APPENDIX L

GREENHOUSE GAS METHODOLOGY AND MODELING

1.0 Modeling Background

In response to rising concern associated with increasing greenhouse gas (GHG) emissions and global climate change impacts, several plans and regulations have been adopted at the international, national, and State levels with the aim of reducing GHG emissions. These plans and regulations are aimed at reducing GHG emissions in association with buildout of the Encinitas Housing Element Update (HEU). The following is a discussion of the Federal and State plans and regulations that most influence GHG emissions associated with the Indio GPU.

A number of policies and regulations that are either directly or indirectly related to GHG emissions have been adopted at the State and Federal level. In addition to the policies and regulations discussion in Section 4.6, the following are relevant to vehicle efficiency, land use planning, and development.

1.1 Federal

a. Corporate Average Fuel Economy Standards

The project would generate additional vehicle trips. These vehicles would consume fuel and would result in GHG emissions. The Federal Corporate Average Fuel Economy (CAFE) standards determine the fuel efficiency of certain vehicle classes in the U.S. While the standards had not changed since 1990, as part of the Energy and Security Act of 2007, the CAFE standards were increased in 2007 for new light-duty vehicles to 35 miles per gallon (mpg) by 2020. In May 2009, plans were announced to further increase CAFE standards to require light duty vehicles to meet an average fuel economy of 35.5 mpg by 2016. In August 2012, fuel economy standards were further increased to 54.5 mpg for cars and light-duty trucks by Model Year 2025. This will nearly double the fuel efficiency of those vehicles compared to new vehicles currently on our roads. With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel.

1.2 State

a. Climate Change Scoping Plan

As directed by the California Global Warming Solutions Act of 2006, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*), which identifies the main strategies California will implement to achieve the GHG reductions necessary to reduce forecasted business as usual (BAU) emissions in 2020 to the State's historic 1990 emissions level (CARB 2008).

In 2008, as part of its adoption of the *Scoping Plan*, CARB estimated that annual statewide GHG emissions were 427 $MMTCO_2E$ in 1990 and would reach 596 $MMTCO_2E$ by 2020 under a BAU condition. To achieve the mandate of AB 32, CARB determined that a 169 $MMTCO_2E$ (or approximately 28.5 percent) reduction in BAU emissions was needed by

2020. (The 2020 emissions estimate used in the *Scoping Plan* was developed using pre-recession data and reflects GHG emissions expected to occur in the absence of any reduction measures in 2010.)

In 2011, CARB revised its 2020 BAU projections to account for the economic downturn and to account for laws that had taken affect but were not included in the 2008 calculations. With respect to the new economic data alone, CARB determined that the economic downturn reduced the 2020 BAU by 55 Million $MTCO_2E$; as a result, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (not 28.5) from the 2020 BAU. Further, CARB determined that implementation of Pavley I and the Initial RPS (as defined below) accounted for reductions of 26 $MMCO_2E$ and 12 $MMTCO_2E$, respectively; as a result, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 15.8 percent (not 28.5). Given the refined 2020 forecast of 507 $MMTCO_2E$ per year, CARB determined statewide GHG emissions would need to be reduced by 80 $MMTCO_2E$ (or 15.8 percent of 507 $MMTCO_2E$) by 2020 in order to reach the 1990 emission levels per AB 32. The updated emissions projections and targets were incorporated into the *Scoping Plan* that was approved in 2011.

Most recently, in 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) (CARB 2014b). The stated purpose of the First Update is to "highlight[] California's success to date in reducing its GHG emissions and lay[] the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050" (CARB 2014b). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals (CARB 2014b).

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050" (CARB 2014). Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction goal.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB 2014b). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, CARB recalculated the State's 1990 emissions level using more recent global warming potentials identified by the Intergovernmental Panel on Climate Change. Using the recalculated 1990 emissions level and the revised 2020 emissions level

projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 or 15.8 percent) from the BAU conditions.

The First Update included a strong recommendation from CARB for setting a mid-term statewide GHG emissions reduction target. CARB specifically recommended that the mid-term target be consistent with: (i) the United States' pledge to reduce emissions 42 percent below 2005 levels (which translates to a 35 percent reduction from 1990 levels in California); and (ii) the long-term policy goal of reducing emissions to 80 percent below 1990 levels by 2050. However, to date, there is no legislative authorization for a post-2020 GHG reduction target, and CARB has not established such a target.

The First Update discusses new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings by 2020 for residential buildings and 2030 for commercial buildings, as an element of meeting mid-term and long-term GHG reduction goals. The First Update expresses CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

The original 2008 Scoping Plan and the 2014 First Update represent important milestones in California's efforts to reduce GHG emissions statewide. The law also requires the Scoping Plan to be updated every five years. The Scoping Plan process, as stated, is also thorough and encourages public input and participation.

b. California Light-Duty Vehicle Greenhouse Gas Standards

AB 1493 enacted July 2002, directed CARB to adopt vehicle standards that lowered GHG emissions from passenger vehicles and light-duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year. CARB adopted these regulations (termed "Pavley I") as a discrete early action measure pursuant to AB 32.

CARB has also adopted a second phase of the Pavley regulations, originally termed "Pavley II" but now called the Low Emission Vehicle III" (LEV III) Standards or Advanced Clean Cars (ACC) Program, that covers model years 2017 to 2025. CARB estimates that LEV III will reduce vehicle GHGs by an additional 4.0 $MMTCO_2E$ for a 2.4 percent reduction over Pavley I. These reductions come from improved vehicle technologies such as smaller engines with superchargers, continuously variable transmissions, and hybrid electric drives. On August 7, 2012, the final regulation for the adoption of LEV III became effective.

It is expected that Pavley I and LEV III regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, while improving fuel efficiency and reducing motorists' costs (CARB 2013).

c. Low Carbon Fuel Standard

An executive order (EO S-01-07) signed in 2007 directed that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through a Low Carbon Fuel Standard (LCFS).

CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009. The LCFS is a performance standard with flexible compliance mechanisms intended to incentivize the development of a diverse set of clean low-carbon transportation fuel options. Its aim is to accelerate the availability and diversity of low-carbon fuels such as biofuels, electricity, and hydrogen by taking into consideration the full life cycle of GHG emissions.

d. Renewables Portfolio Standard

The RPS promotes diversification of the State's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "Initial RPS"), the goal has been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, SB 2 (1X) codified California's 33 percent RPS goal. In January 2015, AB 197 was introduced, which, if enacted, would require an electrical corporation or local publicly-owned electric utility to adopt a long-term procurement strategy to achieve a target of procuring 50 (not 33) percent of its electricity products from eligible renewable energy resources by 2030. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

e. Million Solar Roofs Program

The Million Solar Roofs Program was created by SB 1 in 2006 and includes the CPUC's California Solar Initiative and CEC's New Solar Homes Partnership. It requires publicly owned utilities to adopt, implement, and finance solar-incentive programs to lower the cost of solar systems and help achieve the goal of installing 3,000 megawatts of new solar capacity by 2020.

2.0 Modeling Methodology

Each housing strategy was evaluated relative to the reduction thresholds established in the City's CAP (25 percent reduction from 2020 business-as-usual emissions, or a 12 percent reduction from 2005 baseline emissions). To evaluate each housing strategy's GHG emissions relative to BAU, emissions were quantified and projected to the year 2020 for both a BAU scenario and actual buildout of the housing strategies. This is because the AB 32, CARB BAU Forecast, associated Scoping Plan, and CAP's GHG reduction targets are projected to a year 2020 horizon. Executive Order S-3-05 identified a GHG reduction target for 2050 but did not identify interim targets for the decades between 2020 and 2050. In April 2015, an executive order was issued to establish an interim California GHG reduction target of 40 percent below 1990 levels by 2030. In this analysis, the GHG emissions

estimates based on ultimate buildout of the housing strategies are compared to the 2020 GHG reduction goals in order to evaluate significance. In other words, for the purpose of this analysis, buildout for each strategy is projected to occur by 2020. (Buildout of the HEU based on market demand is not actually anticipated to occur until 2030 or beyond). By meeting the 2020 GHG reduction goals, projects would be in line with achieving the 2030 and 2050 reduction goals.

GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) (CAPCOA 2013). In brief, the model estimates criteria air pollutants and GHG emissions by multiplying emission source intensity factors by estimated quantities of emission sources based on the land use information. All CalEEMod estimates are in terms of total metric tons of CO_2 equivalent ($MTCO_2E$).

Emission estimates were calculated for the three GHGs of primary concern (CO_2, CH_4, and N_2O) that would be emitted from construction and the five primary operational sources that would be associated with HEU buildout: mobile sources, area sources, energy use, water use, and solid waste disposal. To evaluate the reductions in GHG emissions of the housing strategies relative to the BAU 2020 forecast, emissions were estimated for two scenarios: first, the buildout without GHG measures (i.e., buildout under BAU conditions) and, second, the buildout with GHG measures. This allowed for a comparison between the buildout with and without GHG-reducing measures in accordance with the City's 25 percent reduction goal.

2.1 Construction Emissions

Construction activities emit GHGs primarily though combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction vehicles and in the commute vehicles of the construction workers. Smaller amounts of GHGs are also emitted indirectly through the energy use embodied in any water use (for fugitive dust control) and lighting for the construction activity. Every phase of the construction process, including demolition, grading, paving, and building, emits GHG emissions, in volumes proportional to the quantity and type of construction equipment used. Heavier equipment typically emits more GHGs per hour of use than the lighter equipment because of their greater fuel consumption and engine design.

CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Estimates of the amount and type of construction equipment are based on construction surveys performed by the South Coast Air Quality Management District (SCAQMD) of projects ranging up to 30 acres. As such, CalEEMod construction estimations are not accurate for large projects where project-specific information is required. At a program level, it would be speculative to estimate the schedule and construction requirements of individual projects included in the housing strategies. Thus, this analysis relies on the methodology used in the San Diego County Updated Greenhouse Gas Inventory (San Diego County 2013), which forecasts that between 2015 and 2035 construction emissions would comprise roughly 2.1 percent of total GHG

emissions within the county. Therefore, construction emissions are estimated at 2.1 percent of the total operational GHG emissions associated with the project area.

2.2 Mobile Emissions

Transportation-related GHG emissions comprise the largest sector contributing to both inventoried and projected statewide GHG emissions, accounting for 36 percent of the projected total statewide 2020 BAU emissions (CARB 2014b). On-road vehicles alone account for 70 percent of the City's baseline GHG emission (City of Encinitas 2011). GHG emissions from vehicles come from the combustion of fossil fuels in vehicle engines.

The vehicle emissions are calculated based on the vehicle type, the trip rate, and trip length for each land use. The daily trip generation and the City-wide vehicle miles traveled (VMT) were calculated for each housing strategy as a part of the Traffic Impact Statement prepared for the project (Appendix N). The trip generation was calculated based on the buildout projections for each housing strategy, as provided by the City and trip generation rates from the SANDAG's *Guide to Vehicular Traffic Generation Rates for the San Diego Region*. VMT information was provided by SANDAG for each housing strategy. The VMT generated by SANDAG was based upon the methodology recommended by the SB 375 Regional Targets Advisory Committee for allocating VMT to a study area for the purposes of a GHG analysis.

All three housing strategies encourage increased development diversity by increasing the buildout potential for commercial/mixed use and multi-family land uses. Locating different land uses types near one another can decrease VMT, since trips between land use types are shorter and may be accommodated by alternative modes of transportation (CAPCOA 2010). To assist in the evaluation of the three housing strategies, the VMT and trip generation efficiency was calculated and compared to the No Project/Adopted Plan scenario. It was found that housing strategy 3 (MMUP) would have the highest efficiency, followed by housing strategy 1 (RM), housing strategy 2 (BYO), and then the No Project/Adopted Plan scenario, respectively. That is, although housing strategy 3 (MMUP) proposes the greatest amount of development and in turn, the greatest trip generation and total VMT, this housing strategy would be the most efficient because it would reduce the overall average trip length of each individual trip. This can be attributed to housing strategy 3 (MMUP) emphasizing mixed-use development that has the benefits of placing housing in close proximity to retail and employment land uses. Housing strategy 2 (BYO) would be the least efficient of the three strategies because it is more suburban in character. However, each of the housing strategies would be more efficient than the No Project/Adopted Plan scenario.

