APPENDIX H
Energy Demand Calculations

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CalEEMod Version 2016.3.2 - Annual Output

CalEEMod Version: CalEEMod.2016.3.2

Date: 1/15/2018 3:45 PM

Santa Cruz Wharf - Master Plan Energy - Santa Cruz County, Annual

Santa Cruz Wharf - Master Plan Energy

Santa Cruz County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	6.00	Acre	6.00	261,360.00	0
Other Asphalt Surfaces	68.00	1000sqft	1.56	68,000.00	0
Other Asphalt Surfaces	0.80	1000sqft	0.02	800.00	0
Quality Restaurant	14.30	1000sqft	0.33	14,300.00	0
Strip Mall	22.70	1000sqft	0.52	22,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity Factor based on 50% RPS by 2030

Land Use - Wharf expansion/promenade modeled as "Other Asphalt Surface", 65% of new commercial buildings as "Quality Restaurant", and the retail and public buildings as "Strip Mall"

Construction Phase - Wharf development assumed in three broad phases: 2019-2020 (Entry Gate Reloc); 2027-2029 (East Promenade); 2037-2039 (All Other Improvements)

Off-road Equipment - Default "Architectural Coatings" phase equipment

Off-road Equipment - Default "Building Construction" equipment with addition of "Other Construction Equipment" to represent a pile driver

Off-road Equipment - Default "Paving" equipment

Trips and VMT - Default vehicle trips for construction

Architectural Coating - Default architectural coating assumptions

Vehicle Trips - Trip generation provided by City of 47 trips per 1,000 sf of buildings for average day

Landscape Equipment - No landscaping equipment assumed

Energy Use - Electricity/natural gas estimated based on existing wharf usage outside of CalEEMod

Water And Wastewater - Default indoor water/wastewater. Outdoor water assumed to be negligible since no landscaping is assumed.

Solid Waste - Default solid waste

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	260.00
tblConstructionPhase	NumDays	230.00	716.00
tblConstructionPhase	NumDays	230.00	695.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	66.00
tblEnergyUse	LightingElect	5.34	0.00
tblEnergyUse	LightingElect	4.88	0.00
tblEnergyUse	NT24E	20.97	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24NG	128.02	0.00
tblEnergyUse	NT24NG	0.70	0.00
tblEnergyUse	T24E	2.67	0.00
tblEnergyUse	T24E	2.24	0.00
tblEnergyUse	T24NG	39.90	0.00
tblEnergyUse	T24NG	3.90	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblVehicleTrips	ST_TR	94.36	47.00
tblVehicleTrips	ST_TR	42.04	47.00
tblVehicleTrips	SU_TR	72.16	47.00
tblVehicleTrips	SU_TR	20.43	47.00
tblVehicleTrips	WD_TR	89.95	47.00

tblVehicleTrips	WD_TR	44.32	47.00
tblWater	OutdoorWaterUseRate	277,055.24	0.00
tblWater	OutdoorWaterUseRate	1,030,563.82	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					
2019	0.5093	4.6417	3.8588	7.9800e-003	0.2074	0.2133	0.4207	0.0563	0.2000	0.2563	0.0000	721.4397	721.4397	0.1109	0.0000	724.2114
2020	0.0569	0.4662	0.5018	7.9000e-004	3.9200e-003	0.0249	0.0288	1.0400e-003	0.0229	0.0239	0.0000	69.7039	69.7039	0.0215	0.0000	70.2422
2027	0.2917	2.7071	3.1960	7.5800e-003	0.2083	0.0897	0.2979	0.0566	0.0840	0.1405	0.0000	679.4935	679.4935	0.1038	0.0000	682.0871
2028	0.2865	2.6771	3.1503	7.5000e-003	0.2075	0.0892	0.2966	0.0564	0.0835	0.1399	0.0000	672.4958	672.4958	0.1030	0.0000	675.0708
2029	0.2529	2.2785	2.8276	6.3700e-003	0.1595	0.0806	0.2401	0.0433	0.0753	0.1186	0.0000	570.1194	570.1194	0.0984	0.0000	572.5801
2037	0.2286	1.5927	3.0011	8.0300e-003	0.2083	0.0152	0.2235	0.0566	0.0152	0.0717	0.0000	710.9268	710.9268	0.0223	0.0000	711.4844
2038	0.2286	1.5927	3.0011	8.0300e-003	0.2083	0.0152	0.2235	0.0566	0.0152	0.0717	0.0000	710.9268	710.9268	0.0223	0.0000	711.4844
2039	0.5276	1.2250	2.5384	6.3200e-003	0.1443	0.0164	0.1607	0.0392	0.0164	0.0555	0.0000	557.0285	557.0285	0.0180	0.0000	557.4783
Maximum	**0.5276**	**4.6417**	**3.8588**	**8.0300e-003**	**0.2083**	**0.2133**	**0.4207**	**0.0566**	**0.2000**	**0.2563**	**0.0000**	**721.4397**	**721.4397**	**0.1109**	**0.0000**	**724.2114**

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					
2019	0.5093	4.6417	3.8588	7.9800e-003	0.2074	0.2133	0.4207	0.0563	0.2000	0.2563	0.0000	721.4392	721.4392	0.1109	0.0000	724.2110
2020	0.0569	0.4662	0.5018	7.9000e-004	3.9200e-003	0.0249	0.0288	1.0400e-003	0.0229	0.0239	0.0000	69.7039	69.7039	0.0215	0.0000	70.2421
2027	0.2917	2.7071	3.1960	7.5800e-003	0.2083	0.0897	0.2979	0.0566	0.0840	0.1405	0.0000	679.4930	679.4930	0.1038	0.0000	682.0867
2028	0.2865	2.6771	3.1503	7.5000e-003	0.2075	0.0892	0.2966	0.0564	0.0835	0.1399	0.0000	672.4953	672.4953	0.1030	0.0000	675.0704
2029	0.2529	2.2785	2.8276	6.3700e-003	0.1595	0.0806	0.2401	0.0433	0.0753	0.1186	0.0000	570.1190	570.1190	0.0984	0.0000	572.5797
2037	0.2286	1.5927	3.0011	8.0300e-003	0.2083	0.0152	0.2235	0.0566	0.0152	0.0717	0.0000	710.9263	710.9263	0.0223	0.0000	711.4839
2038	0.2286	1.5927	3.0011	8.0300e-003	0.2083	0.0152	0.2235	0.0566	0.0152	0.0717	0.0000	710.9263	710.9263	0.0223	0.0000	711.4839
2039	0.5276	1.2250	2.5384	6.3200e-003	0.1443	0.0164	0.1607	0.0392	0.0164	0.0555	0.0000	557.0281	557.0281	0.0180	0.0000	557.4778
Maximum	**0.5276**	**4.6417**	**3.8588**	**8.0300e-003**	**0.2083**	**0.2133**	**0.4207**	**0.0566**	**0.2000**	**0.2563**	**0.0000**	**721.4392**	**721.4392**	**0.1109**	**0.0000**	**724.2110**

