Air Quality Assessment

for the

Skyline Retirement Center

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Glossary of Terms and Acronyms

APCD	Air Pollution Control District
AQIA	Air Quality Impact Assessment
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measure
BACT	Best Available Control Technology
BMPs	Best Management Practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CALINE4	California Line Source Dispersion Model (Version 4)
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CO	Carbon Monoxide
H_2S	Hydrogen Sulfide
HARP	HotSpots Analysis and Reporting Program
HI	Hazard Index
ISCST	Industrial Source Complex Short Term Model
mg/m^3	Milligrams per Cubic Meter
$\mu g/m^3$	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standard
NOx	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
O_3	Ozone
$PM_{2.5}$	Fine Particulate Matter (particulate matter with an aerodynamic diameter of 2.5 microns or less
PM_{10}	Respirable Particulate Matter (particulate matter with an aerodynamic diameter of 10 microns or less
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RAQS	San Diego County Regional Air Quality Strategy
ROCs	Reactive Organic Compounds
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAB	South Coast Air Basin
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SOx	Oxides of Sulfur
SO_2	Sulfur Dioxide
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology

USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Executive Summary

This report presents an assessment of potential air quality impacts associated with the proposed Skyline Retirement Center in the Valley de Oro community of the County of San Diego. The project is within the jurisdiction of the Department of Planning and Development Services in the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO "hot spots" to form due to traffic associated with the proposed project.

The project is an assisted living facility on approximately 8 acres located at 11330 Campo Road (SR-94) in the Valle De Oro community of San Diego County, California. The project will consist of full-service senior living facility with up to 232 housing units divided between 85 retirement units and 147 congregate care units. Because the project will accommodate existing needs for senior living facilities within the region, the project's emissions would not exceed projected emissions for vehicles and buildings accounted for within the RAQS and SIP. Therefore, the project will be consistent with the RAQS and SIP.

To reduce the emissions to the extent feasible, fugitive dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Clean paved roads
- Use architectural coatings with a VOC content of 100 g/l or less for exterior coatings and 50 g/l or less for interior coatings
- The project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment. If construction fleets cannot meet this It should be noted that even with the assumption that the construction fleet is represented by the average fleet for the years 2016 to 2018 when the project is being constructed, the impact would not exceed the County's threshold of 10 in a million. The average fleet does include equipment that is rated to Tier II and Tier III; and as time progresses, more of the construction equipment in the fleet will meet more stringent standards.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

The proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment and construction workers commuting to and from the site. Emissions of criteria pollutants during construction would be below the County's recommended screening-level thresholds.

The main operational impacts associated with the Project would include impacts associated with traffic; with additional impacts associated with area sources such as energy use and landscaping. Emissions of all pollutants would be below the County's recommended screening-level thresholds.

A health risk assessment was conducted to evaluate the potential for project construction or operations to result in a significant impact to nearby sensitive receptors. The risk assessment focused on diesel particulate matter, which is the main toxic air contaminant (TAC) emitted from vehicles. The risk assessment concluded that risks were less than significant.

An evaluation of odors indicated that odor impacts would be less than significant.

1.0 INTRODUCTION

1.1 Purpose of the Report

This report presents an assessment of potential air quality impacts associated with the proposed Skyline Retirement Center in the Valley de Oro community of the County of San Diego. The project is within the jurisdiction of the Department of Planning and Development Services in the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO "hot spots" to form due to traffic associated with the proposed project.

1.2 Project Location and Description

The project is an assisted living facility on approximately 8 acres located at 11330 Campo Road (SR-94) in the Valle De Oro community of San Diego County, California. The project will consist of full-service senior living facility with up to 232 housing units divided between 85 retirement units and 147 congregate care units. Figure 1 presents a project vicinity map showing the location of the project. Figure 2 provides a project site plan.

This Air Quality Technical Report includes an evaluation of existing conditions in the project vicinity, an assessment of potential impacts associated with project construction, and an evaluation of project operational impacts.