The average regional trip length is 5.8 miles (SANDAG 2014). As discussed, each of the housing strategies would increase vehicle trip efficiency. Using City-wide daily trip generation and SANDAG VMT calculations for each housing strategy, it was calculated that housing strategies 1, 2, and 3 would reduce average trip length by 0.6 percent, 0.5 percent, and 1.3 percent, respectively. Thus, trip lengths of 5.76, 5.77, and 5.72 miles were used for modeling vehicle emissions associated with housing strategies 1, 2, and 3, respectively.

The vehicle emission factors and fleet mix used in CalEEMod are derived from CARB's Emission Factors 2011 model, which includes GHG reducing effects from the implementation of Pavley I (Clean Car Standards) and the Low Carbon Fuel Standard. Emission factors that include the effects of the Tire Pressure Program and the Low Emission Vehicles III regulations are not available. Therefore, to account for the effects of the Tire Pressure Program (0.6 percent) and the Low Emission Vehicles III (2.4 percent), a total 3 percent reduction was applied to the vehicle emissions calculated in CalEEMod (CARB 2011).

2.3 Energy Use Emissions

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are emitted during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated in association with a building's operation. Electric power generation accounts for the second largest sector contributing to both inventoried and projected statewide GHG emissions. Combustion of fossil fuel emits criteria pollutants and GHGs directly into the atmosphere. When this occurs in a building, this is considered a direct emissions source associated with that building. CalEEMod estimates emissions from the direct combustion of natural gas for space and water heating.

CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider.

Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as plug-in appliances. In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.).

Energy consumption values are based on the California Energy Commission-sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies, which identify energy use by building type and climate zone. Because these studies are based on older buildings, adjustments have been made in CalEEMod to account for changes to Title 24 building codes. CalEEMod is based on the 2008 Title 24 energy code (Part 6 of the building code).

For a BAU project scenario, the default CalEEMod historic consumption rates were used to generate the emission estimates. For each housing strategy, the effects of the California Building Code were accounted for by reducing the Title 24 electricity and natural gas intensity factors. When compared to 2008, the 2013 Title 24 Energy Code would result in a 23.3 percent decrease in GHG emissions from electricity sources and a 3.8 percent

reduction in GHG emission from natural gas sources for multi-family residential uses, and a 21.8 percent decrease in GHG emissions from electricity sources and a 16.8 percent reduction in GHG emission from natural gas sources for non-residential uses (California Energy Commission 2013).

The City is served by San Diego Gas & Electric (SDG&E). Therefore, SDG&E's specific energy-intensity factors are used in the calculations of GHG emissions per kilowatt-hour consumed. As discussed, the State mandate for renewable energy is 33 percent by 2020. However, the energy-intensity factors included in CalEEMod by default only represent a 10.2 percent procurement of renewable energy (SDG&E 2011). To account for the continuing effects of RPS through 2020, the energy-intensity factors included in CalEEMod were reduced by an additional 22.8 percent.

2.4 Area Source Emissions

Area sources include hearths, woodstoves, and landscaping equipment. The use of hearths (fireplaces) and woodstoves directly emits CO_2 from the combustion of natural gas, wood, or biomass, some of which are thus classified as biogenic. CalEEMod estimates emissions from hearths and woodstoves only for residential uses based on the type and size features of the residential land use inputs. By default, commercial land uses do not have any hearths or woodstoves in CalEEMod but can be added for those cases where they may occur such as in restaurants or hotels if such information is known. For this analysis, it was assumed that residential uses would be constructed with natural gas fireplaces.

Additionally, the use of landscape equipment emits GHGs associated with the equipment's fuel combustion. Estimates of the number and type of equipment needed based on the number of summer days given the project's location.

2.5 Water and Wastewater Emissions

The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both CH_4 and N_2O.

GHG emissions associated with supplying and treating water and wastewater are calculated for each housing strategy. The indoor and outdoor water use consumption data for each land use subtype comes from the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* 2003 (as cited in CAPCOA 2013). Based on that report, a percentage of total water consumption was dedicated to landscape irrigation. This percentage was used to determine outdoor water use. Wastewater generation was similarly based on a reported percentage of total indoor water use (CAPCOA 2013). Additionally, future projects constructed under each housing strategy would be subject to 2013 Title 24 Part 11 standards, known as CalGreen. Thus, in order to demonstrate compliance with CalGreen, a 20 percent increase in indoor water use efficiency

was included in the water consumption calculations for the project. BAU water use calculations do not consider any reduction in water use from these estimates.

Additionally, as discussed previously, the energy-intensity factors included in CalEEMod 2013 represent a 10.2 percent procurement of renewable energy. To account for the continuing effects of RPS through 2020, the energy-intensity factors included in CalEEMod were reduced by an additional 22.8 percent.

2.6 Solid Waste Emissions

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. To calculate the GHG emissions generated by disposing of solid waste for the project, the total volume of solid waste was calculated using waste disposal rates identified by California Department of Resources Recycling and Recovery. The methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change method, using the degradable organic content of waste. GHG emissions associated with the project's waste disposal were calculated using these parameters.

7722 Encinitas HEU - Ready Made BAU

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,930.00	Dwelling Unit	50.79	1,930,000.00	5520
Strip Mall	780.82	1000sqft	31.37	780,821.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 1,930 units
780,821 SF commercial
82.16 acres

Construction Phase - Construction calcualted separately

Vehicle Trips - 71,127 trips compared to baseline
0.6% reduction in VMT

Woodstoves - No woodstoves, natural gas fireplaces only

Area Coating - SDAPCD VOC content limit = 150 g/L

Energy Use -

Water Mitigation -

Vechicle Emission Factors - Alternative CO2 Emission Factors

Vechicle Emission Factors - Alternative CO2 Emission Factors

Vechicle Emission Factors - Alternative CO2 Emission Factors

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	1,550.00	1.00
tblEnergyUse	T24E	200.21	200.21
tblEnergyUse	T24NG	4,108.03	4,108.03
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	1,061.50	1,930.00
tblFireplaces	NumberNoFireplace	193.00	0.00
tblFireplaces	NumberWood	675.50	0.00
tblLandUse	LandUseSquareFeet	780,820.00	780,821.00
tblLandUse	LotAcreage	17.93	31.37
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	244.25	377.82

tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDA	258.13	403.81
tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDA	241.74	370.83
tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDT1	297.79	472.94
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT1	313.82	504.09
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT1	294.90	464.60
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT2	364.72	480.79
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	LDT2	384.93	512.67
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	LDT2	361.06	472.26
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	MDV	489.56	655.05
tblVehicleEF	MDV	103.31	122.64
tblVehicleEF	MDV	516.30	698.42
tblVehicleEF	MDV	103.31	122.64
tblVehicleEF	MDV	484.72	643.43
tblVehicleEF	MDV	103.31	122.64
tblVehicleTrips	CC_TL	7.30	5.76
tblVehicleTrips	CNW_TL	7.30	5.76
tblVehicleTrips	CW_TL	9.50	5.76
tblVehicleTrips	HO_TL	7.50	5.76
tblVehicleTrips	HS_TL	7.30	5.76

tblVehicleTrips	HW_TL	10.80	5.76
tblVehicleTrips	ST_TR	7.16	4.38
tblVehicleTrips	ST_TR	42.04	80.27
tblVehicleTrips	SU_TR	6.07	4.38
tblVehicleTrips	SU_TR	20.43	80.27
tblVehicleTrips	WD_TR	6.59	4.38
tblVehicleTrips	WD_TR	44.32	80.27
tblWoodstoves	NumberCatalytic	96.50	0.00
tblWoodstoves	NumberNoncatalytic	96.50	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	6.4100e-003	0.0343	0.0675	1.3000e-004	7.6600e-003	1.2700e-003	8.9300e-003	2.0600e-003	1.1900e-003	3.2500e-003	0.0000	10.9380	10.9380	6.5000e-004	0.0000	10.9516
Total	**6.4100e-003**	**0.0343**	**0.0675**	**1.3000e-004**	**7.6600e-003**	**1.2700e-003**	**8.9300e-003**	**2.0600e-003**	**1.1900e-003**	**3.2500e-003**	**0.0000**	**10.9380**	**10.9380**	**6.5000e-004**	**0.0000**	**10.9516**

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					
2016	6.4100e-003	0.0343	0.0675	1.3000e-004	7.6600e-003	1.2700e-003	8.9300e-003	2.0600e-003	1.1900e-003	3.2500e-003	0.0000	10.9380	10.9380	6.5000e-004	0.0000	10.9516
Total	**6.4100e-003**	**0.0343**	**0.0675**	**1.3000e-004**	**7.6600e-003**	**1.2700e-003**	**8.9300e-003**	**2.0600e-003**	**1.1900e-003**	**3.2500e-003**	**0.0000**	**10.9380**	**10.9380**	**6.5000e-004**	**0.0000**	**10.9516**

	ROG	NOx	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	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183
Energy	0.0702	0.6054	0.2958	3.8300e-003		0.0485	0.0485		0.0485	0.0485	0.0000	6,673.5485	6,673.5485	0.2540	0.0625	6,698.2648
Mobile	31.3123	45.3591	245.0696	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	46,195.2747	46,195.2747	1.4550	0.0000	46,225.8290
Waste						0.0000	0.0000		0.0000	0.0000	346.6396	0.0000	346.6396	20.4858	0.0000	776.8416
Water						0.0000	0.0000		0.0000	0.0000	58.2429	1,197.7671	1,256.0101	6.0303	0.1512	1,429.5265
Total	**46.3951**	**46.1309**	**259.7592**	**0.5053**	**33.2241**	**0.8466**	**34.0707**	**8.8858**	**0.7983**	**9.6841**	**404.8825**	**55,610.1770**	**56,015.0595**	**28.2771**	**0.2416**	**56,683.7801**

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	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183
Energy	0.0702	0.6054	0.2958	3.8300e-003		0.0485	0.0485		0.0485	0.0485	0.0000	6,673.5485	6,673.5485	0.2540	0.0625	6,698.2648
Mobile	31.3123	45.3591	245.0696	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	46,195.2747	46,195.2747	1.4550	0.0000	46,225.8290
Waste						0.0000	0.0000		0.0000	0.0000	346.6396	0.0000	346.6396	20.4858	0.0000	776.8416
Water						0.0000	0.0000		0.0000	0.0000	58.2429	1,197.7671	1,256.0101	6.0292	0.1510	1,429.4336
Total	**46.3951**	**46.1309**	**259.7592**	**0.5053**	**33.2241**	**0.8466**	**34.0707**	**8.8858**	**0.7983**	**9.6841**	**404.8825**	**55,610.1770**	**56,015.0595**	**28.2760**	**0.2414**	**56,683.6872**

	ROG	NOx	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**	**0.10**	**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	Building Construction	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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

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	1,639.00	334.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-003	0.0163	0.0229	4.0000e-005	1.0900e-003	2.4000e-004	1.3300e-003	3.1000e-004	2.2000e-004	5.3000e-004	0.0000	3.6030	3.6030	3.0000e-005	0.0000	3.6036
Worker	2.8100e-003	3.7100e-003	0.0354	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	5.0000e-005	1.7900e-003	0.0000	6.1242	6.1242	3.2000e-004	0.0000	6.1310
Total	**4.7100e-003**	**0.0200**	**0.0583**	**1.2000e-004**	**7.6600e-003**	**2.9000e-004**	**7.9500e-003**	**2.0600e-003**	**2.7000e-004**	**2.3200e-003**	**0.0000**	**9.7272**	**9.7272**	**3.5000e-004**	**0.0000**	**9.7346**

