

SAMOA TOWN MASTER PLAN – GREENHOUSE GAS EMISSION ASSESSMENT EUREKA, CALIFORNIA

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Introduction

The purpose of this report is to provide greenhouse gas emissions estimates associated with the build out of the Samoa Town Master Plan in Humboldt County near Eureka, California. The proposed Town Master Plan consists of subdividing and developing the former mill town, lumber storage and processing area to provide a diverse mix of land uses. Key elements of the Samoa Town Master Plan include:

- A commercial area at Vance Avenue and Cutten Street;
- A business park along the south portion of Vance Avenue;
- The Samoa Cookhouse area which includes the existing Samoa Cookhouse, a Maritime Museum, the existing gymnasium, baseball field and the elementary school, and a new small RV park;
- A total of 198 new residential units are proposed, including a residential district west of Vance Avenue;
- Live/work studios along Cadman Court;
- Multi-family housing (80 units) east of Vance Avenue and north of Soule Street;
- Coastal dependent industrial land east of the NCRA railroad tracks;
- Open space and natural areas east of New Navy Base Road and at other locations;
- Roads, trails and pathways;
- A central park and town square; and
- Public facilities, including a wastewater treatment plant, corporation yard and utility substation.

This report provides estimates of greenhouse gas (GHG) emissions using the California Emissions Estimator Model, CalEEMod, version 2013.2.2. This model provides annual GHG emissions in terms metric tons per year based on land use type and size.

Setting

Gases that trap heat in the atmosphere, greenhouse gases (GHGs), regulate the earth's temperature. This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly: methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities.

- Carbon dioxide and nitrous oxide are byproducts of fossil fuel combustion.
- Nitrous oxide is associated with agricultural operations such as fertilization of crops.
- Methane is commonly created by off-gassing from agricultural practices (e.g. keeping livestock) and landfill operation.
- Chlorofluorocarbons were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- Hydrofluorocarbons are now used as a substitute for chlorofluorocarbons in refrigeration and cooling.
- Perfluorocarbons and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with carbon dioxide being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger with a GWP of 23,900. In GHG emission inventories, the mass of each gas is multiplied by its GWP and is measured in units of carbon dioxide equivalent emissions (CO₂e).

GHG Emissions

Greenhouse gas (GHG) emissions were computed for the full build out scenario of the Town Master Plan. Specifically, construction emissions were computed for an assumed 5-year construction period with operational emissions in 2020. The California Emissions Estimator Model Version 2013.2.2 (CalEEMod) was used to predict GHG emissions from construction and operation of the project. The model predicts emissions of GHGs in the form of equivalent CO₂ emissions CO₂e. In order to obtain the CO₂e, an individual GHG is multiplied by its GWP. CalEEMod uses GWP from the IPCC Second Assessment Report (SAR)¹. GWPs from the SAR were selected for use in CalEEMod instead of more recent GWPs since they are the basis used in regulations and international protocols at this time (e.g., California and Federal GHG Reporting Programs, The Climate Registry).

The land use types and sizes, trip generation rates and other plan-specific information available were input to the model. The use of this model for evaluating emissions from land use projects is recommended by the California Association of Air Pollution Control Officers (CAPCOA) and air districts in California. Unless otherwise noted below, the CalEEMod model defaults for Humboldt County were used. CalEEMod provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport.

The model uses mobile emission factors from the California Air Resources Board's EMFAC2011 model and adjusts these based on the effect of new regulations to reduce GHG emissions. These regulations include the Pavley Rule that increases fleet efficiency (reducing fuel consumption) and the low carbon fuel standard. This model is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to fuel efficiency standards and low carbon fuels. Any adjustments to the modeling are described below. CalEEMod input and output worksheets are included in Attachment 1.

Construction Emissions

The CalEEMod model was used to grossly predict construction GHG emissions. Construction schedules are not available, so the model defaults were used based on the land use size and types. The construction schedule was adjusted to fit within a 5-year period, assumed to be 2015 through 2019. The model default construction phasing and equipment usage was assumed.

Total CO₂e emissions associated with construction over the 5-year period would be 1,864 MT of CO₂e, respectively, per year. These represent emissions from on-site construction equipment use, vendor trips and worker travel. No truck trips associated with import or export of fill were included in the modeling.

Operational Emissions

The CalEEMod model along with the project vehicle trip generation rates and estimates were used to predict operational period GHG emissions associated with operation of a fully developed site under the proposed project. The model uses mobile emission factors from the California Air Resources Board's EMFAC2011 model and adjusts these based on the effect of new regulations to reduce GHG emissions. These regulations include the Pavley Rule that increases fleet efficiency (reducing fuel consumption) and the low carbon fuel standard. This model is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to fuel efficiency standards and low carbon fuels. Adjustments to the modeling are described below.

¹ IPCC. 1995. Second Assessment Report. Available at http://www.ipcc.ch/ipccreports/sar/wg_I/ipcc_sar_wg_I_full_report.pdf

Year of Analysis

Emissions associated with vehicle travel depend on the year of analysis. The earlier the year, the higher the emission rates as CalEEMod uses the California Air Resources Board's EMFAC2011 motor vehicle emissions model. This model assumes reduced emission rates as newer vehicles with lower emission rates replace older, more polluting vehicles through attrition of the overall vehicle fleet. The earliest year the project could be possibly constructed and operated was assumed to be 2020. Full build out occurring later than 2020 would result in lower emissions.

Land Uses

The 2013 Tentative Map land use types and sizes were input to the model. The model requires inputs in a variety of size types. However, some land uses were provided in units that are not accepted by the model. Therefore, adjustments had to be made, such that the associated total number of trips could be correctly computed. For example, the Business Park was shown as 12.3 acres. Since CalEEMod only accepts the size in 1,00s of square feet, the land use was estimated at 185,000 square feet with a trip rate of 9.0 trips per 1,000 square feet. This size and trip rate provides almost the same total number of trips generated by that use. Table 1 provides the land uses, size and trip generation rate entered to the CalEEMod model.

