
APPENDIX D

CALEEMOD OUTPUTS

CALEEMOD OUTPUTS

**Construction
Phase 2C/2D/2E**

◆ **Summer**

FR SPA 3 Construction Phases 2C, 2D, 2E
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.30	Acre	1.30	56,628.00	0
Single Family Housing	414.00	Dwelling Unit	78.00	745,200.00	1081
Other Asphalt Surfaces	724.50	1000sqft	16.63	724,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan, City average population is 2.61 persons per household. Pocket park does not include any parking lot or parking spaces.

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	390,564.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,171,692.00	84,942.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	1171692	84942
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
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tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	110.00	294.00
tblConstructionPhase	NumDays	1,550.00	363.00
tblConstructionPhase	NumDays	155.00	25.00
tblConstructionPhase	NumDays	110.00	9.00
tblConstructionPhase	PhaseEndDate	1/6/2017	11/26/2015
tblConstructionPhase	PhaseStartDate	11/24/2015	10/11/2014

tblFireplaces	NumberWood	144.90	0.00
tblGrading	AcresOfGrading	62.50	95.00
tblLandUse	LotAcreage	134.42	78.00
tblLandUse	Population	1,184.00	1,081.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	VendorTripNumber	172.00	54.00
tblTripsAndVMT	WorkerTripNumber	477.00	173.00
tblTripsAndVMT	WorkerTripNumber	95.00	35.00

2.0 Emissions Summary

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	52.3898	1.9303	128.1729	0.3067		15.7358	15.7358		15.7326	15.7326	2,249.9078	4,883.5419	7,133.4497	10.6734	0.0884	7,384.9955
Energy	0.2181	1.8639	0.7931	0.0119		0.1507	0.1507		0.1507	0.1507		2,379.4225	2,379.4225	0.0456	0.0436	2,393.9032
Mobile	44.4881	32.5681	156.0247	0.3762	25.2963	0.4560	25.7523	6.7534	0.4192	7.1726		32,610.4403	32,610.4403	1.0875		32,633.2785
Total	97.0960	36.3623	284.9907	0.6948	25.2963	16.3425	41.6388	6.7534	16.3025	23.0558	2,249.9078	39,873.4047	42,123.3125	11.8065	0.1320	42,412.1773

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	52.3898	1.9303	128.1729	0.3067		15.7358	15.7358		15.7326	15.7326	2,249.9078	4,883.5419	7,133.4497	10.6734	0.0884	7,384.9955
Energy	0.1967	1.6810	0.7153	0.0107		0.1359	0.1359		0.1359	0.1359		2,145.9709	2,145.9709	0.0411	0.0393	2,159.0309
Mobile	44.4881	32.5681	156.0247	0.3762	25.2963	0.4560	25.7523	6.7534	0.4192	7.1726		32,610.4403	32,610.4403	1.0875		32,633.2785
Total	97.0746	36.1794	284.9129	0.6936	25.2963	16.3277	41.6240	6.7534	16.2877	23.0410	2,249.9078	39,639.9531	41,889.8609	11.8021	0.1277	42,177.3049

	ROG	NOx	CO	SO2	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	0.02	0.50	0.03	0.17	0.00	0.09	0.04	0.00	0.09	0.06	0.00	0.59	0.55	0.04	3.24	0.55

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2014	4/18/2014	5	25	
2	Trenching	Trenching	4/19/2014	6/19/2014	5	44	
3	Paving	Paving	6/20/2014	7/2/2014	5	9	
4	Building Construction	Building Construction	7/3/2014	11/23/2015	5	363	
5	Architectural Coating	Architectural Coating	10/11/2014	11/26/2015	5	294	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 95

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	1.00	89	0.20
Building Construction	Generator Sets	3	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	3.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Paving	Sweepers/Scrubbers	1	2.00	64	0.46

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
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	173.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2014

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					10.0520	0.0000	10.0520	3.7454	0.0000	3.7454			0.0000			0.0000
Off-Road	6.8480	80.7211	51.5831	0.0618		3.8792	3.8792		3.5689	3.5689		6,554.8337	6,554.8337	1.9370		6,595.5113
Total	6.8480	80.7211	51.5831	0.0618	10.0520	3.8792	13.9312	3.7454	3.5689	7.3142		6,554.8337	6,554.8337	1.9370		6,595.5113

3.2 Grading - 2014

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	0.3488	0.0798	1.0717	2.0600e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0400e-003	0.0446		182.2360	182.2360	8.0700e-003			182.4054
Total	0.3488	0.0798	1.0717	2.0600e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0400e-003	0.0446		182.2360	182.2360	8.0700e-003			182.4054

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					4.5234	0.0000	4.5234	1.6854	0.0000	1.6854			0.0000				0.0000
Off-Road	6.8480	64.5769	51.5831	0.0618		3.8792	3.8792		3.5689	3.5689	0.0000	6,554.8337	6,554.8337	1.9370			6,595.5113
Total	6.8480	64.5769	51.5831	0.0618	4.5234	3.8792	8.4026	1.6854	3.5689	5.2543	0.0000	6,554.8337	6,554.8337	1.9370			6,595.5113

3.2 Grading - 2014

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	0.3488	0.0798	1.0717	2.0600e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0400e-003	0.0446		182.2360	182.2360	8.0700e-003			182.4054
Total	0.3488	0.0798	1.0717	2.0600e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0400e-003	0.0446		182.2360	182.2360	8.0700e-003			182.4054

3.3 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.3141	12.1536	7.6607	9.6900e-003		0.9519	0.9519		0.8757	0.8757		1,028.6722	1,028.6722	0.3040			1,035.0559
Total	1.3141	12.1536	7.6607	9.6900e-003		0.9519	0.9519		0.8757	0.8757		1,028.6722	1,028.6722	0.3040			1,035.0559

3.3 Trenching - 2014

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	0.1395	0.0319	0.4287	8.2000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		72.8944	72.8944	3.2300e-003			72.9621
Total	0.1395	0.0319	0.4287	8.2000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		72.8944	72.8944	3.2300e-003			72.9621

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.3141	9.7229	7.6607	9.6900e-003		0.9519	0.9519		0.8757	0.8757	0.0000	1,028.6722	1,028.6722	0.3040			1,035.0559
Total	1.3141	9.7229	7.6607	9.6900e-003		0.9519	0.9519		0.8757	0.8757	0.0000	1,028.6722	1,028.6722	0.3040			1,035.0559

3.3 Trenching - 2014

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	0.1395	0.0319	0.4287	8.2000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		72.8944	72.8944	3.2300e-003		72.9621
Total	0.1395	0.0319	0.4287	8.2000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		72.8944	72.8944	3.2300e-003		72.9621

3.4 Paving - 2014

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	2.4680	26.9771	15.4883	0.0229		1.5308	1.5308		1.4083	1.4083		2,430.2030	2,430.2030	0.7182		2,445.2841
Paving	4.8412					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	7.3092	26.9771	15.4883	0.0229		1.5308	1.5308		1.4083	1.4083		2,430.2030	2,430.2030	0.7182		2,445.2841

3.4 Paving - 2014

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	0.3139	0.0718	0.9645	1.8500e-003	0.1479	1.0300e-003	0.1489	0.0392	9.3000e-004	0.0402		164.0124	164.0124	7.2600e-003			164.1648
Total	0.3139	0.0718	0.9645	1.8500e-003	0.1479	1.0300e-003	0.1489	0.0392	9.3000e-004	0.0402		164.0124	164.0124	7.2600e-003			164.1648

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	2.4680	21.5817	15.4883	0.0229		1.5308	1.5308		1.4083	1.4083	0.0000	2,430.2030	2,430.2030	0.7182			2,445.2841
Paving	4.8412					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	7.3092	21.5817	15.4883	0.0229		1.5308	1.5308		1.4083	1.4083	0.0000	2,430.2030	2,430.2030	0.7182			2,445.2841

3.4 Paving - 2014

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	0.3139	0.0718	0.9645	1.8500e-003	0.1479	1.0300e-003	0.1489	0.0392	9.3000e-004	0.0402		164.0124	164.0124	7.2600e-003			164.1648
Total	0.3139	0.0718	0.9645	1.8500e-003	0.1479	1.0300e-003	0.1489	0.0392	9.3000e-004	0.0402		164.0124	164.0124	7.2600e-003			164.1648

3.5 Building Construction - 2014

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	2.1665	16.7845	9.5141	0.0140		1.0751	1.0751		1.0156	1.0156		1,397.9225	1,397.9225	0.3719			1,405.7324
Total	2.1665	16.7845	9.5141	0.0140		1.0751	1.0751		1.0156	1.0156		1,397.9225	1,397.9225	0.3719			1,405.7324

3.5 Building Construction - 2014

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	1.5329	6.5774	6.5046	0.0129	0.3599	0.1315	0.4914	0.1029	0.1209	0.2238		1,324.542 1	1,324.542 1	0.0131			1,324.817 3
Worker	3.0173	0.6899	9.2701	0.0178	1.4212	9.8600e-003	1.4310	0.3770	8.9800e-003	0.3859		1,576.341 0	1,576.341 0	0.0698			1,577.806 4
Total	4.5502	7.2673	15.7748	0.0308	1.7811	0.1414	1.9224	0.4798	0.1299	0.6097		2,900.883 1	2,900.883 1	0.0829			2,902.623 7

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	2.1665	15.4052	9.5141	0.0140		1.0751	1.0751		1.0156	1.0156	0.0000	1,397.922 5	1,397.922 5	0.3719			1,405.732 4
Total	2.1665	15.4052	9.5141	0.0140		1.0751	1.0751		1.0156	1.0156	0.0000	1,397.922 5	1,397.922 5	0.3719			1,405.732 4

3.5 Building Construction - 2014

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	1.5329	6.5774	6.5046	0.0129	0.3599	0.1315	0.4914	0.1029	0.1209	0.2238		1,324.5421	1,324.5421	0.0131			1,324.8173
Worker	3.0173	0.6899	9.2701	0.0178	1.4212	9.8600e-003	1.4310	0.3770	8.9800e-003	0.3859		1,576.3410	1,576.3410	0.0698			1,577.8064
Total	4.5502	7.2673	15.7748	0.0308	1.7811	0.1414	1.9224	0.4798	0.1299	0.6097		2,900.8831	2,900.8831	0.0829			2,902.6237

3.5 Building Construction - 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						
Off-Road	2.0392	16.1743	9.3600	0.0140		1.0191	1.0191		0.9615	0.9615		1,387.9864	1,387.9864	0.3628			1,395.6041
Total	2.0392	16.1743	9.3600	0.0140		1.0191	1.0191		0.9615	0.9615		1,387.9864	1,387.9864	0.3628			1,395.6041

3.5 Building Construction - 2015

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	1.3261	5.6352	5.8182	0.0129	0.3599	0.1000	0.4599	0.1029	0.0919	0.1948		1,307.4067	1,307.4067	0.0113			1,307.6442
Worker	2.7578	0.6109	8.2162	0.0178	1.4212	9.2500e-003	1.4304	0.3770	8.4500e-003	0.3854		1,520.4546	1,520.4546	0.0630			1,521.7779
Total	4.0840	6.2460	14.0344	0.0307	1.7811	0.1092	1.8903	0.4798	0.1004	0.5802		2,827.8614	2,827.8614	0.0743			2,829.4221

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	2.0392	14.8545	9.3600	0.0140		1.0191	1.0191		0.9615	0.9615	0.0000	1,387.9864	1,387.9864	0.3628			1,395.6041
Total	2.0392	14.8545	9.3600	0.0140		1.0191	1.0191		0.9615	0.9615	0.0000	1,387.9864	1,387.9864	0.3628			1,395.6041

3.5 Building Construction - 2015

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	1.3261	5.6352	5.8182	0.0129	0.3599	0.1000	0.4599	0.1029	0.0919	0.1948		1,307.4067	1,307.4067	0.0113			1,307.6442
Worker	2.7578	0.6109	8.2162	0.0178	1.4212	9.2500e-003	1.4304	0.3770	8.4500e-003	0.3854		1,520.4546	1,520.4546	0.0630			1,521.7779
Total	4.0840	6.2460	14.0344	0.0307	1.7811	0.1092	1.8903	0.4798	0.1004	0.5802		2,827.8614	2,827.8614	0.0743			2,829.4221

3.6 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	24.2891					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4462	2.7773	1.9216	2.9700e-003		0.2452	0.2452		0.2452	0.2452		281.4481	281.4481	0.0401			282.2905
Total	24.7353	2.7773	1.9216	2.9700e-003		0.2452	0.2452		0.2452	0.2452		281.4481	281.4481	0.0401			282.2905

3.6 Architectural Coating - 2014

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	0.6104	0.1396	1.8755	3.6100e-003	0.2875	2.0000e-003	0.2895	0.0763	1.8200e-003	0.0781		318.9129	318.9129	0.0141			319.2094
Total	0.6104	0.1396	1.8755	3.6100e-003	0.2875	2.0000e-003	0.2895	0.0763	1.8200e-003	0.0781		318.9129	318.9129	0.0141			319.2094

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	24.2891					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4462	2.2219	1.9216	2.9700e-003		0.2452	0.2452		0.2452	0.2452	0.0000	281.4481	281.4481	0.0401			282.2905
Total	24.7353	2.2219	1.9216	2.9700e-003		0.2452	0.2452		0.2452	0.2452	0.0000	281.4481	281.4481	0.0401			282.2905

3.6 Architectural Coating - 2014

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	0.6104	0.1396	1.8755	3.6100e-003	0.2875	2.0000e-003	0.2895	0.0763	1.8200e-003	0.0781		318.9129	318.9129	0.0141			319.2094
Total	0.6104	0.1396	1.8755	3.6100e-003	0.2875	2.0000e-003	0.2895	0.0763	1.8200e-003	0.0781		318.9129	318.9129	0.0141			319.2094

3.6 Architectural Coating - 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						
Archit. Coating	24.2891					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209		281.4481	281.4481	0.0367			282.2177
Total	24.6957	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209		281.4481	281.4481	0.0367			282.2177

3.6 Architectural Coating - 2015

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	0.5579	0.1236	1.6622	3.6100e-003	0.2875	1.8700e-003	0.2894	0.0763	1.7100e-003	0.0780		307.6064	307.6064	0.0128			307.8741
Total	0.5579	0.1236	1.6622	3.6100e-003	0.2875	1.8700e-003	0.2894	0.0763	1.7100e-003	0.0780		307.6064	307.6064	0.0128			307.8741

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	24.2891					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4066	2.0563	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209	0.0000	281.4481	281.4481	0.0367			282.2177
Total	24.6957	2.0563	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209	0.0000	281.4481	281.4481	0.0367			282.2177

3.6 Architectural Coating - 2015

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	0.5579	0.1236	1.6622	3.6100e-003	0.2875	1.8700e-003	0.2894	0.0763	1.7100e-003	0.0780		307.6064	307.6064	0.0128			307.8741
Total	0.5579	0.1236	1.6622	3.6100e-003	0.2875	1.8700e-003	0.2894	0.0763	1.7100e-003	0.0780		307.6064	307.6064	0.0128			307.8741

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	44.4881	32.5681	156.0247	0.3762	25.2963	0.4560	25.7523	6.7534	0.4192	7.1726		32,610.4403	32,610.4403	1.0875			32,633.2785
Unmitigated	44.4881	32.5681	156.0247	0.3762	25.2963	0.4560	25.7523	6.7534	0.4192	7.1726		32,610.4403	32,610.4403	1.0875			32,633.2785

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2.07	2.07	2.07	4,413	4,413
Single Family Housing	3,961.98	4,173.12	3630.78	11,300,129	11,300,129
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	3,964.05	4,175.19	3,632.85	11,304,542	11,304,542

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

~~5.1 Fleet Mix~~

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1967	1.6810	0.7153	0.0107		0.1359	0.1359		0.1359	0.1359		2,145.9709	2,145.9709	0.0411	0.0393	2,159.0309
NaturalGas Unmitigated	0.2181	1.8639	0.7931	0.0119		0.1507	0.1507		0.1507	0.1507		2,379.4225	2,379.4225	0.0456	0.0436	2,393.9032

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	20225.1	0.2181	1.8639	0.7931	0.0119		0.1507	0.1507		0.1507	0.1507		2,379.4225	2,379.4225	0.0456	0.0436	2,393.9032
Total		0.2181	1.8639	0.7931	0.0119		0.1507	0.1507		0.1507	0.1507		2,379.4225	2,379.4225	0.0456	0.0436	2,393.9032

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	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	18.2408	0.1967	1.6810	0.7153	0.0107		0.1359	0.1359		0.1359	0.1359		2,145.9709	2,145.9709	0.0411	0.0393	2,159.0309
City Park	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		0.1967	1.6810	0.7153	0.0107		0.1359	0.1359		0.1359	0.1359		2,145.9709	2,145.9709	0.0411	0.0393	2,159.0309

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	52.3898	1.9303	128.1729	0.3067		15.7358	15.7358		15.7326	15.7326	2,249.9078	4,883.5419	7,133.4497	10.6734	0.0884	7,384.9955
Unmitigated	52.3898	1.9303	128.1729	0.3067		15.7358	15.7358		15.7326	15.7326	2,249.9078	4,883.5419	7,133.4497	10.6734	0.0884	7,384.9955

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	7.8971					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.6634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	1.0980	0.4059	34.7075	1.8100e-003		0.1871	0.1871		0.1871	0.1871		61.6595	61.6595	0.0631		62.9851
Total	52.3898	1.9303	128.1729	0.3067		15.7358	15.7358		15.7326	15.7326	2,249.9078	4,883.5419	7,133.4497	10.6734	0.0884	7,384.9955

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	7.8971					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.6634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	1.0980	0.4059	34.7075	1.8100e-003		0.1871	0.1871		0.1871	0.1871		61.6595	61.6595	0.0631		62.9851
Total	52.3898	1.9303	128.1729	0.3067		15.7358	15.7358		15.7326	15.7326	2,249.9078	4,883.5419	7,133.4497	10.6734	0.0884	7,384.9955

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

CALEEMOD OUTPUTS

**Construction
Phase 2F**

◆ **Summer**

FR SPA 3 Construction Phases 2F
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.56	Acre	0.56	24,393.60	0
Single Family Housing	314.00	Dwelling Unit	52.00	565,200.00	898
Other Asphalt Surfaces	556.50	1000sqft	12.78	556,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan, City average population is 2.61 persons per household. "park" use is a paseo, no parking or vehicle trips associated

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblAreaCoating	Area_Residential_Interior	1144530	1509030
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	75.00	210.00
tblConstructionPhase	NumDays	1,110.00	241.00
tblConstructionPhase	NumDays	110.00	18.00

tblConstructionPhase	NumDays	75.00	8.00
tblConstructionPhase	PhaseEndDate	3/1/2018	5/21/2017
tblConstructionPhase	PhaseEndDate	5/27/2016	5/28/2016
tblConstructionPhase	PhaseStartDate	5/12/2017	7/30/2016
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	65.00
tblLandUse	LotAcreage	101.95	52.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70
tblWoodstoves	NumberNoncatalytic	15.70	20.70

2.0 Emissions Summary

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	43.6698	1.8322	119.7901	0.3062		15.6906	15.6906		15.6874	15.6874	2,249.9078	4,868.6497	7,118.5575	10.6582	0.0884	7,369.7833
Energy	0.1654	1.4137	0.6016	9.0200e-003		0.1143	0.1143		0.1143	0.1143		1,804.6827	1,804.6827	0.0346	0.0331	1,815.6657
Mobile	33.7365	24.6973	118.3175	0.2853	19.1830	0.3458	19.5288	5.1213	0.3179	5.4392		24,729.5438	24,729.5438	0.8247		24,746.8626
Total	77.5717	27.9432	238.7092	0.6006	19.1830	16.1507	35.3337	5.1213	16.1196	21.2409	2,249.9078	31,402.8762	33,652.7841	11.5175	0.1215	33,932.3116

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	43.6698	1.8322	119.7901	0.3062		15.6906	15.6906		15.6874	15.6874	2,249.9078	4,868.6497	7,118.5575	10.6582	0.0884	7,369.7833
Energy	0.1492	1.2750	0.5425	8.1400e-003		0.1031	0.1031		0.1031	0.1031		1,627.6204	1,627.6204	0.0312	0.0298	1,637.5259
Mobile	33.7365	24.6973	118.3175	0.2853	19.1830	0.3458	19.5288	5.1213	0.3179	5.4392		24,729.5438	24,729.5438	0.8247		24,746.8626
Total	77.5555	27.8045	238.6501	0.5997	19.1830	16.1395	35.3225	5.1213	16.1083	21.2296	2,249.9078	31,225.8139	33,475.7218	11.5141	0.1182	33,754.1718

	ROG	NOx	CO	SO2	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	0.02	0.50	0.02	0.15	0.00	0.07	0.03	0.00	0.07	0.05	0.00	0.56	0.53	0.03	2.68	0.52

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2016	4/11/2016	5	18	
2	Trenching	Trenching	4/12/2016	5/28/2016	5	34	
3	Paving	Paving	5/29/2016	6/8/2016	5	8	
4	Building Construction	Building Construction	6/9/2016	5/11/2017	5	241	
5	Architectural Coating	Architectural Coating	7/30/2016	5/21/2017	5	210	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 65

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50

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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 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					9.8517	0.0000	9.8517	3.7237	0.0000	3.7237			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	9.8517	3.5842	13.4359	3.7237	3.2975	7.0212		6,414.9807	6,414.9807	1.9350		6,455.6154

3.2 Grading - 2016

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	0.0467	0.1817	0.2026	4.8000e-004	0.0133	3.1100e-003	0.0164	3.8100e-003	2.8600e-003	6.6700e-003		47.8528	47.8528	3.8000e-004			47.8608
Worker	0.2938	0.0631	0.8504	2.0600e-003	0.1643	1.0300e-003	0.1653	0.0436	9.4000e-004	0.0445		169.3480	169.3480	6.6400e-003			169.4875
Total	0.3405	0.2448	1.0530	2.5400e-003	0.1776	4.1400e-003	0.1818	0.0474	3.8000e-003	0.0512		217.2009	217.2009	7.0200e-003			217.3483