3.2 Building Construction - 2016

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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-003	0.0163	0.0229	4.0000e-005	1.0900e-003	2.4000e-004	1.3300e-003	3.1000e-004	2.2000e-004	5.3000e-004	0.0000	3.6030	3.6030	3.0000e-005	0.0000	3.6036
Worker	2.8100e-003	3.7100e-003	0.0354	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	5.0000e-005	1.7900e-003	0.0000	6.1242	6.1242	3.2000e-004	0.0000	6.1310
Total	**4.7100e-003**	**0.0200**	**0.0583**	**1.2000e-004**	**7.6600e-003**	**2.9000e-004**	**7.9500e-003**	**2.0600e-003**	**2.7000e-004**	**2.3200e-003**	**0.0000**	**9.7272**	**9.7272**	**3.5000e-004**	**0.0000**	**9.7346**

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	31.3123	45.3591	245.0696	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	46,195.2747	46,195.2747	1.4550	0.0000	46,225.8290
Unmitigated	31.3123	45.3591	245.0696	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	46,195.2747	46,195.2747	1.4550	0.0000	46,225.8290

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	8,453.40	8,453.40	8453.40	15,739,047	15,739,047
Strip Mall	62,676.42	62,676.42	62676.42	72,617,654	72,617,654
Total	71,129.82	71,129.82	71,129.82	88,356,701	88,356,701

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.76	5.76	5.76	41.60	18.80	39.60	86	11	3
Strip Mall	5.76	5.76	5.76	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: Y

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	5,978.8617	5,978.8617	0.2407	0.0498	5,999.3502
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,978.8617	5,978.8617	0.2407	0.0498	5,999.3502
NaturalGas Mitigated	0.0702	0.6054	0.2958	3.8300e-003		0.0485	0.0485		0.0485	0.0485	0.0000	694.6869	694.6869	0.0133	0.0127	698.9146
NaturalGas Unmitigated	0.0702	0.6054	0.2958	3.8300e-003		0.0485	0.0485		0.0485	0.0485	0.0000	694.6869	694.6869	0.0133	0.0127	698.9146

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					
Apartments Mid Rise	1.11362e+007	0.0601	0.5131	0.2184	3.2800e-003		0.0415	0.0415		0.0415	0.0415	0.0000	594.2680	594.2680	0.0114	0.0109	597.8846
Strip Mall	1.88178e+006	0.0102	0.0922	0.0775	5.5000e-004		7.0100e-003	7.0100e-003		7.0100e-003	7.0100e-003	0.0000	100.4189	100.4189	1.9200e-003	1.8400e-003	101.0300
Total		**0.0702**	**0.6054**	**0.2959**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**	**0.0000**	**694.6868**	**694.6868**	**0.0133**	**0.0127**	**698.9146**

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					
Apartments Mid Rise	1.11362e+007	0.0601	0.5131	0.2184	3.2800e-003		0.0415	0.0415		0.0415	0.0415	0.0000	594.2680	594.2680	0.0114	0.0109	597.8846
Strip Mall	1.88178e+006	0.0102	0.0922	0.0775	5.5000e-004		7.0100e-003	7.0100e-003		7.0100e-003	7.0100e-003	0.0000	100.4189	100.4189	1.9200e-003	1.8400e-003	101.0300
Total		**0.0702**	**0.6054**	**0.2959**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**	**0.0000**	**694.6868**	**694.6868**	**0.0133**	**0.0127**	**698.9146**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.74634e+006	2,204.7621	0.0887	0.0184	2,212.3174
Strip Mall	1.15483e+007	3,774.0996	0.1519	0.0314	3,787.0328
Total		**5,978.8617**	**0.2407**	**0.0498**	**5,999.3502**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.74634e+006	2,204.7621	0.0887	0.0184	2,212.3174
Strip Mall	1.15483e+007	3,774.0996	0.1519	0.0314	3,787.0328
Total		**5,978.8617**	**0.2407**	**0.0498**	**5,999.3502**

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	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183
Unmitigated	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183

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	3.8334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.5871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1536	1.0000e-005	8.3800e-003	0.0000		0.1061	0.1061		0.1050	0.1050	0.0000	1,520.1641	1,520.1641	0.0291	0.0279	1,529.4156
Landscaping	0.4385	0.1664	14.3853	7.6000e-004		0.0791	0.0791		0.0791	0.0791	0.0000	23.4225	23.4225	0.0229	0.0000	23.9027
Total	**15.0127**	**0.1664**	**14.3937**	**7.6000e-004**		**0.1852**	**0.1852**		**0.1841**	**0.1841**	**0.0000**	**1,543.5867**	**1,543.5867**	**0.0520**	**0.0279**	**1,553.3183**

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	3.8334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.5871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1536	1.0000e-005	8.3800e-003	0.0000		0.1061	0.1061		0.1050	0.1050	0.0000	1,520.1641	1,520.1641	0.0291	0.0279	1,529.4156
Landscaping	0.4385	0.1664	14.3853	7.6000e-004		0.0791	0.0791		0.0791	0.0791	0.0000	23.4225	23.4225	0.0229	0.0000	23.9027
Total	**15.0127**	**0.1664**	**14.3937**	**7.6000e-004**		**0.1852**	**0.1852**		**0.1841**	**0.1841**	**0.0000**	**1,543.5867**	**1,543.5867**	**0.0520**	**0.0279**	**1,553.3183**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,256.0101	6.0292	0.1510	1,429.4336
Unmitigated	1,256.0101	6.0303	0.1512	1,429.5265

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.747 / 79.2755	862.8328	4.1306	0.1036	981.6924
Strip Mall	57.8373 / 35.4487	393.1773	1.8997	0.0476	447.8340
Total		**1,256.0100**	**6.0303**	**0.1512**	**1,429.5265**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.747 / 79.2755	862.8328	4.1299	0.1035	981.6288
Strip Mall	57.8373 / 35.4487	393.1773	1.8994	0.0476	447.8048
Total		**1,256.0100**	**6.0292**	**0.1510**	**1,429.4336**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	346.6396	20.4858	0.0000	776.8416
Mitigated	346.6396	20.4858	0.0000	776.8416

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	887.8	180.2154	10.6504	0.0000	403.8743
Strip Mall	819.86	166.4242	9.8354	0.0000	372.9673
Total		**346.6396**	**20.4858**	**0.0000**	**776.8416**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	887.8	180.2154	10.6504	0.0000	403.8743
Strip Mall	819.86	166.4242	9.8354	0.0000	372.9673
Total		**346.6396**	**20.4858**	**0.0000**	**776.8416**

9.0 Operational Offroad

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

10.0 Vegetation

7722 Encinitas HEU - Ready Made

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,930.00	Dwelling Unit	50.79	1,930,000.00	5520
Strip Mall	780.82	1000sqft	31.37	780,821.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	556.22	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 33% goal
CalEEMod accounts for 10.2%
22.8% difference applied to intensity factors

Land Use - 1,930 units
780,821 SF commercial
82.16 acres

Construction Phase - Construction calcualted separately

Vehicle Trips - 71,127 trips compared to baseline
0.6% reduction in VMT

Woodstoves - No woodstoves, natural gas fireplaces only

Area Coating - SDAPCD VOC content limit = 150 g/L

Water Mitigation -

Energy Use - 2013 Title 24:
Multi-family - 23.3% increase in electricity efficiency, 3.8% increase in natural gas efficiency
Non-residential - 21.8% increase in electricity efficiency, 16.8% increase in natural gas efficiency

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	1,550.00	1.00
tblEnergyUse	T24E	160.77	123.31
tblEnergyUse	T24E	3.89	3.04
tblEnergyUse	T24NG	3,820.47	3,675.29
tblEnergyUse	T24NG	1.20	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	1,061.50	1,930.00
tblFireplaces	NumberNoFireplace	193.00	0.00
tblFireplaces	NumberWood	675.50	0.00
tblLandUse	LotAcreage	17.93	31.37
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	556.22

tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	CC_TL	7.30	5.76
tblVehicleTrips	CNW_TL	7.30	5.76
tblVehicleTrips	CW_TL	9.50	5.76
tblVehicleTrips	HO_TL	7.50	5.76
tblVehicleTrips	HS_TL	7.30	5.76
tblVehicleTrips	HW_TL	10.80	5.76
tblVehicleTrips	ST_TR	7.16	4.38
tblVehicleTrips	ST_TR	42.04	80.27
tblVehicleTrips	SU_TR	6.07	4.38
tblVehicleTrips	SU_TR	20.43	80.27
tblVehicleTrips	WD_TR	6.59	4.38
tblVehicleTrips	WD_TR	44.32	80.27
tblWoodstoves	NumberCatalytic	96.50	0.00
tblWoodstoves	NumberNoncatalytic	96.50	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	6.4100e-003	0.0343	0.0675	1.3000e-004	7.6600e-003	1.2700e-003	8.9300e-003	2.0600e-003	1.1900e-003	3.2500e-003	0.0000	10.9380	10.9380	6.5000e-004	0.0000	10.9516
Total	**6.4100e-003**	**0.0343**	**0.0675**	**1.3000e-004**	**7.6600e-003**	**1.2700e-003**	**8.9300e-003**	**2.0600e-003**	**1.1900e-003**	**3.2500e-003**	**0.0000**	**10.9380**	**10.9380**	**6.5000e-004**	**0.0000**	**10.9516**

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					
2016	6.4100e-003	0.0343	0.0675	1.3000e-004	7.6600e-003	1.2700e-003	8.9300e-003	2.0600e-003	1.1900e-003	3.2500e-003	0.0000	10.9380	10.9380	6.5000e-004	0.0000	10.9516
Total	**6.4100e-003**	**0.0343**	**0.0675**	**1.3000e-004**	**7.6600e-003**	**1.2700e-003**	**8.9300e-003**	**2.0600e-003**	**1.1900e-003**	**3.2500e-003**	**0.0000**	**10.9380**	**10.9380**	**6.5000e-004**	**0.0000**	**10.9516**

	ROG	NOx	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	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183
Energy	0.0643	0.5547	0.2692	3.5100e-003		0.0445	0.0445		0.0445	0.0445	0.0000	4,899.8356	4,899.8356	0.1808	0.0500	4,919.1316
Mobile	31.3123	45.3592	245.0699	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	34,722.3733	34,722.3733	1.4550	0.0000	34,752.9276
Waste						0.0000	0.0000		0.0000	0.0000	346.6396	0.0000	346.6396	20.4858	0.0000	776.8416
Water						0.0000	0.0000		0.0000	0.0000	58.2429	924.6791	982.9220	6.0187	0.1496	1,155.6787
Total	**46.3893**	**46.0802**	**259.7328**	**0.5050**	**33.2241**	**0.8426**	**34.0667**	**8.8858**	**0.7943**	**9.6801**	**404.8825**	**42,090.4746**	**42,495.3571**	**28.1923**	**0.2274**	**43,157.8977**

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	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183
Energy	0.0643	0.5547	0.2692	3.5100e-003		0.0445	0.0445		0.0445	0.0445	0.0000	4,899.8356	4,899.8356	0.1808	0.0500	4,919.1316
Mobile	31.3123	45.3592	245.0699	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	34,722.3733	34,722.3733	1.4550	0.0000	34,752.9276
Waste						0.0000	0.0000		0.0000	0.0000	346.6396	0.0000	346.6396	20.4858	0.0000	776.8416
Water						0.0000	0.0000		0.0000	0.0000	46.5943	787.3119	833.9062	4.8168	0.1201	972.2837
Total	**46.3893**	**46.0802**	**259.7328**	**0.5050**	**33.2241**	**0.8426**	**34.0667**	**8.8858**	**0.7943**	**9.6801**	**393.2339**	**41,953.1075**	**42,346.3413**	**26.9904**	**0.1980**	**42,974.5027**

	ROG	NOx	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**	**2.88**	**0.33**	**0.35**	**4.26**	**12.96**	**0.42**

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	Building Construction	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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