Table 1 Modeled Land Uses and Trip Rates

Land Use Type (CalEEMod Type)	Size Provided	Size Entered into CalEEMod	Daily Trip Generation Rate (after Internal Trip Adjustment)
Business Park (Office Park)	10.9 acres	143 ksf	10.28
Museum (Library)	1 ksf	1 ksf	51.00
General Light Industry (General Light Industry)	35 acres	35 ksf	4.66
Mini-Warehouse (Unrefrigerated Warehouse)	0.6 acres	3 ksf	5.67
Hotel (Hotel)	30 rooms	30 rooms	7.37
Apartment (Apartment Low Rise)	80 units	80 dwelling unit	5.05
Single Family Detached (Single Family Housing)	198 units	198 dwelling unit	6.89
Gasoline Service Station (Convenience Market with Fuel pumps)	4 fueling posts	4 pumps	40.75
Specialty Retail (Strip Mall)	23 ksf	23 ksf	11.08
RV and Tent Camping (City Park)	30 Sites	15 acres	9.54

Trip Generation Rates

CalEEMod allows the user to enter specific trip generation rates. Town Master Plan specific trip generation rates were entered for each land use. These trip rates take into account the unique setting of the plan location that would lead to a greater internal trip capture rate. Trip rates provided and entered to the model include the discount for internal capture. CalEEMod also includes Saturday and Sunday trip rates. The CalEEMod default relationship between weekday and Saturday and Weekday and Sunday trip rates were applied to the project trip rates to compute weekend trip rates. Project trip rates were assumed to represent weekday trip rates. The weekday trips rates entered into CalEEMod are shown in Table 1.

The trip generation for the Town Master Plan indicates 4,308 net new external trips. Using the trip generation rates in Table 1, CalEEMod predicts 4,309 trips.

Trip Lengths

The CalEEMod default trip lengths were used. CalEEMod allows the user to select an urban or rural setting. The difference is that the rural setting has longer trip lengths. For this assessment, the rural setting was selected since trip generation reflects trips that would mostly be made to destinations outside of Samoa. Calculated distances to Eureka are 5 to 6 miles, almost 10 miles to Arcata and 17 miles to Fortuna. Rural trip lengths range from 6.6 to 16.8 miles, depending on the trip type. Trip types include commute (home-to-work), customer, or other types. Commute trips are the longest, ranging from 14.6 to 16.8 miles, depending on the land use type. Use of urban trip types would have considerably shorter trip lengths. CalEEMod breaks trip purposes down as Primary, Diverted or Pass-by trips. The default trip length is applied to Primary trips. A Diverted trip is one that is considered part of a Primary trip (e.g., a stop at a store slightly diverted from the route home from work). In this case, CalEEMod applies 25 percent of the Primary trip length to the Diverted trip length. A Pass-by trip is considered a stop along a Primary trip, where there is essentially no increased travel distance. The model sets the Pass-by trip length to 0.1 miles, but includes resting and startup emissions.

Energy Usage

New land uses construction would be required to meet the 2013 California Green Building Standards Code that are in effect beginning January 1, 2014. CalEEMod default values are based on 2008 Title 24 building code requirements. Future energy usage should be assumed lower than the CalEEMod default values; however, no adjustments to the model were made.

Electricity Generation

Default CalEEMod rates for energy consumption were assumed in the model. Emissions rates associated with electricity consumption were adjusted to account for Pacific Gas & Electric utility's (PG&E) default CO₂ intensity rate of 641.30 pounds of CO₂ per megawatt of electricity produced.

Water Consumption and Solid Waste Generation

CalEEMod default emission rates for solid waste generation and water consumption were used in this assessment.

GHG Emissions Reporting

Table 1 presents the results of the CalEEMod model analysis in terms of annual metric tons of equivalent CO₂ emissions (MT of CO₂e/yr) by source category. The CalEEMod modeling data are provided in *Attachment 1*.

Table 2 GHG Emissions Reported in Metric Tons

Source Category	Town Plan in 2020
Construction (2015 – 2019)	7,924 total 1,584 per year
Operational Per Year	
Area	424
Energy	1,565
Mobile	4,465
Solid Waste	231
Water	202
Total	7,086

Attachment 1: CalEEMod Output

Samoa Town Master Plan - 2013

Humboldt County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	143.00	1000sqft	10.90	143,000.00	0
Library	1.00	1000sqft	0.20	1,000.00	0
General Light Industry	35.00	1000sqft	0.80	35,000.00	0
Unrefrigerated Warehouse-No Rail	3.00	1000sqft	0.30	3,000.00	0
Hotel	30.00	Room	1.00	43,560.00	0
Apartments Low Rise	80.00	Dwelling Unit	5.00	80,000.00	229
Single Family Housing	198.00	Dwelling Unit	64.29	356,400.00	566
Convenience Market With Gas Pumps	4.00	Pump	0.01	564.70	0
Strip Mall	23.00	1000sqft	0.53	23,000.00	0
City Park	15.00	Acre	15.00	653,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	103
Climate Zone	1			Operational Year	2020

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MW/hr)	641.35	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics - Use defaults, but assume a rural setting

Land Use - Based on Trip Generation Projections

Construction Phase - Default schedule, but adjusted so all work done by 2020

Off-road Equipment -

Vehicle Trips - Adjusted to traffic and weekend rates adjusted based on CalEEMod weekday to Sat/Sun ratio

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	110.00	410.00
tblConstructionPhase	NumDays	1,550.00	1,250.00
tblConstructionPhase	PhaseEndDate	12/28/2017	7/27/2018
tblConstructionPhase	PhaseEndDate	3/4/2020	12/13/2019
tblConstructionPhase	PhaseEndDate	8/17/2016	6/2/2016
tblConstructionPhase	PhaseEndDate	3/6/2020	8/12/2015
tblConstructionPhase	PhaseStartDate	6/3/2016	1/1/2017
tblConstructionPhase	PhaseStartDate	5/21/2015	3/1/2015
tblConstructionPhase	PhaseStartDate	3/17/2016	1/1/2016
tblConstructionPhase	PhaseStartDate	12/14/2019	5/21/2015
tblLandUse	LotAcreage	3.28	10.90
tblLandUse	LotAcreage	0.02	0.20
tblLandUse	LotAcreage	0.07	0.30
tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	7.16	5.50
tblVehicleTrips	ST_TR	204.47	15.49
tblVehicleTrips	ST_TR	1.32	0.89
tblVehicleTrips	ST_TR	8.19	7.37
tblVehicleTrips	ST_TR	46.55	42.33
tblVehicleTrips	ST_TR	1.64	1.44

tblVehicleTrips	ST_TR	10.08	7.54
tblVehicleTrips	ST_TR	42.04	10.53
tblVehicleTrips	ST_TR	2.59	5.67
tblVehicleTrips	ST_TR	1.59	9.54
tblVehicleTrips	SU_TR	6.07	4.65
tblVehicleTrips	SU_TR	166.88	12.63
tblVehicleTrips	SU_TR	0.68	0.47
tblVehicleTrips	SU_TR	5.95	5.38
tblVehicleTrips	SU_TR	25.49	22.95
tblVehicleTrips	SU_TR	0.76	0.72
tblVehicleTrips	SU_TR	8.77	6.61
tblVehicleTrips	SU_TR	20.43	5.10
tblVehicleTrips	SU_TR	2.59	5.67
tblVehicleTrips	SU_TR	1.59	9.54
tblVehicleTrips	WD_TR	6.59	5.05
tblVehicleTrips	WD_TR	542.60	40.75
tblVehicleTrips	WD_TR	6.97	4.66
tblVehicleTrips	WD_TR	8.17	7.37
tblVehicleTrips	WD_TR	56.24	51.00
tblVehicleTrips	WD_TR	11.42	10.28
tblVehicleTrips	WD_TR	9.57	7.18
tblVehicleTrips	WD_TR	44.32	11.08
tblVehicleTrips	WD_TR	2.59	5.67
tblVehicleTrips	WD_TR	1.59	9.54

