
Off-Road	7.4423	93.1416	51.5477	0.0758		3.8216	3.8216		3.5159	3.5159						7,931.8295
<b>Total</b>	<b>7.4423</b>	<b>93.1416</b>	<b>51.5477</b>	<b>0.0758</b>	<b>6.9368</b>	<b>3.8216</b>	<b>10.7584</b>	<b>3.4090</b>	<b>3.5159</b>	<b>6.9249</b>						<b>7,931.8295</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000



Worker	0.1113	0.0836	0.8866	1.8200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3400e-003	0.0458							180.9015
<b>Total</b>	<b>0.1113</b>	<b>0.0836</b>	<b>0.8866</b>	<b>1.8200e-003</b>	<b>0.1677</b>	<b>1.4500e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.3400e-003</b>	<b>0.0458</b>							<b>180.9015</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					6.9368	0.0000	6.9368	3.4090	0.0000	3.4090							0.0000
Off-Road	7.4423	93.1416	51.5477	0.0758		3.8216	3.8216		3.5159	3.5159							7,931.8295
<b>Total</b>	<b>7.4423</b>	<b>93.1416</b>	<b>51.5477</b>	<b>0.0758</b>	<b>6.9368</b>	<b>3.8216</b>	<b>10.7584</b>	<b>3.4090</b>	<b>3.5159</b>	<b>6.9249</b>							<b>7,931.8295</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1113	0.0836	0.8866	1.8200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3400e-003	0.0458						180.9015
<b>Total</b>	<b>0.1113</b>	<b>0.0836</b>	<b>0.8866</b>	<b>1.8200e-003</b>	<b>0.1677</b>	<b>1.4500e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.3400e-003</b>	<b>0.0458</b>						<b>180.9015</b>

**3.5 Landscaping - 2016**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2951	0.0000	0.2951	0.0319	0.0000	0.0319						0.0000
Off-Road	0.3406	3.2551	2.4126	3.1100e-003		0.2506	0.2506		0.2306	0.2306						326.1181
<b>Total</b>	<b>0.3406</b>	<b>3.2551</b>	<b>2.4126</b>	<b>3.1100e-003</b>	<b>0.2951</b>	<b>0.2506</b>	<b>0.5457</b>	<b>0.0319</b>	<b>0.2306</b>	<b>0.2624</b>						<b>326.1181</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1484	0.1114	1.1821	2.4200e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611						241.2020
<b>Total</b>	<b>0.1484</b>	<b>0.1114</b>	<b>1.1821</b>	<b>2.4200e-003</b>	<b>0.2236</b>	<b>1.9300e-003</b>	<b>0.2255</b>	<b>0.0593</b>	<b>1.7800e-003</b>	<b>0.0611</b>						<b>241.2020</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					



**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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1113	0.0836	0.8866	1.8200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3400e-003	0.0458						180.9015
<b>Total</b>	<b>0.1113</b>	<b>0.0836</b>	<b>0.8866</b>	<b>1.8200e-003</b>	<b>0.1677</b>	<b>1.4500e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.3400e-003</b>	<b>0.0458</b>						<b>180.9015</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2951	0.0000	0.2951	0.0319	0.0000	0.0319						0.0000
Off-Road	0.3406	3.2551	2.4126	3.1100e-003		0.2506	0.2506		0.2306	0.2306						326.1181
<b>Total</b>	<b>0.3406</b>	<b>3.2551</b>	<b>2.4126</b>	<b>3.1100e-003</b>	<b>0.2951</b>	<b>0.2506</b>	<b>0.5457</b>	<b>0.0319</b>	<b>0.2306</b>	<b>0.2624</b>						<b>326.1181</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
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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
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
Worker	0.1113	0.0836	0.8866	1.8200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3400e-003	0.0458							180.9015
<b>Total</b>	<b>0.1113</b>	<b>0.0836</b>	<b>0.8866</b>	<b>1.8200e-003</b>	<b>0.1677</b>	<b>1.4500e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.3400e-003</b>	<b>0.0458</b>							<b>180.9015</b>

### 3.7 Solar Panel Installation - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3406	3.2551	2.4126	3.1100e-003		0.2506	0.2506		0.2306	0.2306						326.1181
<b>Total</b>	<b>0.3406</b>	<b>3.2551</b>	<b>2.4126</b>	<b>3.1100e-003</b>		<b>0.2506</b>	<b>0.2506</b>		<b>0.2306</b>	<b>0.2306</b>						<b>326.1181</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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.1410	0.1059	1.1230	2.3000e-003	0.3970	1.8300e-003	0.3988	0.1016	1.6900e-003	0.1033						229.1419

<b>Total</b>	<b>0.1410</b>	<b>0.1059</b>	<b>1.1230</b>	<b>2.3000e-003</b>	<b>0.3970</b>	<b>1.8300e-003</b>	<b>0.3988</b>	<b>0.1016</b>	<b>1.6900e-003</b>	<b>0.1033</b>						<b>229.1419</b>
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**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	
<b>Category</b>	<b>lb/day</b>										<b>lb/day</b>						
Off-Road	0.3406	3.2551	2.4126	3.1100e-003		0.2506	0.2506		0.2306	0.2306							326.1181
<b>Total</b>	<b>0.3406</b>	<b>3.2551</b>	<b>2.4126</b>	<b>3.1100e-003</b>		<b>0.2506</b>	<b>0.2506</b>		<b>0.2306</b>	<b>0.2306</b>							<b>326.1181</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	
<b>Category</b>	<b>lb/day</b>										<b>lb/day</b>						
Hauling	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
Worker	0.1410	0.1059	1.1230	2.3000e-003	0.3970	1.8300e-003	0.3988	0.1016	1.6900e-003	0.1033							229.1419
<b>Total</b>	<b>0.1410</b>	<b>0.1059</b>	<b>1.1230</b>	<b>2.3000e-003</b>	<b>0.3970</b>	<b>1.8300e-003</b>	<b>0.3988</b>	<b>0.1016</b>	<b>1.6900e-003</b>	<b>0.1033</b>							<b>229.1419</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	0.2057	1.0859	2.9760	8.4800e-003	0.6564	0.0117	0.6682	0.1757	0.0111	0.1868						860.5973
Unmitigated	0.2057	1.0859	2.9760	8.4800e-003	0.6564	0.0117	0.6682	0.1757	0.0111	0.1868						860.5973

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	69.70	13.20	6.80	233,117	233,117
Total	69.70	13.20	6.80	233,117	233,117

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

#### 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003						58.8813
NaturalGas Unmitigated	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003						58.8813

## 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					
General Light Industry	497.534	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003						58.8813
<b>Total</b>		<b>5.3700e-003</b>	<b>0.0488</b>	<b>0.0410</b>	<b>2.9000e-004</b>		<b>3.7100e-003</b>	<b>3.7100e-003</b>		<b>3.7100e-003</b>	<b>3.7100e-003</b>						<b>58.8813</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					





Total	0.2235	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000							2.3400e-003
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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	lb/day										lb/day						
Architectural Coating	0.0254					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.1980					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000							2.3400e-003
<b>Total</b>	<b>0.2235</b>	<b>1.0000e-005</b>	<b>1.0400e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>							<b>2.3400e-003</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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