	ROG	NOx	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	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1796	0.8440	1.7962	7.5600e-003	0.9061	4.0200e-003	0.9101	0.2427	3.7300e-003	0.2465	0.0000	696.1654	696.1654	0.0207	0.0000	696.6818
Waste						0.0000	0.0000		0.0000	0.0000	7.4883	0.0000	7.4883	0.4426	0.0000	18.5520
Water						0.0000	0.0000		0.0000	0.0000	1.9105	5.5113	7.4218	0.1967	4.7200e-003	13.7453
Total	**0.3781**	**0.8440**	**1.7962**	**7.5600e-003**	**0.9061**	**4.0200e-003**	**0.9101**	**0.2427**	**3.7300e-003**	**0.2465**	**9.3988**	**701.6767**	**711.0755**	**0.6599**	**4.7200e-003**	**728.9791**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1796	0.8440	1.7962	7.5600e-003	0.9061	4.0200e-003	0.9101	0.2427	3.7300e-003	0.2465	0.0000	696.1654	696.1654	0.0207	0.0000	696.6818
Waste						0.0000	0.0000		0.0000	0.0000	7.4883	0.0000	7.4883	0.4426	0.0000	18.5520
Water						0.0000	0.0000		0.0000	0.0000	1.9105	5.5113	7.4218	0.1967	4.7200e-003	13.7453
Total	**0.3781**	**0.8440**	**1.7962**	**7.5600e-003**	**0.9061**	**4.0200e-003**	**0.9101**	**0.2427**	**3.7300e-003**	**0.2465**	**9.3988**	**701.6767**	**711.0755**	**0.6599**	**4.7200e-003**	**728.9791**

	ROG	NOx	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	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction 1 - Entry Gate Relocation	Building Construction	1/1/2019	12/30/2019	5	260	
2	Paving 1 - Deck Surfacing	Paving	1/1/2020	4/1/2020	5	66	
3	Building Construction 2 - East Promenade	Building Construction	1/1/2027	9/28/2029	5	716	
4	Paving 2 - Deck Surfacing	Paving	10/1/2029	12/31/2029	5	66	
5	Building Construction 3 - All Other	Building Construction	1/1/2037	8/31/2039	5	695	
6	Building Coatings	Architectural Coating	9/1/2039	9/28/2039	5	20	
7	Paving 3 - Deck Surfacing	Paving	9/29/2039	12/29/2039	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 7.58

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 55,500; Non-Residential Outdoor: 18,500; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction 1 - Entry Gate Relocation	Cranes	1	7.00	231	0.29
Building Construction 1 - Entry Gate Relocation	Forklifts	3	8.00	89	0.20
Building Construction 1 - Entry Gate Relocation	Generator Sets	1	8.00	84	0.74
Building Construction 1 - Entry Gate Relocation	Other Construction Equipment	1	7.00	172	0.42
Building Construction 1 - Entry Gate Relocation	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 1 - Entry Gate Relocation	Welders	1	8.00	46	0.45
Paving 1 - Deck Surfacing	Pavers	2	8.00	130	0.42
Paving 1 - Deck Surfacing	Paving Equipment	2	8.00	132	0.36
Paving 1 - Deck Surfacing	Rollers	2	8.00	80	0.38
Building Construction 2 - East Promenade	Cranes	1	7.00	231	0.29
Building Construction 2 - East Promenade	Forklifts	3	8.00	89	0.20
Building Construction 2 - East Promenade	Generator Sets	1	8.00	84	0.74

Building Construction 2 - East Promenade	Other Construction Equipment	1	8.00	172	0.42
Building Construction 2 - East Promenade	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2 - East Promenade	Welders	1	8.00	46	0.45
Paving 2 - Deck Surfacing	Pavers	2	8.00	130	0.42
Paving 2 - Deck Surfacing	Paving Equipment	2	8.00	132	0.36
Paving 2 - Deck Surfacing	Rollers	2	8.00	80	0.38
Building Construction 3 - All Other	Cranes	1	7.00	231	0.29
Building Construction 3 - All Other	Forklifts	3	8.00	89	0.20
Building Construction 3 - All Other	Generator Sets	1	8.00	84	0.74
Building Construction 3 - All Other	Other Construction Equipment	1	8.00	172	0.42
Building Construction 3 - All Other	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 3 - All Other	Welders	1	8.00	46	0.45
Building Coatings	Air Compressors	1	6.00	78	0.48
Paving 3 - Deck Surfacing	Pavers	2	8.00	130	0.42
Paving 3 - Deck Surfacing	Paving Equipment	2	8.00	132	0.36
Paving 3 - Deck Surfacing	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction 1 - Entry Gate	10	152.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 1 - Deck Surfacing	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2 - East Promenade	10	152.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2 - Deck Surfacing	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3 - All Other	10	152.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Coatings	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 3 - Deck Surfacing	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction 1 - Entry Gate Relocation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3667	3.3827	2.7032	4.2000e-003		0.2015	0.2015		0.1888	0.1888	0.0000	368.8037	368.8037	0.0944	0.0000	371.1648
Total	**0.3667**	**3.3827**	**2.7032**	**4.2000e-003**		**0.2015**	**0.2015**		**0.1888**	**0.1888**	**0.0000**	**368.8037**	**368.8037**	**0.0944**	**0.0000**	**371.1648**

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	0.0449	1.1663	0.3379	2.1300e-003	0.0510	0.0104	0.0614	0.0147	9.9000e-003	0.0246	0.0000	204.1400	204.1400	9.3400e-003	0.0000	204.3735
Worker	0.0977	0.0927	0.8178	1.6500e-003	0.1564	1.4200e-003	0.1579	0.0416	1.3100e-003	0.0429	0.0000	148.4959	148.4959	7.0900e-003	0.0000	148.6731
Total	**0.1426**	**1.2590**	**1.1556**	**3.7800e-003**	**0.2074**	**0.0118**	**0.2192**	**0.0563**	**0.0112**	**0.0676**	**0.0000**	**352.6359**	**352.6359**	**0.0164**	**0.0000**	**353.0466**

