APPENDIX F

AIR QUALITY AND GREENHOUSE GAS MODELING

The Homes at Deer Hill (Terraces of Lafayette Project Alternative)

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	160.00	1000sqft	3.67	160,000.00	0
City Park	14.05	Acre	14.05	612,018.00	0
Single Family Housing	44.00	Dwelling Unit	4.55	113,275.00	121

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Based on project description

Construction Phase - Construction schedule from Applicant

Off-road Equipment - Provided construction information

Trips and VMT - Provided construction information

Grading - Site balanced

Architectural Coating - Non-residential architectural coating areas adjusted for lot striping, and no painting for park/open space.

Vehicle Trips - TJKM, 2014

Vechicle Emission Factors - Residential fleet mix

Woodstoves - No woodstoves; 100% gas fireplaces.

Area Coating - Non-residential coating methodology

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BAAQMD's Fugitive Dust Control Measures

Energy Mitigation - Residential buildings 25% more efficient than 2008 Standards under 2013 Building and Energy Standards

Water Mitigation - CALGreen and City's Water Efficiency Landscape Ordinance

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	308,409.00	9,600.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	925,227.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	308409	9600
tblAreaCoating	Area_Nonresidential_Interior	925227	0
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	370.00	521.00
tblConstructionPhase	NumDays	20.00	26.00
tblConstructionPhase	NumDays	35.00	65.00
tblConstructionPhase	NumDays	35.00	10.00
tblConstructionPhase	NumDays	35.00	30.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	PhaseEndDate	11/27/2017	10/30/2017
tblConstructionPhase	PhaseEndDate	11/20/2017	10/30/2017
tblConstructionPhase	PhaseStartDate	10/31/2017	10/3/2017
tblConstructionPhase	PhaseStartDate	10/31/2017	10/10/2017
tblFireplaces	NumberGas	24.20	44.00
tblFireplaces	NumberWood	19.80	0.00
tblLandUse	LandUseSquareFeet	79,200.00	113,275.00
tblLandUse	LotAcreage	14.29	4.55
tblLandUse	Population	126.00	121.00
tblOffRoadEquipment	HorsePower	174.00	180.00
tblOffRoadEquipment	HorsePower	174.00	180.00
tblOffRoadEquipment	HorsePower	174.00	180.00
tblOffRoadEquipment	HorsePower	125.00	89.00
tblOffRoadEquipment	HorsePower	80.00	84.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	255.00	600.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	255.00	600.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	361.00	407.00
tblOffRoadEquipment	HorsePower	361.00	500.00
tblOffRoadEquipment	HorsePower	361.00	500.00
tblOffRoadEquipment	HorsePower	361.00	187.00
tblOffRoadEquipment	HorsePower	361.00	407.00
tblOffRoadEquipment	HorsePower	80.00	232.00
tblOffRoadEquipment	HorsePower	80.00	354.00
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tblOffRoadEquipment	HorsePower	80.00	84.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripLength	20.00	20.70
tblTripsAndVMT	HaulingTripNumber	43.00	57.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	131.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	30.00	20.00
tblTripsAndVMT	WorkerTripNumber	340.00	50.00
tblTripsAndVMT	WorkerTripNumber	68.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblVehicleEF	HHD	0.02	2.7020e-003
tblVehicleEF	HHD	0.02	2.7020e-003
tblVehicleEF	HHD	0.02	2.7020e-003
tblVehicleEF	LDA	0.53	0.66
tblVehicleEF	LDA	0.53	0.66
tblVehicleEF	LDA	0.53	0.66
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LHD1	0.04	4.5850e-003
tblVehicleEF	LHD1	0.04	4.5850e-003
tblVehicleEF	LHD1	0.04	4.5850e-003
tblVehicleEF	LHD2	4.8500e-003	6.1200e-004
tblVehicleEF	LHD2	4.8500e-003	6.1200e-004

tblVehicleEF	LHD2	4.8500e-003	6.1200e-004
tblVehicleEF	MCY	6.3780e-003	7.9780e-003
tblVehicleEF	MCY	6.3780e-003	7.9780e-003
tblVehicleEF	MCY	6.3780e-003	7.9780e-003
tblVehicleEF	MDV	0.15	0.02
tblVehicleEF	MDV	0.15	0.02
tblVehicleEF	MDV	0.15	0.02
tblVehicleEF	MH	2.0510e-003	2.5900e-004
tblVehicleEF	MH	2.0510e-003	2.5900e-004
tblVehicleEF	MH	2.0510e-003	2.5900e-004
tblVehicleEF	MHD	9.7870e-003	1.2360e-003
tblVehicleEF	MHD	9.7870e-003	1.2360e-003
tblVehicleEF	MHD	9.7870e-003	1.2360e-003
tblVehicleEF	OBUS	1.2250e-003	1.5500e-004
tblVehicleEF	OBUS	1.2250e-003	1.5500e-004
tblVehicleEF	OBUS	1.2250e-003	1.5500e-004
tblVehicleEF	SBUS	2.0950e-003	2.6500e-004
tblVehicleEF	SBUS	2.0950e-003	2.6500e-004
tblVehicleEF	SBUS	2.0950e-003	2.6500e-004
tblVehicleEF	UBUS	1.4830e-003	1.8700e-004
tblVehicleEF	UBUS	1.4830e-003	1.8700e-004
tblVehicleEF	UBUS	1.4830e-003	1.8700e-004
tblVehicleTrips	CC_TL	7.30	2.25
tblVehicleTrips	CNW_TL	7.30	2.25
tblVehicleTrips	CW_TL	9.50	2.25
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.40	10.10
tblVehicleTrips	HS_TL	4.30	10.10
tblVehicleTrips	HW_TL	12.40	10.10
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	246.20
tblVehicleTrips	ST_TR	10.08	10.75
tblVehicleTrips	SU_TR	1.59	246.20
tblVehicleTrips	SU_TR	8.77	10.75
tblVehicleTrips	WD_TR	1.59	52.02
tblVehicleTrips	WD_TR	9.57	11.20
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	1.54	0.00
tblWoodstoves	NumberNoncatalytic	1.54	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					
2015	0.8561	10.3574	6.4061	8.3500e-003	0.7971	0.4365	1.2336	0.3630	0.4030	0.7660	0.0000	788.0410	788.0410	0.2216	0.0000	792.6941
2016	0.2273	1.2878	1.4587	2.4100e-003	0.0678	0.0865	0.1543	0.0182	0.0846	0.1028	0.0000	198.8873	198.8873	0.0216	0.0000	199.3405
2017	1.0221	1.1400	1.2763	2.1600e-003	0.0581	0.0750	0.1331	0.0156	0.0728	0.0884	0.0000	177.8370	177.8370	0.0199	0.0000	178.2551
Total	**2.1056**	**12.7853**	**9.1411**	**0.0129**	**0.9230**	**0.5980**	**1.5210**	**0.3968**	**0.5603**	**0.9572**	**0.0000**	**1,164.7653**	**1,164.7653**	**0.2631**	**0.0000**	**1,170.2896**

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					
2015	0.2263	3.8904	4.5861	8.3500e-003	0.3534	0.1545	0.5079	0.1587	0.1544	0.3130	0.0000	788.0401	788.0401	0.2216	0.0000	792.6932
2016	0.1364	0.9063	1.4785	2.4100e-003	0.0627	0.0563	0.1189	0.0169	0.0561	0.0730	0.0000	198.8872	198.8872	0.0216	0.0000	199.3403
2017	0.9432	0.8114	1.2962	2.1600e-003	0.0537	0.0502	0.1038	0.0145	0.0500	0.0645	0.0000	177.8368	177.8368	0.0199	0.0000	178.2549
Total	**1.3058**	**5.6081**	**7.3608**	**0.0129**	**0.4697**	**0.2610**	**0.7307**	**0.1901**	**0.2605**	**0.4506**	**0.0000**	**1,164.7641**	**1,164.7641**	**0.2631**	**0.0000**	**1,170.2885**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**37.98**	**56.14**	**19.48**	**0.00**	**49.11**	**56.36**	**51.96**	**52.10**	**53.51**	**52.93**	**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	3.5513	3.8600e-003	0.3316	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.6383	3.6383	6.0000e-004	6.0000e-005	3.6686
Energy	8.3700e-003	0.0715	0.0304	4.6000e-004		5.7800e-003	5.7800e-003		5.7800e-003	5.7800e-003	0.0000	214.3394	214.3394	7.5300e-003	2.7500e-003	215.3498
Mobile	0.8961	0.7754	7.3346	0.0135	1.1125	0.0106	1.1231	0.2960	9.7700e-003	0.3058	0.0000	987.6200	987.6200	0.0491	0.0000	988.6517
Waste						0.0000	0.0000		0.0000	0.0000	10.5616	0.0000	10.5616	0.6242	0.0000	23.6693
Water						0.0000	0.0000		0.0000	0.0000	1.0143	23.3977	24.4119	4.5500e-003	2.4200e-003	25.2591
Total	**4.4558**	**0.8508**	**7.6967**	**0.0140**	**1.1125**	**0.0184**	**1.1309**	**0.2960**	**0.0176**	**0.3135**	**11.5759**	**1,228.9953**	**1,240.5712**	**0.6860**	**5.2300e-003**	**1,256.5984**

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	3.5513	3.8600e-003	0.3316	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.6383	3.6383	6.0000e-004	6.0000e-005	3.6686
Energy	6.6300e-003	0.0566	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	195.8984	195.8984	7.1500e-003	2.4200e-003	196.7992
Mobile	0.8961	0.7754	7.3346	0.0135	1.1125	0.0106	1.1231	0.2960	9.7700e-003	0.3058	0.0000	987.6200	987.6200	0.0491	0.0000	988.6517
Waste						0.0000	0.0000		0.0000	0.0000	10.5616	0.0000	10.5616	0.6242	0.0000	23.6693
Water						0.0000	0.0000		0.0000	0.0000	0.8114	21.3432	22.1546	3.7400e-003	1.9600e-003	22.8411
Total	**4.4540**	**0.8359**	**7.6903**	**0.0139**	**1.1125**	**0.0172**	**1.1297**	**0.2960**	**0.0164**	**0.3123**	**11.3730**	**1,208.4998**	**1,219.8728**	**0.6848**	**4.4400e-003**	**1,235.6298**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**1.75**	**0.08**	**0.72**	**0.00**	**6.52**	**0.11**	**0.00**	**6.83**	**0.38**	**1.75**	**1.67**	**1.67**	**0.17**	**15.11**	**1.67**