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					4.4333	0.0000	4.4333	1.6757	0.0000	1.6757			0.0000				0.0000
Off-Road	6.4795	59.8510	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350			6,455.6154
Total	6.4795	59.8510	49.1374	0.0617	4.4333	3.5842	8.0175	1.6757	3.2975	4.9732	0.0000	6,414.9807	6,414.9807	1.9350			6,455.6154

3.2 Grading - 2016

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	0.0467	0.1817	0.2026	4.8000e-004	0.0133	3.1100e-003	0.0164	3.8100e-003	2.8600e-003	6.6700e-003		47.8528	47.8528	3.8000e-004			47.8608
Worker	0.2938	0.0631	0.8504	2.0600e-003	0.1643	1.0300e-003	0.1653	0.0436	9.4000e-004	0.0445		169.3480	169.3480	6.6400e-003			169.4875
Total	0.3405	0.2448	1.0530	2.5400e-003	0.1776	4.1400e-003	0.1818	0.0474	3.8000e-003	0.0512		217.2009	217.2009	7.0200e-003			217.3483

3.3 Trenching - 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	1.2370	11.3795	7.6389	9.6800e-003		0.8832	0.8832		0.8125	0.8125		1,007.0803	1,007.0803	0.3038			1,013.4595
Total	1.2370	11.3795	7.6389	9.6800e-003		0.8832	0.8832		0.8125	0.8125		1,007.0803	1,007.0803	0.3038			1,013.4595

3.3 Trenching - 2016

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	0.0467	0.1817	0.2026	4.8000e-004	0.0133	3.1100e-003	0.0164	3.8100e-003	2.8600e-003	6.6700e-003		47.8528	47.8528	3.8000e-004			47.8608
Worker	0.1175	0.0252	0.3402	8.2000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		67.7392	67.7392	2.6600e-003			67.7950
Total	0.1642	0.2070	0.5428	1.3000e-003	0.0791	3.5200e-003	0.0826	0.0212	3.2400e-003	0.0245		115.5920	115.5920	3.0400e-003			115.6558

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.2370	9.1036	7.6389	9.6800e-003		0.8832	0.8832		0.8125	0.8125	0.0000	1,007.0803	1,007.0803	0.3038			1,013.4595
Total	1.2370	9.1036	7.6389	9.6800e-003		0.8832	0.8832		0.8125	0.8125	0.0000	1,007.0803	1,007.0803	0.3038			1,013.4595

3.3 Trenching - 2016

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	0.0467	0.1817	0.2026	4.8000e-004	0.0133	3.1100e-003	0.0164	3.8100e-003	2.8600e-003	6.6700e-003		47.8528	47.8528	3.8000e-004			47.8608
Worker	0.1175	0.0252	0.3402	8.2000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		67.7392	67.7392	2.6600e-003			67.7950
Total	0.1642	0.2070	0.5428	1.3000e-003	0.0791	3.5200e-003	0.0826	0.0212	3.2400e-003	0.0245		115.5920	115.5920	3.0400e-003			115.6558

3.4 Paving - 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	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987			2,331.0495
Paving	4.1855					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	6.2752	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987			2,331.0495

3.4 Paving - 2016

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	0.2204	0.0473	0.6378	1.5400e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		127.0110	127.0110	4.9800e-003			127.1156
Total	0.2204	0.0473	0.6378	1.5400e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		127.0110	127.0110	4.9800e-003			127.1156

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	2.0898	17.9087	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987			2,331.0495
Paving	4.1855					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	6.2752	17.9087	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987			2,331.0495

3.4 Paving - 2016

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	0.2204	0.0473	0.6378	1.5400e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		127.0110	127.0110	4.9800e-003			127.1156
Total	0.2204	0.0473	0.6378	1.5400e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		127.0110	127.0110	4.9800e-003			127.1156

3.5 Building Construction - 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	4.6845	38.1758	26.1129	0.0400		2.6449	2.6449		2.5260	2.5260		3,915.3555	3,915.3555	0.7761			3,931.6525
Total	4.6845	38.1758	26.1129	0.0400		2.6449	2.6449		2.5260	2.5260		3,915.3555	3,915.3555	0.7761			3,931.6525

3.5 Building Construction - 2016

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	1.2606	4.9066	5.4708	0.0129	0.3600	0.0840	0.4440	0.1029	0.0772	0.1801		1,292.0265	1,292.0265	0.0102			1,292.2415
Worker	6.9051	1.4822	19.9849	0.0484	3.8609	0.0242	3.8851	1.0241	0.0222	1.0463		3,979.6787	3,979.6787	0.1561			3,982.9563
Total	8.1657	6.3888	25.4557	0.0613	4.2209	0.1082	4.3291	1.1270	0.0994	1.2264		5,271.7052	5,271.7052	0.1663			5,275.1978

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	4.6845	32.3941	26.1129	0.0400		2.6449	2.6449		2.5260	2.5260	0.0000	3,915.3555	3,915.3555	0.7761			3,931.6525
Total	4.6845	32.3941	26.1129	0.0400		2.6449	2.6449		2.5260	2.5260	0.0000	3,915.3555	3,915.3555	0.7761			3,931.6525

3.5 Building Construction - 2016

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	1.2606	4.9066	5.4708	0.0129	0.3600	0.0840	0.4440	0.1029	0.0772	0.1801		1,292.0265	1,292.0265	0.0102			1,292.2415
Worker	6.9051	1.4822	19.9849	0.0484	3.8609	0.0242	3.8851	1.0241	0.0222	1.0463		3,979.6787	3,979.6787	0.1561			3,982.9563
Total	8.1657	6.3888	25.4557	0.0613	4.2209	0.1082	4.3291	1.1270	0.0994	1.2264		5,271.7052	5,271.7052	0.1663			5,275.1978

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	4.2425	35.3341	25.6762	0.0400		2.3820	2.3820		2.2738	2.2738		3,885.8745	3,885.8745	0.7506			3,901.6362
Total	4.2425	35.3341	25.6762	0.0400		2.3820	2.3820		2.2738	2.2738		3,885.8745	3,885.8745	0.7506			3,901.6362

3.5 Building Construction - 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	1.0716	4.3250	4.9890	0.0128	0.3600	0.0708	0.4308	0.1029	0.0651	0.1680		1,269.8299	1,269.8299	9.5100e-003			1,270.0296
Worker	6.3375	1.3229	17.8329	0.0484	3.8609	0.0236	3.8846	1.0241	0.0218	1.0459		3,821.5141	3,821.5141	0.1426			3,824.5081
Total	7.4091	5.6480	22.8218	0.0612	4.2210	0.0944	4.3153	1.1270	0.0868	1.2139		5,091.3440	5,091.3440	0.1521			5,094.5377

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	4.2425	29.9617	25.6762	0.0400		2.3820	2.3820		2.2738	2.2738	0.0000	3,885.8745	3,885.8745	0.7506			3,901.6362
Total	4.2425	29.9617	25.6762	0.0400		2.3820	2.3820		2.2738	2.2738	0.0000	3,885.8745	3,885.8745	0.7506			3,901.6362

3.5 Building Construction - 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	1.0716	4.3250	4.9890	0.0128	0.3600	0.0708	0.4308	0.1029	0.0651	0.1680		1,269.8299	1,269.8299	9.5100e-003			1,270.0296
Worker	6.3375	1.3229	17.8329	0.0484	3.8609	0.0236	3.8846	1.0241	0.0218	1.0459		3,821.5141	3,821.5141	0.1426			3,824.5081
Total	7.4091	5.6480	22.8218	0.0612	4.2210	0.0944	4.3153	1.1270	0.0868	1.2139		5,091.3440	5,091.3440	0.1521			5,094.5377

3.6 Architectural Coating - 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						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332			282.1449
Total	34.3731	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332			282.1449

3.6 Architectural Coating - 2016

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	1.3810	0.2964	3.9970	9.6800e-003	0.7722	4.8400e-003	0.7770	0.2048	4.4400e-003	0.2093		795.9357	795.9357	0.0312			796.5913
Total	1.3810	0.2964	3.9970	9.6800e-003	0.7722	4.8400e-003	0.7770	0.2048	4.4400e-003	0.2093		795.9357	795.9357	0.0312			796.5913

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3685	1.8978	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332			282.1449
Total	34.3731	1.8978	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332			282.1449

3.6 Architectural Coating - 2016

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	1.3810	0.2964	3.9970	9.6800e-003	0.7722	4.8400e-003	0.7770	0.2048	4.4400e-003	0.2093		795.9357	795.9357	0.0312			796.5913
Total	1.3810	0.2964	3.9970	9.6800e-003	0.7722	4.8400e-003	0.7770	0.2048	4.4400e-003	0.2093		795.9357	795.9357	0.0312			796.5913

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721
Total	34.3370	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721

3.6 Architectural Coating - 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	1.2675	0.2646	3.5666	9.6800e-003	0.7722	4.7200e-003	0.7769	0.2048	4.3500e-003	0.2092		764.3028	764.3028	0.0285			764.9016
Total	1.2675	0.2646	3.5666	9.6800e-003	0.7722	4.7200e-003	0.7769	0.2048	4.3500e-003	0.2092		764.3028	764.3028	0.0285			764.9016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3323	1.7480	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297			282.0721
Total	34.3370	1.7480	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297			282.0721

3.6 Architectural Coating - 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	1.2675	0.2646	3.5666	9.6800e-003	0.7722	4.7200e-003	0.7769	0.2048	4.3500e-003	0.2092		764.3028	764.3028	0.0285			764.9016
Total	1.2675	0.2646	3.5666	9.6800e-003	0.7722	4.7200e-003	0.7769	0.2048	4.3500e-003	0.2092		764.3028	764.3028	0.0285			764.9016

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	33.7365	24.6973	118.3175	0.2853	19.1830	0.3458	19.5288	5.1213	0.3179	5.4392		24,729.54 38	24,729.54 38	0.8247			24,746.86 26
Unmitigated	33.7365	24.6973	118.3175	0.2853	19.1830	0.3458	19.5288	5.1213	0.3179	5.4392		24,729.54 38	24,729.54 38	0.8247			24,746.86 26

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.89	0.89	0.89	1,901	1,901
Single Family Housing	3,004.98	3,165.12	2753.78	8,570,630	8,570,630
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	3,005.87	3,166.01	2,754.67	8,572,530	8,572,530

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

~~2.4 Fleet Mix~~

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1492	1.2750	0.5425	8.1400e-003		0.1031	0.1031		0.1031	0.1031		1,627.6204	1,627.6204	0.0312	0.0298	1,637.5259
NaturalGas Unmitigated	0.1654	1.4137	0.6016	9.0200e-003		0.1143	0.1143		0.1143	0.1143		1,804.6827	1,804.6827	0.0346	0.0331	1,815.6657

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	15339.8	0.1654	1.4137	0.6016	9.0200e-003		0.1143	0.1143		0.1143	0.1143		1,804.6827	1,804.6827	0.0346	0.0331	1,815.6657
Total		0.1654	1.4137	0.6016	9.0200e-003		0.1143	0.1143		0.1143	0.1143		1,804.6827	1,804.6827	0.0346	0.0331	1,815.6657

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	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	13.8348	0.1492	1.2750	0.5425	8.1400e-003		0.1031	0.1031		0.1031	0.1031		1,627.6204	1,627.6204	0.0312	0.0298	1,637.5259
City Park	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		0.1492	1.2750	0.5425	8.1400e-003		0.1031	0.1031		0.1031	0.1031		1,627.6204	1,627.6204	0.0312	0.0298	1,637.5259

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	43.6698	1.8322	119.7901	0.3062		15.6906	15.6906		15.6874	15.6874	2,249.9078	4,868.6497	7,118.5575	10.6582	0.0884	7,369.7833
Unmitigated	43.6698	1.8322	119.7901	0.3062		15.6906	15.6906		15.6874	15.6874	2,249.9078	4,868.6497	7,118.5575	10.6582	0.0884	7,369.7833

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	24.5264					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884		7,322.0105
Landscaping	0.8329	0.3079	26.3247	1.3700e-003		0.1419	0.1419		0.1419	0.1419		46.7673	46.7673	0.0479			47.7728
Total	43.6698	1.8322	119.7901	0.3062		15.6906	15.6906		15.6874	15.6874	2,249.9078	4,868.6497	7,118.5575	10.6582	0.0884		7,369.7833

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.5264					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	0.8329	0.3079	26.3247	1.3700e-003		0.1419	0.1419		0.1419	0.1419		46.7673	46.7673	0.0479		47.7728
Total	43.6698	1.8322	119.7901	0.3062		15.6906	15.6906		15.6874	15.6874	2,249.9078	4,868.6497	7,118.5575	10.6582	0.0884	7,369.7833

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

CALEEMOD OUTPUTS

Construction
Phase 2H

◆ Summer

FR SPA 3 Construction Phase 2H
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.25	Acre	1.25	54,450.00	0
Single Family Housing	406.00	Dwelling Unit	38.00	730,800.00	1060
Other Asphalt Surfaces	873.30	1000sqft	20.05	873,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan, City average population is 2.61 persons per household. "park" use is a paseo, no parking or vehicle trips associated

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblConstructionPhase	NumDays	75.00	212.00
tblConstructionPhase	NumDays	1,110.00	240.00
tblConstructionPhase	NumDays	110.00	18.00
tblConstructionPhase	NumDays	75.00	9.00
tblConstructionPhase	PhaseEndDate	3/3/2020	5/21/2019
tblConstructionPhase	PhaseEndDate	5/10/2019	5/11/2019
tblConstructionPhase	PhaseStartDate	5/12/2019	7/30/2018
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	65.00
tblLandUse	LotAcreage	131.82	38.00
tblLandUse	Population	1,161.00	1,060.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Trenching
tblProjectCharacteristics	OperationalYear	2014	2016
tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70

tblWoodstoves	NumberNoncatalytic	15.70	20.70
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2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	44.6514	59.7283	43.1554	0.1006	10.0293	2.7914	12.8207	3.7711	2.5681	6.3392	0.0000	8,550.3237	8,550.3237	1.9401	0.0000	8,591.0653
2019	43.8357	27.6345	41.1881	0.1005	4.9931	1.5022	6.4953	1.3318	1.4186	2.7504	0.0000	8,335.9089	8,335.9089	0.8092	0.0000	8,352.9028
Total	88.4870	87.3628	84.3435	0.2011	15.0224	4.2936	19.3160	5.1029	3.9867	9.0896	0.0000	16,886.2326	16,886.2326	2.7493	0.0000	16,943.9680

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					
2018	44.6514	47.8215	43.1554	0.1006	4.9931	2.7914	7.4023	1.7231	2.5681	4.2912	0.0000	8,550.3237	8,550.3237	1.9401	0.0000	8,591.0653
2019	43.8357	23.3993	41.1881	0.1005	4.9931	1.5022	6.4953	1.3318	1.4186	2.7504	0.0000	8,335.9089	8,335.9089	0.8092	0.0000	8,352.9028
Total	88.4870	71.2208	84.3435	0.2011	9.9862	4.2936	13.8976	3.0549	3.9867	7.0416	0.0000	16,886.2326	16,886.2326	2.7493	0.0000	16,943.9680

	ROG	NOx	CO	SO2	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	18.48	0.00	0.00	33.52	0.00	28.05	40.13	0.00	22.53	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	54.8820	1.9226	127.5192	0.3066		15.7322	15.7322		15.7290	15.7290	2,249.9078	4,882.3860	7,132.2938	10.6723	0.0884	7,383.8162
Energy	0.2139	1.8279	0.7778	0.0117		0.1478	0.1478		0.1478	0.1478		2,333.4433	2,333.4433	0.0447	0.0428	2,347.6442
Mobile	43.6281	31.9386	153.0086	0.3690	24.8073	0.4472	25.2545	6.6228	0.4111	7.0339		31,980.0545	31,980.0545	1.0665		32,002.4512
Total	98.7240	35.6890	281.3056	0.6873	24.8073	16.3272	41.1345	6.6228	16.2879	22.9107	2,249.9078	39,195.8838	41,445.7917	11.7835	0.1312	41,733.9116

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	54.8820	1.9226	127.5192	0.3066		15.7322	15.7322		15.7290	15.7290	2,249.9078	4,882.3860	7,132.2938	10.6723	0.0884	7,383.8162
Energy	0.1929	1.6485	0.7015	0.0105		0.1333	0.1333		0.1333	0.1333		2,104.5029	2,104.5029	0.0403	0.0386	2,117.3105
Mobile	43.6281	31.9386	153.0086	0.3690	24.8073	0.4472	25.2545	6.6228	0.4111	7.0339		31,980.0545	31,980.0545	1.0665		32,002.4512
Total	98.7030	35.5097	281.2293	0.6861	24.8073	16.3127	41.1200	6.6228	16.2734	22.8962	2,249.9078	38,966.9434	41,216.8512	11.7791	0.1270	41,503.5779

	ROG	NOx	CO	SO2	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	0.02	0.50	0.03	0.17	0.00	0.09	0.04	0.00	0.09	0.06	0.00	0.58	0.55	0.04	3.20	0.55

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2018	4/11/2018	5	18	
2	Trenching	Trenching	4/12/2018	5/28/2018	5	33	
3	Paving	Paving	5/29/2018	6/8/2018	5	9	
4	Building Construction	Building Construction	6/9/2018	5/11/2019	5	240	
5	Architectural Coating	Architectural Coating	7/30/2018	5/21/2019	5	212	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 65

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.8517	0.0000	9.8517	3.7237	0.0000	3.7237			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.804 2	6,212.804 2	1.9341		6,253.420 9
Total	5.2895	59.5338	42.3068	0.0617	9.8517	2.7880	12.6397	3.7237	2.5650	6.2887		6,212.804 2	6,212.804 2	1.9341		6,253.420 9

3.2 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	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	0.0359	0.1437	0.1644	4.7000e-004	0.0133	2.4100e-003	0.0157	3.8100e-003	2.2200e-003	6.0300e-003		46.1846	46.1846	3.4000e-004			46.1918
Worker	0.2493	0.0508	0.6843	2.0600e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		156.4522	156.4522	5.6000e-003			156.5698
Total	0.2852	0.1945	0.8486	2.5300e-003	0.1776	3.4100e-003	0.1810	0.0474	3.1400e-003	0.0505		202.6368	202.6368	5.9400e-003			202.7616

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					4.4333	0.0000	4.4333	1.6757	0.0000	1.6757			0.0000			0.0000	
Off-Road	5.2895	47.6270	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650	0.0000	6,212.8041	6,212.8041	1.9341			6,253.4209
Total	5.2895	47.6270	42.3068	0.0617	4.4333	2.7880	7.2213	1.6757	2.5650	4.2407	0.0000	6,212.8041	6,212.8041	1.9341			6,253.4209

3.2 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	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	0.0359	0.1437	0.1644	4.7000e-004	0.0133	2.4100e-003	0.0157	3.8100e-003	2.2200e-003	6.0300e-003		46.1846	46.1846	3.4000e-004			46.1918
Worker	0.2493	0.0508	0.6843	2.0600e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		156.4522	156.4522	5.6000e-003			156.5698
Total	0.2852	0.1945	0.8486	2.5300e-003	0.1776	3.4100e-003	0.1810	0.0474	3.1400e-003	0.0505		202.6368	202.6368	5.9400e-003			202.7616

3.3 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428		625.5519	625.5519	0.1947			629.6415
Total	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428		625.5519	625.5519	0.1947			629.6415

3.3 Trenching - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0359	0.1437	0.1644	4.7000e-004	0.0133	2.4100e-003	0.0157	3.8100e-003	2.2200e-003	6.0300e-003		46.1846	46.1846	3.4000e-004			46.1918
Worker	0.0997	0.0203	0.2737	8.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.5809	62.5809	2.2400e-003			62.6279
Total	0.1356	0.1640	0.4381	1.2900e-003	0.0791	2.8100e-003	0.0819	0.0212	2.5900e-003	0.0238		108.7655	108.7655	2.5800e-003			108.8197

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.5322	4.2076	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428	0.0000	625.5519	625.5519	0.1947			629.6415
Total	0.5322	4.2076	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428	0.0000	625.5519	625.5519	0.1947			629.6415

3.3 Trenching - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0359	0.1437	0.1644	4.7000e-004	0.0133	2.4100e-003	0.0157	3.8100e-003	2.2200e-003	6.0300e-003		46.1846	46.1846	3.4000e-004			46.1918
Worker	0.0997	0.0203	0.2737	8.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.5809	62.5809	2.2400e-003			62.6279
Total	0.1356	0.1640	0.4381	1.2900e-003	0.0791	2.8100e-003	0.0819	0.0212	2.5900e-003	0.0238		108.7655	108.7655	2.5800e-003			108.8197

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990			2,259.9481
Paving	5.8368					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	7.4482	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990			2,259.9481

3.4 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1870	0.0381	0.5132	1.5400e-003	0.1232	7.5000e-004	0.1240	0.0327	6.9000e-004	0.0334		117.3391	117.3391	4.2000e-003			117.4273
Total	0.1870	0.0381	0.5132	1.5400e-003	0.1232	7.5000e-004	0.1240	0.0327	6.9000e-004	0.0334		117.3391	117.3391	4.2000e-003			117.4273

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.6114	13.7302	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990			2,259.9481
Paving	5.8368					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	7.4482	13.7302	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990			2,259.9481

3.4 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1870	0.0381	0.5132	1.5400e-003	0.1232	7.5000e-004	0.1240	0.0327	6.9000e-004	0.0334		117.3391	117.3391	4.2000e-003			117.4273
Total	0.1870	0.0381	0.5132	1.5400e-003	0.1232	7.5000e-004	0.1240	0.0327	6.9000e-004	0.0334		117.3391	117.3391	4.2000e-003			117.4273