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					

Off-Road	0.3667	3.3827	2.7032	4.2000e-003		0.2015	0.2015		0.1888	0.1888	0.0000	368.8033	368.8033	0.0944	0.0000	371.1643
Total	**0.3667**	**3.3827**	**2.7032**	**4.2000e-003**		**0.2015**	**0.2015**		**0.1888**	**0.1888**	**0.0000**	**368.8033**	**368.8033**	**0.0944**	**0.0000**	**371.1643**

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	0.0449	1.1663	0.3379	2.1300e-003	0.0510	0.0104	0.0614	0.0147	9.9000e-003	0.0246	0.0000	204.1400	204.1400	9.3400e-003	0.0000	204.3735
Worker	0.0977	0.0927	0.8178	1.6500e-003	0.1564	1.4200e-003	0.1579	0.0416	1.3100e-003	0.0429	0.0000	148.4959	148.4959	7.0900e-003	0.0000	148.6731
Total	**0.1426**	**1.2590**	**1.1556**	**3.7800e-003**	**0.2074**	**0.0118**	**0.2192**	**0.0563**	**0.0112**	**0.0676**	**0.0000**	**352.6359**	**352.6359**	**0.0164**	**0.0000**	**353.0466**

3.3 Paving 1 - Deck Surfacing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0448	0.4642	0.4835	7.5000e-004		0.0248	0.0248		0.0229	0.0229	0.0000	66.0931	66.0931	0.0214	0.0000	66.6275
Paving	9.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0547**	**0.4642**	**0.4835**	**7.5000e-004**		**0.0248**	**0.0248**		**0.0229**	**0.0229**	**0.0000**	**66.0931**	**66.0931**	**0.0214**	**0.0000**	**66.6275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2300e-003	2.0500e-003	0.0182	4.0000e-005	3.9200e-003	3.0000e-005	3.9500e-003	1.0400e-003	3.0000e-005	1.0700e-003	0.0000	3.6108	3.6108	1.5000e-004	0.0000	3.6147
Total	**2.2300e-003**	**2.0500e-003**	**0.0182**	**4.0000e-005**	**3.9200e-003**	**3.0000e-005**	**3.9500e-003**	**1.0400e-003**	**3.0000e-005**	**1.0700e-003**	**0.0000**	**3.6108**	**3.6108**	**1.5000e-004**	**0.0000**	**3.6147**

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	0.0448	0.4642	0.4835	7.5000e-004		0.0248	0.0248		0.0229	0.0229	0.0000	66.0931	66.0931	0.0214	0.0000	66.6275
Paving	9.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0547**	**0.4642**	**0.4835**	**7.5000e-004**		**0.0248**	**0.0248**		**0.0229**	**0.0229**	**0.0000**	**66.0931**	**66.0931**	**0.0214**	**0.0000**	**66.6275**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2300e-003	2.0500e-003	0.0182	4.0000e-005	3.9200e-003	3.0000e-005	3.9500e-003	1.0400e-003	3.0000e-005	1.0700e-003	0.0000	3.6108	3.6108	1.5000e-004	0.0000	3.6147
Total	**2.2300e-003**	**2.0500e-003**	**0.0182**	**4.0000e-005**	**3.9200e-003**	**3.0000e-005**	**3.9500e-003**	**1.0400e-003**	**3.0000e-005**	**1.0700e-003**	**0.0000**	**3.6108**	**3.6108**	**1.5000e-004**	**0.0000**	**3.6147**

3.4 Building Construction 2 - East Promenade - 2027

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	0.2175	1.9877	2.6206	4.3300e-003		0.0875	0.0875		0.0819	0.0819	0.0000	373.5247	373.5247	0.0941	0.0000	375.8763
Total	**0.2175**	**1.9877**	**2.6206**	**4.3300e-003**		**0.0875**	**0.0875**		**0.0819**	**0.0819**	**0.0000**	**373.5247**	**373.5247**	**0.0941**	**0.0000**	**375.8763**

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	0.0169	0.6797	0.1737	2.0100e-003	0.0512	1.1300e-003	0.0524	0.0148	1.0800e-003	0.0159	0.0000	193.4514	193.4514	6.7400e-003	0.0000	193.6200
Worker	0.0574	0.0397	0.4018	1.2400e-003	0.1570	1.0700e-003	0.1581	0.0418	9.8000e-004	0.0428	0.0000	112.5174	112.5174	2.9400e-003	0.0000	112.5908
Total	**0.0743**	**0.7194**	**0.5755**	**3.2500e-003**	**0.2083**	**2.2000e-003**	**0.2105**	**0.0566**	**2.0600e-003**	**0.0586**	**0.0000**	**305.9688**	**305.9688**	**9.6800e-003**	**0.0000**	**306.2108**

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	0.2175	1.9877	2.6205	4.3300e-003		0.0875	0.0875		0.0819	0.0819	0.0000	373.5242	373.5242	0.0941	0.0000	375.8759
Total	**0.2175**	**1.9877**	**2.6205**	**4.3300e-003**		**0.0875**	**0.0875**		**0.0819**	**0.0819**	**0.0000**	**373.5242**	**373.5242**	**0.0941**	**0.0000**	**375.8759**

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	0.0169	0.6797	0.1737	2.0100e-003	0.0512	1.1300e-003	0.0524	0.0148	1.0800e-003	0.0159	0.0000	193.4514	193.4514	6.7400e-003	0.0000	193.6200
Worker	0.0574	0.0397	0.4018	1.2400e-003	0.1570	1.0700e-003	0.1581	0.0418	9.8000e-004	0.0428	0.0000	112.5174	112.5174	2.9400e-003	0.0000	112.5908
Total	**0.0743**	**0.7194**	**0.5755**	**3.2500e-003**	**0.2083**	**2.2000e-003**	**0.2105**	**0.0566**	**2.0600e-003**	**0.0586**	**0.0000**	**305.9688**	**305.9688**	**9.6800e-003**	**0.0000**	**306.2108**