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	1.9659	14.5199	18.2836	0.0214	1.9968	0.6896	2.6864	0.7875	0.6406	1.4280	0.0000	1,862.410 3	1,862.410 3	0.2924	0.0000	1,868.550 4
2016	1.5896	10.2314	15.7157	0.0207	1.5885	0.4723	2.0607	0.5256	0.4394	0.9650	0.0000	1,732.815 7	1,732.815 7	0.2156	0.0000	1,737.343 9
2017	12.2474	6.7654	13.7726	0.0197	1.0493	0.2971	1.3464	0.2823	0.2796	0.5619	0.0000	1,565.792 6	1,565.792 6	0.1375	0.0000	1,568.681 0
2018	7.4352	5.9476	12.3475	0.0189	0.9882	0.2445	1.2326	0.2660	0.2298	0.4958	0.0000	1,464.867 5	1,464.867 5	0.1266	0.0000	1,467.525 6
2019	0.9149	4.9773	10.4598	0.0168	0.8587	0.1932	1.0519	0.2314	0.1810	0.4124	0.0000	1,279.538 2	1,279.538 2	0.1102	0.0000	1,281.852 3
Total	24.1529	42.4417	70.5792	0.0975	6.4815	1.8966	8.3781	2.0928	1.7704	3.8632	0.0000	7,905.424 4	7,905.424 4	0.8823	0.0000	7,923.953 1

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	24.4644	0.2606	23.5618	8.5000e-003		3.0304	3.0304		3.0303	3.0303	287.1622	123.8080	410.9702	0.2683	0.0226	423.6067
Energy	0.0456	0.4010	0.2491	2.4900e-003		0.0315	0.0315		0.0315	0.0315	0.0000	1,557.539 ⁸	1,557.539 ⁸	0.0587	0.0186	1,564.544 ⁹
Mobile	3.6043	9.5723	36.3632	0.0655	4.3064	0.1213	4.4277	1.1603	0.1118	1.2721	0.0000	4,660.115 ¹	4,660.115 ¹	0.2119	0.0000	4,664.565 ⁹
Waste						0.0000	0.0000		0.0000	0.0000	103.0869	0.0000	103.0869	6.0923	0.0000	231.0245
Water						0.0000	0.0000		0.0000	0.0000	17.4027	133.2570	150.6596	1.7934	0.0435	201.7920
Total	28.1143	10.2340	60.1741	0.0765	4.3064	3.1832	7.4896	1.1603	3.1736	4.3339	407.6518	6,474.719⁹	6,882.371⁷	8.4246	0.0847	7,085.533⁹

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	24.4644	0.2606	23.5618	8.5000e-003		3.0304	3.0304		3.0303	3.0303	287.1622	123.8080	410.9702	0.2683	0.0226	423.6067
Energy	0.0456	0.4010	0.2491	2.4900e-003		0.0315	0.0315		0.0315	0.0315	0.0000	1,557.539 ⁸	1,557.539 ⁸	0.0587	0.0186	1,564.544 ⁹
Mobile	3.6043	9.5723	36.3632	0.0655	4.3064	0.1213	4.4277	1.1603	0.1118	1.2721	0.0000	4,660.115 ¹	4,660.115 ¹	0.2119	0.0000	4,664.565 ⁹
Waste						0.0000	0.0000		0.0000	0.0000	103.0869	0.0000	103.0869	6.0923	0.0000	231.0245
Water						0.0000	0.0000		0.0000	0.0000	17.4027	133.2570	150.6596	1.7931	0.0434	201.7642
Total	28.1143	10.2340	60.1741	0.0765	4.3064	3.1832	7.4896	1.1603	3.1736	4.3339	407.6518	6,474.719⁹	6,882.371⁷	8.4243	0.0846	7,085.506¹

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	5/20/2015	5	100	
2	Building Construction	Building Construction	3/1/2015	12/13/2019	5	1250	
3	Site Preparation	Site Preparation	5/21/2015	8/12/2015	5	60	
4	Grading	Grading	8/13/2015	3/16/2016	5	155	
5	Paving	Paving	1/1/2016	6/2/2016	5	110	
6	Architectural Coating	Architectural Coating	1/1/2017	7/27/2018	5	410	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 0

Residential Indoor: 883,710; Residential Outdoor: 294,570; Non-Residential Indoor: 1,353,787; Non-Residential Outdoor: 451,262
(Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	9	491.00	178.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHD
Demolition	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHD
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHD
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHD
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHD
Architectural Coating	1	98.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHD

3.1 Mitigation Measures Construction

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					
Off-Road	0.2254	2.4182	1.8037	2.0000e-003		0.1225	0.1225	0.1143	0.1143	0.1143	0.0000	187.2063	187.2063	0.0508	0.0000	188.2721
Total	0.2254	2.4182	1.8037	2.0000e-003		0.1225	0.1225	0.1143	0.1143	0.1143	0.0000	187.2063	187.2063	0.0508	0.0000	188.2721

3.2 Demolition - 2015

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	5.7500e-003	0.0103	0.0837	1.1000e-004	8.9900e-003	9.0000e-005	9.0900e-003	2.4000e-003	9.0000e-005	2.4800e-003	0.0000	8.2108	8.2108	6.5000e-004	0.0000	8.2244
Total	5.7500e-003	0.0103	0.0837	1.1000e-004	8.9900e-003	9.0000e-005	9.0900e-003	2.4000e-003	9.0000e-005	2.4800e-003	0.0000	8.2108	8.2108	6.5000e-004	0.0000	8.2244

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.2254	2.4181	1.8037	2.0000e-003		0.1225	0.1225		0.1143	0.1143	0.0000	187.2061	187.2061	0.0508	0.0000	188.2718
Total	0.2254	2.4181	1.8037	2.0000e-003		0.1225	0.1225		0.1143	0.1143	0.0000	187.2061	187.2061	0.0508	0.0000	188.2718