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	1,639.00	334.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-003	0.0163	0.0229	4.0000e-005	1.0900e-003	2.4000e-004	1.3300e-003	3.1000e-004	2.2000e-004	5.3000e-004	0.0000	3.6030	3.6030	3.0000e-005	0.0000	3.6036
Worker	2.8100e-003	3.7100e-003	0.0354	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	5.0000e-005	1.7900e-003	0.0000	6.1242	6.1242	3.2000e-004	0.0000	6.1310
Total	**4.7100e-003**	**0.0200**	**0.0583**	**1.2000e-004**	**7.6600e-003**	**2.9000e-004**	**7.9500e-003**	**2.0600e-003**	**2.7000e-004**	**2.3200e-003**	**0.0000**	**9.7272**	**9.7272**	**3.5000e-004**	**0.0000**	**9.7346**

3.2 Building Construction - 2016

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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-003	0.0163	0.0229	4.0000e-005	1.0900e-003	2.4000e-004	1.3300e-003	3.1000e-004	2.2000e-004	5.3000e-004	0.0000	3.6030	3.6030	3.0000e-005	0.0000	3.6036
Worker	2.8100e-003	3.7100e-003	0.0354	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	5.0000e-005	1.7900e-003	0.0000	6.1242	6.1242	3.2000e-004	0.0000	6.1310
Total	**4.7100e-003**	**0.0200**	**0.0583**	**1.2000e-004**	**7.6600e-003**	**2.9000e-004**	**7.9500e-003**	**2.0600e-003**	**2.7000e-004**	**2.3200e-003**	**0.0000**	**9.7272**	**9.7272**	**3.5000e-004**	**0.0000**	**9.7346**

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	31.3123	45.3592	245.0699	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	34,722.3733	34,722.3733	1.4550	0.0000	34,752.9276
Unmitigated	31.3123	45.3592	245.0699	0.5007	33.2241	0.6129	33.8370	8.8858	0.5657	9.4515	0.0000	34,722.3733	34,722.3733	1.4550	0.0000	34,752.9276

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	8,453.40	8,453.40	8453.40	15,739,047	15,739,047
Strip Mall	62,676.50	62,676.50	62676.50	72,617,747	72,617,747
Total	71,129.90	71,129.90	71,129.90	88,356,794	88,356,794

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.76	5.76	5.76	41.60	18.80	39.60	86	11	3
Strip Mall	5.76	5.76	5.76	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

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	4,263.0514	4,263.0514	0.1686	0.0383	4,278.4720
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,263.0514	4,263.0514	0.1686	0.0383	4,278.4720
NaturalGas Mitigated	0.0643	0.5547	0.2692	3.5100e-003		0.0445	0.0445		0.0445	0.0445	0.0000	636.7842	636.7842	0.0122	0.0117	640.6596
NaturalGas Unmitigated	0.0643	0.5547	0.2692	3.5100e-003		0.0445	0.0445		0.0445	0.0445	0.0000	636.7842	636.7842	0.0122	0.0117	640.6596

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					
Apartments Mid Rise	1.0301e+007	0.0555	0.4747	0.2020	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.6990	549.6990	0.0105	0.0101	553.0444
Strip Mall	1.63192e+006	8.8000e-003	0.0800	0.0672	4.8000e-004		6.0800e-003	6.0800e-003		6.0800e-003	6.0800e-003	0.0000	87.0853	87.0853	1.6700e-003	1.6000e-003	87.6152
Total		**0.0643**	**0.5547**	**0.2692**	**3.5100e-003**		**0.0445**	**0.0445**		**0.0445**	**0.0445**	**0.0000**	**636.7842**	**636.7842**	**0.0122**	**0.0117**	**640.6596**

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					
Apartments Mid Rise	1.0301e+007	0.0555	0.4747	0.2020	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.6990	549.6990	0.0105	0.0101	553.0444
Strip Mall	1.63192e+006	8.8000e-003	0.0800	0.0672	4.8000e-004		6.0800e-003	6.0800e-003		6.0800e-003	6.0800e-003	0.0000	87.0853	87.0853	1.6700e-003	1.6000e-003	87.6152
Total		**0.0643**	**0.5547**	**0.2692**	**3.5100e-003**		**0.0445**	**0.0445**		**0.0445**	**0.0445**	**0.0000**	**636.7842**	**636.7842**	**0.0122**	**0.0117**	**640.6596**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.59792e+006	1,664.6357	0.0658	0.0150	1,670.6572
Strip Mall	1.0299e+007	2,598.4156	0.1028	0.0234	2,607.8148
Total		**4,263.0514**	**0.1686**	**0.0383**	**4,278.4720**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.59792e+006	1,664.6357	0.0658	0.0150	1,670.6572
Strip Mall	1.0299e+007	2,598.4156	0.1028	0.0234	2,607.8148
Total		**4,263.0514**	**0.1686**	**0.0383**	**4,278.4720**

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	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183
Unmitigated	15.0126	0.1664	14.3937	7.6000e-004		0.1852	0.1852		0.1841	0.1841	0.0000	1,543.5867	1,543.5867	0.0520	0.0279	1,553.3183

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	3.8334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.5871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1536	1.0000e-005	8.3800e-003	0.0000		0.1061	0.1061		0.1050	0.1050	0.0000	1,520.1641	1,520.1641	0.0291	0.0279	1,529.4156
Landscaping	0.4385	0.1664	14.3853	7.6000e-004		0.0791	0.0791		0.0791	0.0791	0.0000	23.4225	23.4225	0.0229	0.0000	23.9027
Total	**15.0127**	**0.1664**	**14.3937**	**7.6000e-004**		**0.1852**	**0.1852**		**0.1841**	**0.1841**	**0.0000**	**1,543.5867**	**1,543.5867**	**0.0520**	**0.0279**	**1,553.3183**

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	3.8334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.5871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1536	1.0000e-005	8.3800e-003	0.0000		0.1061	0.1061		0.1050	0.1050	0.0000	1,520.1641	1,520.1641	0.0291	0.0279	1,529.4156
Landscaping	0.4385	0.1664	14.3853	7.6000e-004		0.0791	0.0791		0.0791	0.0791	0.0000	23.4225	23.4225	0.0229	0.0000	23.9027
Total	**15.0127**	**0.1664**	**14.3937**	**7.6000e-004**		**0.1852**	**0.1852**		**0.1841**	**0.1841**	**0.0000**	**1,543.5867**	**1,543.5867**	**0.0520**	**0.0279**	**1,553.3183**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	833.9062	4.8168	0.1201	972.2837
Unmitigated	982.9220	6.0187	0.1496	1,155.6787

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.747 / 79.2755	675.2046	4.1226	0.1025	793.5423
Strip Mall	57.8373 / 35.4487	307.7174	1.8961	0.0471	362.1364
Total		**982.9220**	**6.0187**	**0.1496**	**1,155.6787**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	100.598 / 79.2755	573.1355	3.2994	0.0823	667.9249
Strip Mall	46.2698 / 35.4487	260.7708	1.5174	0.0378	304.3588
Total		**833.9062**	**4.8168**	**0.1201**	**972.2837**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	346.6396	20.4858	0.0000	776.8416
Mitigated	346.6396	20.4858	0.0000	776.8416

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	887.8	180.2154	10.6504	0.0000	403.8743
Strip Mall	819.86	166.4242	9.8354	0.0000	372.9673
Total		**346.6396**	**20.4858**	**0.0000**	**776.8416**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	887.8	180.2154	10.6504	0.0000	403.8743
Strip Mall	819.86	166.4242	9.8354	0.0000	372.9673
Total		**346.6396**	**20.4858**	**0.0000**	**776.8416**

9.0 Operational Offroad

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

10.0 Vegetation

7722 Encinitas HEU - Build Your Own BAU

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,853.00	Dwelling Unit	48.76	1,853,000.00	5300
Strip Mall	696.09	1000sqft	37.01	696,093.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 1,853 units
696,093 SF commercial
85.77 acres

Construction Phase - Construction calcualted separately

Vehicle Trips - 79,332 trips compared to baseline
0.5% reduction in VMT

Woodstoves - No woodstoves, natural gas fireplaces only

Area Coating - SDAPCD VOC content limit = 150 g/L

Energy Use -

Water Mitigation -

Vechicle Emission Factors - Alternative CO2 Emission Factors

Vechicle Emission Factors - Alternative CO2 Emission Factors

Vechicle Emission Factors - Alternative CO2 Emission Factors

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	1,550.00	1.00
tblEnergyUse	T24E	200.21	200.21
tblEnergyUse	T24NG	4,108.03	4,108.03
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	1,019.15	1,853.00
tblFireplaces	NumberNoFireplace	185.30	0.00
tblFireplaces	NumberWood	648.55	0.00
tblLandUse	LandUseSquareFeet	696,090.00	696,093.00
tblLandUse	LotAcreage	15.98	37.01
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	244.25	377.82

tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDA	258.13	403.81
tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDA	241.74	370.83
tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDT1	297.79	472.94
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT1	313.82	504.09
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT1	294.90	464.60
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT2	364.72	480.79
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	LDT2	384.93	512.67
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	LDT2	361.06	472.26
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	MDV	489.56	655.05
tblVehicleEF	MDV	103.31	122.64
tblVehicleEF	MDV	516.30	698.42
tblVehicleEF	MDV	103.31	122.64
tblVehicleEF	MDV	484.72	643.43
tblVehicleEF	MDV	103.31	122.64
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HS_TL	7.30	5.77

tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	ST_TR	7.16	5.43
tblVehicleTrips	ST_TR	42.04	99.52
tblVehicleTrips	SU_TR	6.07	5.43
tblVehicleTrips	SU_TR	20.43	99.52
tblVehicleTrips	WD_TR	6.59	5.43
tblVehicleTrips	WD_TR	44.32	99.52
tblWoodstoves	NumberCatalytic	92.65	0.00
tblWoodstoves	NumberNoncatalytic	92.65	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	6.1500e-003	0.0330	0.0642	1.3000e-004	7.2600e-003	1.2600e-003	8.5100e-003	1.9500e-003	1.1700e-003	3.1200e-003	0.0000	10.3942	10.3942	6.3000e-004	0.0000	10.4075
Total	**6.1500e-003**	**0.0330**	**0.0642**	**1.3000e-004**	**7.2600e-003**	**1.2600e-003**	**8.5100e-003**	**1.9500e-003**	**1.1700e-003**	**3.1200e-003**	**0.0000**	**10.3942**	**10.3942**	**6.3000e-004**	**0.0000**	**10.4075**

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					
2016	6.1500e-003	0.0330	0.0642	1.3000e-004	7.2600e-003	1.2600e-003	8.5100e-003	1.9500e-003	1.1700e-003	3.1200e-003	0.0000	10.3942	10.3942	6.3000e-004	0.0000	10.4075
Total	**6.1500e-003**	**0.0330**	**0.0642**	**1.3000e-004**	**7.2600e-003**	**1.2600e-003**	**8.5100e-003**	**1.9500e-003**	**1.1700e-003**	**3.1200e-003**	**0.0000**	**10.3942**	**10.3942**	**6.3000e-004**	**0.0000**	**10.4075**

	ROG	NOx	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	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455
Energy	0.0667	0.5749	0.2787	3.6400e-003		0.0461	0.0461		0.0461	0.0461	0.0000	6,141.4478	6,141.4478	0.2333	0.0578	6,164.2487
Mobile	34.9652	50.8099	274.1861	0.5618	37.2892	0.6871	37.9764	9.9730	0.6342	10.6073	0.0000	51,829.3137	51,829.3137	1.6310	0.0000	51,863.5643
Waste						0.0000	0.0000		0.0000	0.0000	321.3895	0.0000	321.3895	18.9936	0.0000	720.2546
Water						0.0000	0.0000		0.0000	0.0000	54.6602	1,124.2607	1,178.9209	5.6594	0.1419	1,341.7642
Total	**49.1804**	**51.5446**	**288.2838**	**0.5661**	**37.2892**	**0.9110**	**38.2003**	**9.9730**	**0.8571**	**10.8301**	**376.0497**	**60,577.0244**	**60,953.0741**	**26.5671**	**0.2264**	**61,581.1773**