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	5/1/2015	6/5/2015	5	26	
2	Rough Grading	Grading	6/6/2015	9/4/2015	5	65	
3	Pad Finish	Grading	9/5/2015	9/18/2015	5	10	
4	Fine Grading/Baserock	Grading	9/19/2015	10/30/2015	5	30	
5	Building Construction	Building Construction	10/31/2015	10/30/2017	5	521	
6	Architectural Coating	Architectural Coating	10/3/2017	10/30/2017	5	20	
7	Paving	Paving	10/10/2017	10/30/2017	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 229,382; Residential Outdoor: 76,461; Non-Residential Indoor: 0; Non-Residential Outdoor: 9,600 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	436	0.40
Demolition	Rubber Tired Dozers	1	8.00	600	0.40
Rough Grading	Excavators	0	8.00	162	0.38
Rough Grading	Graders	1	8.00	180	0.41
Rough Grading	Rollers	1	8.00	232	0.38
Rough Grading	Rollers	1	8.00	354	0.38
Rough Grading	Rubber Tired Dozers	2	8.00	436	0.40
Rough Grading	Rubber Tired Dozers	1	8.00	600	0.40
Rough Grading	Scrapers	3	8.00	407	0.48
Rough Grading	Scrapers	3	8.00	500	0.48
Rough Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Pad Finish	Excavators	0	8.00	162	0.38
Pad Finish	Graders	0	8.00	180	0.41
Pad Finish	Rollers	1	8.00	84	0.38
Pad Finish	Rubber Tired Dozers	1	8.00	436	0.40
Pad Finish	Scrapers	1	8.00	500	0.48
Pad Finish	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Fine Grading/Baserock	Excavators	0	8.00	162	0.38
Fine Grading/Baserock	Graders	1	8.00	180	0.41
Fine Grading/Baserock	Rollers	2	8.00	84	0.38
Fine Grading/Baserock	Rubber Tired Dozers	0	8.00	255	0.40
Fine Grading/Baserock	Scrapers	1	8.00	187	0.48
Fine Grading/Baserock	Scrapers	1	8.00	407	0.48
Fine Grading/Baserock	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	0	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	8.00	89	0.42
Paving	Paving Equipment	0	8.00	130	0.36
Paving	Rollers	3	8.00	84	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	4.00	57.00	12.40	7.30	20.70	LD_Mix	HDT_Mix	HHDT
Rough Grading	12	20.00	12.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pad Finish	3	8.00	4.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading/Baserock	6	15.00	4.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	50.00	10.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	15.00	10.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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	tons/yr										MT/yr					
Fugitive Dust					4.6300e-003	0.0000	4.6300e-003	7.0000e-004	0.0000	7.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0823	0.9683	0.5795	7.5000e-004		0.0436	0.0436		0.0405	0.0405	0.0000	71.0626	71.0626	0.0199	0.0000	71.4801
Total	**0.0823**	**0.9683**	**0.5795**	**7.5000e-004**	**4.6300e-003**	**0.0436**	**0.0482**	**7.0000e-004**	**0.0405**	**0.0412**	**0.0000**	**71.0626**	**71.0626**	**0.0199**	**0.0000**	**71.4801**

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	7.7000e-004	0.0102	7.8300e-003	2.0000e-005	5.0000e-004	1.5000e-004	6.5000e-004	1.4000e-004	1.4000e-004	2.8000e-004	0.0000	2.0447	2.0447	2.0000e-005	0.0000	2.0451
Vendor	7.4000e-004	5.9900e-003	8.1000e-003	1.0000e-005	3.3000e-004	1.0000e-004	4.3000e-004	1.0000e-004	9.0000e-005	1.8000e-004	0.0000	1.1340	1.1340	1.0000e-005	0.0000	1.1342
Worker	8.2000e-004	1.2000e-003	0.0118	2.0000e-005	1.7800e-003	2.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.9000e-004	0.0000	1.6601	1.6601	1.0000e-004	0.0000	1.6621
Total	**2.3300e-003**	**0.0174**	**0.0277**	**5.0000e-005**	**2.6100e-003**	**2.7000e-004**	**2.8700e-003**	**7.1000e-004**	**2.4000e-004**	**9.5000e-004**	**0.0000**	**4.8387**	**4.8387**	**1.3000e-004**	**0.0000**	**4.8413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9800e-003	0.0000	1.9800e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0181	0.3558	0.4539	7.5000e-004		0.0157	0.0157		0.0157	0.0157	0.0000	71.0625	71.0625	0.0199	0.0000	71.4800
Total	**0.0181**	**0.3558**	**0.4539**	**7.5000e-004**	**1.9800e-003**	**0.0157**	**0.0177**	**3.0000e-004**	**0.0157**	**0.0160**	**0.0000**	**71.0625**	**71.0625**	**0.0199**	**0.0000**	**71.4800**

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	7.7000e-004	0.0102	7.8300e-003	2.0000e-005	4.6000e-004	1.5000e-004	6.2000e-004	1.3000e-004	1.4000e-004	2.7000e-004	0.0000	2.0447	2.0447	2.0000e-005	0.0000	2.0451
Vendor	7.4000e-004	5.9900e-003	8.1000e-003	1.0000e-005	3.1000e-004	1.0000e-004	4.1000e-004	9.0000e-005	9.0000e-005	1.8000e-004	0.0000	1.1340	1.1340	1.0000e-005	0.0000	1.1342
Worker	8.2000e-004	1.2000e-003	0.0118	2.0000e-005	1.6400e-003	2.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6601	1.6601	1.0000e-004	0.0000	1.6621
Total	**2.3300e-003**	**0.0174**	**0.0277**	**5.0000e-005**	**2.4100e-003**	**2.7000e-004**	**2.6800e-003**	**6.6000e-004**	**2.4000e-004**	**9.0000e-004**	**0.0000**	**4.8387**	**4.8387**	**1.3000e-004**	**0.0000**	**4.8413**

3.3 Rough Grading - 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	tons/yr										MT/yr					
Fugitive Dust					0.7078	0.0000	0.7078	0.3358	0.0000	0.3358	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6292	8.0192	4.8312	6.1400e-003		0.3257	0.3257		0.2997	0.2997	0.0000	585.3579	585.3579	0.1748	0.0000	589.0277
Total	**0.6292**	**8.0192**	**4.8312**	**6.1400e-003**	**0.7078**	**0.3257**	**1.0335**	**0.3358**	**0.2997**	**0.6354**	**0.0000**	**585.3579**	**585.3579**	**0.1748**	**0.0000**	**589.0277**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5400e-003	0.0449	0.0607	9.0000e-005	2.5100e-003	7.2000e-004	3.2300e-003	7.2000e-004	6.6000e-004	1.3800e-003	0.0000	8.5046	8.5046	8.0000e-005	0.0000	8.5062
Worker	2.7400e-003	4.0100e-003	0.0393	7.0000e-005	5.9200e-003	5.0000e-005	5.9700e-003	1.5700e-003	5.0000e-005	1.6200e-003	0.0000	5.5336	5.5336	3.2000e-004	0.0000	5.5404
Total	**8.2800e-003**	**0.0489**	**0.1000**	**1.6000e-004**	**8.4300e-003**	**7.7000e-004**	**9.2000e-003**	**2.2900e-003**	**7.1000e-004**	**3.0000e-003**	**0.0000**	**14.0382**	**14.0382**	**4.0000e-004**	**0.0000**	**14.0466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3026	0.0000	0.3026	0.1435	0.0000	0.1435	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1507	2.9141	3.2658	6.1400e-003		0.1105	0.1105		0.1105	0.1105	0.0000	585.3572	585.3572	0.1748	0.0000	589.0270
Total	**0.1507**	**2.9141**	**3.2658**	**6.1400e-003**	**0.3026**	**0.1105**	**0.4131**	**0.1435**	**0.1105**	**0.2541**	**0.0000**	**585.3572**	**585.3572**	**0.1748**	**0.0000**	**589.0270**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5400e-003	0.0449	0.0607	9.0000e-005	2.3500e-003	7.2000e-004	3.0700e-003	6.8000e-004	6.6000e-004	1.3400e-003	0.0000	8.5046	8.5046	8.0000e-005	0.0000	8.5062
Worker	2.7400e-003	4.0100e-003	0.0393	7.0000e-005	5.4600e-003	5.0000e-005	5.5100e-003	1.4600e-003	5.0000e-005	1.5100e-003	0.0000	5.5336	5.5336	3.2000e-004	0.0000	5.5404
Total	**8.2800e-003**	**0.0489**	**0.1000**	**1.6000e-004**	**7.8100e-003**	**7.7000e-004**	**8.5800e-003**	**2.1400e-003**	**7.1000e-004**	**2.8500e-003**	**0.0000**	**14.0382**	**14.0382**	**4.0000e-004**	**0.0000**	**14.0466**

3.4 Pad Finish - 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	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2695	0.1847	1.9000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	18.3838	18.3838	5.4900e-003	0.0000	18.4991
Total	**0.0228**	**0.2695**	**0.1847**	**1.9000e-004**	**0.0354**	**0.0123**	**0.0477**	**0.0171**	**0.0113**	**0.0284**	**0.0000**	**18.3838**	**18.3838**	**5.4900e-003**	**0.0000**	**18.4991**

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	2.8000e-004	2.3000e-003	3.1100e-003	0.0000	1.3000e-004	4.0000e-005	1.7000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.4361	0.4361	0.0000	0.0000	0.4362
Worker	1.7000e-004	2.5000e-004	2.4200e-003	0.0000	3.6000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3405	0.3405	2.0000e-005	0.0000	0.3410
Total	**4.5000e-004**	**2.5500e-003**	**5.5300e-003**	**0.0000**	**4.9000e-004**	**4.0000e-005**	**5.4000e-004**	**1.4000e-004**	**3.0000e-005**	**1.7000e-004**	**0.0000**	**0.7767**	**0.7767**	**2.0000e-005**	**0.0000**	**0.7772**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0151	0.0000	0.0151	7.3200e-003	0.0000	7.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7200e-003	0.0925	0.1054	1.9000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	18.3838	18.3838	5.4900e-003	0.0000	18.4991
Total	**4.7200e-003**	**0.0925**	**0.1054**	**1.9000e-004**	**0.0151**	**3.7600e-003**	**0.0189**	**7.3200e-003**	**3.7600e-003**	**0.0111**	**0.0000**	**18.3838**	**18.3838**	**5.4900e-003**	**0.0000**	**18.4991**