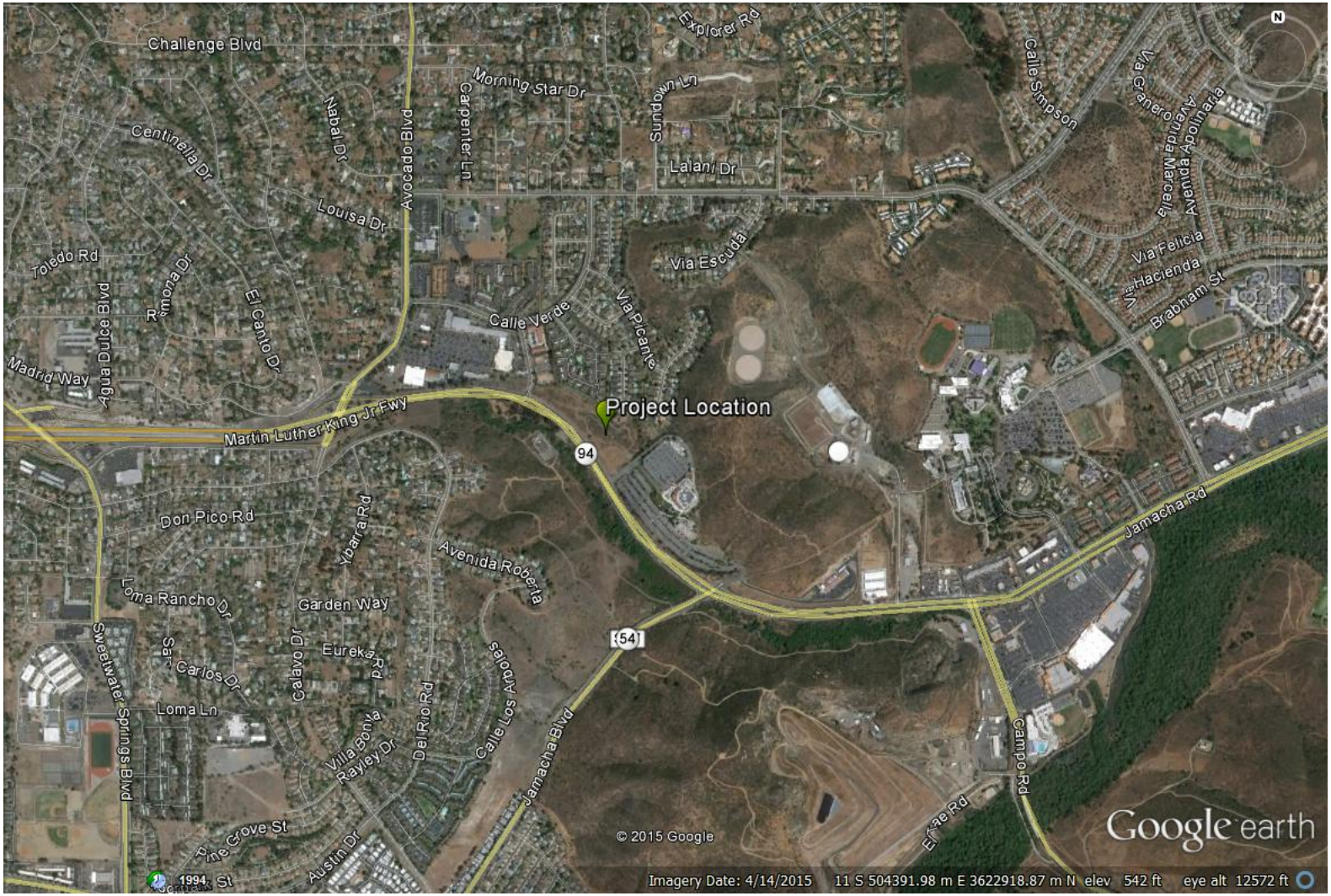

Figure 1. Project Location and Vicinity

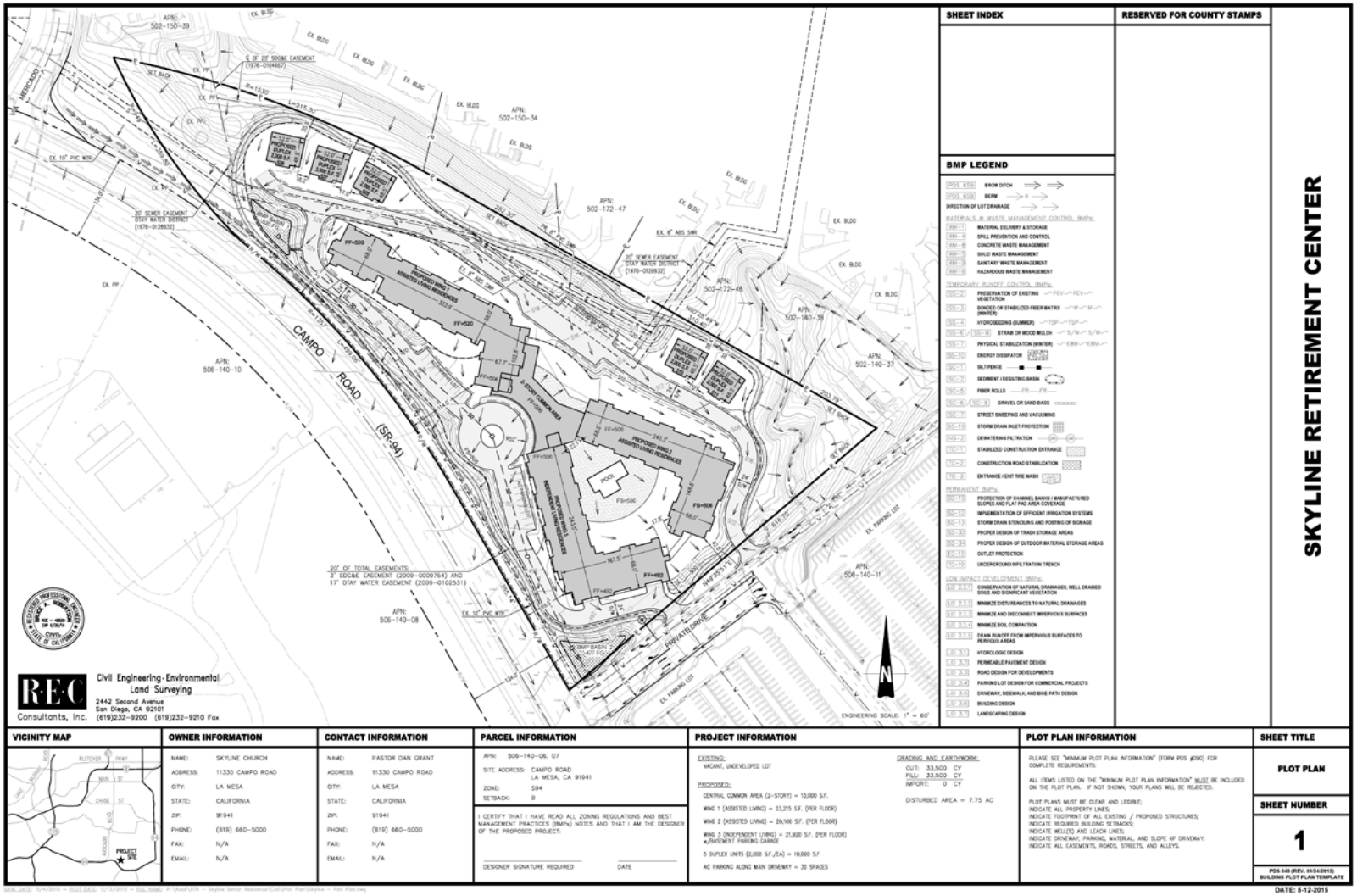

Figure 2. Project Site Plan

2.0 EXISTING CONDITIONS

2.1 Existing Setting

The project site is located in the Valle de Oro community within unincorporated San Diego County. The site is adjacent to the Skyline Church, which is located on the north side of Campo Road, just west of the intersection with Jamacha Blvd. The site is currently unoccupied, and is in a disturbed state. Sensitive receptors in the vicinity of the site include individual single-family residences adjacent to the site on the north side, as well as individual single-family residences across Campo Road to the southwest. The remaining properties adjacent to the project site include commercial uses, undeveloped land, and the Skyline Church.

2.2 Climate and Meteorology

The project area, like the rest of San Diego County's inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The average annual temperature in the La Mesa area (the nearest climatic monitoring station where temperature data are measured) is 63.6 ˚F, with an average maximum temperature of 75.0 ˚F and an average minimum temperature of 52.3 ˚F. The highest temperatures occur in August, when the average maximum temperatures are 84.5 ˚F. The lowest temperatures occur in January, when the average minimum temperature is 43.7 ˚F. (WRCC 2015a). The average annual precipitation is 12.93 inches. Most precipitation occur from November through April. (WRCC 2015b).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to transport pollutants from the coastal areas toward the inland areas. Data collected by the SDAPCD indicate that pollutant levels are often lower at the coast and higher inland as pollutants become trapped by the local mountains. Pollutants may be trapped by periodic temperature inversions. A temperature inversion is a thin layer of the atmosphere where the decrease in temperature with elevation is less than normal. The inversion does not allow pollutants to be transported, but traps pollutants resulting in increased concentrations. Generally, the morning inversion layer is lower than the afternoon inversion layer; therefore, pollutant concentrations tend to be higher in the afternoon.

The SDAPCD measures meteorological data in locations where it operates a monitoring station. There is no monitoring station that measures micro-scale meteorology in the La Mesa area. The nearest monitoring station to the site is the El Cajon monitoring station, which is located approximately 3.5 miles to the northeast. The SDAPCD also operates a monitoring station at Chula Vista, located approximately 10 miles to the southwest of the site.

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Figure 3 provides a graphic representation of the prevailing winds in the project vicinity, as measured at the San Diego Air Pollution Control District's (APCD's) El Cajon Monitoring Station (the closest meteorological monitoring station to the site). The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

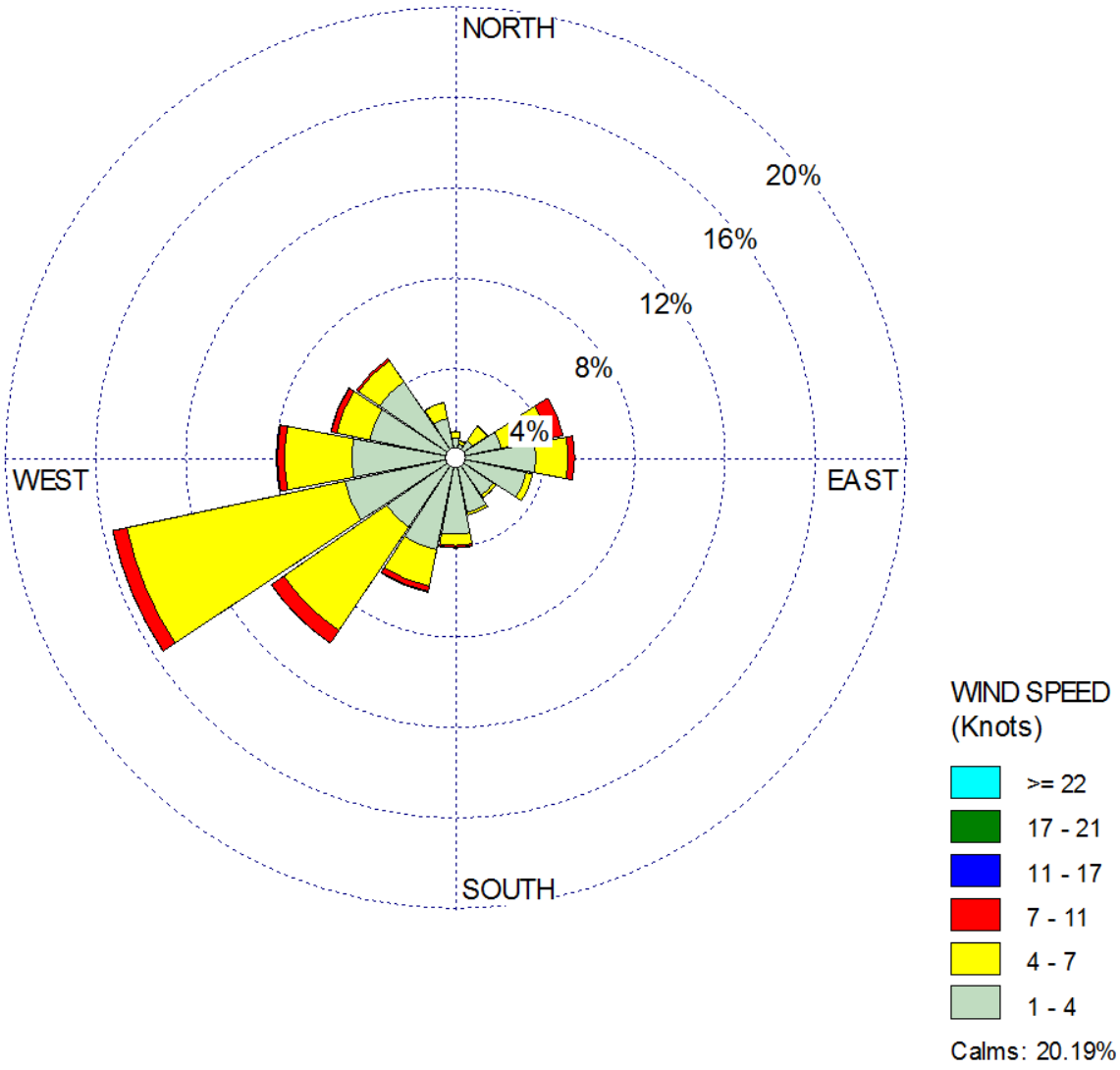

Figure 3. Wind Rose – El Cajon Monitoring Station

2.3 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act

(CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the generally more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The SDAB is currently designated as a marginal nonattainment area for the 8-hour NAAQS for ozone (O_3). The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O_3, particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}).