3.4 Building Construction 2 - East Promenade - 2028

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	0.2166	1.9801	2.6105	4.3100e-003		0.0872	0.0872		0.0816	0.0816	0.0000	372.0935	372.0935	0.0937	0.0000	374.4362
Total	**0.2166**	**1.9801**	**2.6105**	**4.3100e-003**		**0.0872**	**0.0872**		**0.0816**	**0.0816**	**0.0000**	**372.0935**	**372.0935**	**0.0937**	**0.0000**	**374.4362**

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	0.0163	0.6611	0.1681	1.9900e-003	0.0510	1.0500e-003	0.0521	0.0147	1.0000e-003	0.0157	0.0000	191.9309	191.9309	6.6400e-003	0.0000	192.0970
Worker	0.0536	0.0360	0.3717	1.2000e-003	0.1564	9.9000e-004	0.1574	0.0416	9.1000e-004	0.0425	0.0000	108.4714	108.4714	2.6500e-003	0.0000	108.5377
Total	**0.0699**	**0.6970**	**0.5398**	**3.1900e-003**	**0.2075**	**2.0400e-003**	**0.2095**	**0.0564**	**1.9100e-003**	**0.0583**	**0.0000**	**300.4022**	**300.4022**	**9.2900e-003**	**0.0000**	**300.6347**

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	0.2166	1.9801	2.6105	4.3100e-003		0.0872	0.0872		0.0816	0.0816	0.0000	372.0931	372.0931	0.0937	0.0000	374.4357
Total	**0.2166**	**1.9801**	**2.6105**	**4.3100e-003**		**0.0872**	**0.0872**		**0.0816**	**0.0816**	**0.0000**	**372.0931**	**372.0931**	**0.0937**	**0.0000**	**374.4357**

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	0.0163	0.6611	0.1681	1.9900e-003	0.0510	1.0500e-003	0.0521	0.0147	1.0000e-003	0.0157	0.0000	191.9309	191.9309	6.6400e-003	0.0000	192.0970
Worker	0.0536	0.0360	0.3717	1.2000e-003	0.1564	9.9000e-004	0.1574	0.0416	9.1000e-004	0.0425	0.0000	108.4714	108.4714	2.6500e-003	0.0000	108.5377
Total	**0.0699**	**0.6970**	**0.5398**	**3.1900e-003**	**0.2075**	**2.0400e-003**	**0.2095**	**0.0564**	**1.9100e-003**	**0.0583**	**0.0000**	**300.4022**	**300.4022**	**9.2900e-003**	**0.0000**	**300.6347**

3.4 Building Construction 2 - East Promenade - 2029

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	0.1625	1.4850	1.9579	3.2300e-003		0.0654	0.0654		0.0612	0.0612	0.0000	279.0701	279.0701	0.0703	0.0000	280.8271
Total	**0.1625**	**1.4850**	**1.9579**	**3.2300e-003**		**0.0654**	**0.0654**		**0.0612**	**0.0612**	**0.0000**	**279.0701**	**279.0701**	**0.0703**	**0.0000**	**280.8271**

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	0.0118	0.4850	0.1225	1.4900e-003	0.0383	7.3000e-004	0.0390	0.0111	7.0000e-004	0.0118	0.0000	143.4225	143.4225	4.9400e-003	0.0000	143.5459
Worker	0.0372	0.0244	0.2576	8.7000e-004	0.1173	6.9000e-004	0.1180	0.0312	6.4000e-004	0.0318	0.0000	78.9270	78.9270	1.7900e-003	0.0000	78.9717
Total	**0.0490**	**0.5094**	**0.3801**	**2.3600e-003**	**0.1556**	**1.4200e-003**	**0.1570**	**0.0423**	**1.3400e-003**	**0.0436**	**0.0000**	**222.3495**	**222.3495**	**6.7300e-003**	**0.0000**	**222.5176**

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	0.1625	1.4850	1.9579	3.2300e-003		0.0654	0.0654		0.0612	0.0612	0.0000	279.0698	279.0698	0.0703	0.0000	280.8268
Total	**0.1625**	**1.4850**	**1.9579**	**3.2300e-003**		**0.0654**	**0.0654**		**0.0612**	**0.0612**	**0.0000**	**279.0698**	**279.0698**	**0.0703**	**0.0000**	**280.8268**

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	0.0118	0.4850	0.1225	1.4900e-003	0.0383	7.3000e-004	0.0390	0.0111	7.0000e-004	0.0118	0.0000	143.4225	143.4225	4.9400e-003	0.0000	143.5459
Worker	0.0372	0.0244	0.2576	8.7000e-004	0.1173	6.9000e-004	0.1180	0.0312	6.4000e-004	0.0318	0.0000	78.9270	78.9270	1.7900e-003	0.0000	78.9717

Total	**0.0490**	**0.5094**	**0.3801**	**2.3600e-003**	**0.1556**	**1.4200e-003**	**0.1570**	**0.0423**	**1.3400e-003**	**0.0436**	**0.0000**	**222.3495**	**222.3495**	**6.7300e-003**	**0.0000**	**222.5176**

3.5 Paving 2 - Deck Surfacing - 2029

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	0.0302	0.2832	0.4811	7.5000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	66.0635	66.0635	0.0214	0.0000	66.5977
Paving	9.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0401**	**0.2832**	**0.4811**	**7.5000e-004**		**0.0138**	**0.0138**		**0.0127**	**0.0127**	**0.0000**	**66.0635**	**66.0635**	**0.0214**	**0.0000**	**66.5977**

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	1.2400e-003	8.1000e-004	8.6000e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9400e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	2.6362	2.6362	6.0000e-005	0.0000	2.6377
Total	**1.2400e-003**	**8.1000e-004**	**8.6000e-003**	**3.0000e-005**	**3.9200e-003**	**2.0000e-005**	**3.9400e-003**	**1.0400e-003**	**2.0000e-005**	**1.0600e-003**	**0.0000**	**2.6362**	**2.6362**	**6.0000e-005**	**0.0000**	**2.6377**

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	0.0302	0.2832	0.4811	7.5000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	66.0635	66.0635	0.0214	0.0000	66.5976
Paving	9.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0401**	**0.2832**	**0.4811**	**7.5000e-004**		**0.0138**	**0.0138**		**0.0127**	**0.0127**	**0.0000**	**66.0635**	**66.0635**	**0.0214**	**0.0000**	**66.5976**