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	2.8000e-004	2.3000e-003	3.1100e-003	0.0000	1.2000e-004	4.0000e-005	1.6000e-004	3.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.4361	0.4361	0.0000	0.0000	0.4362
Worker	1.7000e-004	2.5000e-004	2.4200e-003	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3405	0.3405	2.0000e-005	0.0000	0.3410
Total	**4.5000e-004**	**2.5500e-003**	**5.5300e-003**	**0.0000**	**4.6000e-004**	**4.0000e-005**	**5.0000e-004**	**1.2000e-004**	**3.0000e-005**	**1.6000e-004**	**0.0000**	**0.7767**	**0.7767**	**2.0000e-005**	**0.0000**	**0.7772**

3.5 Fine Grading/Baserock - 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	tons/yr										MT/yr					
Fugitive Dust					0.0239	0.0000	0.0239	2.5800e-003	0.0000	2.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0664	0.7895	0.3965	5.9000e-004		0.0376	0.0376		0.0346	0.0346	0.0000	56.4211	56.4211	0.0168	0.0000	56.7748
Total	**0.0664**	**0.7895**	**0.3965**	**5.9000e-004**	**0.0239**	**0.0376**	**0.0615**	**2.5800e-003**	**0.0346**	**0.0372**	**0.0000**	**56.4211**	**56.4211**	**0.0168**	**0.0000**	**56.7748**

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	8.5000e-004	6.9100e-003	9.3400e-003	1.0000e-005	3.9000e-004	1.1000e-004	5.0000e-004	1.1000e-004	1.0000e-004	2.1000e-004	0.0000	1.3084	1.3084	1.0000e-005	0.0000	1.3087
Worker	9.5000e-004	1.3900e-003	0.0136	2.0000e-005	2.0500e-003	2.0000e-005	2.0700e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	1.9155	1.9155	1.1000e-004	0.0000	1.9179
Total	**1.8000e-003**	**8.3000e-003**	**0.0230**	**3.0000e-005**	**2.4400e-003**	**1.3000e-004**	**2.5700e-003**	**6.5000e-004**	**1.2000e-004**	**7.7000e-004**	**0.0000**	**3.2239**	**3.2239**	**1.2000e-004**	**0.0000**	**3.2265**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	1.1000e-003	0.0000	1.1000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.2926	0.3445	5.9000e-004		0.0134	0.0134		0.0134	0.0134	0.0000	56.4210	56.4210	0.0168	0.0000	56.7748
Total	**0.0146**	**0.2926**	**0.3445**	**5.9000e-004**	**0.0102**	**0.0134**	**0.0236**	**1.1000e-003**	**0.0134**	**0.0145**	**0.0000**	**56.4210**	**56.4210**	**0.0168**	**0.0000**	**56.7748**

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	8.5000e-004	6.9100e-003	9.3400e-003	1.0000e-005	3.6000e-004	1.1000e-004	4.7000e-004	1.0000e-004	1.0000e-004	2.1000e-004	0.0000	1.3084	1.3084	1.0000e-005	0.0000	1.3087
Worker	9.5000e-004	1.3900e-003	0.0136	2.0000e-005	1.8900e-003	2.0000e-005	1.9100e-003	5.1000e-004	2.0000e-005	5.2000e-004	0.0000	1.9155	1.9155	1.1000e-004	0.0000	1.9179
Total	**1.8000e-003**	**8.3000e-003**	**0.0230**	**3.0000e-005**	**2.2500e-003**	**1.3000e-004**	**2.3800e-003**	**6.1000e-004**	**1.2000e-004**	**7.3000e-004**	**0.0000**	**3.2239**	**3.2239**	**1.2000e-004**	**0.0000**	**3.2265**

3.6 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	tons/yr										MT/yr					
Off-Road	0.0348	0.2017	0.1571	2.3000e-004		0.0157	0.0157		0.0154	0.0154	0.0000	19.7760	19.7760	3.3500e-003	0.0000	19.8463
Total	**0.0348**	**0.2017**	**0.1571**	**2.3000e-004**		**0.0157**	**0.0157**		**0.0154**	**0.0154**	**0.0000**	**19.7760**	**19.7760**	**3.3500e-003**	**0.0000**	**19.8463**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1300e-003	0.0253	0.0343	5.0000e-005	1.4200e-003	4.1000e-004	1.8200e-003	4.1000e-004	3.7000e-004	7.8000e-004	0.0000	4.7975	4.7975	4.0000e-005	0.0000	4.7984
Worker	4.6400e-003	6.7900e-003	0.0665	1.2000e-004	0.0100	9.0000e-005	0.0101	2.6600e-003	8.0000e-005	2.7400e-003	0.0000	9.3646	9.3646	5.5000e-004	0.0000	9.3761
Total	**7.7700e-003**	**0.0321**	**0.1008**	**1.7000e-004**	**0.0114**	**5.0000e-004**	**0.0119**	**3.0700e-003**	**4.5000e-004**	**3.5200e-003**	**0.0000**	**14.1621**	**14.1621**	**5.9000e-004**	**0.0000**	**14.1745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0175	0.1261	0.1595	2.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.0000	19.7760	19.7760	3.3500e-003	0.0000	19.8463
Total	**0.0175**	**0.1261**	**0.1595**	**2.3000e-004**		**9.4100e-003**	**9.4100e-003**		**9.4100e-003**	**9.4100e-003**	**0.0000**	**19.7760**	**19.7760**	**3.3500e-003**	**0.0000**	**19.8463**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1300e-003	0.0253	0.0343	5.0000e-005	1.3300e-003	4.1000e-004	1.7300e-003	3.8000e-004	3.7000e-004	7.6000e-004	0.0000	4.7975	4.7975	4.0000e-005	0.0000	4.7984
Worker	4.6400e-003	6.7900e-003	0.0665	1.2000e-004	9.2400e-003	9.0000e-005	9.3200e-003	2.4700e-003	8.0000e-005	2.5500e-003	0.0000	9.3646	9.3646	5.5000e-004	0.0000	9.3761
Total	**7.7700e-003**	**0.0321**	**0.1008**	**1.7000e-004**	**0.0106**	**5.0000e-004**	**0.0111**	**2.8500e-003**	**4.5000e-004**	**3.3100e-003**	**0.0000**	**14.1621**	**14.1621**	**5.9000e-004**	**0.0000**	**14.1745**

3.6 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	tons/yr										MT/yr					
Off-Road	0.1864	1.1210	0.9182	1.3900e-003		0.0841	0.0841		0.0824	0.0824	0.0000	117.1131	117.1131	0.0184	0.0000	117.4991
Total	**0.1864**	**1.1210**	**0.9182**	**1.3900e-003**		**0.0841**	**0.0841**		**0.0824**	**0.0824**	**0.0000**	**117.1131**	**117.1131**	**0.0184**	**0.0000**	**117.4991**

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	0.0164	0.1307	0.1878	3.1000e-004	8.4100e-003	1.9300e-003	0.0103	2.4100e-003	1.7700e-003	4.1800e-003	0.0000	28.1252	28.1252	2.3000e-004	0.0000	28.1299
Worker	0.0246	0.0361	0.3527	7.0000e-004	0.0594	4.8000e-004	0.0599	0.0158	4.4000e-004	0.0162	0.0000	53.6490	53.6490	2.9700e-003	0.0000	53.7115
Total	**0.0409**	**0.1668**	**0.5406**	**1.0100e-003**	**0.0678**	**2.4100e-003**	**0.0702**	**0.0182**	**2.2100e-003**	**0.0204**	**0.0000**	**81.7742**	**81.7742**	**3.2000e-003**	**0.0000**	**81.8414**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0955	0.7394	0.9380	1.3900e-003		0.0539	0.0539		0.0539	0.0539	0.0000	117.1129	117.1129	0.0184	0.0000	117.4990
Total	**0.0955**	**0.7394**	**0.9380**	**1.3900e-003**		**0.0539**	**0.0539**		**0.0539**	**0.0539**	**0.0000**	**117.1129**	**117.1129**	**0.0184**	**0.0000**	**117.4990**

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	0.0164	0.1307	0.1878	3.1000e-004	7.8600e-003	1.9300e-003	9.7900e-003	2.2700e-003	1.7700e-003	4.0500e-003	0.0000	28.1252	28.1252	2.3000e-004	0.0000	28.1299
Worker	0.0246	0.0361	0.3527	7.0000e-004	0.0548	4.8000e-004	0.0553	0.0147	4.4000e-004	0.0151	0.0000	53.6490	53.6490	2.9700e-003	0.0000	53.7115
Total	**0.0409**	**0.1668**	**0.5406**	**1.0100e-003**	**0.0627**	**2.4100e-003**	**0.0651**	**0.0169**	**2.2100e-003**	**0.0192**	**0.0000**	**81.7742**	**81.7742**	**3.2000e-003**	**0.0000**	**81.8414**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1385	0.8674	0.7490	1.1500e-003		0.0625	0.0625		0.0612	0.0612	0.0000	96.6794	96.6794	0.0140	0.0000	96.9741
Total	**0.1385**	**0.8674**	**0.7490**	**1.1500e-003**		**0.0625**	**0.0625**		**0.0612**	**0.0612**	**0.0000**	**96.6794**	**96.6794**	**0.0140**	**0.0000**	**96.9741**

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	0.0126	0.0970	0.1479	2.6000e-004	6.9600e-003	1.3800e-003	8.3400e-003	1.9900e-003	1.2700e-003	3.2600e-003	0.0000	22.8871	22.8871	1.8000e-004	0.0000	22.8908
Worker	0.0180	0.0268	0.2591	5.8000e-004	0.0492	3.8000e-004	0.0496	0.0131	3.5000e-004	0.0134	0.0000	42.7054	42.7054	2.2500e-003	0.0000	42.7525
Total	**0.0305**	**0.1237**	**0.4070**	**8.4000e-004**	**0.0561**	**1.7600e-003**	**0.0579**	**0.0151**	**1.6200e-003**	**0.0167**	**0.0000**	**65.5925**	**65.5925**	**2.4300e-003**	**0.0000**	**65.6433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0724	0.6053	0.7701	1.1500e-003		0.0430	0.0430		0.0430	0.0430	0.0000	96.6793	96.6793	0.0140	0.0000	96.9740
Total	**0.0724**	**0.6053**	**0.7701**	**1.1500e-003**		**0.0430**	**0.0430**		**0.0430**	**0.0430**	**0.0000**	**96.6793**	**96.6793**	**0.0140**	**0.0000**	**96.9740**

