

Appendix D

California Emissions Estimator Model (CalEEMod) Assumptions, Methodology, and Results

This appendix contains the assumptions, methodology, and results of the California Emissions Estimator Model (CalEEMod) runs conducted for the Fremont Weir Adult Fish Passage (FWAFP) Modification Project.

1. Methods

CalEEMod version 2013.2.2 was used to quantify potential criteria pollutant emissions from construction, long-term operation, and maintenance of the FWAFP Project. The following pollutants were included in the model runs: reactive organic gasses (ROG), nitrogen oxides (NOx), Carbon monoxide (CO), sulfur dioxide (SO2), particulate matter 10um (PM 10), particulate matter 2.5um (PM 2.5), fugitive PM 10 um (PM 10), fugitive PM 2.5um (PM2.5), biogenic carbon dioxide (CO2), non-biogenic carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), CO2 equivalent GHGs (CO2e).

The estimated amount of material that would be imported and exported and the anticipated equipment list, equipment usage hours, worker days, and travel distance that was provided by DWR’s Division of Engineering (DOE) on May 12, 2016, for the greenhouse gas analysis was also used for this air quality analysis.

1.1 Land Use

‘Recreational’ was selected as the most appropriate land use type to represent the FWAFP Project. The total project area was used for the Lot Acreage value.

1.2 Construction

1.2.1 Construction Phases and Off-Road Equipment List

Table 1 contains the construction phases and equipment list used in the CalEEMod model run. CalEEMod contains default equipment lists for each construction phase. The default equipment that would not apply to the FWAFP Project was included in the model run, but the Unit Amount value was set to zero. The CalEEMod default Horsepower and Load Factor values were not changed. All other input fields were left on default settings.

Table 1. Construction phases, duration, and anticipated equipment that would be used for the FWAFP Project.

Phase Description	Phase Type	Days	Equipment	Maximum per day
Phase 1	Demolition	6	Concrete/industrial saw	1
		6	Air compressor	6
Phase 2	Site Prep	7	Crane	2
Phase 3	Grading	10	Grader	2
		10	Roller	2
		10	Excavator	2
Phase 4	Grading	40	Dozer	2
		40	Excavator	2
Phase 5	Grading	45	Tractor	2
Phase 6	Building	75	Generator	5

1.2.2 Material Movement

Table 2 contains the estimated amount of material that would be imported and exported during each phase of construction.

Table 2. Estimated material that would be imported and exported during construction of the FWAFP Project.

Construction Phase Name	Material Imported (cubic yards)	Material Exported (cubic yards)
Phase 2	11,5000	0
Phase 3	0	12,000
Phase 4	0	13,000

1.2.3 Demolition

An estimated 20 tons of debris would be removed during the demolition phase of project construction (Phase 1).

1.2.4 Trips and Vehicle Miles Traveled

It was estimated that there would be 30 workers per day and 3 supervisor trucks per day that would travel 30 miles one-way to reach the proposed project location during construction. Worker trips and supervisor trips were included in the building phase of construction (Phase 6). It was estimated that there would be five water trucks during construction and that each water truck would drive on-site an estimated 2 miles per day. The number of water trucks and distance traveled were included as vendor trips in the building phase of construction (Phase 6).

It was estimated that disposal and delivery of materials would require 2,918 truck trips and that material would be hauled 25 miles one way. Trips were distributed between construction phases 2, 3, and 4.

Model input for Phase 1 of construction did not include any estimated vehicle trips.

1.2.5 On-Road Fugitive Dust

The Yolo Bypass east side levee road is gravel and the existing access road along the north side of Fremont Weir is dirt. These roads were considered part of the project area since they would be watered along with the exposed soil areas.

1.2.6 Architectural Coatings

Architectural coatings were not included in the model.

1.3 Operational Mobile

Operations and maintenance of the FWAFP Project were included in the operational portion of CalEEMod. Only vehicle trips and road dust generated from operations and maintenance of the project

were included in the model. The Area, Energy, Water and Wastewater, and Solid Waste screens were left blank because they do not apply to the FWAFP Project.

1.3.1 Vehicle Trips

It was assumed that the Fremont Weir fish passage structure would be operated 2 times every year. Each operation event would require 2 trips (one to open the fish passage structure gates and one to close the gates). It was assumed that the fish passage structure and channels would be inspected for debris once per year and that debris would need to be removed every year. It was assumed that agricultural road crossing 2 would require operation 5 times per year; each operation would require 2 trips. In total, operations and maintenance would require 16 trips per year. The trip length was estimated to be 27 miles. The weekday trip rate was calculated as:

$$\text{weekday trip rate} = 16 \text{ trips} / 260 \text{ weekdays per year} = 0.1 \text{ trips/weekday}$$

These vehicles trips were represented in the model as the residential trip type 'home-work'. Because this was the only trip type included in the model, the Primary Trip % and Residential H-W % values were both set to 100%.

1.3.2 Vehicle Emissions

The default vehicle emissions were not changed.

1.3.3 Road Dust

The default value of 94% paved road was used for calculating operational road dust.

1.3.4 Off-Road Equipment

It was assumed that maintenance would be completed by operating one excavator, one loader, one dozer, and one dump truck for eight hours per day for 3 days every year.

1.4 Vegetation

Acres of potential impacts to grassland and forest habitat were estimated through GIS analysis. Acres of potential impacts to wetlands were based on the draft wetland delineation report (California Department of Water Resources 2016). No new trees would be planted as part of the project, so the Sequestration screen was left blank.

1.4.1 Land use change

Table 3 shows the change in acres of the vegetation land use types used for model input.

Table 3. Land use changes for the FWAFP.

Vegetation Land Use Type	Initial Acres	Final Acres	Source of Information
Wetlands	1.51	1.05	Initial acres based on draft wetland delineation report ¹ ; final acres based on GIS analysis conducted on 1/25/2017
Riparian Forest	11.13	7.59	Initial and final acres based on GIS analysis conducted on 6/3/2016 and 1/17/2017
Grassland	37.46	35.63	Initial and final acres based on GIS analysis conducted on 6/3/2016 and 1/17/2017

¹ California Department of Water Resources 2016

1.5 Mitigation

Mitigation measures for the traffic, area, energy, water, and solid waste general emission category types were not included in the model. Mitigation measures included in the model for the construction general emission category type are described below.