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	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455
Energy	0.0667	0.5749	0.2787	3.6400e-003		0.0461	0.0461		0.0461	0.0461	0.0000	6,141.4478	6,141.4478	0.2333	0.0578	6,164.2487
Mobile	34.9652	50.8099	274.1861	0.5618	37.2892	0.6871	37.9764	9.9730	0.6342	10.6073	0.0000	51,829.3137	51,829.3137	1.6310	0.0000	51,863.5643
Waste						0.0000	0.0000		0.0000	0.0000	321.3895	0.0000	321.3895	18.9936	0.0000	720.2546
Water						0.0000	0.0000		0.0000	0.0000	54.6602	1,124.2607	1,178.9209	5.6584	0.1417	1,341.6770
Total	**49.1804**	**51.5446**	**288.2838**	**0.5661**	**37.2892**	**0.9110**	**38.2003**	**9.9730**	**0.8571**	**10.8301**	**376.0497**	**60,577.0244**	**60,953.0741**	**26.5661**	**0.2262**	**61,581.0901**

	ROG	NOx	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**	**0.09**	**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	Building Construction	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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

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	1,557.00	312.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7700e-003	0.0152	0.0214	4.0000e-005	1.0100e-003	2.2000e-004	1.2400e-003	2.9000e-004	2.1000e-004	5.0000e-004	0.0000	3.3657	3.3657	3.0000e-005	0.0000	3.3662
Worker	2.6700e-003	3.5300e-003	0.0336	8.0000e-005	6.2400e-003	5.0000e-005	6.2900e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.8178	5.8178	3.1000e-004	0.0000	5.8243
Total	**4.4400e-003**	**0.0188**	**0.0550**	**1.2000e-004**	**7.2500e-003**	**2.7000e-004**	**7.5300e-003**	**1.9500e-003**	**2.5000e-004**	**2.2000e-003**	**0.0000**	**9.1835**	**9.1835**	**3.4000e-004**	**0.0000**	**9.1905**

3.2 Building Construction - 2016

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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7700e-003	0.0152	0.0214	4.0000e-005	1.0100e-003	2.2000e-004	1.2400e-003	2.9000e-004	2.1000e-004	5.0000e-004	0.0000	3.3657	3.3657	3.0000e-005	0.0000	3.3662
Worker	2.6700e-003	3.5300e-003	0.0336	8.0000e-005	6.2400e-003	5.0000e-005	6.2900e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.8178	5.8178	3.1000e-004	0.0000	5.8243
Total	**4.4400e-003**	**0.0188**	**0.0550**	**1.2000e-004**	**7.2500e-003**	**2.7000e-004**	**7.5300e-003**	**1.9500e-003**	**2.5000e-004**	**2.2000e-003**	**0.0000**	**9.1835**	**9.1835**	**3.4000e-004**	**0.0000**	**9.1905**

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	34.9652	50.8099	274.1861	0.5618	37.2892	0.6871	37.9764	9.9730	0.6342	10.6073	0.0000	51,829.3137	51,829.3137	1.6310	0.0000	51,863.5643
Unmitigated	34.9652	50.8099	274.1861	0.5618	37.2892	0.6871	37.9764	9.9730	0.6342	10.6073	0.0000	51,829.3137	51,829.3137	1.6310	0.0000	51,863.5643

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	10,061.79	10,061.79	10061.79	18,766,149	18,766,149
Strip Mall	69,274.88	69,274.88	69274.88	80,401,392	80,401,392
Total	79,336.67	79,336.67	79,336.67	99,167,541	99,167,541

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.77	5.77	5.77	41.60	18.80	39.60	86	11	3
Strip Mall	5.77	5.77	5.77	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: Y

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	5,481.3667	5,481.3667	0.2206	0.0457	5,500.1505
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,481.3667	5,481.3667	0.2206	0.0457	5,500.1505
NaturalGas Mitigated	0.0667	0.5749	0.2787	3.6400e-003		0.0461	0.0461		0.0461	0.0461	0.0000	660.0811	660.0811	0.0127	0.0121	664.0983
NaturalGas Unmitigated	0.0667	0.5749	0.2787	3.6400e-003		0.0461	0.0461		0.0461	0.0461	0.0000	660.0811	660.0811	0.0127	0.0121	664.0983

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					
Apartments Mid Rise	1.06919e+007	0.0577	0.4927	0.2096	3.1400e-003		0.0398	0.0398		0.0398	0.0398	0.0000	570.5588	570.5588	0.0109	0.0105	574.0312
Strip Mall	1.67758e+006	9.0500e-003	0.0822	0.0691	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	89.5223	89.5223	1.7200e-003	1.6400e-003	90.0671
Total		**0.0667**	**0.5749**	**0.2787**	**3.6300e-003**		**0.0461**	**0.0461**		**0.0461**	**0.0461**	**0.0000**	**660.0811**	**660.0811**	**0.0127**	**0.0121**	**664.0983**

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					
Apartments Mid Rise	1.06919e+007	0.0577	0.4927	0.2096	3.1400e-003		0.0398	0.0398		0.0398	0.0398	0.0000	570.5588	570.5588	0.0109	0.0105	574.0312
Strip Mall	1.67758e+006	9.0500e-003	0.0822	0.0691	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	89.5223	89.5223	1.7200e-003	1.6400e-003	90.0671
Total		**0.0667**	**0.5749**	**0.2787**	**3.6300e-003**		**0.0461**	**0.0461**		**0.0461**	**0.0461**	**0.0000**	**660.0811**	**660.0811**	**0.0127**	**0.0121**	**664.0983**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.47718e+006	2,116.8000	0.0852	0.0176	2,124.0540
Strip Mall	1.02952e+007	3,364.5667	0.1354	0.0280	3,376.0965
Total		**5,481.3667**	**0.2206**	**0.0457**	**5,500.1504**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.47718e+006	2,116.8000	0.0852	0.0176	2,124.0540
Strip Mall	1.02952e+007	3,364.5667	0.1354	0.0280	3,376.0965
Total		**5,481.3667**	**0.2206**	**0.0457**	**5,500.1504**

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	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455
Unmitigated	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455

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	3.6246					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.9555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1475	1.0000e-005	8.0400e-003	0.0000		0.1019	0.1019		0.1008	0.1008	0.0000	1,459.5151	1,459.5151	0.0280	0.0268	1,468.3975
Landscaping	0.4210	0.1597	13.8109	7.3000e-004		0.0759	0.0759		0.0759	0.0759	0.0000	22.4871	22.4871	0.0220	0.0000	22.9480
Total	**14.1485**	**0.1597**	**13.8190**	**7.3000e-004**		**0.1778**	**0.1778**		**0.1768**	**0.1768**	**0.0000**	**1,482.0022**	**1,482.0022**	**0.0499**	**0.0268**	**1,491.3455**

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	3.6246					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.9555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1475	1.0000e-005	8.0400e-003	0.0000		0.1019	0.1019		0.1008	0.1008	0.0000	1,459.5151	1,459.5151	0.0280	0.0268	1,468.3975
Landscaping	0.4210	0.1597	13.8109	7.3000e-004		0.0759	0.0759		0.0759	0.0759	0.0000	22.4871	22.4871	0.0220	0.0000	22.9480
Total	**14.1485**	**0.1597**	**13.8190**	**7.3000e-004**		**0.1778**	**0.1778**		**0.1768**	**0.1768**	**0.0000**	**1,482.0022**	**1,482.0022**	**0.0499**	**0.0268**	**1,491.3455**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,178.9209	5.6584	0.1417	1,341.6770
Unmitigated	1,178.9209	5.6594	0.1419	1,341.7642

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	120.73 / 76.1126	828.4089	3.9658	0.0995	942.5265
Strip Mall	51.5611 / 31.602	350.5120	1.6936	0.0425	399.2377
Total		**1,178.9209**	**5.6594**	**0.1419**	**1,341.7642**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	120.73 / 76.1126	828.4089	3.9651	0.0993	942.4654
Strip Mall	51.5611 / 31.602	350.5120	1.6933	0.0424	399.2116
Total		**1,178.9209**	**5.6584**	**0.1417**	**1,341.6770**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	321.3895	18.9936	0.0000	720.2546
Mitigated	321.3895	18.9936	0.0000	720.2546

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	852.38	173.0254	10.2255	0.0000	387.7612
Strip Mall	730.89	148.3641	8.7681	0.0000	332.4934
Total		**321.3895**	**18.9936**	**0.0000**	**720.2546**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	852.38	173.0254	10.2255	0.0000	387.7612
Strip Mall	730.89	148.3641	8.7681	0.0000	332.4934
Total		**321.3895**	**18.9936**	**0.0000**	**720.2546**

9.0 Operational Offroad

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

10.0 Vegetation

7722 Encinitas HEU - Build Your Own

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,853.00	Dwelling Unit	48.76	1,853,000.00	5300
Strip Mall	696.09	1000sqft	37.01	696,093.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	556.22	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 33% goal
CalEEMod accounts for 10.2%
22.8% difference applied to intensity factors

Land Use - 1,853 units
696,093 SF commercial
85.77 acres

Construction Phase - Construction calcualted separately

Vehicle Trips - 79,332 trips compared to baseline
0.5% reduction in VMT

Woodstoves - No woodstoves, natural gas fireplaces only

Area Coating - SDAPCD VOC content limit = 150 g/L

Water Mitigation -

Energy Use - 2013 Title 24:
Multi-family - 23.3% increase in electricity efficiency, 3.8% increase in natural gas efficiency
Non-residential - 21.8% increase in electricity efficiency, 16.8% increase in natural gas efficiency

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	1,550.00	1.00
tblEnergyUse	T24E	160.77	123.31
tblEnergyUse	T24E	3.89	3.04
tblEnergyUse	T24NG	3,820.47	3,675.29
tblEnergyUse	T24NG	1.20	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	1,019.15	1,853.00
tblFireplaces	NumberNoFireplace	185.30	0.00
tblFireplaces	NumberWood	648.55	0.00
tblLandUse	LotAcreage	15.98	37.01
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	556.22

tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	ST_TR	7.16	5.43
tblVehicleTrips	ST_TR	42.04	99.52
tblVehicleTrips	SU_TR	6.07	5.43
tblVehicleTrips	SU_TR	20.43	99.52
tblVehicleTrips	WD_TR	6.59	5.43
tblVehicleTrips	WD_TR	44.32	99.52
tblWoodstoves	NumberCatalytic	92.65	0.00
tblWoodstoves	NumberNoncatalytic	92.65	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	6.1500e-003	0.0330	0.0642	1.3000e-004	7.2600e-003	1.2600e-003	8.5100e-003	1.9500e-003	1.1700e-003	3.1200e-003	0.0000	10.3942	10.3942	6.3000e-004	0.0000	10.4075
Total	**6.1500e-003**	**0.0330**	**0.0642**	**1.3000e-004**	**7.2600e-003**	**1.2600e-003**	**8.5100e-003**	**1.9500e-003**	**1.1700e-003**	**3.1200e-003**	**0.0000**	**10.3942**	**10.3942**	**6.3000e-004**	**0.0000**	**10.4075**

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					
2016	6.1500e-003	0.0330	0.0642	1.3000e-004	7.2600e-003	1.2600e-003	8.5100e-003	1.9500e-003	1.1700e-003	3.1200e-003	0.0000	10.3942	10.3942	6.3000e-004	0.0000	10.4075
Total	**6.1500e-003**	**0.0330**	**0.0642**	**1.3000e-004**	**7.2600e-003**	**1.2600e-003**	**8.5100e-003**	**1.9500e-003**	**1.1700e-003**	**3.1200e-003**	**0.0000**	**10.3942**	**10.3942**	**6.3000e-004**	**0.0000**	**10.4075**