The following specific descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on USEPA (2007) and ARB (2001).

Ozone. O_3 is considered a photochemical oxidant, which is a chemical that is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx), both by-products of combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide. CO is a product of combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in this size range has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. Sulfur dioxide (SO_2) is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead (Pb) in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead

emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The San Diego APCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The APCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, and most recently in 2009. The RAQS is in the process of being updated. The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for O_3. The APCD has also developed the air basin's input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. The latest SIP update was submitted by the ARB to the USEPA in 2007, and was approved in 2012. The latest revisions to the SIP were submitted in 2011. The APCD has developed its *Eight-Hour Ozone Attainment Plan for San Diego County* (APCD 2007), which provides plans for attaining and maintaining the 8-hour NAAQS for ozone.

The RAQS relies on information from ARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities

and by the County as part of the development of the jurisdiction's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the APCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 1
Ambient Air Quality Standards

POLLUTANT	AVE. TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)	0.075 ppm (147 µg/m^3)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m^3)		0.100 ppm (188 µg/m^3)	--	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	--	--	Pararosaniline
	3 hours	--		--	0.5 ppm (1300 µg/m^3)	
	1 hour	0.25 ppm (655 µg/m^3)		0.075 ppm (196 µg/m^3)	--	
	Annual Arithmetic Mean	--		0.030 ppm for certain areas	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	150 µg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m^3	35 µg/m^3	
Sulfates	24 hours	25 µg/m^3	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m^3	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m^3	1.5 µg/m^3	
	3-month Rolling Average	--		0.15 µg/m^3	0.15 µg/m^3	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m^3)	Gas Chromatography	--	--	--

ppm= parts per million
µg/m^3 = micrograms per cubic meter
mg/m^3= milligrams per cubic meter
Source: California Air Resources Board 2015, www.arb.ca.gov

2.4 Background Air Quality

The APCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the El Cajon monitoring station, which measures O_3, PM_{10}, $PM_{2.5,}$ CO, and NO_2. Because the El Cajon monitoring station is located in areas where there is some traffic congestion, it is likely that pollutant concentrations measured at this monitoring station is higher than concentrations that would be observed or measured in the Project area, and would thus provide a conservative estimate of background ambient air quality. Ambient concentrations of pollutants over the last three years are presented in Table 2.

The 8-hour federal ozone standard was not exceeded at the El Cajon monitoring station times from 2012 through 2014. The El Cajon monitoring station has also measured individual exceedances of the 24-hour NAAQS for $PM_{2.5}$; however, because the standard is based on the 98th percentile of three years of data, the El Cajon area is not out of attainment of the standard. The El Cajon monitoring station has measured exceedances of the CAAQS for ozone and PM_{10} during the period from 2012 to 2014. The data from the monitoring station indicates that air quality is in attainment of all other standards.

Table 2
Ambient Background Concentrations
(ppm unless otherwise indicated)

Pollutant	Averaging Time	2012	2013	2014	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.074	0.078	0.053	0.070	El Cajon
	1 hour	0.086	0.090	0.059	0.09	El Cajon
PM_{10}	Annual	23.4 µg/m^3	24.4 µg/m^3	23.9 µg/m^3	20 µg/m^3	El Cajon
	24 hour	48.0 µg/m^3	41.0 µg/m^3	48.0 µg/m^3	50 µg/m^3	El Cajon
$PM_{2.5}$	Annual	10.5 µg/m^3	10.6 µg/m^3	10.3 µg/m^3	12 µg/m^3	El Cajon
	24 hour	37.7 µg/m^3	23.1 µg/m^3	38.1 µg/m^3	35 µg/m^3	El Cajon
NO_2	Annual	0.012	0.012	0.013	0.030	El Cajon
	1 hour	0.059	0.051	0.048	0.100	El Cajon
CO	8 hour	1.9	1.2	1.8	9.0	El Cajon
	1 hour	2.3	1.9	2.0	20.0	El Cajon

Source: www.arb.ca.gov/aqd/aqd.htm; http://www.sdapcd.org/info/reports/5-year-summary.pdf. (Measurements of all pollutants at El Cajon station)

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

The County of San Diego (County of San Diego 2007) has approved guidelines for determining significance based on Appendix G.III of the State CEQA Guidelines. Section 4.0 of the County of *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (County of San Diego 2007) provides guidance that a project would have a significant environmental impact if:

1. The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
2. The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
4. The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
5. The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
6. The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.
7. The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).
8. The project will expose sensitive receptors to substantial pollutant concentrations.
9. The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The County of San Diego recognizes the APCD's established screening level thresholds for air quality emissions (Rules 20.1 et seq.) as screening-level thresholds for land development projects. As stated above, projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the APCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO_x water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the APCD.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$ or exceed quantitative thresholds for O_3 precursors, NO_X and VOCs, project emissions may be evaluated based on the quantitative emission thresholds established by the San Diego APCD. As part of its air quality permitting process, the APCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). The County of San Diego has also approved the use of the South Coast Air Quality Management District's (SCAQMD's) screening threshold of 55 pounds per day or 10 tons per year as a significance threshold for $PM_{2.5}$.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in the table below.

Table 3 Screening-Level Thresholds for Air Quality Impact Analysis			
Pollutant	Total Emissions		
Construction Emissions			
	Lb. per Day		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NOx)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million without Toxics Best Available Control Technology (T-BACT) 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

In the event that emissions exceed these screening-level thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards, including appropriate background levels. For nonattainment pollutants (ozone, with ozone precursors NOx and VOCs, $PM_{2.5}$ and PM_{10}), if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). In San Diego County, the Planning and Development Services Department identifies an excess cancer risk level of 1 in 1 million or less for projects that do not implement

Toxics Best Available Control Technology (T-BACT), and an excess cancer risk level of 10 in 1 million or less for projects that do implement T-BACT as a significant impact. The significance threshold for non-cancer health effects is a health hazard index of one or less. These significance thresholds are consistent with the San Diego Air Pollution Control District's Rule 1210 requirements for stationary sources. If a project has the potential to result in emissions of any TAC or HAP which result in a cancer risk of greater than 1 in 1 million without T-BACT, 10 in 1 million with T-BACT, or health hazard index of one or more, the project would be deemed to have a potentially significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as residences, schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than the risk significance thresholds discussed above would be deemed to have a potentially significant impact. One mile was chosen as a conservative means of evaluating significance. As discussed in the SCAQMD's CEQA Air Quality Handbook, if there is an industrial source within a quarter mile of a sensitive receptor, planners should review the potential for toxic impacts. Therefore, use of a one mile radius is conservative.

APCD Rule 51 (Public Nuisance) prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

The impacts associated with construction and operation of the project were evaluated for significance based on these significance criteria. Emissions associated with construction and operation of the project were evaluated with the CalEEMod Model, Version 2013.2.2.

4.0 PROJECT IMPACT ANALYSIS

The proposed Skyline Retirement Center includes both construction and operational impacts. Construction impacts include emissions associated with the construction of the project. Operational impacts include emissions associated with the project, including traffic, at full buildout.

4.1 Conformance to the Regional Air Quality Strategy

4.1.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The RAQS outlines APCD's plans and control measures designed to attain the State air quality standards for ozone. In addition, the APCD relies on the SIP, which includes the APCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the ARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from ARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the

project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County of San Diego General Plan and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the proposed project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the APCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

4.1.2 Significance of Impacts Prior to Mitigation

As discussed in Section 1.0, the proposed project would construct a retirement community on an approximately 8-acre site at 11330 Campo Road. The project will consist of full-service senior living facility with up to 232 housing units divided between 85 retirement units and 147 congregate care units. The site is currently designated as Conservation/Open Space in the County's General Plan. The applicant is proposing to change the Conservation/Open Space Land Use Designation to Residential. This change will require a General Plan Amendment and rezone of the site.