1.5.1 Construction Mitigation

Mitigation measures for off-road equipment were not included in the model.

Disturbed areas would be restored or planted upon project completion. It was assumed that this would result in a 75% reduction of fugitive dust. Exposed areas would be watered 2 times daily. In addition, unpaved roads adjacent to the project area could be watered. Unpaved road mitigation was applied and it was assumed the moisture content would be 7.9% (the default moisture content value for bulldozing work in the Construction/Dust From Material Movement screen). A 15mph speed limit on unpaved roads adjacent to the project area would be implemented.

Literature Cited

California Department of Water Resources. 2016. Delineation of Aquatic Resources and Preliminary Jurisdictional Determination. Fremont Weir Adult Fish Passage Modification Project. September 30. 107 pp.

FWAFP Run1
Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	3.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	55
Climate Zone	2			Operational Year	2017
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total project area is 3 acres

Construction Phase - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Trips and VMT - DOE estimates 5/12/2016

On-road Fugitive Dust - Vendor trips in Phase 6 are the water trucks; they would only be driving on unpaved roads on the project site.

Demolition -

Grading - DOE estimated 5/12/2016

Vehicle Trips - weekday trip rate = 26 trips/ 260 weekdays per year = 0.1 trips/weekday

Road Dust -

Land Use Change - Initial acres from draft wetland delineation report and project description as of 6/3/2016; EO estimated final acres for input

Construction Off-road Equipment Mitigation - Disturbed areas will be restored/planted upon project completion. The adjacent roads can be watered along with the exposed areas; it was assumed this would result in a 7.9% moisture content (default bulldozing moisture content).

Operational Off-Road Equipment - Estimates 6/3/2016, updated estimates 12/13/2016

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	75.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	6.00	45.00
tblConstructionPhase	NumDays	3.00	7.00
tblConstructionPhase	PhaseEndDate	8/21/2017	8/11/2017

tblConstructionPhase	PhaseEndDate	8/22/2017	5/17/2017
tblConstructionPhase	PhaseStartDate	5/9/2017	5/1/2017
tblConstructionPhase	PhaseStartDate	8/12/2017	5/9/2017
tblGrading	AcresOfGrading	10.00	15.00
tblGrading	MaterialExported	0.00	12,000.00
tblGrading	MaterialExported	0.00	13,000.00
tblGrading	MaterialImported	0.00	11,500.00
tblLandUse	LotAcreage	0.00	3.00
tblOffRoadEquipment	HorsePower	78.00	255.00
tblOffRoadEquipment	HorsePower	80.00	162.00
tblOffRoadEquipment	LoadFactor	0.48	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOnRoadDust	HaulingPercentPave	94.00	0.00
tblOnRoadDust	HaulingPercentPave	94.00	0.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00

tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperHorsePower	16.00	400.00
tblOperationalOffRoadEquipment	OperHorsePower	255.00	400.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.40	0.38
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00

tblTripsAndVMT	HaulingTripNumber	2.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,438.00	834.00
tblTripsAndVMT	HaulingTripNumber	1,500.00	694.00
tblTripsAndVMT	HaulingTripNumber	1,625.00	694.00
tblTripsAndVMT	HaulingTripNumber	0.00	696.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	2.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	0.00	66.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	HW_TL	0.00	30.00
tblVehicleTrips	HW_TTP	0.00	100.00

tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.10

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	8.1786	77.7724	67.2416	0.1746	92.5787	3.6827	95.2913	12.1578	3.5081	15.2307	0.0000	16,835.24 23	16,835.24 23	1.4246	0.0000	16,865.15 93
Total	8.1786	77.7724	67.2416	0.1746	92.5787	3.6827	95.2913	12.1578	3.5081	15.2307	0.0000	16,835.24 23	16,835.24 23	1.4246	0.0000	16,865.15 93

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	8.1786	77.7724	67.2416	0.1746	35.0746	3.6827	37.7872	4.1899	3.5081	6.8054	0.0000	16,835.24 23	16,835.24 23	1.4246	0.0000	16,865.15 93
Total	8.1786	77.7724	67.2416	0.1746	35.0746	3.6827	37.7872	4.1899	3.5081	6.8054	0.0000	16,835.24 23	16,835.24 23	1.4246	0.0000	16,865.15 93

	ROG	NOx	CO	SO2	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	62.11	0.00	60.35	65.54	0.00	55.32	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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	9.4000e-004	4.3000e-003	0.0155	4.0000e-005	0.1362	7.0000e-005	0.1363	0.0139	6.0000e-005	0.0140		3.2846	3.2846	1.2000e-004		3.2870
Offroad	2.6070	29.6842	20.0251	0.0247		1.3156	1.3156		1.2103	1.2103		2,523.9925	2,523.9925	0.7734		2,540.2327
Total	2.6079	29.6885	20.0406	0.0247	0.1362	1.3156	1.4518	0.0139	1.2104	1.2243		2,527.2773	2,527.2773	0.7735	0.0000	2,543.5200

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	9.4000e-004	4.3000e-003	0.0155	4.0000e-005	0.1362	7.0000e-005	0.1363	0.0139	6.0000e-005	0.0140		3.2846	3.2846	1.2000e-004		3.2870
Offroad	2.6070	29.6842	20.0251	0.0247		1.3156	1.3156		1.2103	1.2103		2,523.9925	2,523.9925	0.7734		2,540.2327
Total	2.6079	29.6885	20.0406	0.0247	0.1362	1.3156	1.4518	0.0139	1.2104	1.2243		2,527.2773	2,527.2773	0.7735	0.0000	2,543.5200

	ROG	NOx	CO	SO2	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	99.96	99.99	99.92	99.84	0.00	99.99	90.61	0.00	100.00	98.86	0.00	99.87	99.87	99.98	0.00	99.87