	ROG	NOx	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	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455
Energy	0.0612	0.5270	0.2538	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	4,520.0841	4,520.0841	0.1664	0.0463	4,537.9290
Mobile	34.9653	50.8101	274.1871	0.5618	37.2894	0.6871	37.9765	9.9731	0.6342	10.6073	0.0000	38,955.6591	38,955.6591	1.6310	0.0000	38,989.9098
Waste						0.0000	0.0000		0.0000	0.0000	321.3895	0.0000	321.3895	18.9936	0.0000	720.2546
Water						0.0000	0.0000		0.0000	0.0000	54.6602	867.9319	922.5921	5.6485	0.1404	1,084.7223
Total	**49.1750**	**51.4969**	**288.2599**	**0.5658**	**37.2894**	**0.9072**	**38.1966**	**9.9731**	**0.8533**	**10.8263**	**376.0497**	**45,825.6774**	**46,201.7270**	**26.4894**	**0.2134**	**46,824.1612**

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	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455
Energy	0.0612	0.5270	0.2538	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	4,520.0841	4,520.0841	0.1664	0.0463	4,537.9290
Mobile	34.9653	50.8101	274.1871	0.5618	37.2894	0.6871	37.9765	9.9731	0.6342	10.6073	0.0000	38,955.6591	38,955.6591	1.6310	0.0000	38,989.9098
Waste						0.0000	0.0000		0.0000	0.0000	321.3895	0.0000	321.3895	18.9936	0.0000	720.2546
Water						0.0000	0.0000		0.0000	0.0000	43.7281	739.0148	782.7429	4.5205	0.1127	912.6087
Total	**49.1750**	**51.4969**	**288.2599**	**0.5658**	**37.2894**	**0.9072**	**38.1966**	**9.9731**	**0.8533**	**10.8263**	**365.1176**	**45,696.7602**	**46,061.8778**	**25.3615**	**0.1857**	**46,652.0475**

	ROG	NOx	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**	**2.91**	**0.28**	**0.30**	**4.26**	**12.97**	**0.37**

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	Building Construction	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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

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	1,557.00	312.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7700e-003	0.0152	0.0214	4.0000e-005	1.0100e-003	2.2000e-004	1.2400e-003	2.9000e-004	2.1000e-004	5.0000e-004	0.0000	3.3657	3.3657	3.0000e-005	0.0000	3.3662
Worker	2.6700e-003	3.5300e-003	0.0336	8.0000e-005	6.2400e-003	5.0000e-005	6.2900e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.8178	5.8178	3.1000e-004	0.0000	5.8243
Total	**4.4400e-003**	**0.0188**	**0.0550**	**1.2000e-004**	**7.2500e-003**	**2.7000e-004**	**7.5300e-003**	**1.9500e-003**	**2.5000e-004**	**2.2000e-003**	**0.0000**	**9.1835**	**9.1835**	**3.4000e-004**	**0.0000**	**9.1905**

3.2 Building Construction - 2016

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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7700e-003	0.0152	0.0214	4.0000e-005	1.0100e-003	2.2000e-004	1.2400e-003	2.9000e-004	2.1000e-004	5.0000e-004	0.0000	3.3657	3.3657	3.0000e-005	0.0000	3.3662
Worker	2.6700e-003	3.5300e-003	0.0336	8.0000e-005	6.2400e-003	5.0000e-005	6.2900e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.8178	5.8178	3.1000e-004	0.0000	5.8243
Total	**4.4400e-003**	**0.0188**	**0.0550**	**1.2000e-004**	**7.2500e-003**	**2.7000e-004**	**7.5300e-003**	**1.9500e-003**	**2.5000e-004**	**2.2000e-003**	**0.0000**	**9.1835**	**9.1835**	**3.4000e-004**	**0.0000**	**9.1905**

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	34.9653	50.8101	274.1871	0.5618	37.2894	0.6871	37.9765	9.9731	0.6342	10.6073	0.0000	38,955.6591	38,955.6591	1.6310	0.0000	38,989.9098
Unmitigated	34.9653	50.8101	274.1871	0.5618	37.2894	0.6871	37.9765	9.9731	0.6342	10.6073	0.0000	38,955.6591	38,955.6591	1.6310	0.0000	38,989.9098

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	10,061.79	10,061.79	10061.79	18,766,149	18,766,149
Strip Mall	69,275.18	69,275.18	69275.18	80,401,738	80,401,738
Total	79,336.97	79,336.97	79,336.97	99,167,887	99,167,887

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.77	5.77	5.77	41.60	18.80	39.60	86	11	3
Strip Mall	5.77	5.77	5.77	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

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	3,914.6807	3,914.6807	0.1548	0.0352	3,928.8411
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,914.6807	3,914.6807	0.1548	0.0352	3,928.8411
NaturalGas Mitigated	0.0612	0.5270	0.2538	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	605.4035	605.4035	0.0116	0.0111	609.0879
NaturalGas Unmitigated	0.0612	0.5270	0.2538	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	605.4035	605.4035	0.0116	0.0111	609.0879

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					
Apartments Mid Rise	9.89e+006	0.0533	0.4557	0.1939	2.9100e-003		0.0369	0.0369		0.0369	0.0369	0.0000	527.7680	527.7680	0.0101	9.6800e-003	530.9799
Strip Mall	1.45483e+006	7.8400e-003	0.0713	0.0599	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6355	77.6355	1.4900e-003	1.4200e-003	78.1080
Total		**0.0612**	**0.5270**	**0.2538**	**3.3400e-003**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**605.4035**	**605.4035**	**0.0116**	**0.0111**	**609.0879**

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					
Apartments Mid Rise	9.89e+006	0.0533	0.4557	0.1939	2.9100e-003		0.0369	0.0369		0.0369	0.0369	0.0000	527.7680	527.7680	0.0101	9.6800e-003	530.9799
Strip Mall	1.45483e+006	7.8400e-003	0.0713	0.0599	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6355	77.6355	1.4900e-003	1.4200e-003	78.1080
Total		**0.0612**	**0.5270**	**0.2538**	**3.3400e-003**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**605.4035**	**605.4035**	**0.0116**	**0.0111**	**609.0879**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.33468e+006	1,598.2228	0.0632	0.0144	1,604.0040
Strip Mall	9.18147e+006	2,316.4579	0.0916	0.0208	2,324.8371
Total		**3,914.6807**	**0.1548**	**0.0352**	**3,928.8411**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.33468e+006	1,598.2228	0.0632	0.0144	1,604.0040
Strip Mall	9.18147e+006	2,316.4579	0.0916	0.0208	2,324.8371
Total		**3,914.6807**	**0.1548**	**0.0352**	**3,928.8411**

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	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455
Unmitigated	14.1485	0.1597	13.8190	7.3000e-004		0.1778	0.1778		0.1768	0.1768	0.0000	1,482.0022	1,482.0022	0.0499	0.0268	1,491.3455

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	3.6246					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.9555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1475	1.0000e-005	8.0400e-003	0.0000		0.1019	0.1019		0.1008	0.1008	0.0000	1,459.5151	1,459.5151	0.0280	0.0268	1,468.3975
Landscaping	0.4210	0.1597	13.8109	7.3000e-004		0.0759	0.0759		0.0759	0.0759	0.0000	22.4871	22.4871	0.0220	0.0000	22.9480
Total	**14.1485**	**0.1597**	**13.8190**	**7.3000e-004**		**0.1778**	**0.1778**		**0.1768**	**0.1768**	**0.0000**	**1,482.0022**	**1,482.0022**	**0.0499**	**0.0268**	**1,491.3455**

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	3.6246					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.9555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1475	1.0000e-005	8.0400e-003	0.0000		0.1019	0.1019		0.1008	0.1008	0.0000	1,459.5151	1,459.5151	0.0280	0.0268	1,468.3975
Landscaping	0.4210	0.1597	13.8109	7.3000e-004		0.0759	0.0759		0.0759	0.0759	0.0000	22.4871	22.4871	0.0220	0.0000	22.9480
Total	**14.1485**	**0.1597**	**13.8190**	**7.3000e-004**		**0.1778**	**0.1778**		**0.1768**	**0.1768**	**0.0000**	**1,482.0022**	**1,482.0022**	**0.0499**	**0.0268**	**1,491.3455**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	782.7429	4.5205	0.1127	912.6087
Unmitigated	922.5921	5.6485	0.1404	1,084.7223

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	120.73 / 76.1126	648.2664	3.9581	0.0984	761.8829
Strip Mall	51.5611 / 31.602	274.3257	1.6903	0.0420	322.8395
Total		**922.5921**	**5.6485**	**0.1404**	**1,084.7223**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	96.5843 / 76.1126	550.2694	3.1678	0.0790	641.2771
Strip Mall	41.2489 / 31.602	232.4735	1.3528	0.0337	271.3315
Total		**782.7429**	**4.5205**	**0.1127**	**912.6087**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	321.3895	18.9936	0.0000	720.2546
Mitigated	321.3895	18.9936	0.0000	720.2546

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	852.38	173.0254	10.2255	0.0000	387.7612
Strip Mall	730.89	148.3641	8.7681	0.0000	332.4934
Total		**321.3895**	**18.9936**	**0.0000**	**720.2546**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	852.38	173.0254	10.2255	0.0000	387.7612
Strip Mall	730.89	148.3641	8.7681	0.0000	332.4934
Total		**321.3895**	**18.9936**	**0.0000**	**720.2546**

9.0 Operational Offroad

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

10.0 Vegetation

7722 Encinitas HEU - Modified Mixed-Use Places BAU

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	3,261.00	Dwelling Unit	85.82	3,261,000.00	9326
Strip Mall	1,610.07	1000sqft	64.39	1,610,066.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 3,261 units
1,610,066 SF commercial
150.21 acres

Construction Phase - Construction calcualted separately

Vehicle Trips - 84,915 trips compared to baseline
1.3% reduction in VMT

Woodstoves - No woodstoves, natural gas fireplaces only

Area Coating - SDAPCD VOC content limit = 150 g/L

Energy Use -

Water Mitigation -

Vechicle Emission Factors - Alternative CO2 Emission Factors

Vechicle Emission Factors - Alternative CO2 Emission Factors

Vechicle Emission Factors - Alternative CO2 Emission Factors

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	3,100.00	1.00
tblEnergyUse	T24E	200.21	200.21
tblEnergyUse	T24NG	4,108.03	4,108.03
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	1,793.55	3,261.00
tblFireplaces	NumberNoFireplace	326.10	0.00
tblFireplaces	NumberWood	1,141.35	0.00
tblLandUse	LandUseSquareFeet	1,610,070.00	1,610,066.00
tblLandUse	LotAcreage	36.96	64.39
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	244.25	377.82

tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDA	258.13	403.81
tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDA	241.74	370.83
tblVehicleEF	LDA	52.29	70.77
tblVehicleEF	LDT1	297.79	472.94
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT1	313.82	504.09
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT1	294.90	464.60
tblVehicleEF	LDT1	63.53	87.37
tblVehicleEF	LDT2	364.72	480.79
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	LDT2	384.93	512.67
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	LDT2	361.06	472.26
tblVehicleEF	LDT2	77.49	89.93
tblVehicleEF	MDV	489.56	655.05
tblVehicleEF	MDV	103.31	122.64
tblVehicleEF	MDV	516.30	698.42
tblVehicleEF	MDV	103.31	122.64
tblVehicleEF	MDV	484.72	643.43
tblVehicleEF	MDV	103.31	122.64
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HS_TL	7.30	5.72

tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	ST_TR	7.16	2.59
tblVehicleTrips	ST_TR	42.04	47.49
tblVehicleTrips	SU_TR	6.07	2.59
tblVehicleTrips	SU_TR	20.43	47.49
tblVehicleTrips	WD_TR	6.59	2.59
tblVehicleTrips	WD_TR	44.32	47.49
tblWoodstoves	NumberCatalytic	163.05	0.00
tblWoodstoves	NumberNoncatalytic	163.05	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0101	0.0506	0.1130	2.3000e-004	0.0135	1.5100e-003	0.0150	3.6200e-003	1.4100e-003	5.0300e-003	0.0000	18.5104	18.5104	9.2000e-004	0.0000	18.5296
Total	**0.0101**	**0.0506**	**0.1130**	**2.3000e-004**	**0.0135**	**1.5100e-003**	**0.0150**	**3.6200e-003**	**1.4100e-003**	**5.0300e-003**	**0.0000**	**18.5104**	**18.5104**	**9.2000e-004**	**0.0000**	**18.5296**