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	0.0126	0.0970	0.1479	2.6000e-004	6.5100e-003	1.3800e-003	7.8900e-003	1.8800e-003	1.2700e-003	3.1500e-003	0.0000	22.8871	22.8871	1.8000e-004	0.0000	22.8908
Worker	0.0180	0.0268	0.2591	5.8000e-004	0.0453	3.8000e-004	0.0457	0.0121	3.5000e-004	0.0125	0.0000	42.7054	42.7054	2.2500e-003	0.0000	42.7525
Total	**0.0305**	**0.1237**	**0.4070**	**8.4000e-004**	**0.0519**	**1.7600e-003**	**0.0536**	**0.0140**	**1.6200e-003**	**0.0156**	**0.0000**	**65.5925**	**65.5925**	**2.4300e-003**	**0.0000**	**65.6433**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8308					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0219	0.0187	3.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	2.5533	2.5533	2.7000e-004	0.0000	2.5589
Total	**0.8341**	**0.0219**	**0.0187**	**3.0000e-005**		**1.7300e-003**	**1.7300e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**2.5533**	**2.5533**	**2.7000e-004**	**0.0000**	**2.5589**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.4000e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3954	0.3954	2.0000e-005	0.0000	0.3959
Total	**1.7000e-004**	**2.5000e-004**	**2.4000e-003**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**4.6000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3954**	**0.3954**	**2.0000e-005**	**0.0000**	**0.3959**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8308					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9000e-004	0.0136	0.0183	3.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	2.5533	2.5533	2.7000e-004	0.0000	2.5589
Total	**0.8314**	**0.0136**	**0.0183**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**9.5000e-004**	**9.5000e-004**	**0.0000**	**2.5533**	**2.5533**	**2.7000e-004**	**0.0000**	**2.5589**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.4000e-003	1.0000e-005	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3954	0.3954	2.0000e-005	0.0000	0.3959
Total	**1.7000e-004**	**2.5000e-004**	**2.4000e-003**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**4.2000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3954**	**0.3954**	**2.0000e-005**	**0.0000**	**0.3959**

3.8 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0128	0.1195	0.0836	1.1000e-004		8.8500e-003	8.8500e-003		8.1400e-003	8.1400e-003	0.0000	10.1373	10.1373	3.1100e-003	0.0000	10.2025
Paving	4.8100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0176**	**0.1195**	**0.0836**	**1.1000e-004**		**8.8500e-003**	**8.8500e-003**		**8.1400e-003**	**8.1400e-003**	**0.0000**	**10.1373**	**10.1373**	**3.1100e-003**	**0.0000**	**10.2025**

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	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	8.7000e-004	6.7400e-003	0.0103	2.0000e-005	4.8000e-004	1.0000e-004	5.8000e-004	1.4000e-004	9.0000e-005	2.3000e-004	0.0000	1.5894	1.5894	1.0000e-005	0.0000	1.5896
Worker	3.7000e-004	5.6000e-004	5.4000e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8897	0.8897	5.0000e-005	0.0000	0.8907
Total	**1.2400e-003**	**7.3000e-003**	**0.0157**	**3.0000e-005**	**1.5000e-003**	**1.1000e-004**	**1.6100e-003**	**4.1000e-004**	**1.0000e-004**	**5.1000e-004**	**0.0000**	**2.4791**	**2.4791**	**6.0000e-005**	**0.0000**	**2.4803**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6800e-003	0.0613	0.0827	1.1000e-004		4.2900e-003	4.2900e-003		4.2900e-003	4.2900e-003	0.0000	10.1373	10.1373	3.1100e-003	0.0000	10.2025
Paving	4.8100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4900e-003**	**0.0613**	**0.0827**	**1.1000e-004**		**4.2900e-003**	**4.2900e-003**		**4.2900e-003**	**4.2900e-003**	**0.0000**	**10.1373**	**10.1373**	**3.1100e-003**	**0.0000**	**10.2025**

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	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	8.7000e-004	6.7400e-003	0.0103	2.0000e-005	4.5000e-004	1.0000e-004	5.5000e-004	1.3000e-004	9.0000e-005	2.2000e-004	0.0000	1.5894	1.5894	1.0000e-005	0.0000	1.5896
Worker	3.7000e-004	5.6000e-004	5.4000e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8897	0.8897	5.0000e-005	0.0000	0.8907
Total	**1.2400e-003**	**7.3000e-003**	**0.0157**	**3.0000e-005**	**1.3900e-003**	**1.1000e-004**	**1.5000e-003**	**3.8000e-004**	**1.0000e-004**	**4.8000e-004**	**0.0000**	**2.4791**	**2.4791**	**6.0000e-005**	**0.0000**	**2.4803**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8961	0.7754	7.3346	0.0135	1.1125	0.0106	1.1231	0.2960	9.7700e-003	0.3058	0.0000	987.6200	987.6200	0.0491	0.0000	988.6517
Unmitigated	0.8961	0.7754	7.3346	0.0135	1.1125	0.0106	1.1231	0.2960	9.7700e-003	0.3058	0.0000	987.6200	987.6200	0.0491	0.0000	988.6517

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	730.88	3,459.11	3459.11	1,236,997	1,236,997
Parking Lot	0.00	0.00	0.00		
Single Family Housing	492.80	473.00	473.00	1,790,932	1,790,932
Total	1,223.68	3,932.11	3,932.11	3,027,929	3,027,929

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	2.25	2.25	2.25	33.00	48.00	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.10	10.10	10.10	26.10	29.10	44.80	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.659809	0.081352	0.220861	0.020000	0.004585	0.000612	0.001236	0.002702	0.000155	0.000187	0.007978	0.000265	0.000259

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	130.3151	130.3151	5.8900e-003	1.2200e-003	130.8168
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	131.4947	131.4947	5.9500e-003	1.2300e-003	132.0009
NaturalGas Mitigated	6.6300e-003	0.0566	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.5832	65.5832	1.2600e-003	1.2000e-003	65.9824
NaturalGas Unmitigated	8.3700e-003	0.0715	0.0304	4.6000e-004		5.7800e-003	5.7800e-003		5.7800e-003	5.7800e-003	0.0000	82.8447	82.8447	1.5900e-003	1.5200e-003	83.3488

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					
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
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	1.55245e+006	8.3700e-003	0.0715	0.0304	4.6000e-004		5.7800e-003	5.7800e-003		5.7800e-003	5.7800e-003	0.0000	82.8447	82.8447	1.5900e-003	1.5200e-003	83.3488
Total		**8.3700e-003**	**0.0715**	**0.0304**	**4.6000e-004**		**5.7800e-003**	**5.7800e-003**		**5.7800e-003**	**5.7800e-003**	**0.0000**	**82.8447**	**82.8447**	**1.5900e-003**	**1.5200e-003**	**83.3488**

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					
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	1.22898e+006	6.6300e-003	0.0566	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.5832	65.5832	1.2600e-003	1.2000e-003	65.9824
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		**6.6300e-003**	**0.0566**	**0.0241**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**	**0.0000**	**65.5832**	**65.5832**	**1.2600e-003**	**1.2000e-003**	**65.9824**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	140800	40.9603	1.8500e-003	3.8000e-004	41.1180
Single Family Housing	311209	90.5344	4.0900e-003	8.5000e-004	90.8829
Total		**131.4947**	**5.9400e-003**	**1.2300e-003**	**132.0009**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	140800	40.9603	1.8500e-003	3.8000e-004	41.1180
Single Family Housing	307155	89.3548	4.0400e-003	8.4000e-004	89.6988
Total		**130.3151**	**5.8900e-003**	**1.2200e-003**	**130.8168**

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	3.5513	3.8600e-003	0.3316	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.6383	3.6383	6.0000e-004	6.0000e-005	3.6686
Unmitigated	3.5513	3.8600e-003	0.3316	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.6383	3.6383	6.0000e-004	6.0000e-005	3.6686

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0831					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1000e-004	0.0000	2.0000e-005	0.0000		2.2000e-004	2.2000e-004		2.1000e-004	2.1000e-004	0.0000	3.1015	3.1015	6.0000e-005	6.0000e-005	3.1204
Landscaping	0.0104	3.8600e-003	0.3316	2.0000e-005		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	0.5368	0.5368	5.4000e-004	0.0000	0.5482
Total	**3.5513**	**3.8600e-003**	**0.3317**	**2.0000e-005**		**2.0200e-003**	**2.0200e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.6383**	**3.6383**	**6.0000e-004**	**6.0000e-005**	**3.6686**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0831					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1000e-004	0.0000	2.0000e-005	0.0000		2.2000e-004	2.2000e-004		2.1000e-004	2.1000e-004	0.0000	3.1015	3.1015	6.0000e-005	6.0000e-005	3.1204
Landscaping	0.0104	3.8600e-003	0.3316	2.0000e-005		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	0.5368	0.5368	5.4000e-004	0.0000	0.5482
Total	**3.5513**	**3.8600e-003**	**0.3317**	**2.0000e-005**		**2.0200e-003**	**2.0200e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.6383**	**3.6383**	**6.0000e-004**	**6.0000e-005**	**3.6686**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	22.1546	3.7400e-003	1.9600e-003	22.8411
Unmitigated	24.4119	4.5500e-003	2.4200e-003	25.2591

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 16.7403	17.0448	7.7000e-004	1.6000e-004	17.1104
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.86678 / 1.80732	7.3671	3.7800e-003	2.2700e-003	8.1487
Total		**24.4119**	**4.5500e-003**	**2.4300e-003**	**25.2591**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 15.7192	16.0051	7.2000e-004	1.5000e-004	16.0667
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.29342 / 1.69707	6.1495	3.0200e-003	1.8100e-003	6.7744
Total		**22.1546**	**3.7400e-003**	**1.9600e-003**	**22.8411**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.5616	0.6242	0.0000	23.6693
Unmitigated	10.5616	0.6242	0.0000	23.6693

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.21	0.2456	0.0145	0.0000	0.5505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	50.82	10.3160	0.6097	0.0000	23.1188
Total		**10.5616**	**0.6242**	**0.0000**	**23.6693**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.21	0.2456	0.0145	0.0000	0.5505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	50.82	10.3160	0.6097	0.0000	23.1188
Total		**10.5616**	**0.6242**	**0.0000**	**23.6693**

9.0 Operational Offroad

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

10.0 Vegetation

The Homes at Deer Hill (Terraces of Lafayette Project Alternative) 2020 - Operation Only

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	160.00	1000sqft	3.67	160,000.00	0
City Park	14.05	Acre	14.05	612,018.00	0
Single Family Housing	44.00	Dwelling Unit	4.55	113,275.00	121

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	490.53	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E to achieve 33% RPS by 2020

Land Use - Based on project description

Vehicle Trips - TJKM, 2014

Vechicle Emission Factors - Residential fleet mix

Woodstoves - No woodstoves; 100% gas fireplaces.