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	1.2400e-003	8.1000e-004	8.6000e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9400e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	2.6362	2.6362	6.0000e-005	0.0000	2.6377
Total	**1.2400e-003**	**8.1000e-004**	**8.6000e-003**	**3.0000e-005**	**3.9200e-003**	**2.0000e-005**	**3.9400e-003**	**1.0400e-003**	**2.0000e-005**	**1.0600e-003**	**0.0000**	**2.6362**	**2.6362**	**6.0000e-005**	**0.0000**	**2.6377**

3.6 Building Construction 3 - All Other - 2037

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	0.1837	0.9901	2.6235	5.0400e-003		0.0140	0.0140		0.0140	0.0140	0.0000	428.7542	428.7542	0.0147	0.0000	429.1227
Total	**0.1837**	**0.9901**	**2.6235**	**5.0400e-003**		**0.0140**	**0.0140**		**0.0140**	**0.0140**	**0.0000**	**428.7542**	**428.7542**	**0.0147**	**0.0000**	**429.1227**

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	0.0139	0.5838	0.1491	1.9600e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154	0.0000	189.3670	189.3670	6.2700e-003	0.0000	189.5237
Worker	0.0310	0.0189	0.2286	1.0200e-003	0.1570	6.1000e-004	0.1577	0.0418	5.6000e-004	0.0423	0.0000	92.8056	92.8056	1.3000e-003	0.0000	92.8380
Total	**0.0449**	**0.6027**	**0.3777**	**2.9800e-003**	**0.2083**	**1.2800e-003**	**0.2095**	**0.0566**	**1.2000e-003**	**0.0578**	**0.0000**	**282.1726**	**282.1726**	**7.5700e-003**	**0.0000**	**282.3617**

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	0.1837	0.9901	2.6235	5.0400e-003		0.0140	0.0140		0.0140	0.0140	0.0000	428.7537	428.7537	0.0147	0.0000	429.1221
Total	**0.1837**	**0.9901**	**2.6235**	**5.0400e-003**		**0.0140**	**0.0140**		**0.0140**	**0.0140**	**0.0000**	**428.7537**	**428.7537**	**0.0147**	**0.0000**	**429.1221**

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	0.0139	0.5838	0.1491	1.9600e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154	0.0000	189.3670	189.3670	6.2700e-003	0.0000	189.5237
Worker	0.0310	0.0189	0.2286	1.0200e-003	0.1570	6.1000e-004	0.1577	0.0418	5.6000e-004	0.0423	0.0000	92.8056	92.8056	1.3000e-003	0.0000	92.8380
Total	**0.0449**	**0.6027**	**0.3777**	**2.9800e-003**	**0.2083**	**1.2800e-003**	**0.2095**	**0.0566**	**1.2000e-003**	**0.0578**	**0.0000**	**282.1726**	**282.1726**	**7.5700e-003**	**0.0000**	**282.3617**

3.6 Building Construction 3 - All Other - 2038

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	0.1837	0.9901	2.6235	5.0400e-003		0.0140	0.0140		0.0140	0.0140	0.0000	428.7542	428.7542	0.0147	0.0000	429.1227
Total	**0.1837**	**0.9901**	**2.6235**	**5.0400e-003**		**0.0140**	**0.0140**		**0.0140**	**0.0140**	**0.0000**	**428.7542**	**428.7542**	**0.0147**	**0.0000**	**429.1227**

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	0.0139	0.5838	0.1491	1.9600e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154	0.0000	189.3670	189.3670	6.2700e-003	0.0000	189.5237

Worker	0.0310	0.0189	0.2286	1.0200e-003	0.1570	6.1000e-004	0.1577	0.0418	5.6000e-004	0.0423	0.0000	92.8056	92.8056	1.3000e-003	0.0000	92.8380
Total	**0.0449**	**0.6027**	**0.3777**	**2.9800e-003**	**0.2083**	**1.2800e-003**	**0.2095**	**0.0566**	**1.2000e-003**	**0.0578**	**0.0000**	**282.1726**	**282.1726**	**7.5700e-003**	**0.0000**	**282.3617**

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	0.1837	0.9901	2.6235	5.0400e-003		0.0140	0.0140		0.0140	0.0140	0.0000	428.7537	428.7537	0.0147	0.0000	429.1221
Total	**0.1837**	**0.9901**	**2.6235**	**5.0400e-003**		**0.0140**	**0.0140**		**0.0140**	**0.0140**	**0.0000**	**428.7537**	**428.7537**	**0.0147**	**0.0000**	**429.1221**

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	0.0139	0.5838	0.1491	1.9600e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154	0.0000	189.3670	189.3670	6.2700e-003	0.0000	189.5237
Worker	0.0310	0.0189	0.2286	1.0200e-003	0.1570	6.1000e-004	0.1577	0.0418	5.6000e-004	0.0423	0.0000	92.8056	92.8056	1.3000e-003	0.0000	92.8380
Total	**0.0449**	**0.6027**	**0.3777**	**2.9800e-003**	**0.2083**	**1.2800e-003**	**0.2095**	**0.0566**	**1.2000e-003**	**0.0578**	**0.0000**	**282.1726**	**282.1726**	**7.5700e-003**	**0.0000**	**282.3617**

3.6 Building Construction 3 - All Other - 2039

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	0.1218	0.6563	1.7389	3.3400e-003		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003	0.0000	284.1934	284.1934	9.7700e-003	0.0000	284.4376
Total	**0.1218**	**0.6563**	**1.7389**	**3.3400e-003**		**9.2500e-003**	**9.2500e-003**		**9.2500e-003**	**9.2500e-003**	**0.0000**	**284.1934**	**284.1934**	**9.7700e-003**	**0.0000**	**284.4376**

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	9.2000e-003	0.3869	0.0988	1.3000e-003	0.0340	4.4000e-004	0.0344	9.8100e-003	4.2000e-004	0.0102	0.0000	125.5191	125.5191	4.1600e-003	0.0000	125.6230
Worker	0.0205	0.0125	0.1515	6.8000e-004	0.1041	4.1000e-004	0.1045	0.0277	3.7000e-004	0.0281	0.0000	61.5148	61.5148	8.6000e-004	0.0000	61.5363
Total	**0.0297**	**0.3995**	**0.2503**	**1.9800e-003**	**0.1380**	**8.5000e-004**	**0.1389**	**0.0375**	**7.9000e-004**	**0.0383**	**0.0000**	**187.0339**	**187.0339**	**5.0200e-003**	**0.0000**	**187.1593**