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387			2,623.3517
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387			2,623.3517

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.9692	3.8800	4.4378	0.0128	0.3600	0.0651	0.4251	0.1029	0.0599	0.1628		1,246.984 4	1,246.984 4	9.2500e- 003			1,247.178 7
Worker	5.8592	1.1929	16.0804	0.0484	3.8609	0.0234	3.8843	1.0241	0.0217	1.0458		3,676.626 5	3,676.626 5	0.1316			3,679.390 1
Total	6.8283	5.0728	20.5182	0.0612	4.2209	0.0885	4.3094	1.1270	0.0816	1.2086		4,923.610 9	4,923.610 9	0.1409			4,926.568 8

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	2.6687	18.9451	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7
Total	2.6687	18.9451	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9692	3.8800	4.4378	0.0128	0.3600	0.0651	0.4251	0.1029	0.0599	0.1628		1,246.9844	1,246.9844	9.2500e-003		1,247.1787
Worker	5.8592	1.1929	16.0804	0.0484	3.8609	0.0234	3.8843	1.0241	0.0217	1.0458		3,676.6265	3,676.6265	0.1316		3,679.3901
Total	6.8283	5.0728	20.5182	0.0612	4.2209	0.0885	4.3094	1.1270	0.0816	1.2086		4,923.6109	4,923.6109	0.1409		4,926.5688

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.8883	3.5168	4.2970	0.0128	0.3600	0.0602	0.4202	0.1029	0.0554	0.1583		1,225.8671	1,225.8671	8.9800e-003			1,226.0557
Worker	5.5378	1.0978	14.9412	0.0483	3.8609	0.0235	3.8844	1.0241	0.0218	1.0459		3,539.8600	3,539.8600	0.1238			3,542.4600
Total	6.4261	4.6146	19.2382	0.0611	4.2209	0.0837	4.3046	1.1270	0.0771	1.2042		4,765.7271	4,765.7271	0.1328			4,768.5157

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	2.3516	17.0969	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479
Total	2.3516	17.0969	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8883	3.5168	4.2970	0.0128	0.3600	0.0602	0.4202	0.1029	0.0554	0.1583		1,225.8671	1,225.8671	8.9800e-003		1,226.0557
Worker	5.5378	1.0978	14.9412	0.0483	3.8609	0.0235	3.8844	1.0241	0.0218	1.0459		3,539.8600	3,539.8600	0.1238		3,542.4600
Total	6.4261	4.6146	19.2382	0.0611	4.2209	0.0837	4.3046	1.1270	0.0771	1.2042		4,765.7271	4,765.7271	0.1328		4,768.5157

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	33.9825	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

3.6 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	1.1718	0.2386	3.2161	9.6800e-003	0.7722	4.6800e-003	0.7769	0.2048	4.3300e-003	0.2092		735.3253	735.3253	0.0263			735.8780
Total	1.1718	0.2386	3.2161	9.6800e-003	0.7722	4.6800e-003	0.7769	0.2048	4.3300e-003	0.2092		735.3253	735.3253	0.0263			735.8780

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	1.6046	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.0102
Total	33.9825	1.6046	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.0102

3.6 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	1.1718	0.2386	3.2161	9.6800e-003	0.7722	4.6800e-003	0.7769	0.2048	4.3300e-003	0.2092		735.3253	735.3253	0.0263			735.8780
Total	1.1718	0.2386	3.2161	9.6800e-003	0.7722	4.6800e-003	0.7769	0.2048	4.3300e-003	0.2092		735.3253	735.3253	0.0263			735.8780

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238			281.9473
Total	33.9503	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238			281.9473

3.6 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	1.1076	0.2196	2.9882	9.6600e-003	0.7722	4.7000e-003	0.7769	0.2048	4.3600e-003	0.2092		707.9720	707.9720	0.0248			708.4920
Total	1.1076	0.2196	2.9882	9.6600e-003	0.7722	4.7000e-003	0.7769	0.2048	4.3600e-003	0.2092		707.9720	707.9720	0.0248			708.4920

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.4683	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			281.9473
Total	33.9503	1.4683	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			281.9473

3.6 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	1.1076	0.2196	2.9882	9.6600e-003	0.7722	4.7000e-003	0.7769	0.2048	4.3600e-003	0.2092		707.9720	707.9720	0.0248			708.4920
Total	1.1076	0.2196	2.9882	9.6600e-003	0.7722	4.7000e-003	0.7769	0.2048	4.3600e-003	0.2092		707.9720	707.9720	0.0248			708.4920

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	43.6281	31.9386	153.0086	0.3690	24.8073	0.4472	25.2545	6.6228	0.4111	7.0339		31,980.05 45	31,980.05 45	1.0665			32,002.45 12
Unmitigated	43.6281	31.9386	153.0086	0.3690	24.8073	0.4472	25.2545	6.6228	0.4111	7.0339		31,980.05 45	31,980.05 45	1.0665			32,002.45 12

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.99	1.99	1.99	4,243	4,243
Single Family Housing	3,885.42	4,092.48	3560.62	11,081,769	11,081,769
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	3,887.41	4,094.47	3,562.61	11,086,012	11,086,012

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

~~2.4 Fleet Mix~~

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1929	1.6485	0.7015	0.0105		0.1333	0.1333		0.1333	0.1333		2,104.5029	2,104.5029	0.0403	0.0386	2,117.3105
NaturalGas Unmitigated	0.2139	1.8279	0.7778	0.0117		0.1478	0.1478		0.1478	0.1478		2,333.4433	2,333.4433	0.0447	0.0428	2,347.6442

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	19834.3	0.2139	1.8279	0.7778	0.0117		0.1478	0.1478		0.1478	0.1478		2,333.4433	2,333.4433	0.0447	0.0428	2,347.6442
Total		0.2139	1.8279	0.7778	0.0117		0.1478	0.1478		0.1478	0.1478		2,333.4433	2,333.4433	0.0447	0.0428	2,347.6442

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	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	17.8883	0.1929	1.6485	0.7015	0.0105		0.1333	0.1333		0.1333	0.1333		2,104.5029	2,104.5029	0.0403	0.0386	2,117.3105
City Park	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		0.1929	1.6485	0.7015	0.0105		0.1333	0.1333		0.1333	0.1333		2,104.5029	2,104.5029	0.0403	0.0386	2,117.3105

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	54.8820	1.9226	127.5192	0.3066		15.7322	15.7322		15.7290	15.7290	2,249.9078	4,882.3860	7,132.2938	10.6723	0.0884	7,383.8162
Unmitigated	54.8820	1.9226	127.5192	0.3066		15.7322	15.7322		15.7290	15.7290	2,249.9078	4,882.3860	7,132.2938	10.6723	0.0884	7,383.8162

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	35.4930					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	1.0785	0.3982	34.0538	1.7800e-003		0.1836	0.1836		0.1836	0.1836		60.5036	60.5036	0.0620		61.8057
Total	54.8820	1.9226	127.5192	0.3067		15.7322	15.7322		15.7290	15.7290	2,249.9078	4,882.3860	7,132.2938	10.6723	0.0884	7,383.8162

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	35.4930					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884		7,322.0105
Landscaping	1.0785	0.3982	34.0538	1.7800e-003		0.1836	0.1836		0.1836	0.1836		60.5036	60.5036	0.0620			61.8057
Total	54.8820	1.9226	127.5192	0.3067		15.7322	15.7322		15.7290	15.7290	2,249.9078	4,882.3860	7,132.2938	10.6723	0.0884		7,383.8162

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

CALEEMOD OUTPUTS

**Construction
Phase 2I**

◆ **Summer**

FR SPA 3 Construction Phase 2I
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	249.00	Dwelling Unit	48.00	448,200.00	650
Other Asphalt Surfaces	435.80	1000sqft	10.00	435,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan, City average population is 2.61 persons per household. "park" use is a paseo, no parking or vehicle trips associated

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	75.00	212.00
tblConstructionPhase	NumDays	1,110.00	241.00
tblConstructionPhase	NumDays	110.00	19.00
tblConstructionPhase	NumDays	75.00	7.00
tblConstructionPhase	PhaseEndDate	3/3/2022	5/21/2021
tblConstructionPhase	PhaseEndDate	4/10/2020	4/11/2020
tblConstructionPhase	PhaseStartDate	5/12/2021	7/30/2020
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	60.00
tblLandUse	LotAcreage	80.84	48.00
tblLandUse	Population	712.00	650.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70
tblWoodstoves	NumberNoncatalytic	15.70	20.70

2.0 Emissions Summary

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	38.8207	1.7685	114.3402	0.3060		15.6612	15.6612		15.6580	15.6580	2,249.9078	4,858.9675	7,108.8753	10.6483	0.0884	7,359.8929
Energy	0.1312	1.1210	0.4770	7.1600e-003		0.0906	0.0906		0.0906	0.0906		1,431.1019	1,431.1019	0.0274	0.0262	1,439.8114
Mobile	26.7603	19.5902	93.8512	0.2263	15.2160	0.2743	15.4903	4.0622	0.2522	4.3144		19,615.5628	19,615.5628	0.6542		19,629.3003
Total	65.7121	22.4797	208.6685	0.5394	15.2160	16.0261	31.2421	4.0622	16.0008	20.0630	2,249.9078	25,905.6322	28,155.5401	11.3298	0.1146	28,429.0045

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	38.8207	1.7685	114.3402	0.3060		15.6612	15.6612		15.6580	15.6580	2,249.9078	4,858.9675	7,108.8753	10.6483	0.0884	7,359.8929
Energy	0.1183	1.0110	0.4302	6.4500e-003		0.0817	0.0817		0.0817	0.0817		1,290.6926	1,290.6926	0.0247	0.0237	1,298.5476
Mobile	26.7603	19.5902	93.8512	0.2263	15.2160	0.2743	15.4903	4.0622	0.2522	4.3144		19,615.5628	19,615.5628	0.6542		19,629.3003
Total	65.6993	22.3697	208.6217	0.5387	15.2160	16.0172	31.2332	4.0622	15.9919	20.0541	2,249.9078	25,765.2230	28,015.1308	11.3272	0.1121	28,287.7407

	ROG	NOx	CO	SO2	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	0.02	0.49	0.02	0.13	0.00	0.06	0.03	0.00	0.06	0.04	0.00	0.54	0.50	0.02	2.25	0.50

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2020	4/11/2020	5	19	
2	Trenching	Trenching	4/12/2020	5/28/2020	5	34	
3	Paving	Paving	5/29/2020	6/8/2020	5	7	
4	Building Construction	Building Construction	6/9/2020	5/11/2021	5	241	
5	Architectural Coating	Architectural Coating	7/30/2020	5/21/2021	5	212	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Forklifts	3	1.00	89	0.20
Building Construction	Generator Sets	3	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	3.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Paving	Sweepers/Scrubbers	1	2.00	64	0.46

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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2020

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					9.0541	0.0000	9.0541	3.4976	0.0000	3.4976			0.0000			0.0000
Off-Road	4.5501	49.3839	38.4257	0.0617		2.2619	2.2619		2.0810	2.0810		5,977.7088	5,977.7088	1.9333		6,018.3084
Total	4.5501	49.3839	38.4257	0.0617	9.0541	2.2619	11.3160	3.4976	2.0810	5.5786		5,977.7088	5,977.7088	1.9333		6,018.3084

3.2 Grading - 2020

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	0.0315	0.1120	0.1539	4.7000e-004	0.0133	1.9900e-003	0.0153	3.8100e-003	1.8300e-003	5.6400e-003		44.3686	44.3686	3.2000e-004		44.3753
Worker	0.2240	0.0434	0.5935	2.0500e-003	0.1643	1.0100e-003	0.1653	0.0436	9.4000e-004	0.0445		144.6520	144.6520	5.0000e-003		144.7570
Total	0.2555	0.1554	0.7474	2.5200e-003	0.1776	3.0000e-003	0.1806	0.0474	2.7700e-003	0.0502		189.0206	189.0206	5.3200e-003		189.1323

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					4.0743	0.0000	4.0743	1.5739	0.0000	1.5739			0.0000			0.0000
Off-Road	4.5501	39.5072	38.4257	0.0617		2.2619	2.2619		2.0810	2.0810	0.0000	5,977.7088	5,977.7088	1.9333		6,018.3084
Total	4.5501	39.5072	38.4257	0.0617	4.0743	2.2619	6.3363	1.5739	2.0810	3.6549	0.0000	5,977.7088	5,977.7088	1.9333		6,018.3084

3.2 Grading - 2020

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	0.0315	0.1120	0.1539	4.7000e-004	0.0133	1.9900e-003	0.0153	3.8100e-003	1.8300e-003	5.6400e-003		44.3686	44.3686	3.2000e-004			44.3753
Worker	0.2240	0.0434	0.5935	2.0500e-003	0.1643	1.0100e-003	0.1653	0.0436	9.4000e-004	0.0445		144.6520	144.6520	5.0000e-003			144.7570
Total	0.2555	0.1554	0.7474	2.5200e-003	0.1776	3.0000e-003	0.1806	0.0474	2.7700e-003	0.0502		189.0206	189.0206	5.3200e-003			189.1323

3.3 Trenching - 2020

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	0.8517	8.1237	7.2768	9.6800e-003		0.5592	0.5592		0.5145	0.5145		938.4049	938.4049	0.3035			944.7783
Total	0.8517	8.1237	7.2768	9.6800e-003		0.5592	0.5592		0.5145	0.5145		938.4049	938.4049	0.3035			944.7783

3.3 Trenching - 2020

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	0.0315	0.1120	0.1539	4.7000e-004	0.0133	1.9900e-003	0.0153	3.8100e-003	1.8300e-003	5.6400e-003		44.3686	44.3686	3.2000e-004			44.3753
Worker	0.0896	0.0174	0.2374	8.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		57.8608	57.8608	2.0000e-003			57.9028
Total	0.1211	0.1293	0.3913	1.2900e-003	0.0791	2.3900e-003	0.0814	0.0212	2.2000e-003	0.0235		102.2294	102.2294	2.3200e-003			102.2781

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.8517	6.4989	7.2768	9.6800e-003		0.5592	0.5592		0.5145	0.5145	0.0000	938.4049	938.4049	0.3035			944.7783
Total	0.8517	6.4989	7.2768	9.6800e-003		0.5592	0.5592		0.5145	0.5145	0.0000	938.4049	938.4049	0.3035			944.7783

3.3 Trenching - 2020

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	0.0315	0.1120	0.1539	4.7000e-004	0.0133	1.9900e-003	0.0153	3.8100e-003	1.8300e-003	5.6400e-003		44.3686	44.3686	3.2000e-004			44.3753
Worker	0.0896	0.0174	0.2374	8.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		57.8608	57.8608	2.0000e-003			57.9028
Total	0.1211	0.1293	0.3913	1.2900e-003	0.0791	2.3900e-003	0.0814	0.0212	2.2000e-003	0.0235		102.2294	102.2294	2.3200e-003			102.2781

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.3969	14.3607	14.8444	0.0229		0.7853	0.7853		0.7225	0.7225		2,221.7125	2,221.7125	0.7186			2,236.8020
Paving	3.7429					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	5.1398	14.3607	14.8444	0.0229		0.7853	0.7853		0.7225	0.7225		2,221.7125	2,221.7125	0.7186			2,236.8020

3.4 Paving - 2020

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	0.1680	0.0326	0.4451	1.5400e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		108.4890	108.4890	3.7500e-003			108.5677
Total	0.1680	0.0326	0.4451	1.5400e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		108.4890	108.4890	3.7500e-003			108.5677

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.3969	11.0276	14.8444	0.0229		0.7853	0.7853		0.7225	0.7225	0.0000	2,221.7125	2,221.7125	0.7186			2,236.8020
Paving	3.7429					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	5.1398	11.0276	14.8444	0.0229		0.7853	0.7853		0.7225	0.7225	0.0000	2,221.7125	2,221.7125	0.7186			2,236.8020

3.4 Paving - 2020

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	0.1680	0.0326	0.4451	1.5400e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		108.4890	108.4890	3.7500e-003		108.5677
Total	0.1680	0.0326	0.4451	1.5400e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		108.4890	108.4890	3.7500e-003		108.5677

3.5 Building Construction - 2020

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	0.4393	4.1593	4.3968	6.5300e-003		0.2596	0.2596		0.2447	0.2447		627.5141	627.5141	0.1405		630.4655
Total	0.4393	4.1593	4.3968	6.5300e-003		0.2596	0.2596		0.2447	0.2447		627.5141	627.5141	0.1405		630.4655

3.5 Building Construction - 2020

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	0.8493	3.0227	4.1545	0.0128	0.3600	0.0537	0.4137	0.1029	0.0494	0.1523		1,197.9527	1,197.9527	8.6300e-003			1,198.1339
Worker	5.2644	1.0208	13.9476	0.0483	3.8609	0.0237	3.8847	1.0241	0.0220	1.0461		3,399.3224	3,399.3224	0.1175			3,401.7889
Total	6.1137	4.0435	18.1021	0.0611	4.2209	0.0775	4.2984	1.1270	0.0714	1.1984		4,597.2751	4,597.2751	0.1261			4,599.9228

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.4393	3.3275	4.3968	6.5300e-003		0.2596	0.2596		0.2447	0.2447	0.0000	627.5141	627.5141	0.1405			630.4655
Total	0.4393	3.3275	4.3968	6.5300e-003		0.2596	0.2596		0.2447	0.2447	0.0000	627.5141	627.5141	0.1405			630.4655

3.5 Building Construction - 2020

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	0.8493	3.0227	4.1545	0.0128	0.3600	0.0537	0.4137	0.1029	0.0494	0.1523		1,197.9527	1,197.9527	8.6300e-003			1,198.1339
Worker	5.2644	1.0208	13.9476	0.0483	3.8609	0.0237	3.8847	1.0241	0.0220	1.0461		3,399.3224	3,399.3224	0.1175			3,401.7889
Total	6.1137	4.0435	18.1021	0.0611	4.2209	0.0775	4.2984	1.1270	0.0714	1.1984		4,597.2751	4,597.2751	0.1261			4,599.9228

3.5 Building Construction - 2021

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	0.3932	3.7623	4.3625	6.5400e-003		0.2200	0.2200		0.2075	0.2075		627.6621	627.6621	0.1394			630.5886
Total	0.3932	3.7623	4.3625	6.5400e-003		0.2200	0.2200		0.2075	0.2075		627.6621	627.6621	0.1394			630.5886

3.5 Building Construction - 2021

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	0.7066	2.5021	3.9203	0.0128	0.3600	0.0483	0.4083	0.1029	0.0444	0.1473		1,196.0777	1,196.0777	8.5300e-003			1,196.2570
Worker	5.0402	0.9612	13.1941	0.0483	3.8609	0.0240	3.8850	1.0241	0.0223	1.0464		3,342.7582	3,342.7582	0.1126			3,345.1219
Total	5.7468	3.4633	17.1144	0.0610	4.2210	0.0723	4.2933	1.1270	0.0667	1.1937		4,538.8360	4,538.8360	0.1211			4,541.3789

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.3932	3.0098	4.3625	6.5400e-003		0.2200	0.2200		0.2075	0.2075	0.0000	627.6621	627.6621	0.1394			630.5886
Total	0.3932	3.0098	4.3625	6.5400e-003		0.2200	0.2200		0.2075	0.2075	0.0000	627.6621	627.6621	0.1394			630.5886

3.5 Building Construction - 2021

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	0.7066	2.5021	3.9203	0.0128	0.3600	0.0483	0.4083	0.1029	0.0444	0.1473		1,196.0777	1,196.0777	8.5300e-003			1,196.2570
Worker	5.0402	0.9612	13.1941	0.0483	3.8609	0.0240	3.8850	1.0241	0.0223	1.0464		3,342.7582	3,342.7582	0.1126			3,345.1219
Total	5.7468	3.4633	17.1144	0.0610	4.2210	0.0723	4.2933	1.1270	0.0667	1.1937		4,538.8360	4,538.8360	0.1211			4,541.3789

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218			281.9057
Total	33.9261	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218			281.9057

3.6 Architectural Coating - 2020

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	1.0529	0.2042	2.7895	9.6600e-003	0.7722	4.7400e-003	0.7769	0.2048	4.4000e-003	0.2092		679.8645	679.8645	0.0235			680.3578
Total	1.0529	0.2042	2.7895	9.6600e-003	0.7722	4.7400e-003	0.7769	0.2048	4.4000e-003	0.2092		679.8645	679.8645	0.0235			680.3578

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2422	1.3471	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218			281.9057
Total	33.9261	1.3471	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218			281.9057

3.6 Architectural Coating - 2020

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	1.0529	0.2042	2.7895	9.6600e-003	0.7722	4.7400e-003	0.7769	0.2048	4.4000e-003	0.2092		679.8645	679.8645	0.0235			680.3578
Total	1.0529	0.2042	2.7895	9.6600e-003	0.7722	4.7400e-003	0.7769	0.2048	4.4000e-003	0.2092		679.8645	679.8645	0.0235			680.3578

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193			281.8537
Total	33.9028	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193			281.8537

3.6 Architectural Coating - 2021

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	1.0080	0.1922	2.6388	9.6600e-003	0.7722	4.8100e-003	0.7770	0.2048	4.4600e-003	0.2093		668.5516	668.5516	0.0225			669.0244
Total	1.0080	0.1922	2.6388	9.6600e-003	0.7722	4.8100e-003	0.7770	0.2048	4.4600e-003	0.2093		668.5516	668.5516	0.0225			669.0244

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2189	1.2215	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193			281.8537
Total	33.9028	1.2215	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193			281.8537