Trip generation rates from the proposed land uses would be greater than rates when compared to the open space designation because open space designations do not generate trips (LOS Engineering 2016). There is no category within the SANDAG-recommended trip generation rates that covers open space. For this reason, project-related operational emissions at the site would be greater than anticipated and described in the RAQS/SIP.

According to the Specific Plan Amendment for the project (REC Consultants 2016), the General Plan's suggested Regional Category for the site is Village. The project would provide a village use in that it would provide multi-level senior care. The project accommodates a use that is anticipated within the SANDAG growth projections for multi-level senior care centers. Residents of the project would come from the existing San Diego population, and the project would therefore not be growth inducing. The emissions attributable to vehicles and buildings are anticipated within the emissions budgets used to develop the programs, rules, and regulations within the RAQS and SIP. Projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the APCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO_x water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the APCD.

Furthermore, SANDAG has historically over estimated growth (http://www.voiceofsandiego.org/topics/land-use/sandag-isnt-good-at-predicting-population-growth/). The 2009 RAQS would have used the Series 10 forecasts. The Series 10 forecast were high because they did not account for the recession. Additionally, the Series 10 forecasts within the County did not account for many of the cities adding capacity and pulling growth away from the County.

The project would therefore not conflict with or obstruct implementation of the RAQS and SIP. The impact would be less than significant.

4.1.3 Design Considerations and Mitigation Measures

Because the impact is less than significant, there are no design considerations or mitigation measures required.

4.1.4 Conclusions

Because the Project is consistent with the population projections used to develop emission inventories within the RAQS and SIP, and because the project would not conflict with programs, rules, and regulations adopted as part of the RAQS and SIP, the project would not conflict with implementation of the RAQS or SIP.

4.2 Conformance to Federal and State Ambient Air Quality Standards

The project will result in a significant impact to air quality if:

The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), construction impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.1.2 Significance of Impacts Prior to Mitigation

Emissions associated with project construction were estimated using the CalEEMod Model, Version 2013.2.2 (ENVIRON 2013). The construction schedule is based on the development schedule provided by the applicant, which includes grading (balanced on site), construction of residential units, site paving, and architectural coatings application.

Construction was assumed to commence in January 2018 and be complete by June 2019, for an 18-month construction schedule. Table 4 presents a summary of the construction phases assumed for the project.

Table 4
Construction Schedule and Phasing
Skyline Retirement Center

Phase	Phase Name	Phase Type	Start Date	End Date
1	Grading	Grading	01/01/2018	02/28/2018
2	Building Construction	Building Construction	03/01/2018	06/30/2019
3	Paving	Paving	01/01/2019	06/30/2019
4	Architectural Coating	Architectural Coating	01/01/2019	06/30/2019

CalEEMod relies on the total area of the site and estimates site disturbance based on the maximum acres that can be graded given the construction equipment input in an 8-hour day. The project would be subject to the requirements of SDAPCD Rule 50, Visible Emissions, which states that a person shall not discharge into the atmosphere from any single source of emissions whatsoever

any air contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes which is darker in shade than that designated as Number 1 on the Ringelmann Chart; Rule 51, Nuisance, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property; and Rule 55.0, Fugitive Dust Control, which restricts the discharge of visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60 minute period, and requires construction activities to control track-out.

To account for standard dust control measures within the CalEEMod Model, it was assumed that watering three times day would reduce particulate matter emissions by 61%; that speeds would be reduced on unpaved surfaces to 15 mph; and that paved roads would be cleaned which would have a control effectiveness of 25% for PM emissions (SCAQMD 1999). It was also assumed that the project would use architectural coatings that are compliant with SDAPCD Rule 67.0.1, which limits VOC content to 100 g/l for exterior paints and 50 g/l for interior paints. This rule was taken into account in the CalEEMod Model.

Table 5 provides a summary of the emission estimates for construction of the project. Refer to Attachment A for detailed CalEEMod Model outputs.

Table 5
Maximum Daily Estimated Construction Emissions
Skyline Retirement Center

Emission Source	VOCs	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
			lbs/day			
Grading						
Fugitive Dust	-	-	-	-	2.43	1.30
Off Road Diesel	3.00	31.07	24.00	0.03	1.72	1.58
Haul Trips	0.00	0.00	0.03	0.00	0.00	0.00
Worker Trips	0.04	0.05	0.55	0.00	0.12	0.03
TOTAL	**3.04**	**31.12**	**24.58**	**0.03**	**4.27**	**2.91**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Building Construction						
Off Road Diesel	2.67	23.26	17.53	0.03	1.49	1.40
Vendor Trips	0.23	1.91	2.49	0.01	0.19	0.07
Worker Trips	0.48	0.57	6.13	0.02	1.38	0.37
TOTAL	**3.38**	**25.74**	**26.15**	**0.06**	**3.06**	**1.84**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Off Road Diesel	1.43	14.94	14.37	0.02	0.81	0.74
Worker Trips	0.04	0.05	0.51	0.00	0.12	0.03
TOTAL	**1.47**	**14.99**	**14.88**	**0.02**	**0.93**	**0.77**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Architectural Coatings						
Architectural Coatings Emissions	14.07	-	-	-	-	-
Off Road Diesel	0.27	1.84	1.84	0.00	0.13	0.13
Worker Trips	0.09	0.10	1.12	0.00	0.27	0.07
TOTAL	**14.43**	**1.94**	**2.96**	**0.00**	**0.40**	**0.20**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Maximum Simultaneous Emissions[1]	**18.90**	**40.15**	**42.97**	**0.08**	**4.27**	**2.92**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

[1]Maximum VOC, NOx, CO, and SOx emissions occur during simultaneous building construction, paving, and architectural coatings application. Maximum PM_{10} and $PM_{2.5}$ emissions occur during grading.

As shown in Table 4, maximum simultaneous emissions are below the screening-level thresholds for all criteria pollutants.

4.2.1.3 Design Considerations

Project construction would employ dust control measures to reduce impacts as feasible. Dust control measures would include watering the site at least three times daily during active grading and reducing speeds on unpaved surfaces to 15 mph. The project must also comply with APCD Rule 55.0, which requires control of fugitive dust emissions such that they do not extend off site. In addition, the project would utilize low-VOC coatings in accordance with APCD Rule 67.0 requirements. The project would reduce emissions to the extent feasible. Emissions would therefore be less than significant.

4.2.1.4 Conclusions

Project criteria pollutants emissions during construction would be less than significant.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.2.2 Significance of Impacts Prior to Mitigation

The main operational impacts associated with the Project would include impacts associated with traffic; additional emissions would be associated with area sources such as energy use and landscaping. Emissions are attributable to the following sources:

- Vehicles from trips generated by the project. Trip generation rates were obtained from the Traffic Impact Study (LOS Engineering 2015), and are as follows:
    - Retirement Community – 4 trips per dwelling unit
    - Congregate Care Facility – 2.5 trips per dwelling unit
- Architectural coatings application for maintenance purposes
- Consumer products use
- Landscaping equipment use
- Energy use – natural gas

Project operational emissions were estimated using the CalEEMod Model, Version 2013.2.2, assuming an operational year of 2020. Emissions were calculated for both summer and winter conditions, as well as for annual operations. The results of the emission calculations, in lbs/day and tons/year, are summarized in Table 6 for buildout conditions, along with emissions associated with area sources and a comparison with the County of San Diego significance criteria. The CalEEMod outputs are presented in Appendix A.