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	0.1218	0.6563	1.7389	3.3400e-003		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003	0.0000	284.1931	284.1931	9.7700e-003	0.0000	284.4373

Total	**0.1218**	**0.6563**	**1.7389**	**3.3400e-003**		**9.2500e-003**	**9.2500e-003**		**9.2500e-003**	**9.2500e-003**	**0.0000**	**284.1931**	**284.1931**	**9.7700e-003**	**0.0000**	**284.4373**

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	9.2000e-003	0.3869	0.0988	1.3000e-003	0.0340	4.4000e-004	0.0344	9.8100e-003	4.2000e-004	0.0102	0.0000	125.5191	125.5191	4.1600e-003	0.0000	125.6230
Worker	0.0205	0.0125	0.1515	6.8000e-004	0.1041	4.1000e-004	0.1045	0.0277	3.7000e-004	0.0281	0.0000	61.5148	61.5148	8.6000e-004	0.0000	61.5363
Total	**0.0297**	**0.3995**	**0.2503**	**1.9800e-003**	**0.1380**	**8.5000e-004**	**0.1389**	**0.0375**	**7.9000e-004**	**0.0383**	**0.0000**	**187.0339**	**187.0339**	**5.0200e-003**	**0.0000**	**187.1593**

3.7 Building Coatings - 2039

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	0.3261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.5800e-003	0.0179	3.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	2.5533	2.5533	9.0000e-005	0.0000	2.5556
Total	**0.3273**	**7.5800e-003**	**0.0179**	**3.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**2.5533**	**2.5533**	**9.0000e-005**	**0.0000**	**2.5556**

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	4.7000e-004	2.9000e-004	3.4600e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.4036	1.4036	2.0000e-005	0.0000	1.4041
Total	**4.7000e-004**	**2.9000e-004**	**3.4600e-003**	**2.0000e-005**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**6.3000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.4036**	**1.4036**	**2.0000e-005**	**0.0000**	**1.4041**

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	0.3261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.5800e-003	0.0179	3.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	2.5533	2.5533	9.0000e-005	0.0000	2.5556
Total	**0.3273**	**7.5800e-003**	**0.0179**	**3.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**2.5533**	**2.5533**	**9.0000e-005**	**0.0000**	**2.5556**

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	4.7000e-004	2.9000e-004	3.4600e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.4036	1.4036	2.0000e-005	0.0000	1.4041
Total	**4.7000e-004**	**2.9000e-004**	**3.4600e-003**	**2.0000e-005**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**6.3000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.4036**	**1.4036**	**2.0000e-005**	**0.0000**	**1.4041**

3.8 Paving 3 - Deck Surfacing - 2039

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	0.0376	0.1609	0.5221	9.3000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003	0.0000	79.5284	79.5284	3.0600e-003	0.0000	79.6049
Paving	9.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0476**	**0.1609**	**0.5221**	**9.3000e-004**		**6.1800e-003**	**6.1800e-003**		**6.1800e-003**	**6.1800e-003**	**0.0000**	**79.5284**	**79.5284**	**3.0600e-003**	**0.0000**	**79.6049**

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	7.7000e-004	4.7000e-004	5.7000e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9300e-003	1.0400e-003	1.0000e-005	1.0600e-003	0.0000	2.3159	2.3159	3.0000e-005	0.0000	2.3167
Total	**7.7000e-004**	**4.7000e-004**	**5.7000e-003**	**3.0000e-005**	**3.9200e-003**	**2.0000e-005**	**3.9300e-003**	**1.0400e-003**	**1.0000e-005**	**1.0600e-003**	**0.0000**	**2.3159**	**2.3159**	**3.0000e-005**	**0.0000**	**2.3167**

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	0.0376	0.1609	0.5221	9.3000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003	0.0000	79.5283	79.5283	3.0600e-003	0.0000	79.6048
Paving	9.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0476**	**0.1609**	**0.5221**	**9.3000e-004**		**6.1800e-003**	**6.1800e-003**		**6.1800e-003**	**6.1800e-003**	**0.0000**	**79.5283**	**79.5283**	**3.0600e-003**	**0.0000**	**79.6048**

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	7.7000e-004	4.7000e-004	5.7000e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9300e-003	1.0400e-003	1.0000e-005	1.0600e-003	0.0000	2.3159	2.3159	3.0000e-005	0.0000	2.3167
Total	**7.7000e-004**	**4.7000e-004**	**5.7000e-003**	**3.0000e-005**	**3.9200e-003**	**2.0000e-005**	**3.9300e-003**	**1.0400e-003**	**1.0000e-005**	**1.0600e-003**	**0.0000**	**2.3159**	**2.3159**	**3.0000e-005**	**0.0000**	**2.3167**

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	0.1796	0.8440	1.7962	7.5600e-003	0.9061	4.0200e-003	0.9101	0.2427	3.7300e-003	0.2465	0.0000	696.1654	696.1654	0.0207	0.0000	696.6818

Unmitigated	0.1796	0.8440	1.7962	7.5600e-003	0.9061	4.0200e-003	0.9101	0.2427	3.7300e-003	0.2465	0.0000	696.1654	696.1654	0.0207	0.0000	696.6818

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Quality Restaurant	672.10	672.10	672.10	797,223	797,223
Strip Mall	1,066.90	1,066.90	1066.90	1,643,061	1,643,061
Total	1,739.00	1,739.00	1,739.00	2,440,284	2,440,284

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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Quality Restaurant	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Strip Mall	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	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
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

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

Quality Restaurant	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
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.1985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1659					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1985**					**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1659					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.1985**					**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.4218	0.1967	4.7200e-003	13.7453
Unmitigated	7.4218	0.1967	4.7200e-003	13.7453

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	4.34053 / 0	5.3495	0.1418	3.4000e-003	9.9074
Strip Mall	1.68145 / 0	2.0723	0.0549	1.3200e-003	3.8379
Total		**7.4218**	**0.1967**	**4.7200e-003**	**13.7453**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	4.34053 / 0	5.3495	0.1418	3.4000e-003	9.9074
Strip Mall	1.68145 / 0	2.0723	0.0549	1.3200e-003	3.8379
Total		**7.4218**	**0.1967**	**4.7200e-003**	**13.7453**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.4883	0.4426	0.0000	18.5520
Unmitigated	7.4883	0.4426	0.0000	18.5520