3.6 Architectural Coating - 2021

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	1.0080	0.1922	2.6388	9.6600e-003	0.7722	4.8100e-003	0.7770	0.2048	4.4600e-003	0.2093		668.5516	668.5516	0.0225		669.0244
Total	1.0080	0.1922	2.6388	9.6600e-003	0.7722	4.8100e-003	0.7770	0.2048	4.4600e-003	0.2093		668.5516	668.5516	0.0225		669.0244

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	26.7603	19.5902	93.8512	0.2263	15.2160	0.2743	15.4903	4.0622	0.2522	4.3144		19,615.5628	19,615.5628	0.6542		19,629.3003
Unmitigated	26.7603	19.5902	93.8512	0.2263	15.2160	0.2743	15.4903	4.0622	0.2522	4.3144		19,615.5628	19,615.5628	0.6542		19,629.3003

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.59	1.59	1.59	3,394	3,394
Single Family Housing	2,382.93	2,509.92	2183.73	6,796,455	6,796,455
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,384.52	2,511.51	2,185.32	6,799,849	6,799,849

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1183	1.0110	0.4302	6.4500e-003		0.0817	0.0817		0.0817	0.0817		1,290.6926	1,290.6926	0.0247	0.0237	1,298.5476
NaturalGas Unmitigated	0.1312	1.1210	0.4770	7.1600e-003		0.0906	0.0906		0.0906	0.0906		1,431.1019	1,431.1019	0.0274	0.0262	1,439.8114

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	12164.4	0.1312	1.1210	0.4770	7.1600e-003		0.0906	0.0906		0.0906	0.0906		1,431.1019	1,431.1019	0.0274	0.0262	1,439.8114
Total		0.1312	1.1210	0.4770	7.1600e-003		0.0906	0.0906		0.0906	0.0906		1,431.1019	1,431.1019	0.0274	0.0262	1,439.8114

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	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	10.9709	0.1183	1.0110	0.4302	6.4500e-003		0.0817	0.0817		0.0817	0.0817		1,290.6926	1,290.6926	0.0247	0.0237	1,298.5476
City Park	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		0.1183	1.0110	0.4302	6.4500e-003		0.0817	0.0817		0.0817	0.0817		1,290.6926	1,290.6926	0.0247	0.0237	1,298.5476

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	38.8207	1.7685	114.3402	0.3060		15.6612	15.6612		15.6580	15.6580	2,249.9078	4,858.9675	7,108.8753	10.6483	0.0884	7,359.8929
Unmitigated	38.8207	1.7685	114.3402	0.3060		15.6612	15.6612		15.6580	15.6580	2,249.9078	4,858.9675	7,108.8753	10.6483	0.0884	7,359.8929

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.8498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	0.6604	0.2441	20.8748	1.0900e-003		0.1125	0.1125		0.1125	0.1125		37.0851	37.0851	0.0380		37.8824
Total	38.8207	1.7685	114.3402	0.3060		15.6612	15.6612		15.6580	15.6580	2,249.9078	4,858.9675	7,108.8753	10.6483	0.0884	7,359.8929

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	19.8498					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884		7,322.0105
Landscaping	0.6604	0.2441	20.8748	1.0900e-003		0.1125	0.1125		0.1125	0.1125		37.0851	37.0851	0.0380			37.8824
Total	38.8207	1.7685	114.3402	0.3060		15.6612	15.6612		15.6580	15.6580	2,249.9078	4,858.9675	7,108.8753	10.6483	0.0884		7,359.8929

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

CALEEMOD OUTPUTS

**Construction
Phase 3A.1**

◆ **Summer**

FR SPA 3 Construction Phase 3A1
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.13	Acre	1.13	49,222.80	0
Single Family Housing	282.00	Dwelling Unit	50.00	507,600.00	736
Other Asphalt Surfaces	438.00	1000sqft	10.06	438,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan, City average population is 2.61 persons per household. "park" use is a paseo, no parking or vehicle trips associated

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	75.00	210.00
tblConstructionPhase	NumDays	1,110.00	241.00
tblConstructionPhase	NumDays	110.00	18.00
tblConstructionPhase	NumDays	75.00	8.00
tblConstructionPhase	PhaseEndDate	2/29/2024	5/21/2023
tblConstructionPhase	PhaseEndDate	5/27/2022	5/28/2022
tblConstructionPhase	PhaseStartDate	5/12/2023	7/30/2022
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	60.00
tblLandUse	LotAcreage	91.56	50.00
tblLandUse	Population	807.00	736.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2016

tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70
tblWoodstoves	NumberNoncatalytic	15.70	20.70

2.0 Emissions Summary

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	40.3471	1.8008	117.1009	0.3061		15.6761	15.6761		15.6729	15.6729	2,249.9078	4,863.8702	7,113.7781	10.6532	0.0884	7,364.9005
Energy	0.1486	1.2696	0.5403	8.1000e-003		0.1027	0.1027		0.1027	0.1027		1,620.7660	1,620.7660	0.0311	0.0297	1,630.6297
Mobile	30.3068	22.1865	106.2892	0.2563	17.2326	0.3107	17.5432	4.6006	0.2856	4.8862		22,215.1921	22,215.1921	0.7409		22,230.7502
Total	70.8024	25.2569	223.9304	0.5705	17.2326	16.0894	33.3220	4.6006	16.0611	20.6617	2,249.9078	28,699.8284	30,949.7362	11.4252	0.1181	31,226.2804

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	40.3471	1.8008	117.1009	0.3061		15.6761	15.6761		15.6729	15.6729	2,249.9078	4,863.8702	7,113.7781	10.6532	0.0884	7,364.9005
Energy	0.1340	1.1450	0.4873	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7483	1,461.7483	0.0280	0.0268	1,470.6443
Mobile	30.3068	22.1865	106.2892	0.2563	17.2326	0.3107	17.5432	4.6006	0.2856	4.8862		22,215.1921	22,215.1921	0.7409		22,230.7502
Total	70.7878	25.1323	223.8774	0.5697	17.2326	16.0793	33.3119	4.6006	16.0510	20.6516	2,249.9078	28,540.8106	30,790.7185	11.4221	0.1152	31,066.2950

	ROG	NOx	CO	SO2	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	0.02	0.49	0.02	0.14	0.00	0.06	0.03	0.00	0.06	0.05	0.00	0.55	0.51	0.03	2.46	0.51

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2022	4/11/2022	5	18	
2	Trenching	Trenching	4/12/2022	5/28/2022	5	34	
3	Paving	Paving	5/29/2022	6/8/2022	5	8	
4	Building Construction	Building Construction	6/9/2022	5/11/2023	5	241	
5	Architectural Coating	Architectural Coating	7/30/2022	5/21/2023	5	210	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Forklifts	3	1.00	89	0.20
Building Construction	Generator Sets	3	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	3.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Paving	Sweepers/Scrubbers	1	2.00	64	0.46

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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2022

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					9.5571	0.0000	9.5571	3.6919	0.0000	3.6919			0.0000			0.0000
Off-Road	3.7643	38.4288	35.0957	0.0618		1.7274	1.7274		1.5892	1.5892		5,984.7478	5,984.7478	1.9356		6,025.3952
Total	3.7643	38.4288	35.0957	0.0618	9.5571	1.7274	11.2845	3.6919	1.5892	5.2811		5,984.7478	5,984.7478	1.9356		6,025.3952

3.2 Grading - 2022

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	0.0254	0.0823	0.1428	4.7000e-004	0.0133	1.7500e-003	0.0151	3.8100e-003	1.6100e-003	5.4200e-003		44.2599	44.2599	3.2000e-004			44.2666
Worker	0.2058	0.0387	0.5337	2.0500e-003	0.1643	1.0400e-003	0.1653	0.0436	9.6000e-004	0.0445		140.0697	140.0697	4.6100e-003			140.1666
Total	0.2312	0.1211	0.6765	2.5200e-003	0.1776	2.7900e-003	0.1804	0.0474	2.5700e-003	0.0500		184.3296	184.3296	4.9300e-003			184.4332

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					4.3007	0.0000	4.3007	1.6614	0.0000	1.6614			0.0000				0.0000
Off-Road	3.7643	30.7430	35.0957	0.0618		1.7274	1.7274		1.5892	1.5892	0.0000	5,984.7478	5,984.7478	1.9356			6,025.3952
Total	3.7643	30.7430	35.0957	0.0618	4.3007	1.7274	6.0281	1.6614	1.5892	3.2505	0.0000	5,984.7478	5,984.7478	1.9356			6,025.3952

3.2 Grading - 2022

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	0.0254	0.0823	0.1428	4.7000e-004	0.0133	1.7500e-003	0.0151	3.8100e-003	1.6100e-003	5.4200e-003		44.2599	44.2599	3.2000e-004			44.2666
Worker	0.2058	0.0387	0.5337	2.0500e-003	0.1643	1.0400e-003	0.1653	0.0436	9.6000e-004	0.0445		140.0697	140.0697	4.6100e-003			140.1666
Total	0.2312	0.1211	0.6765	2.5200e-003	0.1776	2.7900e-003	0.1804	0.0474	2.5700e-003	0.0500		184.3296	184.3296	4.9300e-003			184.4332

3.3 Trenching - 2022

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	0.7026	6.8176	7.1415	9.6800e-003		0.4258	0.4258		0.3918	0.3918		937.8107	937.8107	0.3033			944.1801
Total	0.7026	6.8176	7.1415	9.6800e-003		0.4258	0.4258		0.3918	0.3918		937.8107	937.8107	0.3033			944.1801

3.3 Trenching - 2022

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	0.0254	0.0823	0.1428	4.7000e-004	0.0133	1.7500e-003	0.0151	3.8100e-003	1.6100e-003	5.4200e-003		44.2599	44.2599	3.2000e-004			44.2666
Worker	0.0823	0.0155	0.2135	8.2000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.9000e-004	0.0178		56.0279	56.0279	1.8400e-003			56.0666
Total	0.1077	0.0978	0.3563	1.2900e-003	0.0791	2.1700e-003	0.0812	0.0212	2.0000e-003	0.0232		100.2878	100.2878	2.1600e-003			100.3332

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.7026	5.4541	7.1415	9.6800e-003		0.4258	0.4258		0.3918	0.3918	0.0000	937.8107	937.8107	0.3033			944.1801
Total	0.7026	5.4541	7.1415	9.6800e-003		0.4258	0.4258		0.3918	0.3918	0.0000	937.8107	937.8107	0.3033			944.1801

3.3 Trenching - 2022

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	0.0254	0.0823	0.1428	4.7000e-004	0.0133	1.7500e-003	0.0151	3.8100e-003	1.6100e-003	5.4200e-003		44.2599	44.2599	3.2000e-004			44.2666
Worker	0.0823	0.0155	0.2135	8.2000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.9000e-004	0.0178		56.0279	56.0279	1.8400e-003			56.0666
Total	0.1077	0.0978	0.3563	1.2900e-003	0.0791	2.1700e-003	0.0812	0.0212	2.0000e-003	0.0232		100.2878	100.2878	2.1600e-003			100.3332

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.1298	11.3615	14.7607	0.0230		0.5878	0.5878		0.5408	0.5408		2,222.2310	2,222.2310	0.7187			2,237.3240
Paving	3.2947					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	4.4245	11.3615	14.7607	0.0230		0.5878	0.5878		0.5408	0.5408		2,222.2310	2,222.2310	0.7187			2,237.3240

3.4 Paving - 2022

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	0.1544	0.0291	0.4003	1.5400e-003	0.1232	7.8000e-004	0.1240	0.0327	7.2000e-004	0.0334		105.0523	105.0523	3.4600e-003			105.1249
Total	0.1544	0.0291	0.4003	1.5400e-003	0.1232	7.8000e-004	0.1240	0.0327	7.2000e-004	0.0334		105.0523	105.0523	3.4600e-003			105.1249

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.1298	8.7286	14.7607	0.0230		0.5878	0.5878		0.5408	0.5408	0.0000	2,222.2310	2,222.2310	0.7187			2,237.3240
Paving	3.2947					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	4.4245	8.7286	14.7607	0.0230		0.5878	0.5878		0.5408	0.5408	0.0000	2,222.2310	2,222.2310	0.7187			2,237.3240

3.4 Paving - 2022

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	0.1544	0.0291	0.4003	1.5400e-003	0.1232	7.8000e-004	0.1240	0.0327	7.2000e-004	0.0334		105.0523	105.0523	3.4600e-003			105.1249
Total	0.1544	0.0291	0.4003	1.5400e-003	0.1232	7.8000e-004	0.1240	0.0327	7.2000e-004	0.0334		105.0523	105.0523	3.4600e-003			105.1249

3.5 Building Construction - 2022

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	0.3516	3.3788	4.3288	6.5400e-003		0.1827	0.1827		0.1725	0.1725		628.0433	628.0433	0.1387			630.9552
Total	0.3516	3.3788	4.3288	6.5400e-003		0.1827	0.1827		0.1725	0.1725		628.0433	628.0433	0.1387			630.9552

3.5 Building Construction - 2022

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	0.6862	2.2226	3.8555	0.0127	0.3601	0.0473	0.4074	0.1029	0.0435	0.1465		1,195.0169	1,195.0169	8.6500e-003			1,195.1985
Worker	4.8362	0.9102	12.5413	0.0483	3.8609	0.0244	3.8853	1.0241	0.0226	1.0467		3,291.6383	3,291.6383	0.1084			3,293.9141
Total	5.5224	3.1328	16.3968	0.0610	4.2210	0.0717	4.2927	1.1270	0.0662	1.1932		4,486.6552	4,486.6552	0.1170			4,489.1125

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.3516	2.7030	4.3288	6.5400e-003		0.1827	0.1827		0.1725	0.1725	0.0000	628.0433	628.0433	0.1387			630.9552
Total	0.3516	2.7030	4.3288	6.5400e-003		0.1827	0.1827		0.1725	0.1725	0.0000	628.0433	628.0433	0.1387			630.9552

3.5 Building Construction - 2022

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	0.6862	2.2226	3.8555	0.0127	0.3601	0.0473	0.4074	0.1029	0.0435	0.1465		1,195.0169	1,195.0169	8.6500e-003			1,195.1985
Worker	4.8362	0.9102	12.5413	0.0483	3.8609	0.0244	3.8853	1.0241	0.0226	1.0467		3,291.6383	3,291.6383	0.1084			3,293.9141
Total	5.5224	3.1328	16.3968	0.0610	4.2210	0.0717	4.2927	1.1270	0.0662	1.1932		4,486.6552	4,486.6552	0.1170			4,489.1125

3.5 Building Construction - 2023

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	0.3234	3.1059	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470		628.4231	628.4231	0.1380			631.3202
Total	0.3234	3.1059	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470		628.4231	628.4231	0.1380			631.3202

3.5 Building Construction - 2023

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	0.6711	1.9944	3.7602	0.0127	0.3601	0.0444	0.4045	0.1029	0.0409	0.1438		1,193.5829	1,193.5829	8.1800e-003			1,193.7546
Worker	4.6458	0.8658	11.9545	0.0483	3.8609	0.0247	3.8857	1.0241	0.0230	1.0471		3,245.7817	3,245.7817	0.1047			3,247.9809
Total	5.3169	2.8603	15.7147	0.0610	4.2210	0.0692	4.2902	1.1270	0.0638	1.1909		4,439.3645	4,439.3645	0.1129			4,441.7355

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.3234	2.4847	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470	0.0000	628.4231	628.4231	0.1380			631.3202
Total	0.3234	2.4847	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470	0.0000	628.4231	628.4231	0.1380			631.3202

3.5 Building Construction - 2023

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	0.6711	1.9944	3.7602	0.0127	0.3601	0.0444	0.4045	0.1029	0.0409	0.1438		1,193.5829	1,193.5829	8.1800e-003			1,193.7546
Worker	4.6458	0.8658	11.9545	0.0483	3.8609	0.0247	3.8857	1.0241	0.0230	1.0471		3,245.7817	3,245.7817	0.1047			3,247.9809
Total	5.3169	2.8603	15.7147	0.0610	4.2210	0.0692	4.2902	1.1270	0.0638	1.1909		4,439.3645	4,439.3645	0.1129			4,441.7355

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183			281.8329
Total	34.2092	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183			281.8329

3.6 Architectural Coating - 2022

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	0.9672	0.1821	2.5083	9.6500e-003	0.7722	4.8800e-003	0.7771	0.2048	4.5300e-003	0.2094		658.3277	658.3277	0.0217			658.7828
Total	0.9672	0.1821	2.5083	9.6500e-003	0.7722	4.8800e-003	0.7771	0.2048	4.5300e-003	0.2094		658.3277	658.3277	0.0217			658.7828

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2045	1.1268	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183			281.8329
Total	34.2092	1.1268	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183			281.8329

3.6 Architectural Coating - 2022

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	0.9672	0.1821	2.5083	9.6500e-003	0.7722	4.8800e-003	0.7771	0.2048	4.5300e-003	0.2094		658.3277	658.3277	0.0217			658.7828
Total	0.9672	0.1821	2.5083	9.6500e-003	0.7722	4.8800e-003	0.7771	0.2048	4.5300e-003	0.2094		658.3277	658.3277	0.0217			658.7828

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168			281.8017
Total	34.1963	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168			281.8017

3.6 Architectural Coating - 2023

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	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210			649.5962
Total	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210			649.5962

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	34.0047					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1917	1.0424	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168			281.8017
Total	34.1963	1.0424	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168			281.8017

3.6 Architectural Coating - 2023

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	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210		649.5962
Total	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210		649.5962

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	30.3068	22.1865	106.2892	0.2563	17.2326	0.3107	17.5432	4.6006	0.2856	4.8862		22,215.1921	22,215.1921	0.7409		22,230.7502
Unmitigated	30.3068	22.1865	106.2892	0.2563	17.2326	0.3107	17.5432	4.6006	0.2856	4.8862		22,215.1921	22,215.1921	0.7409		22,230.7502

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.80	1.80	1.80	3,836	3,836
Single Family Housing	2,698.74	2,842.56	2473.14	7,697,190	7,697,190
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,700.54	2,844.36	2,474.94	7,701,025	7,701,025

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

~~2.4 Fleet Mix~~

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1340	1.1450	0.4873	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7483	1,461.7483	0.0280	0.0268	1,470.6443
NaturalGas Unmitigated	0.1486	1.2696	0.5403	8.1000e-003		0.1027	0.1027		0.1027	0.1027		1,620.7660	1,620.7660	0.0311	0.0297	1,630.6297

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	13776.5	0.1486	1.2696	0.5403	8.1000e-003		0.1027	0.1027		0.1027	0.1027		1,620.7660	1,620.7660	0.0311	0.0297	1,630.6297
Total		0.1486	1.2696	0.5403	8.1000e-003		0.1027	0.1027		0.1027	0.1027		1,620.7660	1,620.7660	0.0311	0.0297	1,630.6297

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	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	12.4249	0.1340	1.1450	0.4873	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7483	1,461.7483	0.0280	0.0268	1,470.6443
City Park	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		0.1340	1.1450	0.4873	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7483	1,461.7483	0.0280	0.0268	1,470.6443

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	40.3471	1.8008	117.1009	0.3061		15.6761	15.6761		15.6729	15.6729	2,249.9078	4,863.8702	7,113.7781	10.6532	0.0884	7,364.9005
Unmitigated	40.3471	1.8008	117.1009	0.3061		15.6761	15.6761		15.6729	15.6729	2,249.9078	4,863.8702	7,113.7781	10.6532	0.0884	7,364.9005

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	21.2892					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884		7,322.0105
Landscaping	0.7474	0.2764	23.6355	1.2300e-003		0.1274	0.1274		0.1274	0.1274		41.9879	41.9879	0.0430			42.8901
Total	40.3471	1.8008	117.1009	0.3061		15.6761	15.6761		15.6729	15.6729	2,249.9078	4,863.8702	7,113.7781	10.6532	0.0884		7,364.9005

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	21.2892					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	0.7474	0.2764	23.6355	1.2300e-003		0.1274	0.1274		0.1274	0.1274		41.9879	41.9879	0.0430		42.8901
Total	40.3471	1.8008	117.1009	0.3061		15.6761	15.6761		15.6729	15.6729	2,249.9078	4,863.8702	7,113.7781	10.6532	0.0884	7,364.9005

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

CALEEMOD OUTPUTS

Construction
Phase 3A.2

◆ Summer

FR SPA 3 Construction Phase 3A2
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	11.80	Acre	11.80	514,008.00	0
Condo/Townhouse	300.00	Dwelling Unit	18.75	300,000.00	858
Other Asphalt Surfaces	772.00	1000sqft	17.72	772,000.00	0
Apartments Low Rise	472.00	Dwelling Unit	16.00	472,000.00	1350
Elementary School	600.00	Student	10.60	50,162.02	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MW hr)	793.8	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	75.00	211.00
tblConstructionPhase	NumDays	1,110.00	241.00
tblConstructionPhase	NumDays	110.00	18.00
tblConstructionPhase	NumDays	75.00	9.00
tblConstructionPhase	PhaseEndDate	3/3/2025	5/20/2024
tblConstructionPhase	PhaseEndDate	5/26/2023	5/28/2023
tblConstructionPhase	PhaseStartDate	5/11/2024	7/29/2023
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	60.00
tblLandUse	LotAcreage	29.50	16.00
tblLandUse	LotAcreage	1.15	10.60
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2016

tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70
tblWoodstoves	NumberNoncatalytic	15.70	20.70

2.0 Emissions Summary

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	65.4732	2.2813	158.1888	0.3082		15.8976	15.8976		15.8944	15.8944	2,249.9078	4,936.8676	7,186.7754	10.7280	0.0884	7,439.4680
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	0.1572	0.1145	0.5564	1.2700e-003	0.0847	1.5600e-003	0.0863	0.0226	1.4400e-003	0.0241		110.2080	110.2080	3.7800e-003		110.2873
Total	65.6304	2.3958	158.7452	0.3095	0.0847	15.8991	15.9839	0.0226	15.8958	15.9184	2,249.9078	5,047.0756	7,296.9834	10.7318	0.0884	7,549.7553