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					
2016	0.0101	0.0506	0.1130	2.3000e-004	0.0135	1.5100e-003	0.0150	3.6200e-003	1.4100e-003	5.0300e-003	0.0000	18.5104	18.5104	9.2000e-004	0.0000	18.5296
Total	**0.0101**	**0.0506**	**0.1130**	**2.3000e-004**	**0.0135**	**1.5100e-003**	**0.0150**	**3.6200e-003**	**1.4100e-003**	**5.0300e-003**	**0.0000**	**18.5104**	**18.5104**	**9.2000e-004**	**0.0000**	**18.5296**

	ROG	NOx	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	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500
Energy	0.1224	1.0572	0.5287	6.6800e-003		0.0846	0.0846		0.0846	0.0846	0.0000	12,718.6676	12,718.6676	0.4864	0.1180	12,765.4729
Mobile	37.2556	53.4833	289.9796	0.5878	38.9536	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	54,217.0078	54,217.0078	1.7120	0.0000	54,252.9596
Waste						0.0000	0.0000		0.0000	0.0000	647.6691	0.0000	647.6691	38.2761	0.0000	1,451.4681
Water						0.0000	0.0000		0.0000	0.0000	105.2424	2,163.3733	2,268.6156	10.8965	0.2733	2,582.1489
Total	**64.1829**	**54.8216**	**314.8312**	**0.5957**	**38.9536**	**1.1183**	**40.0719**	**10.4182**	**1.0610**	**11.4791**	**752.9114**	**71,707.1555**	**72,460.0670**	**51.4589**	**0.4384**	**73,676.5994**

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	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500
Energy	0.1224	1.0572	0.5287	6.6800e-003		0.0846	0.0846		0.0846	0.0846	0.0000	12,718.6676	12,718.6676	0.4864	0.1180	12,765.4729
Mobile	37.2556	53.4833	289.9796	0.5878	38.9536	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	54,217.0078	54,217.0078	1.7120	0.0000	54,252.9596
Waste						0.0000	0.0000		0.0000	0.0000	647.6691	0.0000	647.6691	38.2761	0.0000	1,451.4681
Water						0.0000	0.0000		0.0000	0.0000	105.2424	2,163.3733	2,268.6156	10.8945	0.2728	2,581.9810
Total	**64.1829**	**54.8216**	**314.8312**	**0.5957**	**38.9536**	**1.1183**	**40.0719**	**10.4182**	**1.0610**	**11.4791**	**752.9114**	**71,707.1555**	**72,460.0670**	**51.4569**	**0.4380**	**73,676.4315**

	ROG	NOx	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**	**0.09**	**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	Building Construction	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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

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	2,863.00	612.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4800e-003	0.0299	0.0419	7.0000e-005	1.9900e-003	4.4000e-004	2.4300e-003	5.7000e-004	4.1000e-004	9.7000e-004	0.0000	6.6019	6.6019	5.0000e-005	0.0000	6.6029
Worker	4.9100e-003	6.4900e-003	0.0618	1.4000e-004	0.0115	9.0000e-005	0.0116	3.0500e-003	8.0000e-005	3.1300e-003	0.0000	10.6978	10.6978	5.7000e-004	0.0000	10.7096
Total	**8.3900e-003**	**0.0364**	**0.1037**	**2.1000e-004**	**0.0135**	**5.3000e-004**	**0.0140**	**3.6200e-003**	**4.9000e-004**	**4.1000e-003**	**0.0000**	**17.2996**	**17.2996**	**6.2000e-004**	**0.0000**	**17.3126**

3.2 Building Construction - 2016

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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4800e-003	0.0299	0.0419	7.0000e-005	1.9900e-003	4.4000e-004	2.4300e-003	5.7000e-004	4.1000e-004	9.7000e-004	0.0000	6.6019	6.6019	5.0000e-005	0.0000	6.6029
Worker	4.9100e-003	6.4900e-003	0.0618	1.4000e-004	0.0115	9.0000e-005	0.0116	3.0500e-003	8.0000e-005	3.1300e-003	0.0000	10.6978	10.6978	5.7000e-004	0.0000	10.7096
Total	**8.3900e-003**	**0.0364**	**0.1037**	**2.1000e-004**	**0.0135**	**5.3000e-004**	**0.0140**	**3.6200e-003**	**4.9000e-004**	**4.1000e-003**	**0.0000**	**17.2996**	**17.2996**	**6.2000e-004**	**0.0000**	**17.3126**

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	37.2556	53.4833	289.9796	0.5878	38.9536	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	54,217.0078	54,217.0078	1.7120	0.0000	54,252.9596
Unmitigated	37.2556	53.4833	289.9796	0.5878	38.9536	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	54,217.0078	54,217.0078	1.7120	0.0000	54,252.9596

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	8,445.99	8,445.99	8445.99	15,616,112	15,616,112
Strip Mall	76,462.22	76,462.22	76462.22	87,977,741	87,977,741
Total	84,908.21	84,908.21	84,908.21	103,593,853	103,593,853

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.72	5.72	5.72	41.60	18.80	39.60	86	11	3
Strip Mall	5.72	5.72	5.72	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: Y

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	11,507.5049	11,507.5049	0.4632	0.0958	11,546.9392
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	11,507.5049	11,507.5049	0.4632	0.0958	11,546.9392
NaturalGas Mitigated	0.1224	1.0572	0.5287	6.6800e-003		0.0846	0.0846		0.0846	0.0846	0.0000	1,211.1627	1,211.1627	0.0232	0.0222	1,218.5337
NaturalGas Unmitigated	0.1224	1.0572	0.5287	6.6800e-003		0.0846	0.0846		0.0846	0.0846	0.0000	1,211.1627	1,211.1627	0.0232	0.0222	1,218.5337

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					
Strip Mall	3.88026e+006	0.0209	0.1902	0.1598	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.0654	207.0654	3.9700e-003	3.8000e-003	208.3256
Apartments Mid Rise	1.88161e+007	0.1015	0.8670	0.3689	5.5300e-003		0.0701	0.0701		0.0701	0.0701	0.0000	1,004.0973	1,004.0973	0.0193	0.0184	1,010.2081
Total		**0.1224**	**1.0572**	**0.5287**	**6.6700e-003**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**1,211.1627**	**1,211.1627**	**0.0232**	**0.0222**	**1,218.5337**

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					
Apartments Mid Rise	1.88161e+007	0.1015	0.8670	0.3689	5.5300e-003		0.0701	0.0701		0.0701	0.0701	0.0000	1,004.0973	1,004.0973	0.0193	0.0184	1,010.2081
Strip Mall	3.88026e+006	0.0209	0.1902	0.1598	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.0654	207.0654	3.9700e-003	3.8000e-003	208.3256
Total		**0.1224**	**1.0572**	**0.5287**	**6.6700e-003**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**1,211.1627**	**1,211.1627**	**0.0232**	**0.0222**	**1,218.5337**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.13989e+007	3,725.2482	0.1499	0.0310	3,738.0140
Strip Mall	2.38129e+007	7,782.2567	0.3132	0.0648	7,808.9252
Total		**11,507.5049**	**0.4632**	**0.0958**	**11,546.9392**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.13989e+007	3,725.2482	0.1499	0.0310	3,738.0140
Strip Mall	2.38129e+007	7,782.2567	0.3132	0.0648	7,808.9252
Total		**11,507.5049**	**0.4632**	**0.0958**	**11,546.9392**

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	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500
Unmitigated	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500

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	6.7803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.0240					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2595	1.0000e-005	0.0142	0.0000		0.1793	0.1793		0.1774	0.1774	0.0000	2,568.5260	2,568.5260	0.0492	0.0471	2,584.1577
Landscaping	0.7412	0.2811	24.3087	1.2800e-003		0.1336	0.1336		0.1336	0.1336	0.0000	39.5808	39.5808	0.0386	0.0000	40.3923
Total	**26.8050**	**0.2811**	**24.3228**	**1.2800e-003**		**0.3130**	**0.3130**		**0.3111**	**0.3111**	**0.0000**	**2,608.1068**	**2,608.1068**	**0.0879**	**0.0471**	**2,624.5500**

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	6.7803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.0240					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2595	1.0000e-005	0.0142	0.0000		0.1793	0.1793		0.1774	0.1774	0.0000	2,568.5260	2,568.5260	0.0492	0.0471	2,584.1577
Landscaping	0.7412	0.2811	24.3087	1.2800e-003		0.1336	0.1336		0.1336	0.1336	0.0000	39.5808	39.5808	0.0386	0.0000	40.3923
Total	**26.8050**	**0.2811**	**24.3228**	**1.2800e-003**		**0.3130**	**0.3130**		**0.3111**	**0.3111**	**0.0000**	**2,608.1068**	**2,608.1068**	**0.0879**	**0.0471**	**2,624.5500**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,268.6156	10.8945	0.2728	2,581.9810
Unmitigated	2,268.6156	10.8965	0.2733	2,582.1489

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	212.467 / 133.947	1,457.8744	6.9792	0.1751	1,658.7042
Strip Mall	119.262 / 73.096	810.7412	3.9173	0.0982	923.4448
Total		**2,268.6156**	**10.8965**	**0.2733**	**2,582.1489**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	212.467 / 133.947	1,457.8744	6.9780	0.1748	1,658.5966
Strip Mall	119.262 / 73.096	810.7412	3.9166	0.0981	923.3844
Total		**2,268.6156**	**10.8945**	**0.2728**	**2,581.9810**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	647.6691	38.2761	0.0000	1,451.4681
Mitigated	647.6691	38.2761	0.0000	1,451.4681

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1500.06	304.4986	17.9954	0.0000	682.4010
Strip Mall	1690.57	343.1704	20.2808	0.0000	769.0671
Total		**647.6691**	**38.2761**	**0.0000**	**1,451.4681**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1500.06	304.4986	17.9954	0.0000	682.4010
Strip Mall	1690.57	343.1704	20.2808	0.0000	769.0671
Total		**647.6691**	**38.2761**	**0.0000**	**1,451.4681**

9.0 Operational Offroad

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

10.0 Vegetation

7722 Encinitas HEU - Modified Mixed-Use Places

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	3,261.00	Dwelling Unit	85.82	3,261,000.00	9326
Strip Mall	1,610.07	1000sqft	64.39	1,610,066.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	556.22	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 33% goal
CalEEMod accounts for 10.2%
22.8% difference applied to intensity factors

Land Use - 3,261 units
1,610,066 SF commercial
150.21 acres

Construction Phase - Construction calcualted separately

Vehicle Trips - 94,915 trips compared to baseline
1.3% reduction in VMT

Woodstoves - No woodstoves, natural gas fireplaces only

Area Coating - SDAPCD VOC content limit = 150 g/L

Water Mitigation -

Energy Use - 2013 Title 24:
Multi-family - 23.3% increase in electricity efficiency, 3.8% increase in natural gas efficiency
Non-residential - 21.8% increase in electricity efficiency, 16.8% increase in natural gas efficiency