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Demolition	5/1/2017	5/8/2017	5	6	
2	Phase 6	Building Construction	5/1/2017	8/11/2017	5	75	
3	Phase 2	Site Preparation	5/9/2017	5/17/2017	5	7	
4	Phase 3	Grading	5/18/2017	5/31/2017	5	10	
5	Phase 4	Grading	6/1/2017	7/26/2017	5	40	
6	Phase 5	Grading	7/27/2017	9/27/2017	5	45	

Acres of Grading (Site Preparation Phase): 0

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
Phase 1	Air Compressors	6	8.00	255	0.40
Phase 1	Concrete/Industrial Saws	1	8.00	81	0.73
Phase 1	Excavators	0	0.00	162	0.38
Phase 1	Rubber Tired Dozers	0	0.00	255	0.40
Phase 6	Air Compressors	0	0.00	78	0.48
Phase 6	Cranes	0	0.00	226	0.29
Phase 6	Forklifts	0	0.00	89	0.20
Phase 6	Generator Sets	5	8.00	84	0.74
Phase 6	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 6	Welders	0	0.00	46	0.45
Phase 2	Cranes	2	8.00	226	0.29
Phase 2	Rubber Tired Dozers	0	0.00	255	0.40

Phase 2	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 3	Excavators	2	8.00	162	0.38
Phase 3	Graders	2	8.00	174	0.41
Phase 3	Rollers	2	8.00	162	0.38
Phase 3	Rubber Tired Dozers	0	0.00	255	0.40
Phase 3	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 4	Cranes	0	0.00	226	0.29
Phase 4	Excavators	2	8.00	162	0.38
Phase 4	Forklifts	0	0.00	89	0.20
Phase 4	Generator Sets	0	0.00	84	0.74
Phase 4	Graders	0	0.00	174	0.41
Phase 4	Rubber Tired Dozers	2	8.00	255	0.40
Phase 4	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 4	Welders	0	0.00	46	0.45
Phase 5	Cement and Mortar Mixers	0	0.00	9	0.56
Phase 5	Excavators	0	0.00	162	0.38
Phase 5	Graders	0	0.00	174	0.41
Phase 5	Pavers	0	0.00	125	0.42
Phase 5	Paving Equipment	0	0.00	130	0.36
Phase 5	Rollers	0	0.00	80	0.38
Phase 5	Rubber Tired Dozers	0	0.00	255	0.40
Phase 5	Tractors/Loaders/Backhoes	2	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
Phase 1	7	0.00	0.00	0.00	0.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Phase 6	5	66.00	5.00	0.00	30.00	2.00	0.00	LD_Mix	HDT_Mix	HHDT
Phase 2	2	0.00	0.00	834.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT
Phase 3	6	0.00	0.00	694.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT
Phase 4	4	0.00	0.00	694.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT
Phase 5	2	5.00	0.00	696.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Phase 1 - 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					0.0836	0.0000	0.0836	0.0127	0.0000	0.0127			0.0000			0.0000
Off-Road	4.0457	33.9982	15.8706	0.0602		1.2996	1.2996		1.2996	1.2996		6,726.788 8	6,726.788 8	0.3652		6,734.457 2
Total	4.0457	33.9982	15.8706	0.0602	0.0836	1.2996	1.3832	0.0127	1.2996	1.3123		6,726.788 8	6,726.788 8	0.3652		6,734.457 2

3.2 Phase 1 - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

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					9.4000e-003	0.0000	9.4000e-003	1.4200e-003	0.0000	1.4200e-003			0.0000			0.0000
Off-Road	4.0457	33.9982	15.8706	0.0602		1.2996	1.2996		1.2996	1.2996	0.0000	6,726.7888	6,726.7888	0.3652		6,734.4572
Total	4.0457	33.9982	15.8706	0.0602	9.4000e-003	1.2996	1.3090	1.4200e-003	1.2996	1.3011	0.0000	6,726.7888	6,726.7888	0.3652		6,734.4572

3.2 Phase 1 - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

3.3 Phase 6 - 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	2.8504	22.3210	18.8676	0.0329		1.5020	1.5020		1.5020	1.5020		3,115.1728	3,115.1728	0.2522			3,120.4680
Total	2.8504	22.3210	18.8676	0.0329		1.5020	1.5020		1.5020	1.5020		3,115.1728	3,115.1728	0.2522			3,120.4680

3.3 Phase 6 - 2017

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	0.0443	0.1837	0.5310	4.0000e-004	14.7205	2.0600e-003	14.7226	1.4696	1.8900e-003	1.4715		38.8687	38.8687	3.7000e-004			38.8766
Worker	0.3621	0.7072	8.5589	0.0195	30.6332	9.9600e-003	30.6432	3.3035	9.1700e-003	3.3127		1,552.9935	1,552.9935	0.0759			1,554.5873
Total	0.4064	0.8909	9.0899	0.0199	45.3537	0.0120	45.3657	4.7731	0.0111	4.7842		1,591.8623	1,591.8623	0.0763			1,593.4639

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	2.8504	22.3210	18.8676	0.0329		1.5020	1.5020		1.5020	1.5020	0.0000	3,115.1728	3,115.1728	0.2522			3,120.4680
Total	2.8504	22.3210	18.8676	0.0329		1.5020	1.5020		1.5020	1.5020	0.0000	3,115.1728	3,115.1728	0.2522			3,120.4680

3.3 Phase 6 - 2017

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	0.0443	0.1837	0.5310	4.0000e-004	5.1899	2.0600e-003	5.1919	0.5165	1.8900e-003	0.5184		38.8687	38.8687	3.7000e-004		38.8766
Worker	0.3621	0.7072	8.5589	0.0195	11.7625	9.9600e-003	11.7725	1.4165	9.1700e-003	1.4256		1,552.9935	1,552.9935	0.0759		1,554.5873
Total	0.4064	0.8909	9.0899	0.0199	16.9524	0.0120	16.9644	1.9330	0.0111	1.9440		1,591.8623	1,591.8623	0.0763		1,593.4639