Area Coating - Non-residential coating methodology

Energy Use - default

Water And Wastewater - 100% aerobic

Energy Mitigation - Residential buildings 25% more efficient than 2008 Standards under 2013 Building and Energy Standards

Water Mitigation - CALGreen and City's Water Efficiency Landscape Ordinance

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	308409	9600
tblAreaCoating	Area_Nonresidential_Interior	925227	0
tblFireplaces	NumberGas	24.20	44.00
tblFireplaces	NumberWood	19.80	0.00
tblLandUse	LandUseSquareFeet	79,200.00	113,275.00
tblLandUse	LotAcreage	14.29	4.55
tblLandUse	Population	126.00	121.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	490.53
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	HHD	0.02	2.8010e-003
tblVehicleEF	HHD	0.02	2.8010e-003
tblVehicleEF	HHD	0.02	2.8010e-003
tblVehicleEF	LDA	0.53	0.66
tblVehicleEF	LDA	0.53	0.66
tblVehicleEF	LDA	0.53	0.66
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.07	0.08

tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LHD1	0.04	4.5600e-003
tblVehicleEF	LHD1	0.04	4.5600e-003
tblVehicleEF	LHD1	0.04	4.5600e-003
tblVehicleEF	LHD2	4.8200e-003	6.0900e-004
tblVehicleEF	LHD2	4.8200e-003	6.0900e-004
tblVehicleEF	LHD2	4.8200e-003	6.0900e-004
tblVehicleEF	MCY	6.4740e-003	8.0980e-003
tblVehicleEF	MCY	6.4740e-003	8.0980e-003
tblVehicleEF	MCY	6.4740e-003	8.0980e-003
tblVehicleEF	MDV	0.14	0.02
tblVehicleEF	MDV	0.14	0.02
tblVehicleEF	MDV	0.14	0.02
tblVehicleEF	MH	2.0520e-003	2.5900e-004
tblVehicleEF	MH	2.0520e-003	2.5900e-004
tblVehicleEF	MH	2.0520e-003	2.5900e-004
tblVehicleEF	MHD	9.7230e-003	1.2280e-003
tblVehicleEF	MHD	9.7230e-003	1.2280e-003
tblVehicleEF	MHD	9.7230e-003	1.2280e-003
tblVehicleEF	OBUS	1.2340e-003	1.5600e-004
tblVehicleEF	OBUS	1.2340e-003	1.5600e-004
tblVehicleEF	OBUS	1.2340e-003	1.5600e-004
tblVehicleEF	SBUS	1.9890e-003	2.5100e-004
tblVehicleEF	SBUS	1.9890e-003	2.5100e-004
tblVehicleEF	SBUS	1.9890e-003	2.5100e-004
tblVehicleEF	UBUS	1.4810e-003	1.8700e-004
tblVehicleEF	UBUS	1.4810e-003	1.8700e-004
tblVehicleEF	UBUS	1.4810e-003	1.8700e-004
tblVehicleTrips	CC_TL	7.30	2.25
tblVehicleTrips	CNW_TL	7.30	2.25
tblVehicleTrips	CW_TL	9.50	2.25
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.40	10.10
tblVehicleTrips	HS_TL	4.30	10.10
tblVehicleTrips	HW_TL	12.40	10.10
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	246.20
tblVehicleTrips	ST_TR	10.08	10.75
tblVehicleTrips	SU_TR	1.59	246.20
tblVehicleTrips	SU_TR	8.77	10.75
tblVehicleTrips	WD_TR	1.59	52.02
tblVehicleTrips	WD_TR	9.57	11.20
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	1.54	0.00
tblWoodstoves	NumberNoncatalytic	1.54	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	3.5510	3.8100e-003	0.3294	2.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	3.6383	3.6383	5.9000e-004	6.0000e-005	3.6682
Energy	8.3700e-003	0.0715	0.0304	4.6000e-004		5.7800e-003	5.7800e-003		5.7800e-003	5.7800e-003	0.0000	183.4170	183.4170	7.5300e-003	2.7500e-003	184.4274
Mobile	0.7178	0.5962	5.6846	0.0135	1.1126	0.0103	1.1229	0.2960	9.5600e-003	0.3056	0.0000	880.7340	880.7340	0.0391	0.0000	881.5555
Waste						0.0000	0.0000		0.0000	0.0000	10.5616	0.0000	10.5616	0.6242	0.0000	23.6693
Water						0.0000	0.0000		0.0000	0.0000	1.0143	17.8955	18.9097	4.5500e-003	2.4200e-003	19.7569
Total	**4.2772**	**0.6715**	**6.0444**	**0.0140**	**1.1126**	**0.0181**	**1.1307**	**0.2960**	**0.0174**	**0.3134**	**11.5759**	**1,085.6847**	**1,097.2606**	**0.6760**	**5.2300e-003**	**1,113.0774**

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	3.5510	3.8100e-003	0.3294	2.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	3.6383	3.6383	5.9000e-004	6.0000e-005	3.6682
Energy	6.6300e-003	0.0566	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	165.2534	165.2534	7.1500e-003	2.4200e-003	166.1542
Mobile	0.7178	0.5962	5.6846	0.0135	1.1126	0.0103	1.1229	0.2960	9.5600e-003	0.3056	0.0000	880.7340	880.7340	0.0391	0.0000	881.5555
Waste						0.0000	0.0000		0.0000	0.0000	10.5616	0.0000	10.5616	0.6242	0.0000	23.6693
Water						0.0000	0.0000		0.0000	0.0000	0.8114	16.3241	17.1355	3.7400e-003	1.9600e-003	17.8220
Total	**4.2754**	**0.6566**	**6.0381**	**0.0139**	**1.1126**	**0.0169**	**1.1295**	**0.2960**	**0.0162**	**0.3122**	**11.3730**	**1,065.9497**	**1,077.3228**	**0.6748**	**4.4400e-003**	**1,092.8693**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**2.22**	**0.10**	**0.72**	**0.00**	**6.62**	**0.11**	**0.00**	**6.91**	**0.38**	**1.75**	**1.82**	**1.82**	**0.18**	**15.11**	**1.82**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7178	0.5962	5.6846	0.0135	1.1126	0.0103	1.1229	0.2960	9.5600e-003	0.3056	0.0000	880.7340	880.7340	0.0391	0.0000	881.5555
Unmitigated	0.7178	0.5962	5.6846	0.0135	1.1126	0.0103	1.1229	0.2960	9.5600e-003	0.3056	0.0000	880.7340	880.7340	0.0391	0.0000	881.5555

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	730.88	3,459.11	3459.11	1,236,997	1,236,997
Parking Lot	0.00	0.00	0.00		
Single Family Housing	492.80	473.00	473.00	1,790,932	1,790,932
Total	1,223.68	3,932.11	3,932.11	3,027,929	3,027,929

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	2.25	2.25	2.25	33.00	48.00	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.10	10.10	10.10	26.10	29.10	44.80	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.659348	0.082120	0.220934	0.019890	0.004560	0.000609	0.001228	0.002801	0.000156	0.000187	0.008098	0.000251	0.000259

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	99.6702	99.6702	5.8900e-003	1.2200e-003	100.1719
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.5724	100.5724	5.9500e-003	1.2300e-003	101.0786
NaturalGas Mitigated	6.6300e-003	0.0566	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.5832	65.5832	1.2600e-003	1.2000e-003	65.9824
NaturalGas Unmitigated	8.3700e-003	0.0715	0.0304	4.6000e-004		5.7800e-003	5.7800e-003		5.7800e-003	5.7800e-003	0.0000	82.8447	82.8447	1.5900e-003	1.5200e-003	83.3488

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					
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	1.55245e+006	8.3700e-003	0.0715	0.0304	4.6000e-004		5.7800e-003	5.7800e-003		5.7800e-003	5.7800e-003	0.0000	82.8447	82.8447	1.5900e-003	1.5200e-003	83.3488
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		**8.3700e-003**	**0.0715**	**0.0304**	**4.6000e-004**		**5.7800e-003**	**5.7800e-003**		**5.7800e-003**	**5.7800e-003**	**0.0000**	**82.8447**	**82.8447**	**1.5900e-003**	**1.5200e-003**	**83.3488**

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					
Single Family Housing	1.22898e+006	6.6300e-003	0.0566	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.5832	65.5832	1.2600e-003	1.2000e-003	65.9824
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
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
Total		**6.6300e-003**	**0.0566**	**0.0241**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**	**0.0000**	**65.5832**	**65.5832**	**1.2600e-003**	**1.2000e-003**	**65.9824**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	140800	31.3281	1.8500e-003	3.8000e-004	31.4858
Single Family Housing	311209	69.2443	4.0900e-003	8.5000e-004	69.5928
Total		**100.5724**	**5.9400e-003**	**1.2300e-003**	**101.0786**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	140800	31.3281	1.8500e-003	3.8000e-004	31.4858
Single Family Housing	307155	68.3421	4.0400e-003	8.4000e-004	68.6861
Total		**99.6702**	**5.8900e-003**	**1.2200e-003**	**100.1719**

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	3.5510	3.8100e-003	0.3294	2.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	3.6383	3.6383	5.9000e-004	6.0000e-005	3.6682
Unmitigated	3.5510	3.8100e-003	0.3294	2.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	3.6383	3.6383	5.9000e-004	6.0000e-005	3.6682