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	65.4732	2.2813	158.1888	0.3082		15.8976	15.8976		15.8944	15.8944	2,249.9078	4,936.8676	7,186.7754	10.7280	0.0884	7,439.4680
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	0.1572	0.1145	0.5564	1.2700e-003	0.0847	1.5600e-003	0.0863	0.0226	1.4400e-003	0.0241		110.2080	110.2080	3.7800e-003		110.2873
Total	65.6304	2.3958	158.7452	0.3095	0.0847	15.8991	15.9839	0.0226	15.8958	15.9184	2,249.9078	5,047.0756	7,296.9834	10.7318	0.0884	7,549.7553

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2023	4/11/2023	5	18	
2	Trenching	Trenching	4/12/2023	5/28/2023	5	33	
3	Paving	Paving	5/29/2023	6/8/2023	5	9	
4	Building Construction	Building Construction	6/9/2023	5/10/2024	5	241	
5	Architectural Coating	Architectural Coating	7/29/2023	5/20/2024	5	211	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Forklifts	3	1.00	89	0.20
Building Construction	Generator Sets	3	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	3.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Paving	Sweepers/Scrubbers	1	2.00	64	0.46

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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2023

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					9.5571	0.0000	9.5571	3.6919	0.0000	3.6919			0.0000			0.0000
Off-Road	3.5314	34.9375	34.1888	0.0618		1.5543	1.5543		1.4300	1.4300		5,985.4359	5,985.4359	1.9358		6,026.0879
Total	3.5314	34.9375	34.1888	0.0618	9.5571	1.5543	11.1114	3.6919	1.4300	5.1219		5,985.4359	5,985.4359	1.9358		6,026.0879

3.2 Grading - 2023

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	0.0249	0.0739	0.1393	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5100e-003	5.3300e-003		44.2068	44.2068	3.0000e-004			44.2131
Worker	0.1977	0.0368	0.5087	2.0500e-003	0.1643	1.0500e-003	0.1654	0.0436	9.8000e-004	0.0446		138.1184	138.1184	4.4600e-003			138.2120
Total	0.2225	0.1107	0.6480	2.5200e-003	0.1776	2.7000e-003	0.1803	0.0474	2.4900e-003	0.0499		182.3251	182.3251	4.7600e-003			182.4251

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					4.3007	0.0000	4.3007	1.6614	0.0000	1.6614			0.0000				0.0000
Off-Road	3.5314	27.9500	34.1888	0.0618		1.5543	1.5543		1.4300	1.4300	0.0000	5,985.4359	5,985.4359	1.9358			6,026.0879
Total	3.5314	27.9500	34.1888	0.0618	4.3007	1.5543	5.8550	1.6614	1.4300	3.0913	0.0000	5,985.4359	5,985.4359	1.9358			6,026.0879

3.2 Grading - 2023

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	0.0249	0.0739	0.1393	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5100e-003	5.3300e-003		44.2068	44.2068	3.0000e-004			44.2131
Worker	0.1977	0.0368	0.5087	2.0500e-003	0.1643	1.0500e-003	0.1654	0.0436	9.8000e-004	0.0446		138.1184	138.1184	4.4600e-003			138.2120
Total	0.2225	0.1107	0.6480	2.5200e-003	0.1776	2.7000e-003	0.1803	0.0474	2.4900e-003	0.0499		182.3251	182.3251	4.7600e-003			182.4251

3.3 Trenching - 2023

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	0.6583	6.3874	7.1212	9.6900e-003		0.3817	0.3817		0.3511	0.3511		938.7426	938.7426	0.3036			945.1184
Total	0.6583	6.3874	7.1212	9.6900e-003		0.3817	0.3817		0.3511	0.3511		938.7426	938.7426	0.3036			945.1184

3.3 Trenching - 2023

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	0.0249	0.0739	0.1393	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5100e-003	5.3300e-003		44.2068	44.2068	3.0000e-004			44.2131
Worker	0.0791	0.0147	0.2035	8.2000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.9000e-004	0.0178		55.2474	55.2474	1.7800e-003			55.2848
Total	0.1039	0.0886	0.3428	1.2900e-003	0.0791	2.0700e-003	0.0811	0.0212	1.9000e-003	0.0232		99.4541	99.4541	2.0800e-003			99.4979

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.6583	5.1099	7.1212	9.6900e-003		0.3817	0.3817		0.3511	0.3511	0.0000	938.7426	938.7426	0.3036			945.1184
Total	0.6583	5.1099	7.1212	9.6900e-003		0.3817	0.3817		0.3511	0.3511	0.0000	938.7426	938.7426	0.3036			945.1184

3.3 Trenching - 2023

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	0.0249	0.0739	0.1393	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5100e-003	5.3300e-003		44.2068	44.2068	3.0000e-004			44.2131
Worker	0.0791	0.0147	0.2035	8.2000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.9000e-004	0.0178		55.2474	55.2474	1.7800e-003			55.2848
Total	0.1039	0.0886	0.3428	1.2900e-003	0.0791	2.0700e-003	0.0811	0.0212	1.9000e-003	0.0232		99.4541	99.4541	2.0800e-003			99.4979

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.0583	10.4247	14.7646	0.0230		0.5282	0.5282		0.4860	0.4860		2,222.1580	2,222.1580	0.7187			2,237.2505
Paving	5.1585					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	6.2168	10.4247	14.7646	0.0230		0.5282	0.5282		0.4860	0.4860		2,222.1580	2,222.1580	0.7187			2,237.2505

3.4 Paving - 2023

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	0.1483	0.0276	0.3815	1.5400e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		103.5888	103.5888	3.3400e-003			103.6590
Total	0.1483	0.0276	0.3815	1.5400e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		103.5888	103.5888	3.3400e-003			103.6590

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.0583	7.9986	14.7646	0.0230		0.5282	0.5282		0.4860	0.4860	0.0000	2,222.1580	2,222.1580	0.7187			2,237.2505
Paving	5.1585					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	6.2168	7.9986	14.7646	0.0230		0.5282	0.5282		0.4860	0.4860	0.0000	2,222.1580	2,222.1580	0.7187			2,237.2505

3.4 Paving - 2023

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	0.1483	0.0276	0.3815	1.5400e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		103.5888	103.5888	3.3400e-003			103.6590
Total	0.1483	0.0276	0.3815	1.5400e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		103.5888	103.5888	3.3400e-003			103.6590

3.5 Building Construction - 2023

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	0.3234	3.1059	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470		628.4231	628.4231	0.1380			631.3202
Total	0.3234	3.1059	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470		628.4231	628.4231	0.1380			631.3202

3.5 Building Construction - 2023

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	0.6711	1.9944	3.7602	0.0127	0.3601	0.0444	0.4045	0.1029	0.0409	0.1438		1,193.5829	1,193.5829	8.1800e-003			1,193.7546
Worker	4.6458	0.8658	11.9545	0.0483	3.8609	0.0247	3.8857	1.0241	0.0230	1.0471		3,245.7817	3,245.7817	0.1047			3,247.9809
Total	5.3169	2.8603	15.7147	0.0610	4.2210	0.0692	4.2902	1.1270	0.0638	1.1909		4,439.3645	4,439.3645	0.1129			4,441.7355

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.3234	2.4847	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470	0.0000	628.4231	628.4231	0.1380			631.3202
Total	0.3234	2.4847	4.3155	6.5400e-003		0.1556	0.1556		0.1470	0.1470	0.0000	628.4231	628.4231	0.1380			631.3202

3.5 Building Construction - 2023

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	0.6711	1.9944	3.7602	0.0127	0.3601	0.0444	0.4045	0.1029	0.0409	0.1438		1,193.5829	1,193.5829	8.1800e-003			1,193.7546
Worker	4.6458	0.8658	11.9545	0.0483	3.8609	0.0247	3.8857	1.0241	0.0230	1.0471		3,245.7817	3,245.7817	0.1047			3,247.9809
Total	5.3169	2.8603	15.7147	0.0610	4.2210	0.0692	4.2902	1.1270	0.0638	1.1909		4,439.3645	4,439.3645	0.1129			4,441.7355

3.5 Building Construction - 2024

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	0.3041	2.9148	4.3163	6.5500e-003		0.1354	0.1354		0.1279	0.1279		628.6371	628.6371	0.1372			631.5184
Total	0.3041	2.9148	4.3163	6.5500e-003		0.1354	0.1354		0.1279	0.1279		628.6371	628.6371	0.1372			631.5184

3.5 Building Construction - 2024

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	0.6372	1.9693	3.6994	0.0127	0.3601	0.0446	0.4047	0.1030	0.0410	0.1440		1,193.745 3	1,193.745 3	8.2000e- 003			1,193.917 6
Worker	4.4728	0.8285	11.4771	0.0483	3.8609	0.0251	3.8860	1.0241	0.0233	1.0474		3,205.425 1	3,205.425 1	0.1017			3,207.559 7
Total	5.1100	2.7979	15.1765	0.0610	4.2211	0.0697	4.2907	1.1271	0.0643	1.1913		4,399.170 4	4,399.170 4	0.1099			4,401.477 3

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.3041	2.3319	4.3163	6.5500e- 003		0.1354	0.1354		0.1279	0.1279	0.0000	628.6371	628.6371	0.1372			631.5184
Total	0.3041	2.3319	4.3163	6.5500e- 003		0.1354	0.1354		0.1279	0.1279	0.0000	628.6371	628.6371	0.1372			631.5184

3.5 Building Construction - 2024

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	0.6372	1.9693	3.6994	0.0127	0.3601	0.0446	0.4047	0.1030	0.0410	0.1440		1,193.745 3	1,193.745 3	8.2000e- 003			1,193.917 6
Worker	4.4728	0.8285	11.4771	0.0483	3.8609	0.0251	3.8860	1.0241	0.0233	1.0474		3,205.425 1	3,205.425 1	0.1017			3,207.559 7
Total	5.1100	2.7979	15.1765	0.0610	4.2211	0.0697	4.2907	1.1271	0.0643	1.1913		4,399.170 4	4,399.170 4	0.1099			4,401.477 3

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.8435					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e- 003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168			281.8017
Total	34.0352	1.3030	1.8111	2.9700e- 003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168			281.8017

3.6 Architectural Coating - 2023

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	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210			649.5962
Total	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210			649.5962

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.8435					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1917	1.0424	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168			281.8017
Total	34.0352	1.0424	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168			281.8017

3.6 Architectural Coating - 2023

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	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210			649.5962
Total	0.9292	0.1732	2.3909	9.6500e-003	0.7722	4.9500e-003	0.7771	0.2048	4.5900e-003	0.2094		649.1563	649.1563	0.0210			649.5962

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.8435					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159			281.7809
Total	34.0243	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159			281.7809

3.6 Architectural Coating - 2024

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	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119
Total	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.8435					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1808	0.9750	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159			281.7809
Total	34.0243	0.9750	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159			281.7809

3.6 Architectural Coating - 2024

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	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119
Total	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119

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	0.1572	0.1145	0.5564	1.2700e-003	0.0847	1.5600e-003	0.0863	0.0226	1.4400e-003	0.0241		110.2080	110.2080	3.7800e-003			110.2873
Unmitigated	0.1572	0.1145	0.5564	1.2700e-003	0.0847	1.5600e-003	0.0863	0.0226	1.4400e-003	0.0241		110.2080	110.2080	3.7800e-003			110.2873

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	18.76	18.76	18.76	40,054	40,054
Single Family Housing	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	18.76	18.76	18.76	40,054	40,054

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	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					
City Park	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
Other Asphalt Surfaces	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

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	lb/day										lb/day					
Other Asphalt Surfaces	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
City Park	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	65.4732	2.2813	158.1888	0.3082		15.8976	15.8976		15.8944	15.8944	2,249.9078	4,936.8676	7,186.7754	10.7280	0.0884	7,439.4680
Unmitigated	65.4732	2.2813	158.1888	0.3082		15.8976	15.8976		15.8944	15.8944	2,249.9078	4,936.8676	7,186.7754	10.7280	0.0884	7,439.4680

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	45.1148					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	2.0479	0.7570	64.7234	3.3700e-003		0.3489	0.3489		0.3489	0.3489		114.9852	114.9852	0.1177		117.4575
Total	65.4732	2.2813	158.1888	0.3082		15.8976	15.8976		15.8944	15.8944	2,249.9078	4,936.8676	7,186.7754	10.7280	0.0884	7,439.4679

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	45.1148					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	2.0479	0.7570	64.7234	3.3700e-003		0.3489	0.3489		0.3489	0.3489		114.9852	114.9852	0.1177		117.4575
Total	65.4732	2.2813	158.1888	0.3082		15.8976	15.8976		15.8944	15.8944	2,249.9078	4,936.8676	7,186.7754	10.7280	0.0884	7,439.4679

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

CALEEMOD OUTPUTS

Construction Phase 3B

- ◆ Summer 3B-Residential
- ◆ Summer 3B-Commercial

FR SPA 3 Construction Phase 3B Residential
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.25	Acre	1.25	54,450.00	0
Single Family Housing	330.00	Dwelling Unit	62.00	594,000.00	944
Other Asphalt Surfaces	640.00	1000sqft	14.69	640,000.00	0
Apartments Low Rise	182.00	Dwelling Unit	11.38	182,000.00	521

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2016
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment - number of units increased to reflect coatings applied to more than one dwelling unit at a time

Off-road Equipment - per applicant

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - modeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	110.00	212.00
tblConstructionPhase	NumDays	1,550.00	240.00
tblConstructionPhase	NumDays	155.00	19.00
tblConstructionPhase	NumDays	110.00	8.00
tblConstructionPhase	PhaseEndDate	3/3/2026	5/21/2025
tblConstructionPhase	PhaseEndDate	5/9/2025	5/11/2025
tblConstructionPhase	PhaseEndDate	6/7/2024	6/8/2024
tblConstructionPhase	PhaseStartDate	5/12/2025	7/30/2024
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	60.00
tblLandUse	LotAcreage	107.14	62.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2016

tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70
tblWoodstoves	NumberNoncatalytic	15.70	20.70

2.0 Emissions Summary

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	51.1335	2.0261	136.3618	0.3071		15.7800	15.7800		15.7768	15.7768	2,249.9078	4,898.0815	7,147.9893	10.6882	0.0884	7,399.8456
Energy	0.1739	1.4857	0.6322	9.4800e-003		0.1201	0.1201		0.1201	0.1201		1,896.6411	1,896.6411	0.0364	0.0348	1,908.1837
Mobile	35.4644	25.9622	124.3776	0.2999	20.1653	0.3635	20.5288	5.3835	0.3342	5.7177		25,995.8258	25,995.8258	0.8669		26,014.0315
Total	86.7717	29.4740	261.3716	0.6165	20.1653	16.2636	36.4288	5.3835	16.2311	21.6146	2,249.9078	32,790.5484	35,040.4562	11.5915	0.1232	35,322.0609

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	51.1335	2.0261	136.3618	0.3071		15.7800	15.7800		15.7768	15.7768	2,249.9078	4,898.0815	7,147.9893	10.6882	0.0884	7,399.8456
Energy	0.1568	1.3399	0.5702	8.5500e-003		0.1083	0.1083		0.1083	0.1083		1,710.5565	1,710.5565	0.0328	0.0314	1,720.9667
Mobile	35.4644	25.9622	124.3776	0.2999	20.1653	0.3635	20.5288	5.3835	0.3342	5.7177		25,995.8258	25,995.8258	0.8669		26,014.0315
Total	86.7547	29.3282	261.3096	0.6156	20.1653	16.2518	36.4171	5.3835	16.2193	21.6028	2,249.9078	32,604.4638	34,854.3716	11.5879	0.1198	35,134.8438

	ROG	NOx	CO	SO2	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	0.02	0.49	0.02	0.15	0.00	0.07	0.03	0.00	0.07	0.05	0.00	0.57	0.53	0.03	2.77	0.53

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/17/2024	4/11/2024	5	19	
2	Trenching	Trenching	4/12/2024	5/28/2024	5	33	
3	Paving	Paving	5/29/2024	6/8/2024	5	8	
4	Building Construction	Building Construction	6/9/2024	5/11/2025	5	240	
5	Architectural Coating	Architectural Coating	7/30/2024	5/21/2025	5	212	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Forklifts	3	1.00	89	0.20
Building Construction	Generator Sets	3	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	3.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Paving	Sweepers/Scrubbers	1	2.00	64	0.46

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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2024

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					9.0541	0.0000	9.0541	3.4976	0.0000	3.4976			0.0000			0.0000
Off-Road	3.3599	32.1927	33.4441	0.0618		1.4234	1.4234		1.3096	1.3096		5,984.025 2	5,984.025 2	1.9354		6,024.667 7
Total	3.3599	32.1927	33.4441	0.0618	9.0541	1.4234	10.4775	3.4976	1.3096	4.8072		5,984.025 2	5,984.025 2	1.9354		6,024.667 7

3.2 Grading - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004		44.2192
Worker	0.1903	0.0353	0.4884	2.0500e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		136.4011	136.4011	4.3300e-003		136.4919
Total	0.2139	0.1082	0.6254	2.5200e-003	0.1776	2.7200e-003	0.1804	0.0474	2.5100e-003	0.0499		180.6139	180.6139	4.6300e-003		180.7111

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	3.3599	25.7542	33.4441	0.0618		1.4234	1.4234		1.3096	1.3096	0.0000	5,984.0252	5,984.0252	1.9354		6,024.6677
Fugitive Dust					4.0743	0.0000	4.0743	1.5739	0.0000	1.5739			0.0000			0.0000
Total	3.3599	25.7542	33.4441	0.0618	4.0743	1.4234	5.4978	1.5739	1.3096	2.8835	0.0000	5,984.0252	5,984.0252	1.9354		6,024.6677

3.2 Grading - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004			44.2192
Worker	0.1903	0.0353	0.4884	2.0500e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		136.4011	136.4011	4.3300e-003			136.4919
Total	0.2139	0.1082	0.6254	2.5200e-003	0.1776	2.7200e-003	0.1804	0.0474	2.5100e-003	0.0499		180.6139	180.6139	4.6300e-003			180.7111

3.3 Trenching - 2024

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	0.6366	6.1369	7.1298	9.7000e-003		0.3571	0.3571		0.3285	0.3285		939.0823	939.0823	0.3037			945.4603
Total	0.6366	6.1369	7.1298	9.7000e-003		0.3571	0.3571		0.3285	0.3285		939.0823	939.0823	0.3037			945.4603

3.3 Trenching - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004			44.2192
Worker	0.0761	0.0141	0.1954	8.2000e-004	0.0657	4.3000e-004	0.0661	0.0174	4.0000e-004	0.0178		54.5604	54.5604	1.7300e-003			54.5968
Total	0.0997	0.0870	0.3324	1.2900e-003	0.0791	2.0800e-003	0.0811	0.0212	1.9200e-003	0.0232		98.7732	98.7732	2.0300e-003			98.8159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.6366	4.9095	7.1298	9.7000e-003		0.3571	0.3571		0.3285	0.3285	0.0000	939.0823	939.0823	0.3037			945.4603
Total	0.6366	4.9095	7.1298	9.7000e-003		0.3571	0.3571		0.3285	0.3285	0.0000	939.0823	939.0823	0.3037			945.4603

3.3 Trenching - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004			44.2192
Worker	0.0761	0.0141	0.1954	8.2000e-004	0.0657	4.3000e-004	0.0661	0.0174	4.0000e-004	0.0178		54.5604	54.5604	1.7300e-003			54.5968
Total	0.0997	0.0870	0.3324	1.2900e-003	0.0791	2.0800e-003	0.0811	0.0212	1.9200e-003	0.0232		98.7732	98.7732	2.0300e-003			98.8159

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.0121	9.7475	14.8047	0.0230		0.4845	0.4845		0.4458	0.4458		2,222.1253	2,222.1253	0.7187			2,237.2176
Paving	4.8110					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	5.8231	9.7475	14.8047	0.0230		0.4845	0.4845		0.4458	0.4458		2,222.1253	2,222.1253	0.7187			2,237.2176

3.4 Paving - 2024

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	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003			102.3689
Total	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003			102.3689

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.0121	7.4762	14.8047	0.0230		0.4845	0.4845		0.4458	0.4458	0.0000	2,222.1253	2,222.1253	0.7187			2,237.2176
Paving	4.8110					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	5.8231	7.4762	14.8047	0.0230		0.4845	0.4845		0.4458	0.4458	0.0000	2,222.1253	2,222.1253	0.7187			2,237.2176

3.4 Paving - 2024

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	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003		102.3689
Total	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003		102.3689

3.5 Building Construction - 2024

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	0.3041	2.9148	4.3163	6.5500e-003		0.1354	0.1354		0.1279	0.1279		628.6371	628.6371	0.1372		631.5184
Total	0.3041	2.9148	4.3163	6.5500e-003		0.1354	0.1354		0.1279	0.1279		628.6371	628.6371	0.1372		631.5184

3.5 Building Construction - 2024

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	0.6372	1.9693	3.6994	0.0127	0.3601	0.0446	0.4047	0.1030	0.0410	0.1440		1,193.745 3	1,193.745 3	8.2000e- 003			1,193.917 6
Worker	4.4728	0.8285	11.4771	0.0483	3.8609	0.0251	3.8860	1.0241	0.0233	1.0474		3,205.425 1	3,205.425 1	0.1017			3,207.559 7
Total	5.1100	2.7979	15.1765	0.0610	4.2211	0.0697	4.2907	1.1271	0.0643	1.1913		4,399.170 4	4,399.170 4	0.1099			4,401.477 3

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.3041	2.3319	4.3163	6.5500e- 003		0.1354	0.1354		0.1279	0.1279	0.0000	628.6371	628.6371	0.1372			631.5184
Total	0.3041	2.3319	4.3163	6.5500e- 003		0.1354	0.1354		0.1279	0.1279	0.0000	628.6371	628.6371	0.1372			631.5184