3.4 Phase 2 - 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					0.8056	0.0000	0.8056	0.1220	0.0000	0.1220			0.0000			0.0000
Off-Road	1.2960	15.3860	5.5127	0.0113		0.6859	0.6859		0.6311	0.6311		1,154.4760	1,154.4760	0.3537		1,161.9043
Total	1.2960	15.3860	5.5127	0.0113	0.8056	0.6859	1.4916	0.1220	0.6311	0.7531		1,154.4760	1,154.4760	0.3537		1,161.9043

3.4 Phase 2 - 2017

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	2.7653	32.3304	27.9717	0.1106	46.4194	0.5127	46.9321	5.0820	0.4715	5.5535		10,973.73 12	10,973.73 12	0.0730		10,975.26 42
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	2.7653	32.3304	27.9717	0.1106	46.4194	0.5127	46.9321	5.0820	0.4715	5.5535		10,973.73 12	10,973.73 12	0.0730		10,975.26 42

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					0.0906	0.0000	0.0906	0.0137	0.0000	0.0137			0.0000			0.0000
Off-Road	1.2960	15.3860	5.5127	0.0113		0.6859	0.6859		0.6311	0.6311	0.0000	1,154.476 0	1,154.476 0	0.3537		1,161.904 3
Total	1.2960	15.3860	5.5127	0.0113	0.0906	0.6859	0.7766	0.0137	0.6311	0.6448	0.0000	1,154.476 0	1,154.476 0	0.3537		1,161.904 3

3.4 Phase 2 - 2017

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	2.7653	32.3304	27.9717	0.1106	18.0316	0.5127	18.5443	2.2432	0.4715	2.7147		10,973.73 12	10,973.73 12	0.0730		10,975.26 42
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	2.7653	32.3304	27.9717	0.1106	18.0316	0.5127	18.5443	2.2432	0.4715	2.7147		10,973.73 12	10,973.73 12	0.0730		10,975.26 42

3.5 Phase 3 - 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					2.1792	0.0000	2.1792	0.2609	0.0000	0.2609			0.0000			0.0000
Off-Road	3.3111	35.7283	22.9908	0.0336		1.8701	1.8701		1.7205	1.7205		3,438.917 9	3,438.917 9	1.0537		3,461.045 2
Total	3.3111	35.7283	22.9908	0.0336	2.1792	1.8701	4.0493	0.2609	1.7205	1.9814		3,438.917 9	3,438.917 9	1.0537		3,461.045 2

3.5 Phase 3 - 2017

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	1.6108	18.8323	16.2933	0.0644	27.0390	0.2986	27.3376	2.9602	0.2746	3.2349		6,392.1326	6,392.1326	0.0425		6,393.0256
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.6108	18.8323	16.2933	0.0644	27.0390	0.2986	27.3376	2.9602	0.2746	3.2349		6,392.1326	6,392.1326	0.0425		6,393.0256

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					0.2452	0.0000	0.2452	0.0294	0.0000	0.0294			0.0000			0.0000
Off-Road	3.3111	35.7283	22.9908	0.0336		1.8701	1.8701		1.7205	1.7205	0.0000	3,438.9179	3,438.9179	1.0537		3,461.0452
Total	3.3111	35.7283	22.9908	0.0336	0.2452	1.8701	2.1153	0.0294	1.7205	1.7498	0.0000	3,438.9179	3,438.9179	1.0537		3,461.0452

3.5 Phase 3 - 2017

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	1.6108	18.8323	16.2933	0.0644	10.5033	0.2986	10.8019	1.3066	0.2746	1.5813		6,392.1326	6,392.1326	0.0425		6,393.0256
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.6108	18.8323	16.2933	0.0644	10.5033	0.2986	10.8019	1.3066	0.2746	1.5813		6,392.1326	6,392.1326	0.0425		6,393.0256

3.6 Phase 4 - 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					12.2036	0.0000	12.2036	6.6446	0.0000	6.6446			0.0000			0.0000
Off-Road	3.1051	34.4190	26.7232	0.0284		1.6210	1.6210		1.4913	1.4913		2,902.5410	2,902.5410	0.8893		2,921.2170
Total	3.1051	34.4190	26.7232	0.0284	12.2036	1.6210	13.8245	6.6446	1.4913	8.1359		2,902.5410	2,902.5410	0.8893		2,921.2170

3.6 Phase 4 - 2017

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	0.4027	4.7081	4.0733	0.0161	6.7598	0.0747	6.8344	0.7401	0.0687	0.8087		1,598.033 2	1,598.033 2	0.0106		1,598.256 4
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.4027	4.7081	4.0733	0.0161	6.7598	0.0747	6.8344	0.7401	0.0687	0.8087		1,598.033 2	1,598.033 2	0.0106		1,598.256 4

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					1.3729	0.0000	1.3729	0.7475	0.0000	0.7475			0.0000			0.0000
Off-Road	3.1051	34.4190	26.7232	0.0284		1.6210	1.6210		1.4913	1.4913	0.0000	2,902.541 0	2,902.541 0	0.8893		2,921.217 0
Total	3.1051	34.4190	26.7232	0.0284	1.3729	1.6210	2.9939	0.7475	1.4913	2.2388	0.0000	2,902.541 0	2,902.541 0	0.8893		2,921.217 0

3.6 Phase 4 - 2017

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	0.4027	4.7081	4.0733	0.0161	2.6258	0.0747	2.7005	0.3267	0.0687	0.3953		1,598.033 2	1,598.033 2	0.0106		1,598.256 4
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.4027	4.7081	4.0733	0.0161	2.6258	0.0747	2.7005	0.3267	0.0687	0.3953		1,598.033 2	1,598.033 2	0.0106		1,598.256 4

3.7 Phase 5 - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6336	6.0877	4.7877	6.2200e-003		0.4578	0.4578		0.4212	0.4212		636.5299	636.5299	0.1950		640.6256
Total	0.6336	6.0877	4.7877	6.2200e-003	0.0000	0.4578	0.4578	0.0000	0.4212	0.4212		636.5299	636.5299	0.1950		640.6256