Table 6 Total Operational Emissions						
	VOCs	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Summer, Lbs/day						
Area Sources	7.70	0.22	19.21	0.00	0.22	0.22
Energy Use	0.06	0.50	0.21	0.00	0.04	0.04
Vehicular Emissions	2.13	4.43	21.52	0.06	4.34	1.21
TOTAL	**9.89**	**5.15**	**40.95**	**0.07**	**4.60**	**1.46**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Winter, Lbs/day						
Area Sources	7.70	0.22	19.21	0.00	0.22	0.22
Energy Use	0.06	0.50	0.21	0.00	0.04	0.04
Vehicular Emissions	2.25	4.71	22.55	0.06	4.34	1.21
TOTAL	**10.02**	**5.43**	**41.98**	**0.06**	**4.60**	**1.46**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Tons/year						
Area Sources	1.32	0.02	1.73	0.00	0.01	0.01
Energy Use	0.01	0.09	0.04	0.00	0.01	0.01
Vehicular Emissions	0.39	0.85	3.99	0.01	0.77	0.21
TOTAL	**1.72**	**0.96**	**5.76**	**0.01**	**0.79**	**0.23**
Screening-Level Thresholds	13.7	40	100	40	15	10
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Emissions associated with the project are below the County's screening-level thresholds for all pollutants. Because vehicular emissions decrease over time with phase-out of older vehicles and implementation of increasingly stringent emission controls, future emissions would decrease.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO "hot spots" was conducted. The Traffic Impact Study (LOS Engineering 2015) evaluated whether or not there would be a decrease in the level of service at the roadways and/or intersections affected by the Project. The potential for CO "hot spots" was evaluated based on the results of the Traffic Assessment.

The project would not result in a degradation in LOS to E or worse at any of the study intersections. The project would therefore not result in a CO "hot spot" due to its trip generation. Operational impacts would therefore be less than significant.

4.2.2.3 Design Considerations

No additional measures would be required to reduce impacts to less than significant.

4.2.2.4 Conclusions

Emissions of all criteria pollutants would be less than the screening-level thresholds for project operations and would therefore not result in a significant impact to the ambient air quality.

4.3 Cumulatively Considerable Net Increase of Criteria Pollutants

The project will result in a significant impact to air quality if:

The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).

4.3.1 Construction Impacts

4.3.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is considered a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructing projects. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NOx, or VOCs during construction would also have a significant cumulatively considerably net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.3.1.2 Significance of Impacts Prior to Mitigation

The emissions budget for 2015 in the SIP, as reported on the ARB's website, includes the following emissions for construction for the SDAB:

- Off-Road Equipment: 12.44 tons/day VOC, 26.12 tons/day NOx
- Construction Fugitive Dust: 28.54 tons/day PM_{10}, 2.85 tons/day $PM_{2.5}$

Emissions of nonattainment pollutants would be a small proportion of the emissions budget for the SDAB.

To evaluate the potential for cumulative impacts from grading at the project site, the following equation was used (Desert Research Institute 1996), which is utilized in the SCAQMD's Localized Significance Threshold Methodology (SCAQMD 2003) to evaluate localized PM_{10} impacts:

$$C_x = 0.9403\ C_0\ e^{-0.0462X}$$

Where C_x = predicted PM_{10} concentration at X meters from the fenceline;

C_0 = PM_{10} concentration at the fenceline;

e = natural logarithm; and

X = distance in meters from the fenceline.

Conservatively assuming C_0 equals the 24-hour ambient air quality standard of 50 µg/m^3, fugitive PM_{10} concentrations would decrease with distance from the fenceline. As shown in the chart below, by 100 meters (approximately 330 feet) from the project boundary, the concentration of PM_{10} would decrease by 99 percent.

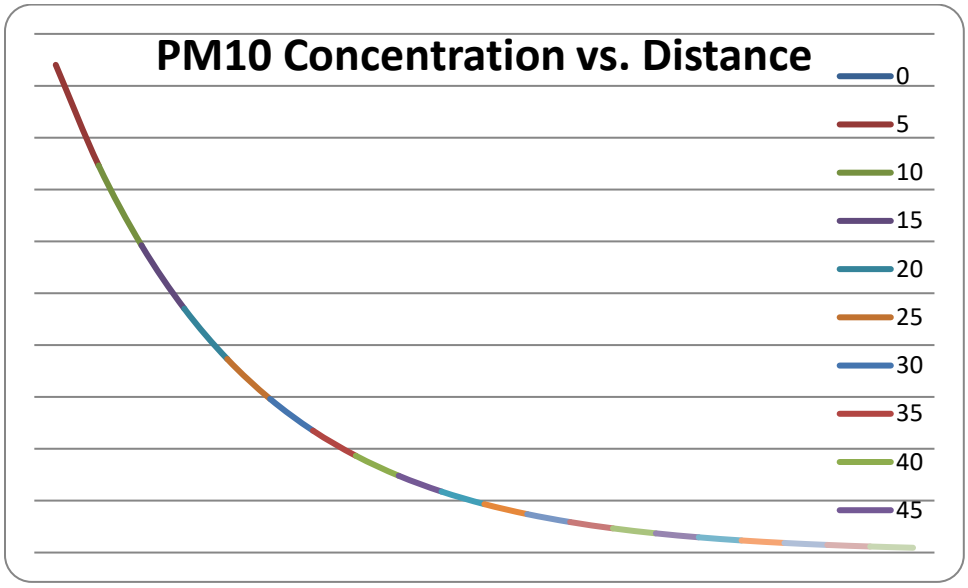

Figure 4. PM_{10} Concentrations versus Distance

A review of other projects in the Valle de Oro area of the County of San Diego did not identify any projects within one mile of the Skyline Retirement Center. Because there are no cumulative projects that would contribute to localized impacts, these impacts would be less than significant.

Because impacts would be limited to localized areas and emissions of nonattainment pollutants during construction are below the significance thresholds, the project would not contribute substantially to cumulative localized and regional impacts within the San Diego Air Basin, and impacts would be less than cumulatively considerable.

4.3.1.3 Design Considerations

As no cumulatively considerable impact has been identified for the project, no design considerations are required.

4.3.1.4 Conclusions

Impacts would be less than significant.

4.3.2 Operational Impacts

4.3.2.1 Guidelines for the Determination of Significance

As discussed above, based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in NOx, VOCs, PM_{10}, and $PM_{2.5}$. In accordance with the guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Also, projects that cause road intersections to operate at or below a LOS E and create a CO "hot spot" create a cumulatively considerable net increase of CO.

4.3.2.2 Significance of Impacts Prior to Mitigation

Emissions of nonattainment pollutants PM_{10}, $PM_{2.5}$, NOx, or VOCs would be below the screening-level thresholds for project operations. The project would therefore not result in a cumulatively considerable net increase in nonattainment pollutants. The project would not result in a CO "hot spot." Because the project's emissions of nonattainment pollutants are below the County's screening thresholds, the project would not contribute substantially to regional pollutant levels. The project would therefore not have a cumulatively significant impact.

4.3.2.3 Design Considerations

Because no significant impacts are identified, no mitigation measures are required.

4.3.2.4 Conclusions

The project would not have a cumulatively considerable impact on air quality.

4.4 Impacts to Sensitive Receptors

4.4.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will expose sensitive receptors to substantial pollutant concentrations.

Air quality regulators typically define "sensitive receptors" as schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purpose of CEQA analysis, the County of San Diego definition of "sensitive receptors" includes residences (County of San Diego 2007). The two primary emissions of concern for impacts to sensitive receptors are CO and diesel particulate matter. As discussed in Section 4.2.3.2, operational impacts would not result in CO "hot spots". This analysis therefore focuses on diesel particulate matter.

4.4.2 Significance of Impacts Prior to Mitigation

The project would result in emissions of diesel particulate matter during construction activities. Truck traffic associated with project operations would be minor and would not affect nearby sensitive receptors. To evaluate whether project construction could pose a significant impact to nearby sensitive receptors, an evaluation of diesel exhaust particulate matter was conducted. Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds.

The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted during construction due to the operation of heavy equipment at the site. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts.

To assess whether there is a potential for a significant impact associated with exposure to diesel exhaust particulate matter, a health risk evaluation was conducted on the particulate emissions. The amount of diesel particulate varies with the project schedule and construction phasing. The on-site construction heavy equipment diesel particulate emissions calculated by the CalEEMod Model total 0.343 tons during the duration of the construction phase of the project.

The construction heavy equipment sources were represented as a series of elevated volume sources with dimensions of 25 meters X 25 meters, placed at the site, as recommended in the SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2003). The sources are modeled as an elevated volume source to account for buoyancy resulting from the heat of the exhaust. Emissions were allocated to this source based on the estimated emission rates for diesel particulate during construction.

To evaluate potential risks to nearby receptors, a 50 meter by 50 meter grid was placed over the surrounding area. Receptors within the site itself were not included in the analysis. The source and receptor configuration is shown in Figure 5. The risk evaluation was conducted to assess the potential for an unacceptable risk at these existing receptors due to exposure to diesel particulate emissions from heavy construction equipment during construction. For conservative purposes, All receptors were treated as residential regardless of their land use.