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Quality Restaurant	13.05	2.6490	0.1566	0.0000	6.5629
Strip Mall	23.84	4.8393	0.2860	0.0000	11.9892
Total		**7.4883**	**0.4425**	**0.0000**	**18.5520**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	13.05	2.6490	0.1566	0.0000	6.5629
Strip Mall	23.84	4.8393	0.2860	0.0000	11.9892
Total		**7.4883**	**0.4425**	**0.0000**	**18.5520**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Energy Demand Calculations for Construction and Operations

Construction Worker Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg/CO2/Gallon	Gallons
Building Construction 1 - Entry Gate Relocation	39,520	148.50	8.78	16,912.97
Paving 1 - Deck Surfacing	990	3.61	8.78	411.25
Building Construction 2 - East Promenade	108,832	299.92	8.78	34,158.97
Paving 2 - Deck Surfacing	990	2.64	8.78	300.25
Building Construction 3 - All Other	105,640	247.13	8.78	28,146.47
Building Coatings	600	1.40	8.78	159.86
Paving 3 - Deck Surfacing	990	2.32	8.78	263.77
Total				**80,089.78**

Construction Vendor Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg/CO2/Gallon	Gallons
Building Construction 1 - Entry Gate Relocation	15,600	204.14	10.21	19,994.12
Paving 1 - Deck Surfacing	0	0.00	10.21	0.00
Building Construction 2 - East Promenade	42,960	528.80	10.21	51,792.83
Paving 2 - Deck Surfacing	0	0.00	10.21	0.00
Building Construction 3 - All Other	41,700	504.25	10.21	49,388.16
Building Coatings	0	0.00	10.21	0.00
Paving 3 - Deck Surfacing	0	0.00	10.21	0.00
Total				**121,175.11**

Construction Haul Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg/CO2/Gallon	Gallons
Building Construction 1 - Entry Gate Relocation	0	0.00	10.21	0.00
Paving 1 - Deck Surfacing	0	0.00	10.21	0.00
Building Construction 2 - East Promenade	0	0.00	10.21	0.00
Paving 2 - Deck Surfacing	0	0.00	10.21	0.00
Building Construction 3 - All Other	0	0.00	10.21	0.00
Building Coatings	0	0.00	10.21	0.00
Paving 3 - Deck Surfacing	0	0.00	10.21	0.00
Total				**0.00**

Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	Kg/CO2/Gallon	Gallons
Building Construction 1 - Entry Gate Relocation	10	368.80	10.21	36,121.81
Paving 1 - Deck Surfacing	6	66.09	10.21	6,473.37
Building Construction 2 - East Promenade	10	1024.69	10.21	100,361.24
Paving 2 - Deck Surfacing	6	66.06	10.21	6,470.47
Building Construction 3 - All Other	10	1141.70	10.21	111,821.92
Building Coatings	1	2.55	10.21	250.08
Paving 3 - Deck Surfacing	6	79.53	10.21	7,789.27
Total				**269,288.16**

Project Construction Assumptions

APPENDIX H

PhaseName	OffRoadEquipmentType	OffRoadEquipmentUn	UsageHours	Days	Total Hours	Pieces of Equi	Equip Hours
Building Construction 1 - Entry Gate R	Cranes	1	7	260	1820	10	19500
Building Construction 1 - Entry Gate R	Forklifts	3	8	260	6240		
Building Construction 1 - Entry Gate R	Generator Sets	1	8	260	2080		
Building Construction 1 - Entry Gate R	Other Construction Equipment	1	7	260	1820		
Building Construction 1 - Entry Gate R	Tractors/Loaders/Backhoes	3	7	260	5460		
Building Construction 1 - Entry Gate R	Welders	1	8	260	2080		
Paving 1 - Deck Surfacing	Pavers	2	8	66	1056	6	3168
Paving 1 - Deck Surfacing	Paving Equipment	2	8	66	1056		
Paving 1 - Deck Surfacing	Rollers	2	8	66	1056		
Building Construction 2 - East Promen	Cranes	1	7	716	5012	10	54416
Building Construction 2 - East Promen	Forklifts	3	8	716	17184		
Building Construction 2 - East Promen	Generator Sets	1	8	716	5728		
Building Construction 2 - East Promen	Other Construction Equipment	1	8	716	5728		
Building Construction 2 - East Promen	Tractors/Loaders/Backhoes	3	7	716	15036		
Building Construction 2 - East Promen	Welders	1	8	716	5728		
Paving 2 - Deck Surfacing	Pavers	2	8	66	1056	6	3168
Paving 2 - Deck Surfacing	Paving Equipment	2	8	66	1056		
Paving 2 - Deck Surfacing	Rollers	2	8	66	1056		
Building Construction 3 - All Other	Cranes	1	7	695	4865	10	52820
Building Construction 3 - All Other	Forklifts	3	8	695	16680		
Building Construction 3 - All Other	Generator Sets	1	8	695	5560		
Building Construction 3 - All Other	Other Construction Equipment	1	8	695	5560		
Building Construction 3 - All Other	Tractors/Loaders/Backhoes	3	7	695	14595		
Building Construction 3 - All Other	Welders	1	8	695	5560		
Building Coatings	Air Compressors	1	6	20	120	1	120
Paving 3 - Deck Surfacing	Pavers	2	8	66	1056	6	3168
Paving 3 - Deck Surfacing	Paving Equipment	2	8	66	1056		
Paving 3 - Deck Surfacing	Rollers	2	8	66	1056		

PhaseName	PhaseType	PhaseStart	PhaseEndD	NumDaysW	NumDays
Building Construction 1 - Entry Gate	Building Co	2019/01/0	2019/12/3	5	260
Paving 1 - Deck Surfacing	Paving	2020/01/0	2020/04/0	5	66
Building Construction 2 - East Prom	Building Co	2027/01/0	2029/09/2	5	716
Paving 2 - Deck Surfacing	Paving	2029/10/0	2029/12/3	5	66
Building Construction 3 - All Other	Building Co	2037/01/0	2039/08/3	5	695
Building Coatings	Architectu	2039/09/0	2039/09/2	5	20
Paving 3 - Deck Surfacing	Paving	2039/09/2	2039/12/2	5	66

PhaseName	WorkerTripNumber	VendorTripNumber	HaulingTripNumber	Days	Worker Trips	Vendor Trips
Building Construction 1 - Entry Gate R	152	60	0	260	39520	15600
Paving 1 - Deck Surfacing	15	0	0	66	990	0
Building Construction 2 - East Promen	152	60	0	716	108832	42960
Paving 2 - Deck Surfacing	15	0	0	66	990	0
Building Construction 3 - All Other	152	60	0	695	105640	41700
Building Coatings	30	0	0	20	600	0
Paving 3 - Deck Surfacing	15	0	0	66	990	0