3.7 Phase 5 - 2017

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	0.3590	4.1970	3.6312	0.0144	6.0260	0.0666	6.0925	0.6597	0.0612	0.7209		1,424.5675	1,424.5675	9.4800e-003		1,424.7665
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	0.0130	2.5400e-003	0.0304	1.0000e-005	5.0000e-005	4.0000e-005	9.0000e-005	2.0000e-005	4.0000e-005	6.0000e-005		1.1439	1.1439	1.7000e-004		1.1475
Total	0.3720	4.1996	3.6616	0.0144	6.0260	0.0666	6.0926	0.6597	0.0613	0.7210		1,425.7114	1,425.7114	9.6500e-003		1,425.9140

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6336	6.0877	4.7877	6.2200e-003		0.4578	0.4578		0.4212	0.4212	0.0000	636.5299	636.5299	0.1950		640.6256
Total	0.6336	6.0877	4.7877	6.2200e-003	0.0000	0.4578	0.4578	0.0000	0.4212	0.4212	0.0000	636.5299	636.5299	0.1950		640.6256

3.7 Phase 5 - 2017

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	0.3590	4.1970	3.6312	0.0144	2.3408	0.0666	2.4074	0.2912	0.0612	0.3524		1,424.5675	1,424.5675	9.4800e-003		1,424.7665
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	0.0130	2.5400e-003	0.0304	1.0000e-005	5.0000e-005	4.0000e-005	9.0000e-005	2.0000e-005	4.0000e-005	6.0000e-005		1.1439	1.1439	1.7000e-004		1.1475
Total	0.3720	4.1996	3.6616	0.0144	2.3409	0.0666	2.4074	0.2912	0.0613	0.3525		1,425.7114	1,425.7114	9.6500e-003		1,425.9140

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	9.4000e-004	4.3000e-003	0.0155	4.0000e-005	0.1362	7.0000e-005	0.1363	0.0139	6.0000e-005	0.0140		3.2846	3.2846	1.2000e-004		3.2870
Unmitigated	9.4000e-004	4.3000e-003	0.0155	4.0000e-005	0.1362	7.0000e-005	0.1363	0.0139	6.0000e-005	0.0140		3.2846	3.2846	1.2000e-004		3.2870

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.10	0.00	0.00	780	780
Total	0.10	0.00	0.00	780	780

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
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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
Dumpers/Tenders	1	8.00	3	400	0.38	Diesel
Excavators	1	8.00	3	162	0.38	Diesel
Rubber Tired Dozers	1	8.00	3	400	0.38	Diesel
Rubber Tired Loaders	1	8.00	3	199	0.36	Diesel

UnMitigated/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
Equipment Type	lb/day										lb/day					
Excavators	0.3622	4.0169	3.4211	5.2900e-003		0.1976	0.1976		0.1818	0.1818		541.2618	541.2618	0.1658		544.7444
Rubber Tired Dozers	1.7739	19.6597	14.8134	0.0132		0.9133	0.9133		0.8402	0.8402		1,356.0914	1,356.0914	0.4155		1,364.8170
Rubber Tired Loaders	0.4709	6.0077	1.7907	6.1300e-003		0.2047	0.2047		0.1883	0.1883		626.6393	626.6393	0.1920		630.6713
Total	2.6070	29.6842	20.0251	0.0247		1.3156	1.3156		1.2103	1.2103		2,523.9925	2,523.9925	0.7733		2,540.2327

10.0 Vegetation

FWAFP Run1
Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	3.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	55
Climate Zone	2			Operational Year	2017
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total project area is 3 acres

Construction Phase - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Off-road Equipment - DOE estimated 5/12/2016

Trips and VMT - DOE estimates 5/12/2016

On-road Fugitive Dust - Vendor trips in Phase 6 are the water trucks; they would only be driving on unpaved roads on the project site.

Demolition -

Grading - DOE estimated 5/12/2016

Vehicle Trips - weekday trip rate = 26 trips/ 260 weekdays per year = 0.1 trips/weekday

Road Dust -

Land Use Change - Initial acres from draft wetland delineation report and project description as of 6/3/2016; EO estimated final acres for input

Construction Off-road Equipment Mitigation - Disturbed areas will be restored/planted upon project completion. The adjacent roads can be watered along with the exposed areas; it was assumed this would result in a 7.9% moisture content (default bulldozing moisture content).

Operational Off-Road Equipment - Estimates 6/3/2016, updated estimates 12/13/2016

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	75.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	6.00	45.00
tblConstructionPhase	NumDays	3.00	7.00
tblConstructionPhase	PhaseEndDate	8/21/2017	8/11/2017

tblConstructionPhase	PhaseEndDate	8/22/2017	5/17/2017
tblConstructionPhase	PhaseStartDate	5/9/2017	5/1/2017
tblConstructionPhase	PhaseStartDate	8/12/2017	5/9/2017
tblGrading	AcresOfGrading	10.00	15.00
tblGrading	MaterialExported	0.00	12,000.00
tblGrading	MaterialExported	0.00	13,000.00
tblGrading	MaterialImported	0.00	11,500.00
tblLandUse	LotAcreage	0.00	3.00
tblOffRoadEquipment	HorsePower	78.00	255.00
tblOffRoadEquipment	HorsePower	80.00	162.00
tblOffRoadEquipment	LoadFactor	0.48	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOnRoadDust	HaulingPercentPave	94.00	0.00
tblOnRoadDust	HaulingPercentPave	94.00	0.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00

tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	VendorPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOnRoadDust	WorkerPercentPave	94.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	3.00
tblOperationalOffRoadEquipment	OperHorsePower	16.00	400.00
tblOperationalOffRoadEquipment	OperHorsePower	255.00	400.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.40	0.38
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00

tblTripsAndVMT	HaulingTripNumber	2.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,438.00	834.00
tblTripsAndVMT	HaulingTripNumber	1,500.00	694.00
tblTripsAndVMT	HaulingTripNumber	1,625.00	694.00
tblTripsAndVMT	HaulingTripNumber	0.00	696.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	2.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	0.00	66.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	HW_TL	0.00	30.00
tblVehicleTrips	HW_TTP	0.00	100.00

tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.10

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	0.2672	2.4530	2.2567	4.3600e-003	2.1958	0.1214	2.3172	0.3424	0.1165	0.4590	0.0000	380.4392	380.4392	0.0390	0.0000	381.2583
Total	0.2672	2.4530	2.2567	4.3600e-003	2.1958	0.1214	2.3172	0.3424	0.1165	0.4590	0.0000	380.4392	380.4392	0.0390	0.0000	381.2583