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0831					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1000e-004	0.0000	2.0000e-005	0.0000		2.2000e-004	2.2000e-004		2.1000e-004	2.1000e-004	0.0000	3.1015	3.1015	6.0000e-005	6.0000e-005	3.1204
Landscaping	0.0101	3.8100e-003	0.3294	2.0000e-005		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	0.5368	0.5368	5.3000e-004	0.0000	0.5479
Total	**3.5510**	**3.8100e-003**	**0.3294**	**2.0000e-005**		**2.0300e-003**	**2.0300e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**3.6383**	**3.6383**	**5.9000e-004**	**6.0000e-005**	**3.6682**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0831					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1000e-004	0.0000	2.0000e-005	0.0000		2.2000e-004	2.2000e-004		2.1000e-004	2.1000e-004	0.0000	3.1015	3.1015	6.0000e-005	6.0000e-005	3.1204
Landscaping	0.0101	3.8100e-003	0.3294	2.0000e-005		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	0.5368	0.5368	5.3000e-004	0.0000	0.5479
Total	**3.5510**	**3.8100e-003**	**0.3294**	**2.0000e-005**		**2.0300e-003**	**2.0300e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**3.6383**	**3.6383**	**5.9000e-004**	**6.0000e-005**	**3.6682**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.1355	3.7400e-003	1.9600e-003	17.8220
Unmitigated	18.9097	4.5500e-003	2.4200e-003	19.7569

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 16.7403	13.0366	7.7000e-004	1.6000e-004	13.1022
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.86678 / 1.80732	5.8732	3.7800e-003	2.2700e-003	6.6547
Total		**18.9097**	**4.5500e-003**	**2.4300e-003**	**19.7569**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 15.7192	12.2413	7.2000e-004	1.5000e-004	12.3029
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.29342 / 1.69707	4.8942	3.0200e-003	1.8100e-003	5.5191
Total		**17.1355**	**3.7400e-003**	**1.9600e-003**	**17.8220**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.5616	0.6242	0.0000	23.6693
Unmitigated	10.5616	0.6242	0.0000	23.6693

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.21	0.2456	0.0145	0.0000	0.5505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	50.82	10.3160	0.6097	0.0000	23.1188
Total		**10.5616**	**0.6242**	**0.0000**	**23.6693**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.21	0.2456	0.0145	0.0000	0.5505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	50.82	10.3160	0.6097	0.0000	23.1188
Total		**10.5616**	**0.6242**	**0.0000**	**23.6693**

9.0 Operational Offroad

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

10.0 Vegetation

Construction/Operation - CalEEMod Land Use Inputs - The Homes at Deer Hill

All Information provided by Applicant, unless otherwise specified.

Type	Land Use Unit Amount	Land Use Size Metric	Lot Acreage	Land Use Square Feet	Population/ Employment[1]	Comments
Single Family Housing	44	Units	4.55	113,275	121	Acreage based on Lot Size 4,500 SF
Park/Open Space	14.05	Acres	14.05	612,081		
Parking Lot	160	1000SF	3.67	160,000		Includes concrete and driveways
Total			22.27		121	

Source

1 Based on a population of 2.74 person per household (US Census 2010)

Project Location:	Contra Costa County
Climate Zone:	4
Operation Year:	2017
Land Use Setting:	Urban
Utility Company:	PG&E

	2008	2020
Procurement status:	12.4%	33%
	Carbon Intensity lbs/Mwh	
CO_2	641.35	490.53
CH_4	0.029	0.029
N_2O	0.011	0.011

Notes: 2008 carbon intensity based on CalEEMod defaults. The 2008 PG&E procurement status is based on the California Public Utility Commission's Procurement Summary. PG&E is on track to achieving the 33% RPS by 2020. It should be noted that PG&E projects a carbon intensity of 290 lbs/MWh based on PG&E's GHG Emission Factors Guidance: http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf.

Demolition

	Building SQFT	Tons	Comments
Building Debris: Single-Family/Office	5,000	230	*(see Demo Haul Trip Calculation Worksheet)*
Asphalt/Concrete Debris: Paved Surfaces	27,000	203	*(see Demo Haul Trip Calculation Worksheet)*
Total Demolition Volume		**433**	**Tons**
Haul Trips		**57**	**Trips** Based on 12 CY's of debris per truck (*see Demo Haul Trip Worksheet*)

Debris Dumpsite			Comments
Keller Canyon Landfill	15.7	miles	
C&D Recycling Facility	25.6	miles	*Lafayette Municipal Code (Ch 5-6) requires C&D recycling (50% diversion rate).*
Average distance:	20.7	miles	

Soil Haul: Site Preparation

Soil Haul	Total (CY)	Haul Truck Capacity (CY)	Total Round Trips	Total Trip Ends
Soil Export:	**0**	12	0	0

Assuming site balanced; no grading information.

Construction/Operation - CalEEMod Land Use Inputs - The Homes at Deer Hill

Architectural Coating

*Non-Residential Architectural Coating**

Nonresidential Structures	Land use SF	CalEEMod Application Factor	Total Paintable Surface Area	Paintable Interior Area	Paintable Exterior Area
Park/Open Space	612,081	0	0	0	0
Parking Lot	160,000	0.06	9,600	0	9,600
Total	*772,081*		*9,600*	*0*	*9,600*

*CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot/structure are based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted. No painting assumed for park/open space.

Fireplaces: Assumes 100% gas fireplaces for residences.

Energy: The new residential are 25 more efficient than the 2008 Standards under 2013 Building and Energy Efficiency Standards. Future cycle updates anticipated to be more efficient. For the purpose of modeling, buildings are assumed to be 25% more energy efficient than the 2008 standards in the CalEEMod program.

Water/Wastewater: CalEEMod Defaults
Waste: CalEEMod Defaults

Trip Generation and VMT *	Weekday[1] Daily Trips	Weekday[1] Daily Trip Rate	Weekend[2] Proportional Trip Rate	Weekend Daily Trips	Weekend Daily Trip Rate
Single Family Housing	493	11.20	ITE equation[3]	473	10.75
Dog Park	265		5	1325	
City Park	270		5	1350	
Sports Field	196		4	784	
Park/Open Space Total	731	52.02		3459	246.2
Total	1,224			3,932	

	Total Weekday VMT[1]	Average VMT/Trip
Residential	4,979	10.10
Recreation	1,645	2.25

Sources

1 Trip generation rates and VMT provided by TJKM Transportation Consultants (Trip Generation Survey, 2014).
2 Weekend trips for recreational park uses proportioned from Project weekday trips an assumed 5:1 ratio, based on recreation facility information received from the City of Lafayette and discussion with TJKM regarding weekend trip generation described in the ITE Manual. A weekend trip proportion of 4:1 was used for the sports field based on sports field usage information received from the City of Lafayette.

3 ITE Trip Generation Manual, 9th Edition, for Single-Family Detached Housing for Saturday Daily Trips (Ln(T)=0.93Ln(X)+2.64).

Construction Activities and Schedule Assumptions

Construction Activities	Construction Schedule		
	Start Date	End Date	Duration (Workday)
Phase	5/1/2015	10/30/2017	652
Demolition	5/1/2015	6/5/2015	26
Rough Grading	6/6/2015	9/4/2015	65
Pad Finish	9/5/2015	9/18/2015	10
Fine Grading/Baserock	9/19/2015	10/30/2015	30
Building Construction	10/31/2015	10/30/2017	521
Paving	10/10/2017	10/30/2017	15
Architectural Coating	10/3/2017	10/30/2017	20

Notes: Construction activities are based on the preliminary information at the time of the analysis. Because detailed information on construction phasing and equipment use is not available, the analysis is based on the default construction schedule identified in CalEEMod. The CalEEMod phasing for the proposed Project is based on the Project land use characteristics and acreage disturbed during Phase 1 and Phase 2 construction activities. No overlap being Phase 1 and Phase 2 of construction is assumed.

Construction Activities	Annual Construction Days per Phase		
	Start Date	End Date	Duration (Workday)
2015	5/1/2015	12/31/2015	175
2016	1/1/2016	12/31/2016	261
2017	1/1/2017	10/30/2017	216

CALEEMOD-2013 EQUIPMENT

* CalEEMod defaults will be used where preliminary information is not available

	Constuction Fleet Mix			Homes at Deer Hill			Dog Park			
Equipment	#	hp	hours/ day	#	hp	hrs/ day	#	hp	hrs/ day	Notes:
Demolition				SAME - 1 month			SAME CREW ADD 5 DAYS			
Concrete/Industrial Saw	1	81	8	1	81	8				Note: Haul trips included on Demo-Grading Tab
Excavators	3	162	8	3	162	8				
Rubber Tired Dozers	2	255	8	1	436	8				Dozer D9
Rubber Tired Dozers				1	600	8				Dozer D10
Water Trucks				1	n/a	n/a				Note: CalEEMod treats these as Vendor Trips (4 trips/truck)
Workers	15			15						
Vendors	0			0						
Rough Grading				From BKF - 10 weeks			SAME CREW ADD 15 DAYS			
Excavators	2	162	8							
Grader	1	174	8	1	180	8				Grader 14G
Roller (Compactors)				1	232	8				Compactor Engine 815
Roller (Compactors)				1	354	8				Compactor Engine 825
Rubber Tired Dozers	1	255	8	2	436	8				Dozers D9
Rubber Tired Dozers				1	600	8				Dozer D10
Scrapers	2	361	8	3	407	8				Scraper Engines 627
Scrapers				3	500	8				Scraper Engines 637
Tractor/Loader/Backhoe	2	97	8							
Water Trucks	1	n/a	n/a	3	n/a	n/a				Note: CalEEMod treats these as Vendor Trips
Workers	20			20						
Vendors	0			0						
Pad Finish				From BKF - 2 weeks			Not Applicable			
Roller				1	84	8				
Scrapers				1	500	8				Scraper Engine 637
Rubber Tired Dozers				1	436	8				Dozer D9
Water Trucks				1	n/a	n/a				Note: CalEEMod treats these as Vendor Trips
Workers				8						
Vendors				0						
Fine Grade and Baserock				From BKF - 5 weeks			SAME CREW ADD 5 DAYS			
Grader				1	180	8				Grader 14G
Roller				2	84	8				
Scrapers				1	187	8				Scraper Engine 613
Scrapers				1	407	8				Scraper Engine 623
Tractor/Loader/Backhoe				1	97	8				Loader
Water Trucks				1	n/a	n/a				Note: CalEEMod treats these as Vendor Trips
Workers				15						
Vendors				0						
Building				From BKF - 2 years			SAME CREW ADD 0 DAYS			
Crane	1	226	7	0						
Forklifts	3	89	8	1	89	8				
Generator Set	1	84	8	1	84	8				
Tractor/Loader/Backhoe	3	97	7							
Welders	1	46	8	1	46	8				
Workers	227			50						
Vendors	34			10						
Paving				From BKF - 3 weeks			SAME CREW ADD 0 DAYS			
Paver	2	89	8	1	89	8				
Paving Equipment	2	82	8							
Roller	2	84	8	3	84	8				
Tractor/Loader/Backhoe	4	97	8	1	97	8				Loader
Workers	15			15						
Vendors	0			10						Assumes same vendor trips as building construction phase
Painting				From BKF			SAME CREW ADD 0 DAYS			Phase duration not provided; thus, based on model defaults
Air Compressors	1	78	6	1	78	6				
Workers	45			5						
Vendors	0			0						

Pavement Volume to Weight Conversion

Location	Total SF of Parking Lot	Assumed Thickness (foot)[1]	Parking Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf)[2]	AC Mass (lbs)	AC Mass (tons)
Surface Lots	27,000	0.33	9000	45	405,000	202.50

[1] *Pavements and Surface Materials* . Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Conneticut Cooperative Extension System, 1999.