Mobile Source Gasoline Demand

Project Phase	Vehicle MT CO_2	Kg/CO2/Gallon	Gallons
Quality Restaurant	177.79	8.78	20,249.61
Other Commercial/Retail	366.43	8.78	41,734.06
Total	**544.22**		**61,983.67**

Mobile Source Diesel Demand

Project Phase	Vehicle MT CO_2	Kg/CO2/Gallon	Gallons
Quality Restaurant	49.64	10.21	4,861.95
Other Commercial/Retail	102.31	10.21	10,020.40
Total	**151.95**		**14,882.35**

Building and Lighting Electricity Demand

Project Phase	Square Feet	Annual Average kWh/ Square Foot	kWh/Year
Building and Lighting Electricity Demand			
Quality Restaurant	14,300	36.57	522,898.72
Other Commercial/Retail	22,700	36.57	830,056.02
Wharf Expansion	74,240	0.42	31,357.56
Total			**1,384,312.30**
Water/Wastewater Electricity Demand			
Quality Restaurant	14,300	1.64	23,486.61
Other Commercial/Retail	22,700	0.40	9,098.33
Wharf Expansion	74,240	0.00	0.00
Total			**32,584.93**

Natural Gas Demand

Project Phase	Square Feet	Annual Average Therms/ Square Foot	Therms/Year
Quality Restaurant	14,300	1.07	15,343.10
Other Commercial/Retail	22,700	1.07	24,355.82
Wharf Expansion	74,240	0.00	0.00
Total			**39,698.92**

Existing Wharf Energy Demand

	Usage Electricity (kWh)	Electricity Cost ($)	Type of Natural Gas (see list below)	Usage Natural Gas (therms)	Natural Gas Cost ($)
Major Facilities - Reported Individually					
Facility Total: Municipal Wharf					
Lifeguard HQ	4,070.00	$925.45		-	$0.00
Wharf	2,802.00	$661.43		-	$0.00
Lifeguard HQ	-	$0.00		187.00	$253.91
Wharf	756.00	$348.38		-	$0.00
Wharf Lights	12,234.00	$3,640.83		-	$0.00
Municipal Wharf	6,847.00	$1,936.32		-	$0.00
Municipal Wharf	5,368.00	$1,096.08		-	$0.00
Wharf	-	$296.18		-	$0.00
Wharf	6,957.00	$1,478.65		-	$0.00
Wharf	424.00	$146.17		-	$0.00
Wharf	2,973.00	$853.20		-	$0.00
Wharf	3,166.00	$736.94		-	$0.00
Wharf	-	$0.00		724.00	$906.53
Wharf	-	$0.00		-	$0.00
Wharf	10,595.00	$2,325.75		-	$0.00
Wharf	2,436.00	$709.29		-	$0.00
Wharf	20,611.00	$4,297.90		-	$0.00
Wharf	12,935.00	$2,560.94		-	$0.00
Wharf	5,776.00	$1,280.12		-	$0.00
Wharf	4,988.00	$1,134.55		-	$0.00
Wharf Gate	9,711.00	$2,020.08		-	$0.00
Subtotal:	112,649	$26,448.26		911	$1,160.44
Wharf SF (road, parking, sidew	0.42	kWh/SF		0.003	therms/SF
266700			natural gas would be for Lifeguard HQ and wharf office		
Expansion SF	31357.5619	kWh	increased energy usage		
74240					

Existing Wharf - Building Energy Demand

Annual Energy Use

	Space Type	ElectricityEUI (kWh/SF)	Natural Gas EUI (CF/SF)	SF	Estimated kWh	Estimated therms
Boat Rentals	Other	19.5	13.2	1368	26676	180.576
Surf Life	Retail	14.9	13.2	1440	21456	190.08
Bonnie's	Retail	14.9	13.2	1080	16092	142.56
SC Bay Co	Retail	14.9	13.2	1460	21754	192.72
Sockshiop	Retail	14.9	13.2	416	6198.4	54.912
Firefish Grill	Food Service	43.2	137.6	7948	343353.6	10936.448
Riva's	Food Service	43.2	137.6	2400	103680	3302.4
Gilda's	Food Service	43.2	137.6	5257	227102.4	7233.632
Ports of Call	Retail	14.9	13.2	2736	40766.4	361.152
Miramar	Food Service	43.2	137.6	7104	306892.8	9775.104
Noland's	Retail	14.9	13.2	1968	29323.2	259.776
Splash!	Food Service	43.2	137.6	4670	201744	6425.92
Olitas	Food Service	43.2	137.6	4390	189648	6040.64
Marini's	Food Service	43.2	137.6	2000	86400	2752
Vino Prima	Other	19.5	13.2	1702	33189	224.664
Made in SC	Retail	14.9	13.2	1030	15347	135.96
Stagnaro Bros	Food Service	43.2	137.6	5739	247924.8	7896.864
Dolphin	Food Service	43.2	137.6	1476	63763.2	2030.976
				54,184	**1,981,311**	**58,136**
					36.57	1.07
					kWh/SF	therms/SF

Assumptions:

1. EUIs come from the 2012 Commercial Buildings Energy consumption survey, released in 2016 by the US Energy Information Administration
2. 1 therm = 100 CF

Expansion SF	37000		1,352,954.74	39,698.92
			kWh/yr	therms/yr

Project Water/Wastewater Energy Demand

APPENDIX H

From CalEEMod 2016

	Units	Potable Water - Indoor	Potable Water - Outdoor	Total
Electricity Intensity Factor				
Supply	kwh/MG	2,117	2,117	N/A
Treat	kwh/MG	111	111	N/A
Distribute	kwh/MG	1,272	1,272	N/A
Wastewater Treatment	kwh/MG	1,911	-	N/A
Total	**kwh/MG**	**5,411**	**3,500**	N/A
Water - Quality Rest	**MG/yr**	**4.3**	**0.0**	**4.3**
Water - Strip Mall	**MG/yr**	**1.7**	**0.0**	**1.7**
Electricity Usage - Quality Restaurant	**kwh/yr**	**23,487**	**0**	**23,487**
Electricity Usage - Strip Mall	**kwh/yr**	**9,098**	**0**	**9,098**