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	0.2672	2.4529	2.2567	4.3600e-003	0.7670	0.1214	0.8884	0.1029	0.1165	0.2195	0.0000	380.4389	380.4389	0.0390	0.0000	381.2580
Total	0.2672	2.4529	2.2567	4.3600e-003	0.7670	0.1214	0.8884	0.1029	0.1165	0.2195	0.0000	380.4389	380.4389	0.0390	0.0000	381.2580

	ROG	NOx	CO	SO2	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	65.07	0.00	61.66	69.94	0.00	52.18	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	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.2000e-004	6.0000e-004	1.8300e-003	0.0000	0.0177	1.0000e-005	0.0177	1.8100e-003	1.0000e-005	1.8200e-003	0.0000	0.3639	0.3639	1.0000e-005	0.0000	0.3642
Offroad	3.9100e-003	0.0445	0.0300	4.0000e-005		1.9700e-003	1.9700e-003		1.8200e-003	1.8200e-003	0.0000	3.4346	3.4346	1.0500e-003	0.0000	3.4567
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.0300e-003	0.0451	0.0319	4.0000e-005	0.0177	1.9800e-003	0.0197	1.8100e-003	1.8300e-003	3.6400e-003	0.0000	3.7986	3.7986	1.0600e-003	0.0000	3.8209

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.2000e-004	6.0000e-004	1.8300e-003	0.0000	0.0177	1.0000e-005	0.0177	1.8100e-003	1.0000e-005	1.8200e-003	0.0000	0.3639	0.3639	1.0000e-005	0.0000	0.3642
Offroad	3.9100e-003	0.0445	0.0300	4.0000e-005		1.9700e-003	1.9700e-003		1.8200e-003	1.8200e-003	0.0000	3.4346	3.4346	1.0500e-003	0.0000	3.4567
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.0300e-003	0.0451	0.0319	4.0000e-005	0.0177	1.9800e-003	0.0197	1.8100e-003	1.8300e-003	3.6400e-003	0.0000	3.7986	3.7986	1.0600e-003	0.0000	3.8209

	ROG	NOx	CO	SO2	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	97.02	98.67	94.23	100.00	0.00	99.49	10.01	0.00	99.45	50.00	0.00	90.42	90.42	99.06	0.00	90.47

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-400.8273
Total	-400.8273

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Demolition	5/1/2017	5/8/2017	5	6	
2	Phase 6	Building Construction	5/1/2017	8/11/2017	5	75	
3	Phase 2	Site Preparation	5/9/2017	5/17/2017	5	7	
4	Phase 3	Grading	5/18/2017	5/31/2017	5	10	
5	Phase 4	Grading	6/1/2017	7/26/2017	5	40	
6	Phase 5	Grading	7/27/2017	9/27/2017	5	45	

Acres of Grading (Site Preparation Phase): 0

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
Phase 1	Air Compressors	6	8.00	255	0.40
Phase 1	Concrete/Industrial Saws	1	8.00	81	0.73
Phase 1	Excavators	0	0.00	162	0.38
Phase 1	Rubber Tired Dozers	0	0.00	255	0.40
Phase 6	Air Compressors	0	0.00	78	0.48
Phase 6	Cranes	0	0.00	226	0.29
Phase 6	Forklifts	0	0.00	89	0.20
Phase 6	Generator Sets	5	8.00	84	0.74
Phase 6	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 6	Welders	0	0.00	46	0.45
Phase 2	Cranes	2	8.00	226	0.29
Phase 2	Rubber Tired Dozers	0	0.00	255	0.40
Phase 2	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 3	Excavators	2	8.00	162	0.38
Phase 3	Graders	2	8.00	174	0.41
Phase 3	Rollers	2	8.00	162	0.38
Phase 3	Rubber Tired Dozers	0	0.00	255	0.40
Phase 3	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 4	Cranes	0	0.00	226	0.29
Phase 4	Excavators	2	8.00	162	0.38
Phase 4	Forklifts	0	0.00	89	0.20
Phase 4	Generator Sets	0	0.00	84	0.74
Phase 4	Graders	0	0.00	174	0.41
Phase 4	Rubber Tired Dozers	2	8.00	255	0.40

Phase 4	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Phase 4	Welders	0	0.00	46	0.45
Phase 5	Cement and Mortar Mixers	0	0.00	9	0.56
Phase 5	Excavators	0	0.00	162	0.38
Phase 5	Graders	0	0.00	174	0.41
Phase 5	Pavers	0	0.00	125	0.42
Phase 5	Paving Equipment	0	0.00	130	0.36
Phase 5	Rollers	0	0.00	80	0.38
Phase 5	Rubber Tired Dozers	0	0.00	255	0.40
Phase 5	Tractors/Loaders/Backhoes	2	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
Phase 1	7	0.00	0.00	0.00	0.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Phase 6	5	66.00	5.00	0.00	30.00	2.00	0.00	LD_Mix	HDT_Mix	HHDT
Phase 2	2	0.00	0.00	834.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT
Phase 3	6	0.00	0.00	694.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT
Phase 4	4	0.00	0.00	694.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT
Phase 5	2	5.00	0.00	696.00	0.00	0.00	25.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.3 Phase 6 - 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	0.1069	0.8370	0.7075	1.2300e-003		0.0563	0.0563		0.0563	0.0563	0.0000	105.9764	105.9764	8.5800e-003	0.0000	106.1565
Total	0.1069	0.8370	0.7075	1.2300e-003		0.0563	0.0563		0.0563	0.0563	0.0000	105.9764	105.9764	8.5800e-003	0.0000	106.1565