The U.S. EPA's approved air dispersion model, AERMOD (U.S. EPA 2015), was used to estimate the downwind impacts at the closest receptors to the construction site. The model was run using

preprocessed meteorological data from the El Cajon surface meteorological monitoring station provided by the San Diego Air Pollution Control District. Risks were estimated using the Office of Environmental Health Hazard Assessment (OEHHA)'s March 2015 *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.*

OEHHA recommends exposure assumptions to calculate potential health risks, including adjustments to account for childhood exposure, to calculate excess cancer risks. The guidance recommends a 30-year exposure period for use as the basis for estimating cancer risk at residential receptors. Risks are calculated on the basis of the 30-year exposure period, accounting for childhood sensitivity, using the OEHHA-recommended age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure. In addition, high-end breathing rates recommended by OEHHA were used to provide a conservative estimate of risk. The residential exposure scenario assumes that an individual is present at the same location 24 hours per day, 350 days per year, for a 30-year period that includes childhood. Table 8 presents the exposure factors used in this analysis to evaluate potential risks from the construction of the project.

Table 8
Risk Assessment Exposure Factors

Risk Calculation Parameters	**Breathing Rate/Body Weight. L/kg-day**	**Age Sensitivity Factor**	**Exposure Duration, years**	**Averaging Time, years**	**Fraction of Time at Home**
Time Period of Exposure, years	**High End BR/BW**	**ASF**	**ED**	**AT**	**FAH**
3rd Trimester	361	10	0.25	70	0.85
0<2	1090	10	2	70	0.85
2<16	745	3	14	70	0.72
16<30	335	1	14	70	0.73
Cancer Potency Factors					
Diesel Particulate	1.10E+00(mg/kg-day)$^{-1}$				

Source: OEHHA 2015

It should be understood that the averaging time for cancer risk (AT) is not the same as the exposure duration (ED). According to the USEPA (USEPA 2015), for quantifying cancer risk, "lifetime"

exposure employs an averaging time of 70 years (i.e., 70 years × 365 days/year). This term specifies the length of time over which the average dose is calculated. According to the USEPA (USEPA 2009), the estimation of an exposure concentration when assessing cancer risks characterized by an inhalation unit risk involves the concentration in air measured at an exposure point at a site as well as scenario-specific parameters, such as the exposure duration and frequency. The exposure concentration typically takes the form of a concentration in air that is time-weighted over the duration of exposure and incorporates information on activity patterns for the specific site or the use of professional judgment. However, the cancer slope factor used to calculate the risk is always based on an averaging time of 70 years, which represent a lifetime of exposure.

Risks are calculated on the basis of a 30-year exposure scenario as recommended by OEHHA. Because the risk calculation is based on 30 years (10950 days) of exposure for 24 hours per day, 350 days per year, the results of the analysis were scaled to account for exposure for the duration of each individual construction phase, as shown in the example calculation below.

Risk = Excess cancer risk for 30 years x (396 days of construction/10950 days).

The days of construction were estimated at 396 days, based on approximately 18 months of construction, assuming 22 days per month of construction activity. The maximum annual concentration at an offsite receptor is 0.35402 µg/m^3. According to OEHHA (OEHHA 2015), cancer and chronic risks are calculated based on air dispersion modeling using meteorological data that is sufficient to estimate long-term exposure concentrations. To be representative, meteorological data must be of sufficient duration to define the range of sequential atmospheric conditions anticipated at a site. As a minimum, one full year of on-site meteorological data is necessary to prescribe this time series. OEHHA recommends that annual average concentrations be used in calculating cancer and chronic risks. The maximum concentration was used to calculate risk based on on-site diesel particulate emissions. The risk predicted using this equation is then compared to a risk level of 10 in 1 million, which is the County's significance threshold with implementation of Toxics-Best Available Control Technology (T-BACT). If the risk predicted using this equation is above 10 in 1 million, the risk would be above the County of San Diego's significance threshold. Based on the above equation, the maximum excess cancer risk predicted

at the nearest residential receptor would be 5.36 in a million. This value is below the County of San Diego's significance threshold of 10 in 1 million with implementation of T-BACT.

In addition, the chronic hazard was calculated based on the potential for adverse non-cancer health effects associated with exposure to diesel particulate matter. It should be noted that cancer risks generally drive the potential risk assessment for diesel particulate matter. The reference exposure level (REL) for diesel particulate matter is 5 $\mu g/m^3$. The hazard quotient is calculated by dividing the downwind concentration of diesel particulate matter by the REL. The chronic hazard quotient for construction of the project would therefore be 0.0708, which is below the County's significance hazard threshold of 1.0.

T-BACT will include the following measure:

In accordance with County of San Diego Planning and Development Services requirements, the project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment.

It should be noted that even with the assumption that the construction fleet is represented by the average fleet for the years 2016 to 2018 when the project is being constructed, the impact would not exceed the County's threshold of 10 in a million. The average fleet does include equipment that is rated to Tier II and Tier III; and as time progresses, more of the construction equipment in the fleet will meet more stringent standards.

The risk associated with exposure to diesel particulate from construction of the project is therefore not significant. Results of the risk evaluation and risk calculations are included in Appendix A.

Vehicular traffic may result in emissions of toxic air contaminants (TACs). Minor amounts of TACs are found in light-duty vehicle exhaust; however, the main source of on-road TACs is from diesel-powered heavy-duty trucks. Because the project is a mixed use development, the amount

of truck traffic will be minimal, and no risks to surrounding sensitive receptors would be anticipated from project operations.

The project site is surrounded by village residential uses and general commercial uses. These land uses do not include major stationary sources of TACs. The project would be located adjacent to Campo Road (SR-94). The ARB's *Air Quality and Land Use Handbook* (ARB 2005) recommends to avoid siting sensitive land uses within 500 feet of an urban road with 100,000 average daily trips. Based on data from Caltrans (California Department of Transportation 2016), the segment from Avocado Blvd. to Jamacha Road, upon which the project is located, has 44,500 average daily trips. The project would therefore be consistent with the ARB's guidance on siting sensitive receptors.

4.4.3 Mitigation Measures and Design Considerations

The project will require ten percent of the construction fleet to use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier I, II, III, or IV equipment. Ten percent was determined to be a reasonable requirement based on the amount of contractors whose fleets have already been retrofit and engines repowered as a result of the local and neighboring Carl Moyer Programs. With use of ten percent of the construction fleet retrofit and/or repowered, the project would mitigate emissions to the extent feasible. Because impacts to sensitive receptors from diesel particulate emissions would be less than significant, no additional mitigation measures are required.

4.4.4 Conclusions

Impacts to sensitive receptors would be less than significant.

- Sources
- Receptors

Figure 5. Risk Assessment Sources and Receptors

4.5 Odor Impacts

4.5.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

4.5.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Because the construction equipment would be operating at various locations throughout the construction site, and because any operation that would occur in the vicinity of existing receptors would be temporary, impacts associated with odors during construction are therefore not considered significant.

During construction, diesel equipment operating at the site may generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant. The project is not considered a source of objectionable odors from operations.

4.5.3 Design Considerations

Because the project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no additional design considerations are required.

4.5.4 Conclusions

Due to the nature of the project as a retirement center and congregate care facility, the project is not identified as a specific source of nuisance odors. Odor impacts are therefore less than significant.

5.0 SUMMARY OF RECOMMENDED DESIGN FEATURES, IMPACTS, AND MITIGATION

In summary, the proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the following air quality issues, and made the following conclusions:

The project will not conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The project will require a General Plan Amendment and Zoning Change to be consistent with the County's General Plan. Without mitigation, the project impacts are significant. With implementation of Mitigation Measure MM-AQ1, which will implement the General Plan Amendment and Zoning Change, the project will mitigate this impact and will be consistent with the RAQS and SIP.

The project would not result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
The project will not result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
The project will not result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
The project will not result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.

Both construction and operational emissions were evaluated to address these impacts. During both construction and operations, the project would result in emissions that are less than the screening-level thresholds for all criteria pollutants. To reduce the emissions to the extent feasible, fugitive

dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Clean paved roads
- Use architectural coatings with a VOC content of 100 g/l or less for exterior coatings, and 50 g/l or less for interior coatings.
- In accordance with County of San Diego Planning and Development Services requirements, the project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment. It should be noted that even with the assumption that the construction fleet is represented by the average fleet for the years 2016 to 2018 when the project is being constructed, the impact would not exceed the County's threshold of 10 in a million. The average fleet does include equipment that is rated to Tier II and Tier III; and as time progresses, more of the construction equipment in the fleet will meet more stringent standards.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

Operational emissions would be associated with traffic accessing the project, and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the project emissions would not exceed the screening-level thresholds. Furthermore, emissions associated with traffic would decrease with time as older vehicles are phased out and more stringent emission standards are applied to new vehicles. Impacts will be less than significant.