3.2 Demolition - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/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	5.7500e-003	0.0103	0.0837	1.1000e-004	8.9900e-003	9.0000e-005	9.0900e-003	2.4000e-003	9.0000e-005	2.4800e-003	0.0000	8.2108	8.2108	6.5000e-004	0.0000	8.2244
Total	5.7500e-003	0.0103	0.0837	1.1000e-004	8.9900e-003	9.0000e-005	9.0900e-003	2.4000e-003	9.0000e-005	2.4800e-003	0.0000	8.2108	8.2108	6.5000e-004	0.0000	8.2244

3.3 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															
Off-Road	0.4007	3.2883	2.0525	2.9400e-003		0.2318	0.2318		0.2180	0.2180	0.0000	267.1738	267.1738	0.0670	0.0000	268.5815
Total	0.4007	3.2883	2.0525	2.9400e-003		0.2318	0.2318		0.2180	0.2180	0.0000	267.1738	267.1738	0.0670	0.0000	268.5815

3.3 Building Construction - 2015

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.4098	2.3439	4.3251	4.2300e-003	0.1105	0.0435	0.1540	0.0317	0.0400	0.0717	0.0000	385.1924	385.1924	4.1300e-003	0.0000	385.2790
Worker	0.4124	0.7395	5.9993	7.6300e-003	0.6446	6.7800e-003	0.6514	0.1718	6.2000e-003	0.1780	0.0000	588.6014	588.6014	0.0464	0.0000	589.5752
Total	0.8222	3.0833	10.3244	0.0119	0.7551	0.0503	0.8054	0.2035	0.0462	0.2497	0.0000	973.7938	973.7938	0.0505	0.0000	974.8542

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.4007	3.2883	2.0525	2.9400e-003		0.2318	0.2318		0.2180	0.2180	0.0000	267.1735	267.1735	0.0670	0.0000	268.5812
Total	0.4007	3.2883	2.0525	2.9400e-003		0.2318	0.2318		0.2180	0.2180	0.0000	267.1735	267.1735	0.0670	0.0000	268.5812

3.3 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.4098	2.3439	4.3251	4.2300e-003	0.1105	0.0435	0.1540	0.0317	0.0400	0.0717	0.0000	385.1924	385.1924	4.1300e-003	0.0000	385.2790
Worker	0.4124	0.7395	5.9993	7.6300e-003	0.6446	6.7800e-003	0.6514	0.1718	6.2000e-003	0.1780	0.0000	588.6014	588.6014	0.0464	0.0000	589.5752
Total	0.8222	3.0833	10.3244	0.0119	0.7551	0.0503	0.8054	0.2035	0.0462	0.2497	0.0000	973.7938	973.7938	0.0505	0.0000	974.8542

3.3 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	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563

3.3 Building Construction - 2016

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.4095	2.4601	4.6871	5.0300e-003	0.1317	0.0417	0.1734	0.0378	0.0384	0.0761	0.0000	453.8247	453.8247	4.2700e-003	0.0000	453.9142
Worker	0.4363	0.7834	6.3368	9.0800e-003	0.7682	7.5100e-003	0.7758	0.2047	6.8900e-003	0.2116	0.0000	675.8780	675.8780	0.0497	0.0000	676.9210
Total	0.8459	3.2435	11.0239	0.0141	0.8999	0.0492	0.9491	0.2425	0.0452	0.2877	0.0000	1,129.7026	1,129.7026	0.0539	0.0000	1,130.8352

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560

3.3 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.4095	2.4601	4.6871	5.0300e-003	0.1317	0.0417	0.1734	0.0378	0.0384	0.0761	0.0000	453.8247	453.8247	4.2700e-003	0.0000	453.9142
Worker	0.4363	0.7834	6.3368	9.0800e-003	0.7682	7.5100e-003	0.7758	0.2047	6.8900e-003	0.2116	0.0000	675.8780	675.8780	0.0497	0.0000	676.9210
Total	0.8459	3.2435	11.0239	0.0141	0.8999	0.0492	0.9491	0.2425	0.0452	0.2877	0.0000	1,129.702₆	1,129.702₆	0.0539	0.0000	1,130.835₂

3.3 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	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319

3.3 Building Construction - 2017

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.3807	2.2158	4.4843	5.0100e-003	0.1313	0.0346	0.1659	0.0377	0.0318	0.0695	0.0000	445.2814	445.2814	3.8700e-003	0.0000	445.3628
Worker	0.3828	0.6943	5.5758	9.0400e-003	0.7653	7.0200e-003	0.7723	0.2039	6.4600e-003	0.2104	0.0000	646.8830	646.8830	0.0446	0.0000	647.8203
Total	0.7635	2.9100	10.0601	0.0141	0.8966	0.0416	0.9382	0.2416	0.0383	0.2799	0.0000	1,092.1644	1,092.1644	0.0485	0.0000	1,093.1830

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315

3.3 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.3807	2.2158	4.4843	5.0100e-003	0.1313	0.0346	0.1659	0.0377	0.0318	0.0695	0.0000	445.2814	445.2814	3.8700e-003	0.0000	445.3628
Worker	0.3828	0.6943	5.5758	9.0400e-003	0.7653	7.0200e-003	0.7723	0.2039	6.4600e-003	0.2104	0.0000	646.8830	646.8830	0.0446	0.0000	647.8203
Total	0.7635	2.9100	10.0601	0.0141	0.8966	0.0416	0.9382	0.2416	0.0383	0.2799	0.0000	1,092.1644	1,092.1644	0.0485	0.0000	1,093.1830

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
Total	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.3614	2.0663	4.3732	5.0300e-003	0.1318	0.0307	0.1625	0.0378	0.0282	0.0661	0.0000	439.9910	439.9910	3.6800e-003	0.0000	440.0682
Worker	0.3405	0.6238	4.9764	9.0600e-003	0.7682	6.7100e-003	0.7749	0.2047	6.1900e-003	0.2109	0.0000	625.0447	625.0447	0.0408	0.0000	625.9013
Total	0.7019	2.6901	9.3496	0.0141	0.9001	0.0374	0.9375	0.2426	0.0344	0.2770	0.0000	1,065.035₇	1,065.035₇	0.0445	0.0000	1,065.969₅

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
Total	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.3614	2.0663	4.3732	5.0300e-003	0.1318	0.0307	0.1625	0.0378	0.0282	0.0661	0.0000	439.9910	439.9910	3.6800e-003	0.0000	440.0682
Worker	0.3405	0.6238	4.9764	9.0600e-003	0.7682	6.7100e-003	0.7749	0.2047	6.1900e-003	0.2109	0.0000	625.0447	625.0447	0.0408	0.0000	625.9013
Total	0.7019	2.6901	9.3496	0.0141	0.9001	0.0374	0.9375	0.2426	0.0344	0.2770	0.0000	1,065.035₇	1,065.035₇	0.0445	0.0000	1,065.969₅