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9100e-003	7.1200e-003	0.0268	1.0000e-005	0.4689	8.0000e-005	0.4689	0.0468	7.0000e-005	0.0469	0.0000	1.3095	1.3095	1.0000e-005	0.0000	1.3097
Worker	0.0119	0.0298	0.2718	6.6000e-004	0.9823	3.7000e-004	0.9826	0.1070	3.4000e-004	0.1074	0.0000	48.0908	48.0908	2.5800e-003	0.0000	48.1450
Total	0.0138	0.0370	0.2986	6.7000e-004	1.4511	4.5000e-004	1.4516	0.1538	4.1000e-004	0.1542	0.0000	49.4003	49.4003	2.5900e-003	0.0000	49.4548

3.3 Phase 6 - 2017

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	0.1069	0.8370	0.7075	1.2300e-003		0.0563	0.0563		0.0563	0.0563	0.0000	105.9763	105.9763	8.5800e-003	0.0000	106.1564
Total	0.1069	0.8370	0.7075	1.2300e-003		0.0563	0.0563		0.0563	0.0563	0.0000	105.9763	105.9763	8.5800e-003	0.0000	106.1564

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9100e-003	7.1200e-003	0.0268	1.0000e-005	0.1653	8.0000e-005	0.1654	0.0165	7.0000e-005	0.0165	0.0000	1.3095	1.3095	1.0000e-005	0.0000	1.3097
Worker	0.0119	0.0298	0.2718	6.6000e-004	0.3812	3.7000e-004	0.3816	0.0469	3.4000e-004	0.0472	0.0000	48.0908	48.0908	2.5800e-003	0.0000	48.1450
Total	0.0138	0.0370	0.2986	6.7000e-004	0.5465	4.5000e-004	0.5470	0.0634	4.1000e-004	0.0638	0.0000	49.4003	49.4003	2.5900e-003	0.0000	49.4548

3.4 Phase 2 - 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					2.8200e-003	0.0000	2.8200e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5400e-003	0.0539	0.0193	4.0000e-005		2.4000e-003	2.4000e-003		2.2100e-003	2.2100e-003	0.0000	3.6656	3.6656	1.1200e-003	0.0000	3.6892
Total	4.5400e-003	0.0539	0.0193	4.0000e-005	2.8200e-003	2.4000e-003	5.2200e-003	4.3000e-004	2.2100e-003	2.6400e-003	0.0000	3.6656	3.6656	1.1200e-003	0.0000	3.6892

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	0.0105	0.1198	0.1216	3.9000e-004	0.1391	1.8000e-003	0.1409	0.0154	1.6500e-003	0.0171	0.0000	34.8156	34.8156	2.3000e-004	0.0000	34.8205
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0105	0.1198	0.1216	3.9000e-004	0.1391	1.8000e-003	0.1409	0.0154	1.6500e-003	0.0171	0.0000	34.8156	34.8156	2.3000e-004	0.0000	34.8205

3.4 Phase 2 - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5400e-003	0.0539	0.0193	4.0000e-005		2.4000e-003	2.4000e-003		2.2100e-003	2.2100e-003	0.0000	3.6656	3.6656	1.1200e-003	0.0000	3.6892
Total	4.5400e-003	0.0539	0.0193	4.0000e-005	3.2000e-004	2.4000e-003	2.7200e-003	5.0000e-005	2.2100e-003	2.2600e-003	0.0000	3.6656	3.6656	1.1200e-003	0.0000	3.6892

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	0.0105	0.1198	0.1216	3.9000e-004	0.0547	1.8000e-003	0.0565	6.9800e-003	1.6500e-003	8.6300e-003	0.0000	34.8156	34.8156	2.3000e-004	0.0000	34.8205
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0105	0.1198	0.1216	3.9000e-004	0.0547	1.8000e-003	0.0565	6.9800e-003	1.6500e-003	8.6300e-003	0.0000	34.8156	34.8156	2.3000e-004	0.0000	34.8205

3.5 Phase 3 - 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					0.0109	0.0000	0.0109	1.3000e-003	0.0000	1.3000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1786	0.1150	1.7000e-004		9.3500e-003	9.3500e-003		8.6000e-003	8.6000e-003	0.0000	15.5987	15.5987	4.7800e-003	0.0000	15.6990
Total	0.0166	0.1786	0.1150	1.7000e-004	0.0109	9.3500e-003	0.0203	1.3000e-003	8.6000e-003	9.9000e-003	0.0000	15.5987	15.5987	4.7800e-003	0.0000	15.6990

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	8.7400e-003	0.0997	0.1012	3.2000e-004	0.1157	1.4900e-003	0.1172	0.0128	1.3700e-003	0.0142	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7400e-003	0.0997	0.1012	3.2000e-004	0.1157	1.4900e-003	0.1172	0.0128	1.3700e-003	0.0142	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753

3.5 Phase 3 - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2300e-003	0.0000	1.2300e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1786	0.1150	1.7000e-004		9.3500e-003	9.3500e-003		8.6000e-003	8.6000e-003	0.0000	15.5987	15.5987	4.7800e-003	0.0000	15.6990
Total	0.0166	0.1786	0.1150	1.7000e-004	1.2300e-003	9.3500e-003	0.0106	1.5000e-004	8.6000e-003	8.7500e-003	0.0000	15.5987	15.5987	4.7800e-003	0.0000	15.6990

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	8.7400e-003	0.0997	0.1012	3.2000e-004	0.0455	1.4900e-003	0.0470	5.8100e-003	1.3700e-003	7.1800e-003	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7400e-003	0.0997	0.1012	3.2000e-004	0.0455	1.4900e-003	0.0470	5.8100e-003	1.3700e-003	7.1800e-003	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753