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	3,100.00	1.00
tblEnergyUse	T24E	160.77	123.31
tblEnergyUse	T24E	3.89	3.04
tblEnergyUse	T24NG	3,820.47	3,675.29
tblEnergyUse	T24NG	1.20	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	1,793.55	3,261.00
tblFireplaces	NumberNoFireplace	326.10	0.00
tblFireplaces	NumberWood	1,141.35	0.00
tblLandUse	LandUseSquareFeet	1,610,070.00	1,610,066.00
tblLandUse	LotAcreage	36.96	64.39
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022

tblProjectCharacteristics	CO2IntensityFactor	720.49	556.22
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	ST_TR	7.16	2.59
tblVehicleTrips	ST_TR	42.04	47.49
tblVehicleTrips	SU_TR	6.07	2.59
tblVehicleTrips	SU_TR	20.43	47.49
tblVehicleTrips	WD_TR	6.59	2.59
tblVehicleTrips	WD_TR	44.32	47.49
tblWoodstoves	NumberCatalytic	163.05	0.00
tblWoodstoves	NumberNoncatalytic	163.05	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0101	0.0506	0.1130	2.3000e-004	0.0135	1.5100e-003	0.0150	3.6200e-003	1.4100e-003	5.0300e-003	0.0000	18.5104	18.5104	9.2000e-004	0.0000	18.5296
Total	**0.0101**	**0.0506**	**0.1130**	**2.3000e-004**	**0.0135**	**1.5100e-003**	**0.0150**	**3.6200e-003**	**1.4100e-003**	**5.0300e-003**	**0.0000**	**18.5104**	**18.5104**	**9.2000e-004**	**0.0000**	**18.5296**

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					
2016	0.0101	0.0506	0.1130	2.3000e-004	0.0135	1.5100e-003	0.0150	3.6200e-003	1.4100e-003	5.0300e-003	0.0000	18.5104	18.5104	9.2000e-004	0.0000	18.5296
Total	**0.0101**	**0.0506**	**0.1130**	**2.3000e-004**	**0.0135**	**1.5100e-003**	**0.0150**	**3.6200e-003**	**1.4100e-003**	**5.0300e-003**	**0.0000**	**18.5104**	**18.5104**	**9.2000e-004**	**0.0000**	**18.5296**

	ROG	NOx	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	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500
Energy	0.1120	0.9669	0.4798	6.1100e-003		0.0774	0.0774		0.0774	0.0774	0.0000	9,278.9704	9,278.9704	0.3444	0.0938	9,315.2710
Mobile	37.2555	53.4831	289.9790	0.5878	38.9535	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	40,756.5961	40,756.5961	1.7120	0.0000	40,792.5478
Waste						0.0000	0.0000		0.0000	0.0000	647.6691	0.0000	647.6691	38.2761	0.0000	1,451.4681
Water						0.0000	0.0000		0.0000	0.0000	105.2424	1,670.1293	1,775.3717	10.8755	0.2703	2,087.5328
Total	**64.1725**	**54.7312**	**314.7817**	**0.5952**	**38.9535**	**1.1112**	**40.0647**	**10.4182**	**1.0538**	**11.4719**	**752.9114**	**54,313.8026**	**55,066.7141**	**51.2959**	**0.4111**	**56,271.3697**

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	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500
Energy	0.1120	0.9669	0.4798	6.1100e-003		0.0774	0.0774		0.0774	0.0774	0.0000	9,278.9704	9,278.9704	0.3444	0.0938	9,315.2710
Mobile	37.2555	53.4831	289.9790	0.5878	38.9535	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	40,756.5961	40,756.5961	1.7120	0.0000	40,792.5478
Waste						0.0000	0.0000		0.0000	0.0000	647.6691	0.0000	647.6691	38.2761	0.0000	1,451.4681
Water						0.0000	0.0000		0.0000	0.0000	84.1939	1,421.9129	1,506.1068	8.7038	0.2170	1,756.1461
Total	**64.1725**	**54.7312**	**314.7817**	**0.5952**	**38.9535**	**1.1112**	**40.0647**	**10.4182**	**1.0538**	**11.4719**	**731.8630**	**54,065.5862**	**54,797.4492**	**49.1242**	**0.3578**	**55,939.9829**

	ROG	NOx	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**	**2.80**	**0.46**	**0.49**	**4.23**	**12.96**	**0.59**

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	Building Construction	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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

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	2,863.00	612.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4800e-003	0.0299	0.0419	7.0000e-005	1.9900e-003	4.4000e-004	2.4300e-003	5.7000e-004	4.1000e-004	9.7000e-004	0.0000	6.6019	6.6019	5.0000e-005	0.0000	6.6029
Worker	4.9100e-003	6.4900e-003	0.0618	1.4000e-004	0.0115	9.0000e-005	0.0116	3.0500e-003	8.0000e-005	3.1300e-003	0.0000	10.6978	10.6978	5.7000e-004	0.0000	10.7096
Total	**8.3900e-003**	**0.0364**	**0.1037**	**2.1000e-004**	**0.0135**	**5.3000e-004**	**0.0140**	**3.6200e-003**	**4.9000e-004**	**4.1000e-003**	**0.0000**	**17.2996**	**17.2996**	**6.2000e-004**	**0.0000**	**17.3126**

3.2 Building Construction - 2016

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	1.7000e-003	0.0143	9.2500e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.2000e-004	9.2000e-004	0.0000	1.2108	1.2108	3.0000e-004	0.0000	1.2171
Total	**1.7000e-003**	**0.0143**	**9.2500e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**1.2108**	**1.2108**	**3.0000e-004**	**0.0000**	**1.2171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4800e-003	0.0299	0.0419	7.0000e-005	1.9900e-003	4.4000e-004	2.4300e-003	5.7000e-004	4.1000e-004	9.7000e-004	0.0000	6.6019	6.6019	5.0000e-005	0.0000	6.6029
Worker	4.9100e-003	6.4900e-003	0.0618	1.4000e-004	0.0115	9.0000e-005	0.0116	3.0500e-003	8.0000e-005	3.1300e-003	0.0000	10.6978	10.6978	5.7000e-004	0.0000	10.7096
Total	**8.3900e-003**	**0.0364**	**0.1037**	**2.1000e-004**	**0.0135**	**5.3000e-004**	**0.0140**	**3.6200e-003**	**4.9000e-004**	**4.1000e-003**	**0.0000**	**17.2996**	**17.2996**	**6.2000e-004**	**0.0000**	**17.3126**

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	37.2555	53.4831	289.9790	0.5878	38.9535	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	40,756.5961	40,756.5961	1.7120	0.0000	40,792.5478
Unmitigated	37.2555	53.4831	289.9790	0.5878	38.9535	0.7208	39.6744	10.4182	0.6653	11.0835	0.0000	40,756.5961	40,756.5961	1.7120	0.0000	40,792.5478

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	8,445.99	8,445.99	8445.99	15,616,112	15,616,112
Strip Mall	76,462.03	76,462.03	76462.03	87,977,523	87,977,523
Total	84,908.02	84,908.02	84,908.02	103,593,634	103,593,634

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.72	5.72	5.72	41.60	18.80	39.60	86	11	3
Strip Mall	5.72	5.72	5.72	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

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	8,170.6073	8,170.6073	0.3232	0.0735	8,200.1626
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,170.6073	8,170.6073	0.3232	0.0735	8,200.1626
NaturalGas Mitigated	0.1120	0.9669	0.4798	6.1100e-003		0.0774	0.0774		0.0774	0.0774	0.0000	1,108.3631	1,108.3631	0.0212	0.0203	1,115.1084
NaturalGas Unmitigated	0.1120	0.9669	0.4798	6.1100e-003		0.0774	0.0774		0.0774	0.0774	0.0000	1,108.3631	1,108.3631	0.0212	0.0203	1,115.1084

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					
Apartments Mid Rise	1.74049e+007	0.0939	0.8020	0.3413	5.1200e-003		0.0648	0.0648		0.0648	0.0648	0.0000	928.7919	928.7919	0.0178	0.0170	934.4444
Strip Mall	3.36504e+006	0.0181	0.1650	0.1386	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	179.5712	179.5712	3.4400e-003	3.2900e-003	180.6641
Total		**0.1120**	**0.9669**	**0.4798**	**6.1100e-003**		**0.0774**	**0.0774**		**0.0774**	**0.0774**	**0.0000**	**1,108.3631**	**1,108.3631**	**0.0212**	**0.0203**	**1,115.1084**

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					
Apartments Mid Rise	1.74049e+007	0.0939	0.8020	0.3413	5.1200e-003		0.0648	0.0648		0.0648	0.0648	0.0000	928.7919	928.7919	0.0178	0.0170	934.4444
Strip Mall	3.36504e+006	0.0181	0.1650	0.1386	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	179.5712	179.5712	3.4400e-003	3.2900e-003	180.6641
Total		**0.1120**	**0.9669**	**0.4798**	**6.1100e-003**		**0.0774**	**0.0774**		**0.0774**	**0.0774**	**0.0000**	**1,108.3631**	**1,108.3631**	**0.0212**	**0.0203**	**1,115.1084**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.11481e+007	2,812.6306	0.1113	0.0253	2,822.8047
Strip Mall	2.12368e+007	5,357.9766	0.2119	0.0482	5,377.3579
Total		**8,170.6073**	**0.3232**	**0.0734**	**8,200.1626**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.11481e+007	2,812.6306	0.1113	0.0253	2,822.8047
Strip Mall	2.12368e+007	5,357.9766	0.2119	0.0482	5,377.3579
Total		**8,170.6073**	**0.3232**	**0.0734**	**8,200.1626**

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	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500
Unmitigated	26.8050	0.2811	24.3228	1.2800e-003		0.3130	0.3130		0.3111	0.3111	0.0000	2,608.1068	2,608.1068	0.0879	0.0471	2,624.5500

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	6.7803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.0240					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2595	1.0000e-005	0.0142	0.0000		0.1793	0.1793		0.1774	0.1774	0.0000	2,568.5260	2,568.5260	0.0492	0.0471	2,584.1577
Landscaping	0.7412	0.2811	24.3087	1.2800e-003		0.1336	0.1336		0.1336	0.1336	0.0000	39.5808	39.5808	0.0386	0.0000	40.3923
Total	**26.8050**	**0.2811**	**24.3228**	**1.2800e-003**		**0.3130**	**0.3130**		**0.3111**	**0.3111**	**0.0000**	**2,608.1068**	**2,608.1068**	**0.0879**	**0.0471**	**2,624.5500**

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	6.7803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.0240					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2595	1.0000e-005	0.0142	0.0000		0.1793	0.1793		0.1774	0.1774	0.0000	2,568.5260	2,568.5260	0.0492	0.0471	2,584.1577
Landscaping	0.7412	0.2811	24.3087	1.2800e-003		0.1336	0.1336		0.1336	0.1336	0.0000	39.5808	39.5808	0.0386	0.0000	40.3923
Total	**26.8050**	**0.2811**	**24.3228**	**1.2800e-003**		**0.3130**	**0.3130**		**0.3111**	**0.3111**	**0.0000**	**2,608.1068**	**2,608.1068**	**0.0879**	**0.0471**	**2,624.5500**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,506.1068	8.7038	0.2170	1,756.1461
Unmitigated	1,775.3717	10.8755	0.2703	2,087.5328

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	212.467 / 133.947	1,140.8509	6.9657	0.1731	1,340.7987
Strip Mall	119.262 / 73.096	634.5208	3.9098	0.0971	746.7341
Total		**1,775.3717**	**10.8755**	**0.2702**	**2,087.5328**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	169.974 / 133.947	968.3911	5.5748	0.1390	1,128.5508
Strip Mall	95.4096 / 73.096	537.7157	3.1290	0.0780	627.5953
Total		**1,506.1068**	**8.7038**	**0.2170**	**1,756.1461**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	647.6691	38.2761	0.0000	1,451.4681
Mitigated	647.6691	38.2761	0.0000	1,451.4681

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1500.06	304.4986	17.9954	0.0000	682.4010
Strip Mall	1690.57	343.1704	20.2808	0.0000	769.0671
Total		**647.6691**	**38.2761**	**0.0000**	**1,451.4681**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1500.06	304.4986	17.9954	0.0000	682.4010
Strip Mall	1690.57	343.1704	20.2808	0.0000	769.0671
Total		**647.6691**	**38.2761**	**0.0000**	**1,451.4681**

9.0 Operational Offroad

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

10.0 Vegetation