3.5 Building Construction - 2024

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	0.6372	1.9693	3.6994	0.0127	0.3601	0.0446	0.4047	0.1030	0.0410	0.1440		1,193.745 3	1,193.745 3	8.2000e- 003			1,193.917 6
Worker	4.4728	0.8285	11.4771	0.0483	3.8609	0.0251	3.8860	1.0241	0.0233	1.0474		3,205.425 1	3,205.425 1	0.1017			3,207.559 7
Total	5.1100	2.7979	15.1765	0.0610	4.2211	0.0697	4.2907	1.1271	0.0643	1.1913		4,399.170 4	4,399.170 4	0.1099			4,401.477 3

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.2811	2.7072	4.3058	6.5500e- 003		0.1131	0.1131		0.1069	0.1069		628.9624	628.9624	0.1365			631.8286
Total	0.2811	2.7072	4.3058	6.5500e- 003		0.1131	0.1131		0.1069	0.1069		628.9624	628.9624	0.1365			631.8286

3.5 Building Construction - 2025

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	0.6341	1.9469	3.6608	0.0127	0.3602	0.0447	0.4048	0.1030	0.0411	0.1441		1,193.9367	1,193.9367	8.2200e-003			1,194.1094
Worker	4.3206	0.7974	11.0839	0.0483	3.8609	0.0254	3.8864	1.0241	0.0236	1.0477		3,170.1096	3,170.1096	0.0991			3,172.1899
Total	4.9548	2.7443	14.7447	0.0610	4.2211	0.0701	4.2912	1.1271	0.0647	1.1918		4,364.0463	4,364.0463	0.1073			4,366.2993

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.2811	2.1658	4.3058	6.5500e-003		0.1131	0.1131		0.1069	0.1069	0.0000	628.9624	628.9624	0.1365			631.8286
Total	0.2811	2.1658	4.3058	6.5500e-003		0.1131	0.1131		0.1069	0.1069	0.0000	628.9624	628.9624	0.1365			631.8286

3.5 Building Construction - 2025

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	0.6341	1.9469	3.6608	0.0127	0.3602	0.0447	0.4048	0.1030	0.0411	0.1441		1,193.9367	1,193.9367	8.2200e-003			1,194.1094
Worker	4.3206	0.7974	11.0839	0.0483	3.8609	0.0254	3.8864	1.0241	0.0236	1.0477		3,170.1096	3,170.1096	0.0991			3,172.1899
Total	4.9548	2.7443	14.7447	0.0610	4.2211	0.0701	4.2912	1.1271	0.0647	1.1918		4,364.0463	4,364.0463	0.1073			4,366.2993

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159			281.7809
Total	33.8646	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159			281.7809

3.6 Architectural Coating - 2024

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	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119
Total	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1808	0.9750	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159			281.7809
Total	33.8646	0.9750	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159			281.7809

3.6 Architectural Coating - 2024

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	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119
Total	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154			281.7705
Total	33.8547	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154			281.7705

3.6 Architectural Coating - 2025

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	0.8641	0.1595	2.2168	9.6500e-003	0.7722	5.0900e-003	0.7773	0.2048	4.7200e-003	0.2095		634.0219	634.0219	0.0198			634.4380
Total	0.8641	0.1595	2.2168	9.6500e-003	0.7722	5.0900e-003	0.7773	0.2048	4.7200e-003	0.2095		634.0219	634.0219	0.0198			634.4380

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	33.6839					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1709	0.9164	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154			281.7705
Total	33.8547	0.9164	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154			281.7705

3.6 Architectural Coating - 2025

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	0.8641	0.1595	2.2168	9.6500e-003	0.7722	5.0900e-003	0.7773	0.2048	4.7200e-003	0.2095		634.0219	634.0219	0.0198			634.4380
Total	0.8641	0.1595	2.2168	9.6500e-003	0.7722	5.0900e-003	0.7773	0.2048	4.7200e-003	0.2095		634.0219	634.0219	0.0198			634.4380

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	35.4644	25.9622	124.3776	0.2999	20.1653	0.3635	20.5288	5.3835	0.3342	5.7177		25,995.8258	25,995.8258	0.8669			26,014.0315
Unmitigated	35.4644	25.9622	124.3776	0.2999	20.1653	0.3635	20.5288	5.3835	0.3342	5.7177		25,995.8258	25,995.8258	0.8669			26,014.0315

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.99	1.99	1.99	4,243	4,243
Single Family Housing	3,158.10	3,326.40	2894.10	9,007,350	9,007,350
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	3,160.09	3,328.39	2,896.09	9,011,593	9,011,593

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1568	1.3399	0.5702	8.5500e-003		0.1083	0.1083		0.1083	0.1083		1,710.5565	1,710.5565	0.0328	0.0314	1,720.9667
NaturalGas Unmitigated	0.1739	1.4857	0.6322	9.4800e-003		0.1201	0.1201		0.1201	0.1201		1,896.6411	1,896.6411	0.0364	0.0348	1,908.1837

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	16121.4	0.1739	1.4857	0.6322	9.4800e-003		0.1201	0.1201		0.1201	0.1201		1,896.6411	1,896.6411	0.0364	0.0348	1,908.1837
Total		0.1739	1.4857	0.6322	9.4800e-003		0.1201	0.1201		0.1201	0.1201		1,896.6411	1,896.6411	0.0364	0.0348	1,908.1837

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	lb/day										lb/day					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	14.5397	0.1568	1.3399	0.5702	8.5500e-003		0.1083	0.1083		0.1083	0.1083		1,710.5565	1,710.5565	0.0328	0.0314	1,720.9667
Total		0.1568	1.3399	0.5702	8.5500e-003		0.1083	0.1083		0.1083	0.1083		1,710.5565	1,710.5565	0.0328	0.0314	1,720.9667

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	51.1335	2.0261	136.3618	0.3071		15.7800	15.7800		15.7768	15.7768	2,249.9078	4,898.0815	7,147.9893	10.6882	0.0884	7,399.8456
Unmitigated	51.1335	2.0261	136.3618	0.3071		15.7800	15.7800		15.7768	15.7768	2,249.9078	4,898.0815	7,147.9893	10.6882	0.0884	7,399.8456

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.4676					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	1.3554	0.5018	42.8964	2.2400e-003		0.2313	0.2313		0.2313	0.2313		76.1991	76.1991	0.0779		77.8352
Total	51.1335	2.0261	136.3618	0.3071		15.7800	15.7800		15.7768	15.7768	2,249.9078	4,898.0815	7,147.9893	10.6882	0.0884	7,399.8456

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	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.4676					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping	1.3554	0.5018	42.8964	2.2400e-003		0.2313	0.2313		0.2313	0.2313		76.1991	76.1991	0.0779		77.8352
Total	51.1335	2.0261	136.3618	0.3071		15.7800	15.7800		15.7768	15.7768	2,249.9078	4,898.0815	7,147.9893	10.6882	0.0884	7,399.8456

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

FR SPA 3 Construction Phase 3B Commercial
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	167.70	1000sqft	3.85	167,700.00	0
Strip Mall	79.20	1000sqft	3.45	79,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage per Conceptual Land Use Plan

Construction Phase - no demolition. site preparation phase omitted because project site has limited vegetation.

Off-road Equipment -

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Grading - total acres disturbed consistent with parcel sizes

Architectural Coating - consistent with project commitments

Vehicle Trips - Per project traffic study

Woodstoves - modeling for construction emissions

Water And Wastewater - nmodeling for construction emissions

Solid Waste - construction emissions

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Trips and VMT - water trucks

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290,447.00	28,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	871,340.00	84,942.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	381,510.00	503,010.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,144,530.00	1,509,030.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_Nonresidential_Interior	871340	84942
tblAreaCoating	Area_Residential_Exterior	381510	503010

tblAreaCoating	Area_Residential_Interior	1144530	1509030
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstEquipMitigation	OxidationCatalyst	0.00	20.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	230.00	65.00
tblConstructionPhase	NumDays	20.00	3.00

tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	PhaseEndDate	8/1/2024	10/4/2024
tblConstructionPhase	PhaseEndDate	9/27/2024	9/29/2024
tblConstructionPhase	PhaseEndDate	10/10/2024	7/11/2024
tblConstructionPhase	PhaseEndDate	6/28/2024	6/30/2024
tblConstructionPhase	PhaseStartDate	7/12/2024	9/15/2024
tblConstructionPhase	PhaseStartDate	9/30/2024	7/1/2024
tblFireplaces	NumberGas	172.70	227.70
tblFireplaces	NumberNoFireplace	31.40	41.40
tblFireplaces	NumberWood	109.90	0.00
tblGrading	AcresOfGrading	45.00	7.30
tblLandUse	LotAcreage	1.82	3.45
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Trenching
tblOffRoadEquipment	PhaseName		Trenching

tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblSolidWaste	SolidWasteGenerationRate	0.05	0.11
tblSolidWaste	SolidWasteGenerationRate	323.28	389.16
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	129.00	54.00
tblTripsAndVMT	WorkerTripNumber	357.00	470.00
tblTripsAndVMT	WorkerTripNumber	71.00	94.00
tblWater	IndoorWaterUseRate	20,458,364.05	26,973,766.61
tblWater	OutdoorWaterUseRate	667,229.56	1,548,925.75
tblWater	OutdoorWaterUseRate	12,897,664.29	17,005,200.69
tblWoodstoves	NumberCatalytic	15.70	20.70
tblWoodstoves	NumberNoncatalytic	15.70	20.70

2.0 Emissions Summary

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/17/2024	6/19/2024	5	3	
2	Trenching	Trenching	6/20/2024	6/30/2024	5	7	
3	Building Construction	Building Construction	7/1/2024	9/29/2024	5	65	
4	Paving	Paving	7/1/2024	7/11/2024	5	9	
5	Architectural Coating	Architectural Coating	9/15/2024	10/4/2024	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.3

Acres of Paving: 0

Residential Indoor: 1,509,030; Residential Outdoor: 503,010; Non-Residential Indoor: 84,942; Non-Residential Outdoor: 28,314 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	1	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Building Construction	Forklifts	1	1.00	89	0.20
Building Construction	Generator Sets	1	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	3.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Paving	Sweepers/Scrubbers	1	2.00	64	0.46

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
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	470.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2024

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					38.7131	0.0000	38.7131	20.1400	0.0000	20.1400			0.0000			0.0000
Off-Road	2.2835	21.7362	21.9913	0.0385		0.9869	0.9869		0.9080	0.9080		3,724.248 1	3,724.248 1	1.2045		3,749.542 6
Total	2.2835	21.7362	21.9913	0.0385	38.7131	0.9869	39.7000	20.1400	0.9080	21.0480		3,724.248 1	3,724.248 1	1.2045		3,749.542 6

3.2 Grading - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004			44.2192
Worker	0.1903	0.0353	0.4884	2.0500e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		136.4011	136.4011	4.3300e-003			136.4919
Total	0.2139	0.1082	0.6254	2.5200e-003	0.1776	2.7200e-003	0.1804	0.0474	2.5100e-003	0.0499		180.6139	180.6139	4.6300e-003			180.7111

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					17.4209	0.0000	17.4209	9.0630	0.0000	9.0630			0.0000				0.0000
Off-Road	2.2835	15.2021	21.9913	0.0385		0.9869	0.9869		0.9080	0.9080	0.0000	3,724.2481	3,724.2481	1.2045			3,749.5426
Total	2.2835	15.2021	21.9913	0.0385	17.4209	0.9869	18.4078	9.0630	0.9080	9.9710	0.0000	3,724.2481	3,724.2481	1.2045			3,749.5426

3.2 Grading - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004			44.2192
Worker	0.1903	0.0353	0.4884	2.0500e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		136.4011	136.4011	4.3300e-003			136.4919
Total	0.2139	0.1082	0.6254	2.5200e-003	0.1776	2.7200e-003	0.1804	0.0474	2.5100e-003	0.0499		180.6139	180.6139	4.6300e-003			180.7111

3.3 Trenching - 2024

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	0.4927	4.6887	4.8942	6.5800e-003		0.2907	0.2907		0.2674	0.2674		637.3155	637.3155	0.2061			641.6441
Total	0.4927	4.6887	4.8942	6.5800e-003		0.2907	0.2907		0.2674	0.2674		637.3155	637.3155	0.2061			641.6441

3.3 Trenching - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004			44.2192
Worker	0.0761	0.0141	0.1954	8.2000e-004	0.0657	4.3000e-004	0.0661	0.0174	4.0000e-004	0.0178		54.5604	54.5604	1.7300e-003			54.5968
Total	0.0997	0.0870	0.3324	1.2900e-003	0.0791	2.0800e-003	0.0811	0.0212	1.9200e-003	0.0232		98.7732	98.7732	2.0300e-003			98.8159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.4927	3.3657	4.8942	6.5800e-003		0.2907	0.2907		0.2674	0.2674	0.0000	637.3155	637.3155	0.2061			641.6440
Total	0.4927	3.3657	4.8942	6.5800e-003		0.2907	0.2907		0.2674	0.2674	0.0000	637.3155	637.3155	0.2061			641.6440

3.3 Trenching - 2024

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	0.0236	0.0729	0.1370	4.7000e-004	0.0133	1.6500e-003	0.0150	3.8100e-003	1.5200e-003	5.3300e-003		44.2128	44.2128	3.0000e-004		44.2192
Worker	0.0761	0.0141	0.1954	8.2000e-004	0.0657	4.3000e-004	0.0661	0.0174	4.0000e-004	0.0178		54.5604	54.5604	1.7300e-003		54.5968
Total	0.0997	0.0870	0.3324	1.2900e-003	0.0791	2.0800e-003	0.0811	0.0212	1.9200e-003	0.0232		98.7732	98.7732	2.0300e-003		98.8159

3.4 Building Construction - 2024

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	0.1014	0.9716	1.4388	2.1800e-003		0.0451	0.0451		0.0426	0.0426		209.5457	209.5457	0.0457		210.5062
Total	0.1014	0.9716	1.4388	2.1800e-003		0.0451	0.0451		0.0426	0.0426		209.5457	209.5457	0.0457		210.5062

3.4 Building Construction - 2024

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	0.6372	1.9693	3.6994	0.0127	0.3601	0.0446	0.4047	0.1030	0.0410	0.1440		1,193.745 3	1,193.745 3	8.2000e- 003		1,193.917 6
Worker	4.4728	0.8285	11.4771	0.0483	3.8609	0.0251	3.8860	1.0241	0.0233	1.0474		3,205.425 1	3,205.425 1	0.1017		3,207.559 7
Total	5.1100	2.7979	15.1765	0.0610	4.2211	0.0697	4.2907	1.1271	0.0643	1.1913		4,399.170 4	4,399.170 4	0.1099		4,401.477 3

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1014	0.4614	1.4388	2.1800e- 003		0.0451	0.0451		0.0426	0.0426	0.0000	209.5457	209.5457	0.0457		210.5062
Total	0.1014	0.4614	1.4388	2.1800e- 003		0.0451	0.0451		0.0426	0.0426	0.0000	209.5457	209.5457	0.0457		210.5062

3.4 Building Construction - 2024

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	0.6372	1.9693	3.6994	0.0127	0.3601	0.0446	0.4047	0.1030	0.0410	0.1440		1,193.745 3	1,193.745 3	8.2000e- 003			1,193.917 6
Worker	4.4728	0.8285	11.4771	0.0483	3.8609	0.0251	3.8860	1.0241	0.0233	1.0474		3,205.425 1	3,205.425 1	0.1017			3,207.559 7
Total	5.1100	2.7979	15.1765	0.0610	4.2211	0.0697	4.2907	1.1271	0.0643	1.1913		4,399.170 4	4,399.170 4	0.1099			4,401.477 3

3.5 Paving - 2024

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	0.5276	5.0748	7.6420	0.0118		0.2545	0.2545		0.2341	0.2341		1,141.834 7	1,141.834 7	0.3693			1,149.589 9
Paving	1.1208					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.6484	5.0748	7.6420	0.0118		0.2545	0.2545		0.2341	0.2341		1,141.834 7	1,141.834 7	0.3693			1,149.589 9

3.5 Paving - 2024

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	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003		102.3689
Total	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003		102.3689

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5276	3.2058	7.6420	0.0118		0.2545	0.2545		0.2341	0.2341	0.0000	1,141.8347	1,141.8347	0.3693		1,149.5899
Paving	1.1208					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6484	3.2058	7.6420	0.0118		0.2545	0.2545		0.2341	0.2341	0.0000	1,141.8347	1,141.8347	0.3693		1,149.5899

3.5 Paving - 2024

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	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003			102.3689
Total	0.1428	0.0264	0.3663	1.5400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		102.3008	102.3008	3.2400e-003			102.3689

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	476.0655					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159			281.7809
Total	476.2463	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159			281.7809

3.6 Architectural Coating - 2024

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	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119
Total	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	476.0655					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1808	0.9750	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159			281.7809
Total	476.2463	0.9750	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159			281.7809

3.6 Architectural Coating - 2024

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	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119
Total	0.8946	0.1657	2.2954	9.6500e-003	0.7722	5.0200e-003	0.7772	0.2048	4.6500e-003	0.2095		641.0850	641.0850	0.0203			641.5119

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
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			0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463357	0.064811	0.185732	0.174193	0.060561	0.008437	0.013233	0.014693	0.001703	0.001282	0.007826	0.000643	0.003529

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

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	23.5942	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Unmitigated	23.5942	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105

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					
Consumer Products	5.2837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Architectural Coating	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	23.5942	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105

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					
Hearth	10.7312	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105
Landscaping						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Architectural Coating	7.5793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.2837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	23.5942	1.5244	93.4654	0.3049		15.5487	15.5487		15.5455	15.5455	2,249.9078	4,821.8824	7,071.7902	10.6103	0.0884	7,322.0105

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

CALEEMOD OUTPUTS

Operation
2010 Business As Usual

◆ Annual

FR SPA 3 Buildout Operational 2010 BAU
Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	1.15	50,162.02	0
Parking Lot	30.00	1000sqft	0.69	30,000.00	0
City Park	11.89	Acre	11.89	517,928.40	0
Apartments Low Rise	954.00	Dwelling Unit	59.63	954,000.00	2490
Single Family Housing	1,995.00	Dwelling Unit	500.00	3,591,000.00	8569
Strip Mall	79.20	1000sqft	7.30	79,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2010
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - per proposed project and City of Roseville average persons per household

Construction Phase - modeling for operational emissions only

Vehicle Trips - per traffic study

Woodstoves - no woodburning appliances or fireplaces allowed in multi family units. woodburning is included for 50% of single family homes in this unmitigated or business as usual analysis

Water And Wastewater - all wastewater treated at City's WWTP, no septic systems.