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2928	2.6102	2.1315	3.3400e-003		0.1600	0.1600		0.1504	0.1504	0.0000	291.4829	291.4829	0.0709	0.0000	292.9722
Total	0.2928	2.6102	2.1315	3.3400e-003		0.1600	0.1600		0.1504	0.1504	0.0000	291.4829	291.4829	0.0709	0.0000	292.9722

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.3296	1.8293	4.0498	4.8000e-003	0.1258	0.0270	0.1528	0.0361	0.0249	0.0610	0.0000	413.0840	413.0840	3.3900e-003	0.0000	413.1552
Worker	0.2925	0.5379	4.2785	8.6400e-003	0.7329	6.1600e-003	0.7391	0.1953	5.7100e-003	0.2010	0.0000	574.9714	574.9714	0.0359	0.0000	575.7249
Total	0.6221	2.3672	8.3283	0.0134	0.8587	0.0332	0.8919	0.2314	0.0306	0.2620	0.0000	988.0554	988.0554	0.0393	0.0000	988.8801

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.2928	2.6101	2.1315	3.3400e-003		0.1600	0.1600		0.1504	0.1504	0.0000	291.4825	291.4825	0.0709	0.0000	292.9718
Total	0.2928	2.6101	2.1315	3.3400e-003		0.1600	0.1600		0.1504	0.1504	0.0000	291.4825	291.4825	0.0709	0.0000	292.9718

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.3296	1.8293	4.0498	4.8000e-003	0.1258	0.0270	0.1528	0.0361	0.0249	0.0610	0.0000	413.0840	413.0840	3.3900e-003	0.0000	413.1552
Worker	0.2925	0.5379	4.2785	8.6400e-003	0.7329	6.1600e-003	0.7391	0.1953	5.7100e-003	0.2010	0.0000	574.9714	574.9714	0.0359	0.0000	575.7249
Total	0.6221	2.3672	8.3283	0.0134	0.8587	0.0332	0.8919	0.2314	0.0306	0.2620	0.0000	988.0554	988.0554	0.0393	0.0000	988.8801

3.4 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1578	1.7067	1.2790	1.1700e-003		0.0927	0.0927		0.0852	0.0852	0.0000	111.9034	111.9034	0.0334	0.0000	112.6049
Total	0.1578	1.7067	1.2790	1.1700e-003	0.5420	0.0927	0.6346	0.2979	0.0852	0.3832	0.0000	111.9034	111.9034	0.0334	0.0000	112.6049

3.4 Site Preparation - 2015

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	4.1400e-003	7.4300e-003	0.0603	8.0000e-005	6.4700e-003	7.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7900e-003	0.0000	5.9118	5.9118	4.7000e-004	0.0000	5.9216
Total	4.1400e-003	7.4300e-003	0.0603	8.0000e-005	6.4700e-003	7.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7900e-003	0.0000	5.9118	5.9118	4.7000e-004	0.0000	5.9216

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1578	1.7067	1.2790	1.1700e-003		0.0927	0.0927		0.0852	0.0852	0.0000	111.9032	111.9032	0.0334	0.0000	112.6048
Total	0.1578	1.7067	1.2790	1.1700e-003	0.5420	0.0927	0.6346	0.2979	0.0852	0.3832	0.0000	111.9032	111.9032	0.0334	0.0000	112.6048

3.4 Site Preparation - 2015**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.1400e-003	7.4300e-003	0.0603	8.0000e-005	6.4700e-003	7.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7900e-003	0.0000	5.9118	5.9118	4.7000e-004	0.0000	5.9216
Total	4.1400e-003	7.4300e-003	0.0603	8.0000e-005	6.4700e-003	7.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7900e-003	0.0000	5.9118	5.9118	4.7000e-004	0.0000	5.9216

3.5 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					0.6722	0.0000	0.6722	0.2787	0.0000	0.2787	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3421	3.9919	2.5674	3.1200e-003		0.1920	0.1920		0.1767	0.1767	0.0000	297.1532	297.1532	0.0887	0.0000	299.0161
Total	0.3421	3.9919	2.5674	3.1200e-003	0.6722	0.1920	0.8642	0.2787	0.1767	0.4554	0.0000	297.1532	297.1532	0.0887	0.0000	299.0161

3.5 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	7.7500e-003	0.0139	0.1127	1.4000e-004	0.0121	1.3000e-004	0.0122	3.2300e-003	1.2000e-004	3.3400e-003	0.0000	11.0573	11.0573	8.7000e-004	0.0000	11.0755
Total	7.7500e-003	0.0139	0.1127	1.4000e-004	0.0121	1.3000e-004	0.0122	3.2300e-003	1.2000e-004	3.3400e-003	0.0000	11.0573	11.0573	8.7000e-004	0.0000	11.0755

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	0.3421	3.9919	2.5674	3.1200e-003	0.6722	0.0000	0.6722	0.2787	0.0000	0.2787	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3421	3.9919	2.5674	3.1200e-003	0.6722	0.1920	0.1920	0.1767	0.1767	0.1767	0.0000	297.1528	297.1528	0.0887	0.0000	299.0158
Total	0.3421	3.9919	2.5674	3.1200e-003	0.6722	0.1920	0.8642	0.2787	0.1767	0.4554	0.0000	297.1528	297.1528	0.0887	0.0000	299.0158

3.5 Grading - 2015**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	7.7500e-003	0.0139	0.1127	1.4000e-004	0.0121	1.3000e-004	0.0122	3.2300e-003	1.2000e-004	3.3400e-003	0.0000	11.0573	11.0573	8.7000e-004	0.0000	11.0755
Total	7.7500e-003	0.0139	0.1127	1.4000e-004	0.0121	1.3000e-004	0.0122	3.2300e-003	1.2000e-004	3.3400e-003	0.0000	11.0573	11.0573	8.7000e-004	0.0000	11.0755

3.5 Grading - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6722	0.0000	0.6722	0.2787	0.0000	0.2787	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1750	2.0200	1.3267	1.6700e-003		0.0968	0.0968		0.0890	0.0890	0.0000	157.1285	157.1285	0.0474	0.0000	158.1238
Total	0.1750	2.0200	1.3267	1.6700e-003	0.6722	0.0968	0.7690	0.2787	0.0890	0.3678	0.0000	157.1285	157.1285	0.0474	0.0000	158.1238