3.6 Phase 4 - 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					0.2441	0.0000	0.2441	0.1329	0.0000	0.1329	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0621	0.6884	0.5345	5.7000e-004		0.0324	0.0324		0.0298	0.0298	0.0000	52.6628	52.6628	0.0161	0.0000	53.0017
Total	0.0621	0.6884	0.5345	5.7000e-004	0.2441	0.0324	0.2765	0.1329	0.0298	0.1627	0.0000	52.6628	52.6628	0.0161	0.0000	53.0017

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	8.7400e-003	0.0997	0.1012	3.2000e-004	0.1157	1.4900e-003	0.1172	0.0128	1.3700e-003	0.0142	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7400e-003	0.0997	0.1012	3.2000e-004	0.1157	1.4900e-003	0.1172	0.0128	1.3700e-003	0.0142	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753

3.6 Phase 4 - 2017

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					0.0275	0.0000	0.0275	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0621	0.6884	0.5345	5.7000e-004		0.0324	0.0324		0.0298	0.0298	0.0000	52.6628	52.6628	0.0161	0.0000	53.0016
Total	0.0621	0.6884	0.5345	5.7000e-004	0.0275	0.0324	0.0599	0.0150	0.0298	0.0448	0.0000	52.6628	52.6628	0.0161	0.0000	53.0016

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	8.7400e-003	0.0997	0.1012	3.2000e-004	0.0455	1.4900e-003	0.0470	5.8100e-003	1.3700e-003	7.1800e-003	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7400e-003	0.0997	0.1012	3.2000e-004	0.0455	1.4900e-003	0.0470	5.8100e-003	1.3700e-003	7.1800e-003	0.0000	28.9713	28.9713	1.9000e-004	0.0000	28.9753

3.7 Phase 5 - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0143	0.1370	0.1077	1.4000e-004		0.0103	0.0103		9.4800e-003	9.4800e-003	0.0000	12.9926	12.9926	3.9800e-003	0.0000	13.0762
Total	0.0143	0.1370	0.1077	1.4000e-004	0.0000	0.0103	0.0103	0.0000	9.4800e-003	9.4800e-003	0.0000	12.9926	12.9926	3.9800e-003	0.0000	13.0762

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	8.7700e-003	0.1000	0.1015	3.2000e-004	0.1161	1.5000e-003	0.1176	0.0129	1.3800e-003	0.0142	0.0000	29.0547	29.0547	1.9000e-004	0.0000	29.0588
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	6.0000e-005	9.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0226	0.0226	0.0000	0.0000	0.0227
Total	9.0200e-003	0.1000	0.1024	3.2000e-004	0.1161	1.5000e-003	0.1176	0.0129	1.3800e-003	0.0142	0.0000	29.0774	29.0774	1.9000e-004	0.0000	29.0815

3.7 Phase 5 - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0143	0.1370	0.1077	1.4000e-004		0.0103	0.0103		9.4800e-003	9.4800e-003	0.0000	12.9926	12.9926	3.9800e-003	0.0000	13.0762
Total	0.0143	0.1370	0.1077	1.4000e-004	0.0000	0.0103	0.0103	0.0000	9.4800e-003	9.4800e-003	0.0000	12.9926	12.9926	3.9800e-003	0.0000	13.0762

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	8.7700e-003	0.1000	0.1015	3.2000e-004	0.0457	1.5000e-003	0.0472	5.8200e-003	1.3800e-003	7.2000e-003	0.0000	29.0547	29.0547	1.9000e-004	0.0000	29.0588
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	6.0000e-005	9.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0226	0.0226	0.0000	0.0000	0.0227
Total	9.0200e-003	0.1000	0.1024	3.2000e-004	0.0457	1.5000e-003	0.0472	5.8200e-003	1.3800e-003	7.2000e-003	0.0000	29.0774	29.0774	1.9000e-004	0.0000	29.0815

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	1.2000e-004	6.0000e-004	1.8300e-003	0.0000	0.0177	1.0000e-005	0.0177	1.8100e-003	1.0000e-005	1.8200e-003	0.0000	0.3639	0.3639	1.0000e-005	0.0000	0.3642
Unmitigated	1.2000e-004	6.0000e-004	1.8300e-003	0.0000	0.0177	1.0000e-005	0.0177	1.8100e-003	1.0000e-005	1.8200e-003	0.0000	0.3639	0.3639	1.0000e-005	0.0000	0.3642

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.10	0.00	0.00	780	780
Total	0.10	0.00	0.00	780	780

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
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Dumpers/Tenders	1	8.00	3	400	0.38	Diesel
Excavators	1	8.00	3	162	0.38	Diesel
Rubber Tired Dozers	1	8.00	3	400	0.38	Diesel
Rubber Tired Loaders	1	8.00	3	199	0.36	Diesel

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Excavators	5.4000e-004	6.0300e-003	5.1300e-003	1.0000e-005		3.0000e-004	3.0000e-004		2.7000e-004	2.7000e-004	0.0000	0.7365	0.7365	2.3000e-004	0.0000	0.7413
Rubber Tired Dozers	2.6600e-003	0.0295	0.0222	2.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	1.8453	1.8453	5.7000e-004	0.0000	1.8572
Rubber Tired Loaders	7.1000e-004	9.0100e-003	2.6900e-003	1.0000e-005		3.1000e-004	3.1000e-004		2.8000e-004	2.8000e-004	0.0000	0.8527	0.8527	2.6000e-004	0.0000	0.8582
Total	3.9100e-003	0.0445	0.0300	4.0000e-005		1.9800e-003	1.9800e-003		1.8100e-003	1.8100e-003	0.0000	3.4346	3.4346	1.0600e-003	0.0000	3.4567

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-400.8273	0.0000	0.0000	-400.8273

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	37.46 / 35.63	-7.8873	0.0000	0.0000	-7.8873
Trees	11.13 / 7.59	-392.9400	0.0000	0.0000	-392.9400
Wetlands	1.52 / 1.05	0.0000	0.0000	0.0000	0.0000
Total		-400.8273	0.0000	0.0000	-400.8273