Solid Waste -

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	600.00	2.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	524.70	0.00
tblFireplaces	NumberNoFireplace	95.40	0.00
tblFireplaces	NumberWood	333.90	0.00
tblLandUse	LotAcreage	647.73	500.00
tblLandUse	LotAcreage	1.82	7.30
tblLandUse	Population	2,728.00	2,490.00
tblLandUse	Population	5,706.00	8,569.00
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleTrips	WD_TR	6.59	6.50
tblVehicleTrips	WD_TR	1.59	2.20
tblVehicleTrips	WD_TR	1.29	1.00
tblVehicleTrips	WD_TR	9.57	9.00
tblVehicleTrips	WD_TR	44.32	35.00
tblWater	AerobicPercent	87.46	100.00

tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	47.70	0.00
tblWoodstoves	NumberNoncatalytic	47.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

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	154.2718	1.9777	177.5169	0.0614		21.7804	21.7804		21.7797	21.7797	2,060.7506	900.0295	2,960.7801	1.9454	0.1621	3,051.8816
Energy	0.2676	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	9,673.7515	9,673.7515	0.3074	0.1017	9,711.7216
Mobile	80.5952	70.2563	299.0095	0.3965	27.6506	1.2725	28.9230	7.4082	1.1654	8.5736	0.0000	35,638.0406	35,638.0406	1.9899	0.0000	35,679.8281
Waste						0.0000	0.0000		0.0000	0.0000	754.5905	0.0000	754.5905	44.5950	0.0000	1,691.0859
Water						0.0000	0.0000		0.0000	0.0000	70.5694	568.3566	638.9260	0.2637	0.1578	693.3688
Total	235.1346	74.5251	477.5289	0.4725	27.6506	23.2378	50.8883	7.4082	23.1300	30.5383	2,885.9105	46,780.1782	49,666.0886	49.1013	0.4215	50,827.8860

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	154.2718	1.9777	177.5169	0.0614		21.7804	21.7804		21.7797	21.7797	2,060.7506	900.0295	2,960.7801	1.9454	0.1621	3,051.8816
Energy	0.2676	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	9,673.7515	9,673.7515	0.3074	0.1017	9,711.7216
Mobile	80.5952	70.2563	299.0095	0.3965	27.6506	1.2725	28.9230	7.4082	1.1654	8.5736	0.0000	35,638.0406	35,638.0406	1.9899	0.0000	35,679.8281
Waste						0.0000	0.0000		0.0000	0.0000	754.5905	0.0000	754.5905	44.5950	0.0000	1,691.0859
Water						0.0000	0.0000		0.0000	0.0000	70.5694	568.3566	638.9260	0.2623	0.1575	693.2562
Total	235.1346	74.5251	477.5289	0.4725	27.6506	23.2378	50.8883	7.4082	23.1300	30.5383	2,885.9105	46,780.1782	49,666.0886	49.1000	0.4212	50,827.7734

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	1/2/2014	5	2	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Demolition - 2014

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	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390
Total	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390

3.2 Demolition - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116
Total	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116

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	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390
Total	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390

3.2 Demolition - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116
Total	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116

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	80.5952	70.2563	299.0095	0.3965	27.6506	1.2725	28.9230	7.4082	1.1654	8.5736	0.0000	35,638.0406	35,638.0406	1.9899	0.0000	35,679.8281
Unmitigated	80.5952	70.2563	299.0095	0.3965	27.6506	1.2725	28.9230	7.4082	1.1654	8.5736	0.0000	35,638.0406	35,638.0406	1.9899	0.0000	35,679.8281

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	6,201.00	6,830.64	5790.78	17,852,820	17,852,820
City Park	26.16	18.91	18.91	51,420	51,420
Elementary School	600.00	0.00	0.00	944,974	944,974
Parking Lot	0.00	0.00	0.00		
Single Family Housing	17,955.00	20,109.60	17496.15	52,126,798	52,126,798
Strip Mall	2,772.00	3,329.57	1618.06	4,137,766	4,137,766
Total	27,554.16	30,288.71	24,923.89	75,113,777	75,113,777

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455538	0.063088	0.186236	0.184349	0.062438	0.009089	0.011942	0.012661	0.001858	0.001285	0.007343	0.000678	0.003494

5.0 Energy Detail

5.1 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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7,025.0039	7,025.0039	0.2567	0.0531	7,046.8541
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7,025.0039	7,025.0039	0.2567	0.0531	7,046.8541
NaturalGas Mitigated	0.2676	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	2,648.7476	2,648.7476	0.0508	0.0486	2,664.8675
NaturalGas Unmitigated	0.2676	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	2,648.7476	2,648.7476	0.0508	0.0486	2,664.8675

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	755942	4.0800e-003	0.0371	0.0311	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3399	40.3399	7.7000e-004	7.4000e-004	40.5854
Parking Lot	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
Single Family Housing	3.55734e+007	0.1918	1.6392	0.6975	0.0105		0.1325	0.1325		0.1325	0.1325	0.0000	1,898.3344	1,898.3344	0.0364	0.0348	1,909.8874
Strip Mall	601128	3.2400e-003	0.0295	0.0248	1.8000e-004		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003	0.0000	32.0785	32.0785	6.1000e-004	5.9000e-004	32.2737
Apartments Low Rise	1.27051e+007	0.0685	0.5854	0.2491	3.7400e-003		0.0473	0.0473		0.0473	0.0473	0.0000	677.9948	677.9948	0.0130	0.0124	682.1210
City Park	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
Total		0.2677	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	2,648.7476	2,648.7476	0.0508	0.0486	2,664.8675

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					
Elementary School	755942	4.0800e-003	0.0371	0.0311	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3399	40.3399	7.7000e-004	7.4000e-004	40.5854
Parking Lot	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
Single Family Housing	3.55734e+007	0.1918	1.6392	0.6975	0.0105		0.1325	0.1325		0.1325	0.1325	0.0000	1,898.3344	1,898.3344	0.0364	0.0348	1,909.8874
Strip Mall	601128	3.2400e-003	0.0295	0.0248	1.8000e-004		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003	0.0000	32.0785	32.0785	6.1000e-004	5.9000e-004	32.2737
Apartments Low Rise	1.27051e+007	0.0685	0.5854	0.2491	3.7400e-003		0.0473	0.0473		0.0473	0.0473	0.0000	677.9948	677.9948	0.0130	0.0124	682.1210
City Park	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
Total		0.2677	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	2,648.7476	2,648.7476	0.0508	0.0486	2,664.8675

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.43014e+006	1,235.0602	0.0451	9.3400e-003	1,238.9017
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	384743	138.5311	5.0600e-003	1.0500e-003	138.9620
Parking Lot	26400	9.5056	3.5000e-004	7.0000e-005	9.5352
Single Family Housing	1.44544e+007	5,204.4580	0.1901	0.0393	5,220.6457
Strip Mall	1.21493e+006	437.4490	0.0160	3.3100e-003	438.8096
Total		7,025.0039	0.2567	0.0531	7,046.8541

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.43014e+006	1,235.0602	0.0451	9.3400e-003	1,238.9017
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	384743	138.5311	5.0600e-003	1.0500e-003	138.9620
Parking Lot	26400	9.5056	3.5000e-004	7.0000e-005	9.5352
Single Family Housing	1.44544e+007	5,204.4580	0.1901	0.0393	5,220.6457
Strip Mall	1.21493e+006	437.4490	0.0160	3.3100e-003	438.8096
Total		7,025.0039	0.2567	0.0531	7,046.8541

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	154.2718	1.9777	177.5169	0.0614		21.7804	21.7804		21.7797	21.7797	2,060.7506	900.0295	2,960.7801	1.9454	0.1621	3,051.8816
Unmitigated	154.2718	1.9777	177.5169	0.0614		21.7804	21.7804		21.7797	21.7797	2,060.7506	900.0295	2,960.7801	1.9454	0.1621	3,051.8816

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	7.8609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	20.3957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	125.1787	1.6983	154.2067	0.0602		21.6651	21.6651		21.6645	21.6645	2,060.7506	864.2488	2,924.9994	1.9017	0.1621	3,015.1847
Landscaping	0.8366	0.2794	23.3102	1.1600e-003		0.1153	0.1153		0.1153	0.1153	0.0000	35.7807	35.7807	0.0436	0.0000	36.6969
Total	154.2718	1.9777	177.5169	0.0614		21.7804	21.7804		21.7797	21.7797	2,060.7506	900.0295	2,960.7801	1.9454	0.1621	3,051.8816

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	20.3957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	125.1787	1.6983	154.2067	0.0602		21.6651	21.6651		21.6645	21.6645	2,060.7506	864.2488	2,924.9994	1.9017	0.1621	3,015.1847
Landscaping	0.8366	0.2794	23.3102	1.1600e-003		0.1153	0.1153		0.1153	0.1153	0.0000	35.7807	35.7807	0.0436	0.0000	36.6969
Total	154.2718	1.9777	177.5169	0.0614		21.7804	21.7804		21.7797	21.7797	2,060.7506	900.0295	2,960.7801	1.9454	0.1621	3,051.8816

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	638.9260	0.2623	0.1575	693.2562
Unmitigated	638.9260	0.2637	0.1578	693.3688

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	62.1569 / 39.1859	192.4739	0.0819	0.0491	209.4190
City Park	0 / 14.1667	17.8531	6.5000e-004	1.3000e-004	17.9086
Elementary School	1.45454 / 3.74026	8.0620	2.0500e-003	1.1800e-003	8.4696
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	129.982 / 81.9454	402.5004	0.1713	0.1027	437.9360
Strip Mall	5.86654 / 3.59562	18.0366	7.7300e-003	4.6300e-003	19.6355
Total		638.9260	0.2637	0.1578	693.3688

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	62.1569 / 39.1859	192.4739	0.0815	0.0490	209.3839
City Park	0 / 14.1667	17.8531	6.5000e-004	1.3000e-004	17.9086
Elementary School	1.45454 / 3.74026	8.0620	2.0400e-003	1.1700e-003	8.4688
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	129.982 / 81.9454	402.5004	0.1705	0.1025	437.8626
Strip Mall	5.86654 / 3.59562	18.0366	7.6900e-003	4.6300e-003	19.6322
Total		638.9260	0.2623	0.1575	693.2562

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	754.5905	44.5950	0.0000	1,691.0859
Mitigated	754.5905	44.5950	0.0000	1,691.0859

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	438.84	89.0806	5.2645	0.0000	199.6353
City Park	1.02	0.2071	0.0122	0.0000	0.4640
Elementary School	109.5	22.2275	1.3136	0.0000	49.8133
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3084.84	626.1946	37.0070	0.0000	1,403.3426
Strip Mall	83.16	16.8807	0.9976	0.0000	37.8308
Total		754.5905	44.5950	0.0000	1,691.0859

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	438.84	89.0806	5.2645	0.0000	199.6353
City Park	1.02	0.2071	0.0122	0.0000	0.4640
Elementary School	109.5	22.2275	1.3136	0.0000	49.8133
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3084.84	626.1946	37.0070	0.0000	1,403.3426
Strip Mall	83.16	16.8807	0.9976	0.0000	37.8308
Total		754.5905	44.5950	0.0000	1,691.0859

9.0 Operational Offroad

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

CALEEMOD OUTPUTS

Operation
2020 Proposed Project

- ◆ Annual
- ◆ Summer
- ◆ Winter

FR SPA 3 Buildout Operational 2020 Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	1.15	50,162.02	0
Parking Lot	30.00	1000sqft	0.69	30,000.00	0
City Park	11.89	Acre	11.89	517,928.40	0
Apartments Low Rise	954.00	Dwelling Unit	59.63	954,000.00	2490
Single Family Housing	1,995.00	Dwelling Unit	500.00	3,591,000.00	8569
Strip Mall	79.20	1000sqft	7.30	79,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2020
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	640.78	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity reduced to reflect attainment of 33% RPS. Default value of 793.8 reflects 17% RPS.

Formula: $[793.8 / (1-.17)] * (1- 0.33) = 640.78$

Land Use - per proposed project and City of Roseville average persons per household

Construction Phase - modeling for operational emissions only

Off-road Equipment -

Vehicle Trips - per traffic study

Woodstoves - no woodburning appliances or fireplaces allowed in multi family units. woodburning is included for 50% of single family homes in this unmitigated or business as usual analysis

Energy Use -

Water And Wastewater - all wastewater treated at City's WWTP, no septic systems.

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - 32.5% above Title 24 is a 10% improvement over the 2014 requirements (CalEEMod is based on 2008 Title 24 requirements)

Water Mitigation - water conservation measures not modeled include use of high-efficiency irrigation, drought tolerant landscaping, and reduction in turf areas. Because these measures vary across housing densities, they were not modeled.

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	600.00	2.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	524.70	0.00
tblFireplaces	NumberNoFireplace	95.40	0.00
tblFireplaces	NumberWood	333.90	0.00
tblLandUse	LotAcreage	647.73	500.00
tblLandUse	LotAcreage	1.82	7.30
tblLandUse	Population	2,728.00	2,490.00
tblLandUse	Population	5,706.00	8,569.00
tblProjectCharacteristics	CO2IntensityFactor	793.8	640.78

tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	WorkerTripNumber	3.00	15.00
tblVehicleTrips	WD_TR	6.59	6.50
tblVehicleTrips	WD_TR	1.59	2.20
tblVehicleTrips	WD_TR	1.29	1.00
tblVehicleTrips	WD_TR	9.57	9.00
tblVehicleTrips	WD_TR	44.32	35.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	47.70	0.00
tblWoodstoves	NumberNoncatalytic	47.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

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					
2014	1.0300e-003	5.4500e-003	4.5200e-003	1.0000e-005	1.2000e-004	4.3000e-004	5.5000e-004	3.0000e-005	4.3000e-004	4.6000e-004	0.0000	0.6492	0.6492	7.0000e-005	0.0000	0.6506
Total	1.0300e-003	5.4500e-003	4.5200e-003	1.0000e-005	1.2000e-004	4.3000e-004	5.5000e-004	3.0000e-005	4.3000e-004	4.6000e-004	0.0000	0.6492	0.6492	7.0000e-005	0.0000	0.6506

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					
2014	1.0300e-003	5.4500e-003	4.5200e-003	1.0000e-005	1.2000e-004	4.3000e-004	5.5000e-004	3.0000e-005	4.3000e-004	4.6000e-004	0.0000	0.6492	0.6492	7.0000e-005	0.0000	0.6506
Total	1.0300e-003	5.4500e-003	4.5200e-003	1.0000e-005	1.2000e-004	4.3000e-004	5.5000e-004	3.0000e-005	4.3000e-004	4.6000e-004	0.0000	0.6492	0.6492	7.0000e-005	0.0000	0.6506

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	154.1048	1.9525	176.1828	0.0614		21.7859	21.7859		21.7853	21.7853	2,060.7506	900.0295	2,960.7801	1.9366	0.1621	3,051.6986
Energy	0.2676	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	8,319.5488	8,319.5488	0.3074	0.1017	8,357.5189
Mobile	39.7609	28.3398	124.5217	0.3945	27.6598	0.4255	28.0853	7.4112	0.3926	7.8038	0.0000	27,380.7696	27,380.7696	0.8713	0.0000	27,399.0673
Waste						0.0000	0.0000		0.0000	0.0000	754.5905	0.0000	754.5905	44.5950	0.0000	1,691.0859
Water						0.0000	0.0000		0.0000	0.0000	70.5694	458.7951	529.3645	0.2637	0.1578	583.8073
Total	194.1334	32.5835	301.7070	0.4705	27.6598	22.3964	50.0562	7.4112	22.3628	29.7740	2,885.9105	37,059.1430	39,945.0535	47.9741	0.4215	41,083.1779

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	29.0691	0.2542	21.9839	1.1600e-003		0.2196	0.2196		0.2185	0.2185	0.0000	1,450.0059	1,450.0059	0.0620	0.0259	1,459.3458
Energy	0.2065	1.7672	0.7709	0.0113		0.1427	0.1427		0.1427	0.1427	0.0000	7,538.9400	7,538.9400	0.2879	0.0889	7,572.5507
Mobile	35.6316	25.5357	114.0556	0.3494	24.3959	0.3801	24.7760	6.5367	0.3506	6.8873	0.0000	24,246.2129	24,246.2129	0.7787	0.0000	24,262.5659
Waste						0.0000	0.0000		0.0000	0.0000	754.5905	0.0000	754.5905	44.5950	0.0000	1,691.0859
Water						0.0000	0.0000		0.0000	0.0000	56.4555	396.0559	452.5114	0.2112	0.1263	496.0874
Total	64.9071	27.5571	136.8104	0.3618	24.3959	0.7423	25.1382	6.5367	0.7118	7.2485	811.0460	33,631.2147	34,442.2607	45.9348	0.2411	35,481.6358

	ROG	NOx	CO	SO2	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	66.57	15.43	54.65	23.10	11.80	96.69	49.78	11.80	96.82	75.65	71.90	9.25	13.78	4.25	42.80	13.63

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	1/2/2014	5	2	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390
Total	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390

3.2 Demolition - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116
Total	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116

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	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390
Total	7.8000e-004	5.3800e-003	3.8300e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.5377	0.5377	6.0000e-005	0.0000	0.5390

3.2 Demolition - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116
Total	2.5000e-004	7.0000e-005	6.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1115	0.1115	1.0000e-005	0.0000	0.1116

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	35.6316	25.5357	114.0556	0.3494	24.3959	0.3801	24.7760	6.5367	0.3506	6.8873	0.0000	24,246.21 29	24,246.21 29	0.7787	0.0000	24,262.56 59
Unmitigated	39.7609	28.3398	124.5217	0.3945	27.6598	0.4255	28.0853	7.4112	0.3926	7.8038	0.0000	27,380.76 96	27,380.76 96	0.8713	0.0000	27,399.06 73

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	6,201.00	6,830.64	5790.78	17,852,820	15,746,187
City Park	26.16	18.91	18.91	51,420	45,352
Elementary School	600.00	0.00	0.00	944,974	833,467
Parking Lot	0.00	0.00	0.00		
Single Family Housing	17,955.00	20,109.60	17496.15	52,126,798	45,975,836
Strip Mall	2,772.00	3,329.57	1618.06	4,137,766	3,649,510
Total	27,554.16	30,288.71	24,923.89	75,113,777	66,250,351

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463102	0.064860	0.187402	0.173152	0.059565	0.008320	0.013499	0.015223	0.001635	0.001280	0.007831	0.000608	0.003523

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,495.5411	5,495.5411	0.2487	0.0515	5,516.7161
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,670.8012	5,670.8012	0.2567	0.0531	5,692.6514
NaturalGas Mitigated	0.2065	1.7672	0.7709	0.0113		0.1427	0.1427		0.1427	0.1427	0.0000	2,043.3988	2,043.3988	0.0392	0.0375	2,055.8346
NaturalGas Unmitigated	0.2676	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	2,648.7476	2,648.7476	0.0508	0.0486	2,664.8675

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	755942	4.0800e-003	0.0371	0.0311	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3399	40.3399	7.7000e-004	7.4000e-004	40.5854
Parking Lot	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
Single Family Housing	3.55734e+007	0.1918	1.6392	0.6975	0.0105		0.1325	0.1325		0.1325	0.1325	0.0000	1,898.3344	1,898.3344	0.0364	0.0348	1,909.8874
Strip Mall	601128	3.2400e-003	0.0295	0.0248	1.8000e-004		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003	0.0000	32.0785	32.0785	6.1000e-004	5.9000e-004	32.2737
Apartments Low Rise	1.27051e+007	0.0685	0.5854	0.2491	3.7400e-003		0.0473	0.0473		0.0473	0.0473	0.0000	677.9948	677.9948	0.0130	0.0124	682.1210
City Park	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
Total		0.2677	2.2911	1.0025	0.0146		0.1849	0.1849		0.1849	0.1849	0.0000	2,648.7476	2,648.7476	0.0508	0.0486	2,664.8675

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					
Elementary School	524281	2.8300e-003	0.0257	0.0216	1.5000e-004		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	27.9776	27.9776	5.4000e-004	5.1000e-004	28.1479
Parking Lot	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
Single Family Housing	2.80113e+007	0.1510	1.2907	0.5492	8.2400e-003		0.1044	0.1044		0.1044	0.1044	0.0000	1,494.7912	1,494.7912	0.0287	0.0274	1,503.8883
Strip Mall	405761	2.1900e-003	0.0199	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6530	21.6530	4.2000e-004	4.0000e-004	21.7848
Apartments Low Rise	9.35048e+006	0.0504	0.4309	0.1833	2.7500e-003		0.0348	0.0348		0.0348	0.0348	0.0000	498.9770	498.9770	9.5600e-003	9.1500e-003	502.0137
City Park	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
Total		0.2065	1.7672	0.7709	0.0113		0.1427	0.1427		0.1427	0.1427	0.0000	2,043.3988	2,043.3988	0.0392	0.0375	2,055.8346

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.43014e+006	996.9789	0.0451	9.3400e-003	1,000.8204
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	384743	111.8266	5.0600e-003	1.0500e-003	112.2575
Parking Lot	26400	7.6732	3.5000e-004	7.0000e-005	7.7028
Single Family Housing	1.44544e+007	4,201.2001	0.1901	0.0393	4,217.3878
Strip Mall	1.21493e+006	353.1224	0.0160	3.3100e-003	354.4830
Total		5,670.8012	0.2567	0.0531	5,692.6514

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.37939e+006	982.2296	0.0445	9.2000e-003	986.0142
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	352463	102.4445	4.6400e-003	9.6000e-004	102.8393
Parking Lot	26400	7.6732	3.5000e-004	7.0000e-005	7.7028
Single Family Housing	1.40919e+007	4,095.8577	0.1854	0.0384	4,111.6395
Strip Mall	1.0574e+006	307.3362	0.0139	2.8800e-003	308.5204
Total		5,495.5411	0.2487	0.0515	5,516.7161

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	29.0691	0.2542	21.9839	1.1600e-003		0.2196	0.2196		0.2185	0.2185	0.0000	1,450.0059	1,450.0059	0.0620	0.0259	1,459.3458
Unmitigated	154.1048	1.9525	176.1828	0.0614		21.7859	21.7859		21.7853	21.7853	2,060.7506	900.0295	2,960.7801	1.9366	0.1621	3,051.6986

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	7.8609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	20.3957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	125.1787	1.6983	154.2067	0.0602		21.6651	21.6651		21.6645	21.6645	2,060.7506	864.2488	2,924.9994	1.9017	0.1621	3,015.1847
Landscaping	0.6696	0.2542	21.9761	1.1600e-003		0.1208	0.1208		0.1208	0.1208	0.0000	35.7807	35.7807	0.0349	0.0000	36.5139
Total	154.1048	1.9525	176.1828	0.0614		21.7859	21.7859		21.7853	21.7853	2,060.7506	900.0295	2,960.7801	1.9366	0.1621	3,051.6986

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	20.3957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1429	1.0000e-005	7.7900e-003	0.0000		0.0987	0.0987		0.0977	0.0977	0.0000	1,414.2252	1,414.2252	0.0271	0.0259	1,422.8320
Landscaping	0.6696	0.2542	21.9761	1.1600e-003		0.1208	0.1208		0.1208	0.1208	0.0000	35.7807	35.7807	0.0349	0.0000	36.5139
Total	29.0691	0.2542	21.9839	1.1600e-003		0.2196	0.2196		0.2185	0.2185	0.0000	1,450.0059	1,450.0059	0.0620	0.0259	1,459.3458

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	452.5114	0.2112	0.1263	496.0874
Unmitigated	529.3645	0.2637	0.1578	583.8073

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	62.1569 / 39.1859	159.6101	0.0819	0.0491	176.5552
City Park	0 / 14.1667	14.4116	6.5000e-004	1.3000e-004	14.4671
Elementary School	1.45454 / 3.74026	6.6071	2.0500e-003	1.1800e-003	7.0147
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	129.982 / 81.9454	333.7758	0.1713	0.1027	369.2114
Strip Mall	5.86654 / 3.59562	14.9598	7.7300e-003	4.6300e-003	16.5587
Total		529.3645	0.2637	0.1578	583.8073

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	49.7256 / 39.1859	135.6607	0.0656	0.0393	149.2195
City Park	0 / 14.1667	14.4116	6.5000e-004	1.3000e-004	14.4671
Elementary School	1.16364 / 3.74026	6.0467	1.6600e-003	9.5000e-004	6.3750
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	103.986 / 81.9454	283.6930	0.1371	0.0822	312.0471
Strip Mall	4.69323 / 3.59562	12.6994	6.1800e-003	3.7100e-003	13.9787
Total		452.5114	0.2112	0.1263	496.0874

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	754.5905	44.5950	0.0000	1,691.0859
Mitigated	754.5905	44.5950	0.0000	1,691.0859

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	438.84	89.0806	5.2645	0.0000	199.6353
City Park	1.02	0.2071	0.0122	0.0000	0.4640
Elementary School	109.5	22.2275	1.3136	0.0000	49.8133
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3084.84	626.1946	37.0070	0.0000	1,403.3426
Strip Mall	83.16	16.8807	0.9976	0.0000	37.8308
Total		754.5905	44.5950	0.0000	1,691.0859

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	438.84	89.0806	5.2645	0.0000	199.6353
City Park	1.02	0.2071	0.0122	0.0000	0.4640
Elementary School	109.5	22.2275	1.3136	0.0000	49.8133
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3084.84	626.1946	37.0070	0.0000	1,403.3426
Strip Mall	83.16	16.8807	0.9976	0.0000	37.8308
Total		754.5905	44.5950	0.0000	1,691.0859

9.0 Operational Offroad

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

FR SPA 3 Buildout Operational 2020
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	1.15	50,162.02	0
Parking Lot	30.00	1000sqft	0.69	30,000.00	0
City Park	11.89	Acre	11.89	517,928.40	0
Apartments Low Rise	954.00	Dwelling Unit	59.63	954,000.00	2490
Single Family Housing	1,995.00	Dwelling Unit	500.00	3,591,000.00	8569
Strip Mall	79.20	1000sqft	7.30	79,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2020
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	640.78	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity reduced to reflect attainment of 33% RPS. Default value of 793.8 reflects 17% RPS.