[2] http://www.reade.com/Particle_Briefings/spec_gra2.html

Demo Haul Trip Calculation

Conversion factors [1]

0.046	ton/SF	<<---CalEEMod Appendix A
1.2641662	tons/cy	<<---CalEEMod Appendix A

Building Demoltion Haul Trips (BSF and Haul Truck (CY) given)

Phase	BSF Demo	Tons/SF	Tons	Haul Truck (CY)	Haul Truck (Ton)	Round Trips	Total Trip Ends
Total	5,000	0.046	230	12	15.17	15	30

Asphalt Demo Haul Trips (Asphalt in SF and Haul Truck in CY given)

Phase	Tons	Haul Truck (CY)	Haul Truck (Ton)	Round Trips	Total Trip Ends
Total	203	12	15.17	13	27

[1] CalEEMod User's Guide Version 2013.2.2, Appendix A

Changes to the CalEEMod Defaults - Fleet Mix 2017

Countywide fleet mix not applicable at a project level:

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix	0.5275	0.06504	0.17657	0.14533	0.03631	0.00485	0.00979	0.02139	0.00123	0.00148	0.00638	0.0021	0.00205	1
	0.77548			0.14533				0.07919						1
Calibrated	0.659809	0.081352	0.220861	0.020000	0.004585	0.000612	0.001236	0.002702	0.000155	0.000187	0.007978	0.000265	0.000259	1.0
	97%			2%				1%						
Check	808	100	270	24	6	1	2	3	0	0	10	0	0	1,224
	97%			2%				1%						
Assumes a passenger vehicle fleet mix. Typical residential fleet mix is 97% passenger vehicles, 2% MDT, and 1% HDT.														
Default mix:	646	80	216	178	44	6	12	26	1	2	8	3	3	1,224
	78%			15%				8%						

Changes to the CalEEMod Defaults - Fleet Mix 2020

Countywide fleet mix not applicable at a project level:

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix	0.52713	0.06565	0.17663	0.14453	0.03611	0.00482	0.00972	0.02218	0.00123	0.00148	0.00647	0.00199	0.00205	1
	0.77588			0.14453				0.07959						1
Calibrated	0.659348	0.082120	0.220934	0.019890	0.004560	0.000609	0.001228	0.002801	0.000156	0.000187	0.008098	0.000251	0.000259	1.0
	97%			2%				1%						
Check	807	101	270	24	6	1	2	3	0	0	10	0	0	1,224
	97%			2%				1%						
Assumes a passenger vehicle fleet mix. Typical residential fleet mix is 97% passenger vehicles, 2% MDT, and 1% HDT.														
Default mix:	645	80	216	177	44	6	12	27	2	2	8	2	3	1,224
	78%			14%				8%						

Criteria Air Pollutant Emissions Summary - Construction

Average Annual Emissions

tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Unmitigated	2.11	12.79	9.14	0.01	0.92	0.60	1.52	0.40	0.56	0.96
Total Mitigated	1.31	5.61	7.36	0.01	0.48	0.26	0.74	0.19	0.26	0.45

Average Annual Emissions - Unmitigated

tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015	0.86	10.36	6.41	0.01	0.80	0.44	1.23	0.36	0.40	0.77
2016	0.23	1.29	1.46	0.00	0.07	0.09	0.15	0.02	0.08	0.10
2017	1.02	1.14	1.28	0.00	0.06	0.07	0.13	0.02	0.07	0.09

Average Annual Emissions - Mitigated with Best Control Measures for Fugitive Dust and Tier 3 Engines for Equipment 50 HP or greater

tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015	0.23	3.89	4.59	0.01	0.36	0.15	0.51	0.16	0.15	0.31
2016	0.14	0.91	1.48	0.00	0.07	0.06	0.12	0.02	0.06	0.07
2017	0.94	0.81	1.30	0.00	0.06	0.05	0.11	0.02	0.05	0.07

FOR CONSTRUCTION HRA - Unmitigated Run

tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015 On-site	0.84	10.25	6.15	0.01	0.77	0.43	1.21	0.36	0.40	0.76
2015 Off-site	0.02	0.11	0.26	0.00	0.03	0.00	0.03	0.01	0.00	0.01
2016 On-site	0.19	1.12	0.92	0.00	0.00	0.08	0.08	0.00	0.08	0.08
2016 Off-site	0.04	0.17	0.54	0.00	0.07	0.00	0.07	0.02	0.00	0.02
2017 On-site	0.99	1.01	0.85	0.00	0.00	0.07	0.07	0.00	0.07	0.07
2017 Off-site	0.03	0.13	0.43	0.00	0.06	0.00	0.06	0.02	0.00	0.02

FOR CONSTRUCTION HRA - Mitigated Run with Best Control Measures for Fugitive Dust and Tier 3 Engines for Equipment 50 HP or greater

tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015 On-site	0.21	3.78	4.33	0.01	0.33	0.15	0.48	0.15	0.15	0.30
2015 Off-site	0.02	0.11	0.26	0.00	0.03	0.00	0.03	0.01	0.00	0.01
2016 On-site	0.10	0.74	0.94	0.00	0.00	0.05	0.05	0.00	0.05	0.05
2016 Off-site	0.04	0.17	0.54	0.00	0.07	0.00	0.07	0.02	0.00	0.02
2017 On-site	0.91	0.68	0.87	0.00	0.00	0.05	0.05	0.00	0.05	0.05
2017 Off-site	0.03	0.13	0.43	0.00	0.06	0.00	0.06	0.02	0.00	0.02

Criteria Air Pollutant Emissions Summary - Construction

Demolition - 2015

Unmitigated Construction

Category tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.08	0.97	0.58	0.00		0.04	0.04		0.04	0.04
Hauling	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.08	0.99	0.61	0.00	0.01	0.04	0.05	0.00	0.04	0.04
TOTAL ONSITE	**0.08**	**0.97**	**0.58**	**0.00**	**0.00**	**0.04**	**0.05**	**0.00**	**0.04**	**0.04**
TOTAL OFFSITE	**0.00**	**0.02**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.36	0.45	0.00		0.02	0.02		0.02	0.02
Hauling	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.37	0.48	0.00	0.00	0.02	0.02	0.00	0.02	0.02
TOTAL ONSITE MIT	**0.02**	**0.36**	**0.45**	**0.00**	**0.00**	**0.02**	**0.02**	**0.00**	**0.02**	**0.02**
TOTAL OFFSITE MIT	**0.00**	**0.02**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Rough Grading - 2015

Unmitigated Construction

Category tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust					0.71	0.00	0.71	0.34	0.00	0.34
Off-Road	0.63	8.02	4.83	0.01		0.33	0.33		0.30	0.30
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Total	0.64	8.07	4.93	0.01	0.72	0.33	1.04	0.34	0.30	0.64
TOTAL ONSITE	**0.63**	**8.02**	**4.83**	**0.01**	**0.71**	**0.33**	**1.03**	**0.34**	**0.30**	**0.64**
TOTAL OFFSITE	**0.01**	**0.05**	**0.10**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust					0.30	0.00	0.30	0.14	0.00	0.14
Off-Road	0.15	2.91	3.27	0.01		0.11	0.11		0.11	0.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Total	0.16	2.96	3.37	0.01	0.31	0.11	0.42	0.15	0.11	0.26
TOTAL ONSITE MIT	**0.15**	**2.91**	**3.27**	**0.01**	**0.30**	**0.11**	**0.41**	**0.14**	**0.11**	**0.25**
TOTAL OFFSITE MIT	**0.01**	**0.05**	**0.10**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**

Criteria Air Pollutant Emissions Summary - Construction

Pad Finish - 2015

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.04	0.00	0.04	0.02	0.00	0.02
Off-Road		0.02	0.27	0.18	0.00		0.01	0.01		0.01	0.01
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.02	0.27	0.19	0.00	0.04	0.01	0.05	0.02	0.01	0.03
TOTAL ONSITE		**0.02**	**0.27**	**0.18**	**0.00**	**0.04**	**0.01**	**0.05**	**0.02**	**0.01**	**0.03**
TOTAL OFFSITE		**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.02	0.00	0.02	0.01	0.00	0.01
Off-Road		0.00	0.09	0.11	0.00		0.00	0.00		0.00	0.00
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.10	0.11	0.00	0.02	0.00	0.02	0.01	0.00	0.01
TOTAL ONSITE MIT		**0.00**	**0.09**	**0.11**	**0.00**	**0.02**	**0.00**	**0.02**	**0.01**	**0.00**	**0.01**
TOTAL OFFSITE MIT		**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Fine Grading/Baserock - 2015

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.02	0.00	0.02	0.00	0.00	0.00
Off-Road		0.07	0.79	0.40	0.00		0.04	0.04		0.03	0.03
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.07	0.80	0.42	0.00	0.03	0.04	0.06	0.00	0.03	0.04
TOTAL ONSITE		**0.07**	**0.79**	**0.40**	**0.00**	**0.02**	**0.04**	**0.06**	**0.00**	**0.03**	**0.04**
TOTAL OFFSITE		**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.01	0.00	0.01	0.00	0.00	0.00
Off-Road		0.01	0.29	0.34	0.00		0.01	0.01		0.01	0.01
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.02	0.30	0.37	0.00	0.01	0.01	0.03	0.00	0.01	0.02
TOTAL ONSITE MIT		**0.01**	**0.29**	**0.34**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**
TOTAL OFFSITE MIT		**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Criteria Air Pollutant Emissions Summary - Construction