3.5 Grading - 2016

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	3.6800e-003	6.6000e-003	0.0534	8.0000e-005	6.4700e-003	6.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7800e-003	0.0000	5.6960	5.6960	4.2000e-004	0.0000	5.7048
Total	3.6800e-003	6.6000e-003	0.0534	8.0000e-005	6.4700e-003	6.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7800e-003	0.0000	5.6960	5.6960	4.2000e-004	0.0000	5.7048

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.6722	0.0000	0.6722	0.2787	0.0000	0.2787	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1749	2.0200	1.3267	1.6700e-003		0.0968	0.0968		0.0890	0.0890	0.0000	157.1283	157.1283	0.0474	0.0000	158.1236
Total	0.1749	2.0200	1.3267	1.6700e-003	0.6722	0.0968	0.7690	0.2787	0.0890	0.3678	0.0000	157.1283	157.1283	0.0474	0.0000	158.1236

3.5 Grading - 2016

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	3.6800e-003	6.6000e-003	0.0534	8.0000e-005	6.4700e-003	6.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7800e-003	0.0000	5.6960	5.6960	4.2000e-004	0.0000	5.7048
Total	3.6800e-003	6.6000e-003	0.0534	8.0000e-005	6.4700e-003	6.0000e-005	6.5400e-003	1.7300e-003	6.0000e-005	1.7800e-003	0.0000	5.6960	5.6960	4.2000e-004	0.0000	5.7048

3.6 Paving - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.1149	1.2312	0.8150	1.2300e-003		0.0694	0.0694		0.0638	0.0638	0.0000	115.5760	115.5760	0.0349	0.0000	116.3081
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1149	1.2312	0.8150	1.2300e-003		0.0694	0.0694		0.0638	0.0638	0.0000	115.5760	115.5760	0.0349	0.0000	116.3081

3.6 Paving - 2016

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	5.6200e-003	0.0101	0.0816	1.2000e-004	9.8900e-003	1.0000e-004	9.9900e-003	2.6400e-003	9.0000e-005	2.7200e-003	0.0000	8.7022	8.7022	6.4000e-004	0.0000	8.7157
Total	5.6200e-003	0.0101	0.0816	1.2000e-004	9.8900e-003	1.0000e-004	9.9900e-003	2.6400e-003	9.0000e-005	2.7200e-003	0.0000	8.7022	8.7022	6.4000e-004	0.0000	8.7157

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.1149	1.2312	0.8150	1.2300e-003		0.0694	0.0694		0.0638	0.0638	0.0000	115.5759	115.5759	0.0349	0.0000	116.3080
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1149	1.2312	0.8150	1.2300e-003		0.0694	0.0694		0.0638	0.0638	0.0000	115.5759	115.5759	0.0349	0.0000	116.3080

3.6 Paving - 2016**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	5.6200e-003	0.0101	0.0816	1.2000e-004	9.8900e-003	1.0000e-004	9.9900e-003	2.6400e-003	9.0000e-005	2.7200e-003	0.0000	8.7022	8.7022	6.4000e-004	0.0000	8.7157
Total	5.6200e-003	0.0101	0.0816	1.2000e-004	9.8900e-003	1.0000e-004	9.9900e-003	2.6400e-003	9.0000e-005	2.7200e-003	0.0000	8.7022	8.7022	6.4000e-004	0.0000	8.7157

3.7 Architectural Coating - 2017**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	10.9610					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	11.0042	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.0764	0.1386	1.1129	1.8000e-003	0.1528	1.4000e-003	0.1542	0.0407	1.2900e-003	0.0420	0.0000	129.1131	129.1131	8.9100e-003	0.0000	129.3002
Total	0.0764	0.1386	1.1129	1.8000e-003	0.1528	1.4000e-003	0.1542	0.0407	1.2900e-003	0.0420	0.0000	129.1131	129.1131	8.9100e-003	0.0000	129.3002

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	10.9610					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	11.0042	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.0764	0.1386	1.1129	1.8000e-003	0.1528	1.4000e-003	0.1542	0.0407	1.2900e-003	0.0420	0.0000	129.1131	129.1131	8.9100e-003	0.0000	129.3002
Total	0.0764	0.1386	1.1129	1.8000e-003	0.1528	1.4000e-003	0.1542	0.0407	1.2900e-003	0.0420	0.0000	129.1131	129.1131	8.9100e-003	0.0000	129.3002

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	6.3237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.1504	0.1391	2.2000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	19.1494	19.1494	1.8200e-003	0.0000	19.1877
Total	6.3461	0.1504	0.1391	2.2000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	19.1494	19.1494	1.8200e-003	0.0000	19.1877

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/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	0.0391	0.0716	0.5708	1.0400e-003	0.0881	7.7000e-004	0.0889	0.0235	7.1000e-004	0.0242	0.0000	71.6979	71.6979	4.6800e-003	0.0000	71.7962
Total	0.0391	0.0716	0.5708	1.0400e-003	0.0881	7.7000e-004	0.0889	0.0235	7.1000e-004	0.0242	0.0000	71.6979	71.6979	4.6800e-003	0.0000	71.7962

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															
Archit. Coating	6.3237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.1504	0.1391	2.2000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	19.1494	19.1494	1.8200e-003	0.0000	19.1876
Total	6.3461	0.1504	0.1391	2.2000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	19.1494	19.1494	1.8200e-003	0.0000	19.1876

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
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	0.0391	0.0716	0.5708	1.0400e-003	0.0881	7.7000e-004	0.0889	0.0235	7.1000e-004	0.0242	0.0000	71.6979	71.6979	4.6800e-003	0.0000	71.7962
Total	0.0391	0.0716	0.5708	1.0400e-003	0.0881	7.7000e-004	0.0889	0.0235	7.1000e-004	0.0242	0.0000	71.6979	71.6979	4.6800e-003	0.0000	71.7962

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Mitigated	3.6043	9.5723	36.3632	0.0655	4.3064	0.1213	4.4277	1.1603	0.1118	1.2721	0.0000	4,660.1151	4,660.1151	0.2119	0.0000	4,664.5659
Unmitigated	3.6043	9.5723	36.3632	0.0655	4.3064	0.1213	4.4277	1.1603	0.1118	1.2721	0.0000	4,660.1151	4,660.1151	0.2119	0.0000	4,664.5659

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Apartments Low Rise	404.00	440.00	372.00	1,504,487	1,504,487
Convenience Market With Gas Pumps	163.00	61.96	50.52	65,011	65,011
General Light Industry	163.10	31.15	16.45	476,365	476,365
Hotel	221.10	221.10	161.40	427,092	427,092
Library	51.00	42.33	22.95	99,238	99,238
Office Park	1,470.04	205.92	102.96	3,168,095	3,168,095
Single Family Housing	1,421.64	1,492.92	1308.78	5,264,591	5,264,591
Strip Mall	254.84	242.19	117.30	372,474	372,474
Unrefrigerated Warehouse-No Rail	17.01	17.01	17.01	65,718	65,718
City Park	143.10	143.10	143.10	352,914	352,914
Total	4,308.83	2,897.68	2,312.47	11,795,985	11,795,985