Formula: $[793.8 / (1-.17)] * (1- 0.33) = 640.78$

Land Use - per proposed project and City of Roseville average persons per household

Construction Phase - modeling for operational emissions only

Off-road Equipment -

Vehicle Trips - per traffic study

Woodstoves - no woodburning appliances or fireplaces allowed in multi family units. woodburning is included for 50% of single family homes in this unmitigated or business as usual analysis

Energy Use -

Water And Wastewater - all wastewater treated at City's WWTP, no septic systems.

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - 32.5% above Title 24 is a 10% improvement over the 2014 requirements (CalEEMod is based on 2008 Title 24 requirements)

Water Mitigation - water conservation measures not modeled include use of high-efficiency irrigation, drought tolerant landscaping, and reduction in turf areas. Because these measures vary across housing densities, they were not modeled.

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	600.00	2.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	524.70	0.00
tblFireplaces	NumberNoFireplace	95.40	0.00
tblFireplaces	NumberWood	333.90	0.00
tblLandUse	LotAcreage	647.73	500.00
tblLandUse	LotAcreage	1.82	7.30
tblLandUse	Population	2,728.00	2,490.00
tblLandUse	Population	5,706.00	8,569.00
tblProjectCharacteristics	CO2IntensityFactor	793.8	640.78

tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	WorkerTripNumber	3.00	15.00
tblVehicleTrips	WD_TR	6.59	6.50
tblVehicleTrips	WD_TR	1.59	2.20
tblVehicleTrips	WD_TR	1.29	1.00
tblVehicleTrips	WD_TR	9.57	9.00
tblVehicleTrips	WD_TR	44.32	35.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	47.70	0.00
tblWoodstoves	NumberNoncatalytic	47.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

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					
2014	1.0427	5.4411	4.6363	7.8000e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	729.3416	729.3416	0.0759	0.0000	730.9360
Total	1.0427	5.4411	4.6363	7.8000e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	729.3416	729.3416	0.0759	0.0000	730.9360

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					
2014	1.0427	5.4411	4.6363	7.8000e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	729.3416	729.3416	0.0759	0.0000	730.9360
Total	1.0427	5.4411	4.6363	7.8000e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	729.3416	729.3416	0.0759	0.0000	730.9360

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	3,215.4085	44.2469	4,005.3171	1.4820		529.7596	529.7596		529.7441	529.7441	55,404.6028	23,674.1210	79,078.7238	51.5569	4.3580	81,512.3946
Energy	1.4665	12.5541	5.4933	0.0800		1.0132	1.0132		1.0132	1.0132		15,998.5999	15,998.5999	0.3066	0.2933	16,095.9647
Mobile	253.7783	161.2113	822.1586	2.6321	177.0070	2.6047	179.6117	47.2543	2.4029	49.6572		200,345.0911	200,345.0911	5.8873		200,468.7244
Total	3,470.6534	218.0123	4,832.9690	4.1940	177.0070	533.3776	710.3845	47.2543	533.1602	580.4145	55,404.6028	240,017.8120	295,422.4148	57.7508	4.6513	298,077.0837

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	165.7560	2.8241	244.3692	0.0129		3.7506	3.7506		3.7253	3.7253	0.0000	38,460.5916	38,460.5916	1.1564	0.6971	38,700.9688
Energy	1.1314	9.6831	4.2240	0.0617		0.7817	0.7817		0.7817	0.7817		12,342.2556	12,342.2556	0.2366	0.2263	12,417.3685
Mobile	228.6342	145.3919	744.1623	2.3302	156.1201	2.3261	158.4462	41.6783	2.1459	43.8242		177,367.3685	177,367.3685	5.2618		177,477.8652
Total	395.5215	157.8991	992.7555	2.4048	156.1201	6.8584	162.9785	41.6783	6.6529	48.3312	0.0000	228,170.2156	228,170.2156	6.6547	0.9234	228,596.2025

	ROG	NOx	CO	SO2	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	88.60	27.57	79.46	42.66	11.80	98.71	77.06	11.80	98.75	91.67	100.00	4.94	22.76	88.48	80.15	23.31

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	1/2/2014	5	2	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297		592.6646	592.6646	0.0699		594.1320
Total	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297		592.6646	592.6646	0.0699		594.1320

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	0.2616	0.0598	0.8038	1.5500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		136.6770	136.6770	6.0500e-003		136.8040
Total	0.2616	0.0598	0.8038	1.5500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		136.6770	136.6770	6.0500e-003		136.8040

3.2 Demolition - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297	0.0000	592.6646	592.6646	0.0699		594.1320
Total	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297	0.0000	592.6646	592.6646	0.0699		594.1320

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	0.2616	0.0598	0.8038	1.5500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		136.6770	136.6770	6.0500e-003		136.8040
Total	0.2616	0.0598	0.8038	1.5500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		136.6770	136.6770	6.0500e-003		136.8040

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Diversity
- Improve Walkability Design
- Improve Destination Accessibility
- Integrate Below Market Rate Housing
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	228.6342	145.3919	744.1623	2.3302	156.1201	2.3261	158.4462	41.6783	2.1459	43.8242		177,367.3685	177,367.3685	5.2618		177,477.8652
Unmitigated	253.7783	161.2113	822.1586	2.6321	177.0070	2.6047	179.6117	47.2543	2.4029	49.6572		200,345.0911	200,345.0911	5.8873		200,468.7244

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	6,201.00	6,830.64	5790.78	17,852,820	15,746,187
City Park	26.16	18.91	18.91	51,420	45,352
Elementary School	600.00	0.00	0.00	944,974	833,467
Parking Lot	0.00	0.00	0.00		
Single Family Housing	17,955.00	20,109.60	17496.15	52,126,798	45,975,836
Strip Mall	2,772.00	3,329.57	1618.06	4,137,766	3,649,510
Total	27,554.16	30,288.71	24,923.89	75,113,777	66,250,351

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463102	0.064860	0.187402	0.173152	0.059565	0.008320	0.013499	0.015223	0.001635	0.001280	0.007831	0.000608	0.003523

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

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	1.1314	9.6831	4.2240	0.0617		0.7817	0.7817		0.7817	0.7817		12,342.2556	12,342.2556	0.2366	0.2263	12,417.3685
NaturalGas Unmitigated	1.4665	12.5541	5.4933	0.0800		1.0132	1.0132		1.0132	1.0132		15,998.5999	15,998.5999	0.3066	0.2933	16,095.9647

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					
Elementary School	2071.07	0.0223	0.2031	0.1706	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.6557	243.6557	4.6700e-003	4.4700e-003	245.1385
Parking Lot	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
Single Family Housing	97461.5	1.0511	8.9818	3.8220	0.0573		0.7262	0.7262		0.7262	0.7262		11,466.0575	11,466.0575	0.2198	0.2102	11,535.8381
Strip Mall	1646.93	0.0178	0.1615	0.1356	9.7000e-004		0.0123	0.0123		0.0123	0.0123		193.7560	193.7560	3.7100e-003	3.5500e-003	194.9352
Apartments Low Rise	34808.6	0.3754	3.2079	1.3650	0.0205		0.2594	0.2594		0.2594	0.2594		4,095.1307	4,095.1307	0.0785	0.0751	4,120.0530
City Park	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		1.4666	12.5541	5.4933	0.0800		1.0132	1.0132		1.0132	1.0132		15,998.5999	15,998.5999	0.3066	0.2933	16,095.9647

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	lb/day										lb/day					
Elementary School	1.43639	0.0155	0.1408	0.1183	8.4000e-004		0.0107	0.0107		0.0107	0.0107		168.9866	168.9866	3.2400e-003	3.1000e-003	170.0150
Parking Lot	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
Single Family Housing	76.7434	0.8276	7.0724	3.0095	0.0451		0.5718	0.5718		0.5718	0.5718		9,028.6315	9,028.6315	0.1731	0.1655	9,083.5782
Strip Mall	1.11168	0.0120	0.1090	0.0916	6.5000e-004		8.2800e-003	8.2800e-003		8.2800e-003	8.2800e-003		130.7853	130.7853	2.5100e-003	2.4000e-003	131.5812
Apartments Low Rise	25.6177	0.2763	2.3609	1.0046	0.0151		0.1909	0.1909		0.1909	0.1909		3,013.8522	3,013.8522	0.0578	0.0553	3,032.1940
City Park	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		1.1314	9.6831	4.2240	0.0617		0.7817	0.7817		0.7817	0.7817		12,342.2556	12,342.2556	0.2366	0.2263	12,417.3685

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	165.7560	2.8241	244.3692	0.0129		3.7506	3.7506		3.7253	3.7253	0.0000	38,460.5916	38,460.5916	1.1564	0.6971	38,700.9688
Unmitigated	3,215.4085	44.2469	4,005.3171	1.4820		529.7596	529.7596		529.7441	529.7441	55,404.6028	23,674.1210	79,078.7238	51.5569	4.3580	81,512.3946

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	43.0734					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	111.7570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,053.1380	41.4229	3,761.1381	1.4691		528.4171	528.4171		528.4016	528.4016	55,404.6028	23,235.8824	78,640.4852	51.1293	4.3580	81,065.1765
Landscaping	7.4402	2.8240	244.1791	0.0129		1.3425	1.3425		1.3425	1.3425		438.2387	438.2387	0.4276		447.2182
Total	3,215.4085	44.2469	4,005.3171	1.4820		529.7596	529.7596		529.7441	529.7441	55,404.6028	23,674.1210	79,078.7238	51.5569	4.3580	81,512.3946

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	43.0734					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	111.7570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4854	1.6000e-004	0.1901	0.0000		2.4081	2.4081		2.3827	2.3827	0.0000	38,022.3529	38,022.3529	0.7288	0.6971	38,253.7506
Landscaping	7.4402	2.8240	244.1791	0.0129		1.3425	1.3425		1.3425	1.3425		438.2387	438.2387	0.4276		447.2182
Total	165.7560	2.8241	244.3692	0.0129		3.7506	3.7506		3.7253	3.7253	0.0000	38,460.5916	38,460.5916	1.1564	0.6971	38,700.9688

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

FR SPA 3 Buildout Operational 2020
Placer-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	1.15	50,162.02	0
Parking Lot	30.00	1000sqft	0.69	30,000.00	0
City Park	11.89	Acre	11.89	517,928.40	0
Apartments Low Rise	954.00	Dwelling Unit	59.63	954,000.00	2490
Single Family Housing	1,995.00	Dwelling Unit	500.00	3,591,000.00	8569
Strip Mall	79.20	1000sqft	7.30	79,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2020
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	640.78	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity reduced to reflect attainment of 33% RPS. Default value of 793.8 reflects 17% RPS.

Formula: $[793.8 / (1-.17)] * (1- 0.33) = 640.78$

Land Use - per proposed project and City of Roseville average persons per household

Construction Phase - modeling for operational emissions only

Off-road Equipment -

Vehicle Trips - per traffic study

Woodstoves - no woodburning appliances or fireplaces allowed in multi family units. woodburning is included for 50% of single family homes in this unmitigated or business as usual analysis

Energy Use -

Water And Wastewater - all wastewater treated at City's WWTP, no septic systems.

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - 32.5% above Title 24 is a 10% improvement over the 2014 requirements (CalEEMod is based on 2008 Title 24 requirements)

Water Mitigation - water conservation measures not modeled include use of high-efficiency irrigation, drought tolerant landscaping, and reduction in turf areas. Because these measures vary across housing densities, they were not modeled.

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	600.00	2.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	524.70	0.00
tblFireplaces	NumberNoFireplace	95.40	0.00
tblFireplaces	NumberWood	333.90	0.00
tblLandUse	LotAcreage	647.73	500.00
tblLandUse	LotAcreage	1.82	7.30
tblLandUse	Population	2,728.00	2,490.00
tblLandUse	Population	5,706.00	8,569.00
tblProjectCharacteristics	CO2IntensityFactor	793.8	640.78

tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	WorkerTripNumber	3.00	15.00
tblVehicleTrips	WD_TR	6.59	6.50
tblVehicleTrips	WD_TR	1.59	2.20
tblVehicleTrips	WD_TR	1.29	1.00
tblVehicleTrips	WD_TR	9.57	9.00
tblVehicleTrips	WD_TR	44.32	35.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	47.70	0.00
tblWoodstoves	NumberNoncatalytic	47.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

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					
2014	1.0736	5.4550	4.5493	7.6100e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	711.9196	711.9196	0.0759	0.0000	713.5139
Total	1.0736	5.4550	4.5493	7.6100e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	711.9196	711.9196	0.0759	0.0000	713.5139

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					
2014	1.0736	5.4550	4.5493	7.6100e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	711.9196	711.9196	0.0759	0.0000	713.5139
Total	1.0736	5.4550	4.5493	7.6100e-003	0.1232	0.4305	0.5537	0.0327	0.4304	0.4631	0.0000	711.9196	711.9196	0.0759	0.0000	713.5139

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	3,215.4085	44.2469	4,005.3171	1.4820		529.7596	529.7596		529.7441	529.7441	55,404.6028	23,674.1210	79,078.7238	51.5569	4.3580	81,512.3946
Energy	1.4665	12.5541	5.4933	0.0800		1.0132	1.0132		1.0132	1.0132		15,998.5999	15,998.5999	0.3066	0.2933	16,095.9647
Mobile	275.7371	182.5667	824.7383	2.3616	177.0070	2.6157	179.6226	47.2543	2.4130	49.6673		180,807.7801	180,807.7801	5.8925		180,931.5216
Total	3,492.6122	239.3677	4,835.5487	3.9235	177.0070	533.3886	710.3955	47.2543	533.1703	580.4247	55,404.6028	220,480.5010	275,885.1038	57.7559	4.6513	278,539.8809

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	165.7560	2.8241	244.3692	0.0129		3.7506	3.7506		3.7253	3.7253	0.0000	38,460.5916	38,460.5916	1.1564	0.6971	38,700.9688
Energy	1.1314	9.6831	4.2240	0.0617		0.7817	0.7817		0.7817	0.7817		12,342.2556	12,342.2556	0.2366	0.2263	12,417.3685
Mobile	246.4712	164.4976	762.3238	2.0917	156.1201	2.3371	158.4572	41.6783	2.1561	43.8344		160,116.2330	160,116.2330	5.2669		160,226.8380
Total	413.3585	177.0048	1,010.9170	2.1663	156.1201	6.8694	162.9895	41.6783	6.6630	48.3413	0.0000	210,919.0802	210,919.0802	6.6598	0.9234	211,345.1752

	ROG	NOx	CO	SO2	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	88.16	26.05	79.09	44.79	11.80	98.71	77.06	11.80	98.75	91.67	100.00	4.34	23.55	88.47	80.15	24.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	1/2/2014	5	2	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297		592.6646	592.6646	0.0699			594.1320
Total	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297		592.6646	592.6646	0.0699			594.1320

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	0.2925	0.0738	0.7167	1.3500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		119.2549	119.2549	6.0500e-003			119.3820
Total	0.2925	0.0738	0.7167	1.3500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		119.2549	119.2549	6.0500e-003			119.3820

3.2 Demolition - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297	0.0000	592.6646	592.6646	0.0699		594.1320
Total	0.7811	5.3812	3.8326	6.2600e-003		0.4297	0.4297		0.4297	0.4297	0.0000	592.6646	592.6646	0.0699		594.1320

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	0.2925	0.0738	0.7167	1.3500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		119.2549	119.2549	6.0500e-003		119.3820
Total	0.2925	0.0738	0.7167	1.3500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.8000e-004	0.0335		119.2549	119.2549	6.0500e-003		119.3820

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Diversity
- Improve Walkability Design
- Improve Destination Accessibility
- Integrate Below Market Rate Housing
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	246.4712	164.4976	762.3238	2.0917	156.1201	2.3371	158.4572	41.6783	2.1561	43.8344		160,116.2330	160,116.2330	5.2669		160,226.8380
Unmitigated	275.7371	182.5667	824.7383	2.3616	177.0070	2.6157	179.6226	47.2543	2.4130	49.6673		180,807.7801	180,807.7801	5.8925		180,931.5216

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	6,201.00	6,830.64	5790.78	17,852,820	15,746,187
City Park	26.16	18.91	18.91	51,420	45,352
Elementary School	600.00	0.00	0.00	944,974	833,467
Parking Lot	0.00	0.00	0.00		
Single Family Housing	17,955.00	20,109.60	17496.15	52,126,798	45,975,836
Strip Mall	2,772.00	3,329.57	1618.06	4,137,766	3,649,510
Total	27,554.16	30,288.71	24,923.89	75,113,777	66,250,351

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.463102	0.064860	0.187402	0.173152	0.059565	0.008320	0.013499	0.015223	0.001635	0.001280	0.007831	0.000608	0.003523

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.1314	9.6831	4.2240	0.0617		0.7817	0.7817		0.7817	0.7817		12,342.2556	12,342.2556	0.2366	0.2263	12,417.3685
NaturalGas Unmitigated	1.4665	12.5541	5.4933	0.0800		1.0132	1.0132		1.0132	1.0132		15,998.5999	15,998.5999	0.3066	0.2933	16,095.9647

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					
Elementary School	2071.07	0.0223	0.2031	0.1706	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.6557	243.6557	4.6700e-003	4.4700e-003	245.1385
Parking Lot	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
Single Family Housing	97461.5	1.0511	8.9818	3.8220	0.0573		0.7262	0.7262		0.7262	0.7262		11,466.0575	11,466.0575	0.2198	0.2102	11,535.8381
Strip Mall	1646.93	0.0178	0.1615	0.1356	9.7000e-004		0.0123	0.0123		0.0123	0.0123		193.7560	193.7560	3.7100e-003	3.5500e-003	194.9352
Apartments Low Rise	34808.6	0.3754	3.2079	1.3650	0.0205		0.2594	0.2594		0.2594	0.2594		4,095.1307	4,095.1307	0.0785	0.0751	4,120.0530
City Park	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		1.4666	12.5541	5.4933	0.0800		1.0132	1.0132		1.0132	1.0132		15,998.5999	15,998.5999	0.3066	0.2933	16,095.9647

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	lb/day										lb/day					
Elementary School	1.43639	0.0155	0.1408	0.1183	8.4000e-004		0.0107	0.0107		0.0107	0.0107		168.9866	168.9866	3.2400e-003	3.1000e-003	170.0150
Parking Lot	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
Single Family Housing	76.7434	0.8276	7.0724	3.0095	0.0451		0.5718	0.5718		0.5718	0.5718		9,028.6315	9,028.6315	0.1731	0.1655	9,083.5782
Strip Mall	1.11168	0.0120	0.1090	0.0916	6.5000e-004		8.2800e-003	8.2800e-003		8.2800e-003	8.2800e-003		130.7853	130.7853	2.5100e-003	2.4000e-003	131.5812
Apartments Low Rise	25.6177	0.2763	2.3609	1.0046	0.0151		0.1909	0.1909		0.1909	0.1909		3,013.8522	3,013.8522	0.0578	0.0553	3,032.1940
City Park	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		1.1314	9.6831	4.2240	0.0617		0.7817	0.7817		0.7817	0.7817		12,342.2556	12,342.2556	0.2366	0.2263	12,417.3685

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	165.7560	2.8241	244.3692	0.0129		3.7506	3.7506		3.7253	3.7253	0.0000	38,460.5916	38,460.5916	1.1564	0.6971	38,700.9688
Unmitigated	3,215.4085	44.2469	4,005.3171	1.4820		529.7596	529.7596		529.7441	529.7441	55,404.6028	23,674.1210	79,078.7238	51.5569	4.3580	81,512.3946

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	43.0734					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	111.7570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,053.1380	41.4229	3,761.1381	1.4691		528.4171	528.4171		528.4016	528.4016	55,404.6028	23,235.8824	78,640.4852	51.1293	4.3580	81,065.1765
Landscaping	7.4402	2.8240	244.1791	0.0129		1.3425	1.3425		1.3425	1.3425		438.2387	438.2387	0.4276		447.2182
Total	3,215.4085	44.2469	4,005.3171	1.4820		529.7596	529.7596		529.7441	529.7441	55,404.6028	23,674.1210	79,078.7238	51.5569	4.3580	81,512.3946

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	43.0734					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	111.7570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4854	1.6000e-004	0.1901	0.0000		2.4081	2.4081		2.3827	2.3827	0.0000	38,022.3529	38,022.3529	0.7288	0.6971	38,253.7506
Landscaping	7.4402	2.8240	244.1791	0.0129		1.3425	1.3425		1.3425	1.3425		438.2387	438.2387	0.4276		447.2182
Total	165.7560	2.8241	244.3692	0.0129		3.7506	3.7506		3.7253	3.7253	0.0000	38,460.5916	38,460.5916	1.1564	0.6971	38,700.9688

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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