Building Construction - 2015

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.03	0.20	0.16	0.00		0.02	0.02		0.02	0.02
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Total		0.04	0.23	0.26	0.00	0.01	0.02	0.03	0.00	0.02	0.02
TOTAL ONSITE		**0.03**	**0.20**	**0.16**	**0.00**	**0.00**	**0.02**	**0.02**	**0.00**	**0.02**	**0.02**
TOTAL OFFSITE		**0.01**	**0.03**	**0.10**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.02	0.13	0.16	0.00		0.01	0.01		0.01	0.01
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Total		0.03	0.16	0.26	0.00	0.01	0.01	0.02	0.00	0.01	0.01
TOTAL ONSITE MIT		**0.02**	**0.13**	**0.16**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**
TOTAL OFFSITE MIT		**0.01**	**0.03**	**0.10**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**

Building Construction - 2016

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.19	1.12	0.92	0.00		0.08	0.08		0.08	0.08
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.02	0.13	0.19	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Worker		0.02	0.04	0.35	0.00	0.06	0.00	0.06	0.02	0.00	0.02
Total		0.23	1.29	1.46	0.00	0.07	0.09	0.15	0.02	0.08	0.10
TOTAL ONSITE		**0.19**	**1.12**	**0.92**	**0.00**	**0.00**	**0.08**	**0.08**	**0.00**	**0.08**	**0.08**
TOTAL OFFSITE		**0.04**	**0.17**	**0.54**	**0.00**	**0.07**	**0.00**	**0.07**	**0.02**	**0.00**	**0.02**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.10	0.74	0.94	0.00		0.05	0.05		0.05	0.05
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.02	0.13	0.19	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Worker		0.02	0.04	0.35	0.00	0.06	0.00	0.06	0.02	0.00	0.02
Total		0.14	0.91	1.48	0.00	0.07	0.06	0.12	0.02	0.06	0.07
TOTAL ONSITE MIT		**0.10**	**0.74**	**0.94**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.05**	**0.05**
TOTAL OFFSITE MIT		**0.04**	**0.17**	**0.54**	**0.00**	**0.07**	**0.00**	**0.07**	**0.02**	**0.00**	**0.02**

Criteria Air Pollutant Emissions Summary - Construction

Building Construction - 2017

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.14	0.87	0.75	0.00		0.06	0.06		0.06	0.06
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.01	0.10	0.15	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Worker		0.02	0.03	0.26	0.00	0.05	0.00	0.05	0.01	0.00	0.01
Total		0.17	0.99	1.16	0.00	0.06	0.06	0.12	0.02	0.06	0.08
TOTAL ONSITE		**0.14**	**0.87**	**0.75**	**0.00**	**0.00**	**0.06**	**0.06**	**0.00**	**0.06**	**0.06**
TOTAL OFFSITE		**0.03**	**0.12**	**0.41**	**0.00**	**0.06**	**0.00**	**0.06**	**0.02**	**0.00**	**0.02**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.07	0.61	0.77	0.00		0.04	0.04		0.04	0.04
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.01	0.10	0.15	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Worker		0.02	0.03	0.26	0.00	0.05	0.00	0.05	0.01	0.00	0.01
Total		0.10	0.73	1.18	0.00	0.06	0.04	0.10	0.02	0.04	0.06
TOTAL ONSITE MIT		**0.07**	**0.61**	**0.77**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**
TOTAL OFFSITE MIT		**0.03**	**0.12**	**0.41**	**0.00**	**0.06**	**0.00**	**0.06**	**0.02**	**0.00**	**0.02**

Architectural Coating - 2017

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Arch. Coating		0.83					0.00	0.00		0.00	0.00
Off-Road		0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.83	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL ONSITE		**0.83**	**0.02**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
TOTAL OFFSITE		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Arch. Coating		0.83					0.00	0.00		0.00	0.00
Off-Road		0.00	0.01	0.02	0.00		0.00	0.00		0.00	0.00
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.83	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL ONSITE MIT		**0.83**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
TOTAL OFFSITE MIT		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Criteria Air Pollutant Emissions Summary - Construction

Paving - 2017

Unmitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.01	0.12	0.08	0.00		0.01	0.01		0.01	0.01
Paving		0.00					0.00	0.00		0.00	0.00
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.02	0.13	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01
TOTAL ONSITE		**0.02**	**0.12**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**
TOTAL OFFSITE		**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.00	0.06	0.08	0.00		0.00	0.00		0.00	0.00
Paving		0.00					0.00	0.00		0.00	0.00
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.07	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00
TOTAL ONSITE MIT		**0.01**	**0.06**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
TOTAL OFFSITE MIT		**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Average Daily Emission Calculations (lbs/day)

Criteria Air Pollutant Emissions Summary - Construction

Annual emissions divided by total construction duration to obtain average daily emissions. Average construction emissions accounts for the duration of each construction phase and the time each piece of construction equipment is onsite.

Annual Average Emissions

avg lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Unmitigated	6.46	39.22	28.04	0.04	2.83	1.83	4.67	1.22	1.72	2.94
Total Mitigated	4.01	17.20	22.58	0.04	1.48	0.80	2.28	0.59	0.80	1.39

Certified EIR - Terraces of Lafayette

UNMITIGATED SCENARIO	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Unmitigated Avg lbs/day	42	138	NA	NA	NA	6	NA	NA	6	NA
Change from Certified EIR	-36	-99	NA	NA	NA	-4	NA	NA	-4	NA

MITIGATED SCENARIO	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Mitigated Avg lbs/day	38	104	NA	NA	NA	5	NA	NA	5	NA
Change from Certified EIR	-34	-87	NA	NA	NA	-4	NA	NA	-4	NA

FOR CONSTRUCTION HRA - Unmitigated Run

Onsite Details

avg lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015 Onsite	9.55	117.12	70.27	0.09	8.82	4.970	13.79	4.07	4.59	8.659
2016 Onsite	1.43	8.59	7.04	0.01	0.00	0.644	0.64	0.00	0.63	0.631
2017 Onsite	9.17	9.34	7.88	0.01	0.00	0.677	0.68	0.00	0.66	0.658

Offsite Details

avg lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015 Offsite	0.24	1.25	2.94	0.00	0.29	0.020	0.31	0.08	0.02	0.096
2016 Offsite	0.31	1.28	4.14	0.01	0.52	0.018	0.54	0.14	0.02	0.156
2017 Offsite	0.30	1.22	3.94	0.01	0.54	0.017	0.56	0.14	0.02	0.160

FOR CONSTRUCTION HRA - Mitigated Run with Best Control Measures for Fugitive Dust and Tier 3 Engines for Equipment 50 HP or greater

Onsite Details

avg lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015 Onsite	2.35	43.21	49.48	0.09	3.77	1.746	5.52	1.74	1.75	3.486
2016 Onsite	0.73	5.67	7.19	0.01	0.00	0.413	0.41	0.00	0.41	0.413
2017 Onsite	8.44	6.30	8.07	0.01	0.00	0.447	0.45	0.00	0.45	0.447

Offsite Details

avg lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2015 Offsite	0.24	1.25	2.94	0.00	0.29	0.020	0.31	0.08	0.02	0.096
2016 Offsite	0.31	1.28	4.14	0.01	0.52	0.018	0.54	0.14	0.02	0.156
2017 Offsite	0.30	1.22	3.94	0.01	0.54	0.017	0.56	0.14	0.02	0.160

Terraces of Lafayette Project Operational Criteria Air Pollutant Emissions Summary

Source: Lafayette, City of. 2012, The Terraces of Lafayette Final Environmental Impact Report for the City of Lafayette, State Clearinghouse No. 2011072055, Appendix H, Air Quality & GHG Data and Health Risk Assessment (Annual Emissions), CalEEMod 2011.1.1..

Annual Emissions Category	ROG	NOx	PM10 Total	PM2.5 Total
	tons/yr			
Area	2.00	0.03	0.03	0.03
Energy	0.03	0.23	0.02	0.02
Mobile	2.30	2.65	3.82	0.27
Total	4.33	2.91	3.87	0.32

Average Daily Emissions	ROG	NOx	PM10 Total	PM2.5 Total
	avg lbs/day			
Area	11	0	0	0
Energy	0	1	0	0
Mobile	13	15	21	1
Total	24	16	21	2

Criteria Air Pollutant Emissions Summary - Operations

Revised Project - 2017 Emission Rates

Tons/yr	ROG	NOx	PM10 Total	PM2.5 Total
Area Sources	3.55	0.00	0.00	0.00
Energy Use	0.01	0.06	0.00	0.00
Mobile Sources	0.90	0.78	1.12	0.31
Total	4.45	0.84	1.13	0.31
BAAQMD Threshold (Annual)	10	10	15	10
Exceeds Threshold	No	No	No	No

Annual emissions divided by 365 days/year to obtain Average Daily Emissions.

Revised Project - 2017 Emission Rates

lbs/day	ROG	NOx	PM10 Total	PM2.5 Total
Area Sources	19	0	0	0
Energy Use	0	0	0	0
Mobile Sources	5	4	6	2
Total	24	5	6	2
BAAQMD Threshold (Daily)	54	54	82	54
Exceeds Threshold	No	No	No	No

Change from the Certified EIR

Tons/yr	ROG	NOx	PM10 Total	PM2.5 Total
Change	0.12	0.84	1.13	0.31
BAAQMD Threshold (Annual)	10	10	15	10
Exceeds Threshold	No	No	No	No

lbs/day	ROG	NOx	PM10 Total	PM2.5 Total
Change	1	5	6	2
BAAQMD Threshold (Daily)	54	54	82	54
Exceeds Threshold	No	No	No	No

CalEEMod Output
GHG Emissions

Greenhouse Gas Emissions Summary

Revised Project - 2020 Emission Rates

Operation	MT/yr	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	Percent of Total
Area Sources		0	4	4	0	0	**4**	0%
Energy Use		0	165	165	0	0	**166**	15%
Mobile Sources		0	881	881	0	0	**882**	81%
Waste Generation		11	0	11	1	0	**24**	2%
Water/Wastewater		1	16	17	0	0	**18**	2%
Total		11	1,066	1,077	1	0	**1,093**	100%
Total without Waste Generation		1	1,066	1,067	0	0	**1,069**	

Construction	MT/yr	
Total		1,170
30-year Amortized		39

Certified EIR - Terraces of Lafayette

Operation	MT/yr	CO2e	Change from Certified EIR	
Area Sources		210	-206	-98%
Energy Use		520	-354	-68%
Mobile Sources		2,491	-1,609	-65%
Waste Generation		66	-42	-64%
Water/Wastewater		40	-22	-55%
Total		3,327	-2,234	-67%
Total without Waste Generation		3,261	-2,192	-67%

Construction	MT/yr	CO2e		
		4,013	-2,843	-71%
30-year Amortized		134	-95	-71%