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	16.80	7.10	7.90	42.30	19.60	38.10				86	11	3
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00				14	21	65
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00				92	5	3
Hotel	14.70	6.60	6.60	19.40	61.60	19.00				58	38	4
Library	14.70	6.60	6.60	52.00	43.00	5.00				44	44	12
Office Park	14.70	6.60	6.60	33.00	48.00	19.00				82	15	3
Single Family Housing	16.80	7.10	7.90	42.30	19.60	38.10				86	11	3
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00				45	40	15
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00				92	5	3
City Park	14.70	6.60	6.60	33.00	48.00	19.00				66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.422018	0.107001	0.174240	0.131471	0.086089	0.009012	0.015321	0.038711	0.002260	0.001585	0.007944	0.001281	0.003067

5.0 Electricity Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
		tons/yr											MT/yr				
...	Electricity Mitigated	...	...	...	...	...	0.0000	0.0000	...	0.0000	0.0000	0.0000	1,106.294 ₄	1,106.294 ₄	0.0500	0.0104	1,110.553 ₃
...	Electricity Unmitigated	...	...	...	...	...	0.0000	0.0000	...	0.0000	0.0000	0.0000	1,106.294 ₄	1,106.294 ₄	0.0500	0.0104	1,110.553 ₃
...	Natural Gas Mitigated	0.0456	0.4010	0.2491	2.4900e-003	...	0.0315	0.0315	...	0.0315	0.0315	0.0000	451.2454	451.2454	8.6500e-003	8.2700e-003	453.9917
...	Natural Gas Unmitigated	0.0456	0.4010	0.2491	2.4900e-003	...	0.0315	0.0315	...	0.0315	0.0315	0.0000	451.2454	451.2454	8.6500e-003	8.2700e-003	453.9917

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				
Apartment Low Rise	1.06542e+006	5.7400e-003	0.0491	0.0209	3.1000e-004	3.9700e-003	3.9700e-003	3.9700e-003	3.9700e-003	3.9700e-003	3.9700e-003	0.0000	56.8549	56.8549	1.0900e-003	1.0400e-003	57.2009
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	0.0000	0.0000
Convenience Market With Gas	4286.07	2.0000e-005	2.1000e-004	1.8000e-004	0.0000	2.0000e-005	2.0000e-005	2.0000e-005	2.0000e-005	2.0000e-005	2.0000e-005	0.0000	0.2287	0.2287	0.0000	0.0000	0.2301
General Light Industry	128800	6.9000e-004	6.3100e-003	5.3000e-003	4.0000e-005	4.8000e-004	4.8000e-004	4.8000e-004	4.8000e-004	4.8000e-004	4.8000e-004	0.0000	6.8733	6.8733	1.3000e-004	1.3000e-004	6.9151
Hotel	951786	5.1300e-003	0.0467	0.0392	2.8000e-004	3.5500e-003	3.5500e-003	3.5500e-003	3.5500e-003	3.5500e-003	3.5500e-003	0.0000	50.7909	50.7909	9.7000e-004	9.3000e-004	51.1000
Library	3680	2.0000e-005	1.8000e-004	1.5000e-004	0.0000	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.1964	0.1964	0.0000	0.0000	0.1976
Office Park	2.59688e+006	0.0140	0.1273	0.1069	7.6000e-004	9.6700e-003	9.6700e-003	9.6700e-003	9.6700e-003	9.6700e-003	9.6700e-003	0.0000	138.5794	138.5794	2.6600e-003	2.5400e-003	139.4228
Single Family Housing	3.5306e+006	0.0190	0.1627	0.0692	1.0400e-003	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0000	188.4061	188.4061	3.6100e-003	3.4500e-003	189.5527
Strip Mall	174570	9.4000e-004	8.5600e-003	7.1900e-003	5.0000e-005	6.5000e-004	6.5000e-004	6.5000e-004	6.5000e-004	6.5000e-004	6.5000e-004	0.0000	9.3157	9.3157	1.8000e-004	1.7000e-004	9.3724
Unrefrigerated Warehouse No Pail	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0456	0.4010	0.2491	2.4800e-003	0.0315	0.0315	0.0315		0.0315	0.0315	0.0000	451.2455	451.2455	8.6400e-003	8.2600e-003	453.9916

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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
Convenience Market With Gas Pump	4286.07	2.0000e-005	2.1000e-004	1.8000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2287	0.2287	0.0000	0.0000	0.2301
General Light Industry	128800	6.9000e-004	6.3100e-003	5.3000e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8733	6.8733	1.3000e-004	1.3000e-004	6.9151
Hotel	951786	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	50.7909	50.7909	9.7000e-004	9.3000e-004	51.1000
Library	3680	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1964	0.1964	0.0000	0.0000	0.1976
Office Park	2.59688e+006	0.0140	0.1273	0.1069	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.5794	138.5794	2.6600e-003	2.5400e-003	139.4228
Single Family Housing	3.5306e+006	0.0190	0.1627	0.0692	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.4061	188.4061	3.6100e-003	3.4500e-003	189.5527
Strip Mall	174570	9.4000e-004	8.5600e-003	7.1900e-003	5.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	9.3157	9.3157	1.8000e-004	1.7000e-004	9.3724
Unrefrigerated Warehouse No Coolant	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
Apartment Low Rise	1.06542e+006	5.7400e-003	0.0491	0.0209	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.8549	56.8549	1.0900e-003	1.0400e-003	57.2009
Total		0.0456	0.4010	0.2491	2.4800e-003		0.0315	0.0315		0.0315	0.0315	0.0000	451.2455	451.2455	8.6400e-003	8.2600e-003	453.9916

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartment Low Rise	287642	83.6785	3.7800e-003	7.8000e-004	84.0006
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market With Gas	8662.5	2.5200	1.1000e-004	2.0000e-005	2.5297
General Light Industry	165550	48.1604	2.1800e-003	4.5000e-004	48.3458
Hotel	361984	105.3052	4.7600e-003	9.9000e-004	105.7106
Library	4730	1.3760	6.0000e-005	1.0000e-005	1.3813
Office Park	1.1869e+006	345.2828	0.0156	3.2300e-003	346.6121
Single Family Housing	1.43457e+006	417.3321	0.0189	3.9000e-003	418.9387
Strip Mall	352820	102.6394	4.6400e-003	9.6000e-004	103.0345
Unrefrigerated Warehouse No Pail	0	0.0000	0.0000	0.0000	0.0000
Total		1,106.294₄	0.0500	0.0103	1,110.553₃

5.3 Energy by Land Use - Electricity

Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
		MT/yr			
Apartment Low Rise	287642	83.6785	3.7800e-003	7.8000e-004	84.0006
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market With Gas	8662.5	2.5200	1.1000e-004	2.0000e-005	2.5297
General Light Industry	165550	48.1604	2.1800e-003	4.5000e-004	48.3458
Hotel	361984	105.3052	4.7600e-003	9.9000e-004	105.7106
Library	4730	1.3760	6.0000e-005	1.0000e-005	1.3813
Office Park	1.1869e+006	345.2828	0.0156	3.2300e-003	346.6121
Single Family Housing	1.43457e+006	417.3321	0.0189	3.9000e-003	418.9387
Strip Mall	352820	102.6394	4.6400e-003	9.6000e-004	103.0345
Unrefrigerated Warehouse No Pail	0	0.0000	0.0000	0.0000	0.0000
Total		1,106.294₄	0.0500	0.0103	1,110.553₃

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	24.4644	0.2606	23.5618	8.5000e-003		3.0304	3.0304		3.0303	3.0303	287.1622	123.8080	410.9702	0.2683	0.0226	423.6067
Unmitigated	24.4644	0.2606	23.5618	8.5000e-003		3.0304	3.0304		3.0303	3.0303	287.1622	123.8080	410.9702	0.2683	0.0226	423.6067

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	1.7285					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.2292					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	17.4434	0.2367	21.4885	8.3900e-003		3.0190	3.0190		3.0189	3.0189	287.1622	120.4317	407.5939	0.2650	0.0226	420.1611
Landscaping	0.0633	0.0240	2.0734	1.1000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	3.3763	3.3763	3.3000e-003	0.0000	3.4456
Total	24.4644	0.2606	23.5618	8.5000e-003		3.0304	3.0304		3.0303	3.0303	287.1622	123.8080	410.9702	0.2683	0.0226	423.6067

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7285					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.2292					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	17.4434	0.2367	21.4885	8.3900e-003		3.0190	3.0190		3.0189	3.0189	287.1622	120.4317	407.5939	0.2650	0.0226	420.1611
Landscaping	0.0633	0.0240	2.0734	1.1000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	3.3763	3.3763	3.3000e-003	0.0000	3.4456
Total	24.4644	0.2606	23.5618	8.5000e-003		3.0304	3.0304		3.0303	3.0303	287.1622	123.8080	410.9702	0.2683	0.0226	423.6067

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	150.6596	1.7931	0.0434	201.7642
Unmitigated	150.6596	1.7934	0.0435	201.7920

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.21232 / 3.28603	13.2043	0.1704	4.1200e-003	18.0587
City Park	0 / 17.8722	18.1973	8.2000e-004	1.7000e-004	18.2674
Convenience Market With Gas	0.0418287 / 0.0256374	0.1052	1.3700e-003	3.0000e-005	0.1442
General Light Industry	8.09375 / 0	15.3083	0.2643	6.3500e-003	22.8263
Hotel	0.761003 / 0.0845559	1.5254	0.0249	6.0000e-004	2.2326
Library	0.0312889 / 0.0000000	0.1090	1.0200e-003	3.0000e-005	0.1383
Office Park	25.4159 / 15.5775	63.9319	0.8307	0.0201	87.6008
Single Family Housing	12.9005 / 8.13292	32.6806	0.4217	0.0102	44.6952
Strip Mall	1.70367 / 1.04418	4.2855	0.0557	1.3500e-003	5.8720
Unrefrigerated Warehouse-No Pail	0.69375 / 0	1.3121	0.0227	5.4000e-004	1.9565
Total		150.6596	1.7935	0.0435	201.7919

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartment Low Rise	5.21232 / 3.28603	13.2043	0.1703	4.1100e-003	18.0560
City Park	0 / 17.8722	18.1973	8.2000e-004	1.7000e-004	18.2674
Convenience Market With Gas	0.0418287 / 0.0256374	0.1052	1.3700e-003	3.0000e-005	0.1442
General Light Industry	8.09375 / 0	15.3083	0.2643	6.3400e-003	22.8222
Hotel	0.761003 / 0.0845559	1.5254	0.0249	6.0000e-004	2.2323
Library	0.0312889 / 0.0000000	0.1090	1.0200e-003	2.0000e-005	0.1383
Office Park	25.4159 / 15.5775	63.9319	0.8306	0.0201	87.5880
Single Family Housing	12.9005 / 8.13292	32.6806	0.4216	0.0102	44.6887
Strip Mall	1.70367 / 1.04418	4.2855	0.0557	1.3400e-003	5.8712
Unrefrigerated Warehouse-No Pail	0.69375 / 0	1.3121	0.0227	5.4000e-004	1.9562
Total		150.6596	1.7931	0.0434	201.7642

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	103.0869	6.0923	0.0000	231.0245
Unmitigated	103.0869	6.0923	0.0000	231.0245

8.2 Waste by Land Use

Unmitigated

Land Use	Waste Disposed tons	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
		MT/yr			
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	16.7409
City Park	1.29	0.2619	0.0155	0.0000	0.5868
General Light Industry	43.4	8.8098	0.5206	0.0000	19.7434
Hotel	16.43	3.3351	0.1971	0.0000	7.4743
Library	0.92	0.1868	0.0110	0.0000	0.4185
Office Park	132.99	26.9958	1.5954	0.0000	60.4993
Single Family Housing	249.04	50.5529	2.9876	0.0000	113.2922
Strip Mall	24.15	4.9022	0.2897	0.0000	10.9862
Unrefrigerated Warehouse-No Pail	2.82	0.5724	0.0338	0.0000	1.2829
Total		103.0869	6.0923	0.0000	231.0245

8.2 Waste by Land Use

Mitigated

Land Use	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	16.7409
City Park	1.29	0.2619	0.0155	0.0000	0.5868
General Light Industry	43.4	8.8098	0.5206	0.0000	19.7434
Hotel	16.43	3.3351	0.1971	0.0000	7.4743
Library	0.92	0.1868	0.0110	0.0000	0.4185
Office Park	132.99	26.9958	1.5954	0.0000	60.4993
Single Family Housing	249.04	50.5529	2.9876	0.0000	113.2922
Strip Mall	24.15	4.9022	0.2897	0.0000	10.9862
Unrefrigerated Warehouse-No Pail	2.82	0.5724	0.0338	0.0000	1.2829
Total		103.0869	6.0923	0.0000	231.0245

9.0 Operational Offroad

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