The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).

Emissions of nonattainment pollutants PM_{10}, $PM_{2.5}$, NOx, and VOCs would not exceed the screening-level thresholds for project construction. The emissions budget for 2015 in the SIP, as reported on the ARB's website, includes the following emissions for construction for the SDAB:

- Off-Road Equipment: 12.44 tons/day VOC, 26.12 tons/day NOx
- Construction Fugitive Dust: 28.54 tons/day PM_{10}, 2.85 tons/day $PM_{2.5}$

Emissions of nonattainment pollutants would be consistent with the construction emissions evaluated in the RAQS and SIP for construction projects and would not be cumulatively considerable. Emissions of PM_{10} would be localized and would not result in a cumulatively considerable impact. Construction emissions are below the County's screening-level thresholds and are therefore not cumulatively considerable.

Operational emissions are below the screening-level thresholds and would not be cumulatively considerable.

The project will not expose sensitive receptors to substantial pollutant concentrations.

As discussed in Section 4.4, the project would not expose sensitive receptors to substantial pollutant concentrations.

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will not either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The project would not generate objectionable odors that would affect a considerable number of persons or the public. Odor impacts are less than significant.

6.0 REFERENCES

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7.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

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Appendix A

Emission Calculations

Skyline Retirement Center

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	147.00	Dwelling Unit	4.00	147,000.00	420
Retirement Community	85.00	Dwelling Unit	4.00	85,000.00	243

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)	622.74	**CH4 Intensity (lb/MWhr)**	0.026	**N2O Intensity (lb/MWhr)**	0.007

1.3 User Entered Comments & Non-Default Data

Area Coating - Rule 67.0.1 coatings

Land Use Change -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExterioValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0

tblConstDustMitigation	CleanPavedRoadPercentReduction	0	25
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	NumDays	230.00	347.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	PhaseEndDate	12/26/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	6/28/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	12/26/2019	6/30/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	1/1/2019
tblFireplaces	FireplaceDayYear	82.00	30.00
tblFireplaces	FireplaceDayYear	82.00	30.00
tblFireplaces	NumberGas	80.85	0.00
tblFireplaces	NumberGas	46.75	85.00
tblFireplaces	NumberNoFireplace	14.70	147.00
tblFireplaces	NumberNoFireplace	8.50	0.00
tblFireplaces	NumberWood	51.45	0.00
tblFireplaces	NumberWood	29.75	0.00
tblGrading	AcresOfGrading	21.50	8.00
tblGrading	MaterialExported	0.00	35.00
tblGrading	MaterialImported	0.00	35.00
tblLandUse	LotAcreage	9.19	4.00
tblLandUse	LotAcreage	17.00	4.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.026
tblProjectCharacteristics	CO2IntensityFactor	720.49	622.74
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.007
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	528.33	587.03
tblVehicleEF	HHD	1,547.78	1,719.76
tblVehicleEF	HHD	50.38	55.97
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	8.5820e-003	9.5356e-003
tblVehicleEF	LDA	244.25	271.39
tblVehicleEF	LDA	52.29	58.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	297.79	330.88
tblVehicleEF	LDT1	63.53	70.59
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.2780e-003	9.1978e-003
tblVehicleEF	LDT2	364.72	405.24
tblVehicleEF	LDT2	77.49	86.11
tblVehicleEF	LHD1	1.1720e-003	1.3022e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.98	8.87
tblVehicleEF	LHD1	734.00	815.56
tblVehicleEF	LHD1	36.60	40.66
tblVehicleEF	LHD2	8.7100e-004	9.6778e-004
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.6180e-003	0.01
tblVehicleEF	LHD2	8.84	9.82
tblVehicleEF	LHD2	623.36	692.62
tblVehicleEF	LHD2	22.28	24.75
tblVehicleEF	MCY	156.52	173.91
tblVehicleEF	MCY	38.51	42.79
tblVehicleEF	MDV	0.02	0.02

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	489.56	543.95
tblVehicleEF	MDV	103.31	114.79
tblVehicleEF	MH	681.06	756.73
tblVehicleEF	MH	28.25	31.39
tblVehicleEF	MHD	7.6150e-003	8.4611e-003
tblVehicleEF	MHD	5.1900e-003	5.7667e-003
tblVehicleEF	MHD	572.06	635.62
tblVehicleEF	MHD	995.11	1,105.68
tblVehicleEF	MHD	49.80	55.33
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.8860e-003	3.2067e-003
tblVehicleEF	OBUS	534.88	594.31
tblVehicleEF	OBUS	1,037.87	1,153.19
tblVehicleEF	OBUS	32.81	36.45
tblVehicleEF	SBUS	4.4530e-003	4.9478e-003
tblVehicleEF	SBUS	5.3930e-003	5.9922e-003
tblVehicleEF	SBUS	547.00	607.77
tblVehicleEF	SBUS	1,024.49	1,138.33
tblVehicleEF	SBUS	116.73	129.70
tblVehicleEF	UBUS	1,981.57	2,201.74
tblVehicleEF	UBUS	22.78	25.31
tblVehicleTrips	ST_TR	2.20	2.50
tblVehicleTrips	ST_TR	2.81	4.00
tblVehicleTrips	SU_TR	2.44	2.50
tblVehicleTrips	SU_TR	2.81	4.00
tblVehicleTrips	WD_TR	2.74	2.50
tblVehicleTrips	WD_TR	2.81	4.00
tblWoodstoves	NumberCatalytic	7.35	0.00
tblWoodstoves	NumberCatalytic	4.25	0.00

tblWoodstoves	NumberNoncatalytic	7.35	0.00
tblWoodstoves	NumberNoncatalytic	4.25	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3774	31.1257	26.1540	0.0501	6.3429	1.7210	8.0638	3.3643	1.5833	4.9476	0.0000	4,528.4371	4,528.4371	0.9374	0.0000	4,548.1229
2019	18.9001	40.1540	42.9733	0.0804	1.9321	2.2626	4.1947	0.5158	2.1180	2.6338	0.0000	7,303.0843	7,303.0843	1.4305	0.0000	7,333.1243
Total	**22.2775**	**71.2797**	**69.1273**	**0.1305**	**8.2749**	**3.9836**	**12.2585**	**3.8801**	**3.7013**	**7.5814**	**0.0000**	**11,831.5214**	**11,831.5214**	**2.3679**	**0.0000**	**11,881.2472**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3774	31.1257	26.1540	0.0501	2.5489	1.7210	4.2699	1.3320	1.5833	2.9153	0.0000	4,528.4371	4,528.4371	0.9374	0.0000	4,548.1229
2019	18.9001	40.1540	42.9733	0.0804	1.9321	2.2626	4.1947	0.5158	2.1180	2.6338	0.0000	7,303.0843	7,303.0843	1.4305	0.0000	7,333.1243
Total	**22.2775**	**71.2797**	**69.1273**	**0.1305**	**4.4810**	**3.9836**	**8.4645**	**1.8478**	**3.7013**	**5.5491**	**0.0000**	**11,831.5214**	**11,831.5214**	**2.3679**	**0.0000**	**11,881.2472**

	ROG	NOx	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**	**45.85**	**0.00**	**30.95**	**52.38**	**0.00**	**26.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244
Energy	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830
Mobile	2.1285	4.4312	21.5197	0.0633	4.2742	0.0694	4.3437	1.1409	0.0641	1.2050		4,836.2565	4,836.2565	0.1791		4,840.0181
Total	**9.8902**	**5.1528**	**40.9452**	**0.0675**	**4.2742**	**0.3294**	**4.6036**	**1.1409**	**0.3229**	**1.4638**	**0.0000**	**7,308.3234**	**7,308.3234**	**0.2595**	**0.0447**	**7,327.6255**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244
Energy	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830
Mobile	2.1285	4.4312	21.5197	0.0633	4.2742	0.0694	4.3437	1.1409	0.0641	1.2050		4,836.2565	4,836.2565	0.1791		4,840.0181
Total	**9.8902**	**5.1528**	**40.9452**	**0.0675**	**4.2742**	**0.3294**	**4.6036**	**1.1409**	**0.3229**	**1.4638**	**0.0000**	**7,308.3234**	**7,308.3234**	**0.2595**	**0.0447**	**7,327.6255**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e

Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	2/28/2018	5	43	
2	Building Construction	Building Construction	3/1/2018	6/30/2019	5	347	
3	Paving	Paving	1/1/2019	6/30/2019	5	129	
4	Architectural Coating	Architectural Coating	1/1/2019	6/30/2019	5	129	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 469,800; Residential Outdoor: 156,600; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	9.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2196	0.0000	6.2196	3.3316	0.0000	3.3316			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.2196**	**1.7201**	**7.9397**	**3.3316**	**1.5825**	**4.9141**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5800e-003	4.5000e-003	0.0258	0.0000	2.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005		0.4420	0.4420	1.0000e-005		0.4422
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0450**	**0.0555**	**0.5767**	**1.5600e-003**	**0.1232**	**8.9000e-004**	**0.1241**	**0.0327**	**8.2000e-004**	**0.0335**		**120.9964**	**120.9964**	**5.6300e-003**		**121.1146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4257	0.0000	2.4257	1.2993	0.0000	1.2993			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.4257**	**1.7201**	**4.1457**	**1.2993**	**1.5825**	**2.8818**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

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

Hauling	1.5800e-003	4.5000e-003	0.0258	0.0000	2.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005		0.4420	0.4420	1.0000e-005		0.4422
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0450**	**0.0555**	**0.5767**	**1.5600e-003**	**0.1232**	**8.9000e-004**	**0.1241**	**0.0327**	**8.2000e-004**	**0.0335**		**120.9964**	**120.9964**	**5.6300e-003**		**121.1146**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2250	1.9138	2.4874	5.9300e-003	0.1659	0.0289	0.1948	0.0473	0.0266	0.0739		576.3253	576.3253	4.2700e-003		576.4150
Worker	0.4837	0.5682	6.1339	0.0174	1.3719	9.7900e-003	1.3817	0.3639	9.0600e-003	0.3729		1,342.1728	1,342.1728	0.0625		1,343.4862
Total	**0.7087**	**2.4820**	**8.6213**	**0.0233**	**1.5378**	**0.0387**	**1.5765**	**0.4112**	**0.0356**	**0.4468**		**1,918.4981**	**1,918.4981**	**0.0668**		**1,919.9012**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2250	1.9138	2.4874	5.9300e-003	0.1659	0.0289	0.1948	0.0473	0.0266	0.0739		576.3253	576.3253	4.2700e-003		576.4150
Worker	0.4837	0.5682	6.1339	0.0174	1.3719	9.7900e-003	1.3817	0.3639	9.0600e-003	0.3729		1,342.1728	1,342.1728	0.0625		1,343.4862
Total	**0.7087**	**2.4820**	**8.6213**	**0.0233**	**1.5378**	**0.0387**	**1.5765**	**0.4112**	**0.0356**	**0.4468**		**1,918.4981**	**1,918.4981**	**0.0668**		**1,919.9012**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2107	1.7423	2.3636	5.9200e-003	0.1659	0.0269	0.1928	0.0473	0.0247	0.0720		566.3987	566.3987	4.1600e-003		566.4861
Worker	0.4496	0.5250	5.6570	0.0174	1.3719	9.7200e-003	1.3816	0.3639	9.0100e-003	0.3729		1,293.6696	1,293.6696	0.0588		1,294.9049
Total	**0.6603**	**2.2674**	**8.0205**	**0.0233**	**1.5378**	**0.0366**	**1.5743**	**0.4112**	**0.0337**	**0.4449**		**1,860.0682**	**1,860.0682**	**0.0630**		**1,861.3910**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2107	1.7423	2.3636	5.9200e-003	0.1659	0.0269	0.1928	0.0473	0.0247	0.0720		566.3987	566.3987	4.1600e-003		566.4861
Worker	0.4496	0.5250	5.6570	0.0174	1.3719	9.7200e-003	1.3816	0.3639	9.0100e-003	0.3729		1,293.6696	1,293.6696	0.0588		1,294.9049
Total	**0.6603**	**2.2674**	**8.0205**	**0.0233**	**1.5378**	**0.0366**	**1.5743**	**0.4112**	**0.0337**	**0.4449**		**1,860.0682**	**1,860.0682**	**0.0630**		**1,861.3910**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4259**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
Total	**0.0404**	**0.0472**	**0.5081**	**1.5600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**116.1979**	**116.1979**	**5.2800e-003**		**116.3088**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4259**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
Total	**0.0404**	**0.0472**	**0.5081**	**1.5600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**116.1979**	**116.1979**	**5.2800e-003**		**116.3088**

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.0667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**14.3331**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.1038	1.1179	3.4300e-003	0.2711	1.9200e-003	0.2730	0.0719	1.7800e-003	0.0737		255.6353	255.6353	0.0116		255.8794
Total	**0.0888**	**0.1038**	**1.1179**	**3.4300e-003**	**0.2711**	**1.9200e-003**	**0.2730**	**0.0719**	**1.7800e-003**	**0.0737**		**255.6353**	**255.6353**	**0.0116**		**255.8794**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.0667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**14.3331**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.1038	1.1179	3.4300e-003	0.2711	1.9200e-003	0.2730	0.0719	1.7800e-003	0.0737		255.6353	255.6353	0.0116		255.8794
Total	**0.0888**	**0.1038**	**1.1179**	**3.4300e-003**	**0.2711**	**1.9200e-003**	**0.2730**	**0.0719**	**1.7800e-003**	**0.0737**		**255.6353**	**255.6353**	**0.0116**		**255.8794**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1285	4.4312	21.5197	0.0633	4.2742	0.0694	4.3437	1.1409	0.0641	1.2050		4,836.2565	4,836.2565	0.1791		4,840.0181
Unmitigated	2.1285	4.4312	21.5197	0.0633	4.2742	0.0694	4.3437	1.1409	0.0641	1.2050		4,836.2565	4,836.2565	0.1791		4,840.0181

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	367.50	367.50	367.50	1,049,324	1,049,324
Retirement Community	340.00	340.00	340.00	970,803	970,803
Total	707.50	707.50	707.50	2,020,127	2,020,127

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
Congregate Care (Assisted	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Retirement Community	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

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

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830
NaturalGas Unmitigated	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2208.01	0.0238	0.2035	0.0866	1.3000e-003		0.0165	0.0165		0.0165	0.0165		259.7657	259.7657	4.9800e-003	4.7600e-003	261.3466
Retirement Community	3211.61	0.0346	0.2960	0.1260	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.8370	377.8370	7.2400e-003	6.9300e-003	380.1364
Total		**0.0585**	**0.4995**	**0.2125**	**3.1900e-003**		**0.0404**	**0.0404**		**0.0404**	**0.0404**		**637.6027**	**637.6027**	**0.0122**	**0.0117**	**641.4830**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Congregate Care (Assisted Living)	2.20801	0.0238	0.2035	0.0866	1.3000e-003		0.0165	0.0165		0.0165	0.0165		259.7657	259.7657	4.9800e-003	4.7600e-003	261.3466
Retirement Community	3.21161	0.0346	0.2960	0.1260	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.8370	377.8370	7.2400e-003	6.9300e-003	380.1364
Total		**0.0585**	**0.4995**	**0.2125**	**3.1900e-003**		**0.0404**	**0.0404**		**0.0404**	**0.0404**		**637.6027**	**637.6027**	**0.0122**	**0.0117**	**641.4830**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244
Unmitigated	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1650	1.0000e-005	9.0000e-003	0.0000		0.1140	0.1140		0.1128	0.1128	0.0000	1,800.0000	1,800.0000	0.0345	0.0330	1,810.9545

Landscaping	0.5848	0.2221	19.2039	1.0100e-003		0.1056	0.1056		0.1056	0.1056		34.4641	34.4641	0.0336		35.1699
Total	**7.7032**	**0.2221**	**19.2129**	**1.0100e-003**		**0.2196**	**0.2196**		**0.2184**	**0.2184**	**0.0000**	**1,834.4641**	**1,834.4641**	**0.0681**	**0.0330**	**1,846.1244**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1650	1.0000e-005	9.0000e-003	0.0000		0.1140	0.1140		0.1128	0.1128	0.0000	1,800.0000	1,800.0000	0.0345	0.0330	1,810.9545
Landscaping	0.5848	0.2221	19.2039	1.0100e-003		0.1056	0.1056		0.1056	0.1056		34.4641	34.4641	0.0336		35.1699
Total	**7.7032**	**0.2221**	**19.2129**	**1.0100e-003**		**0.2196**	**0.2196**		**0.2184**	**0.2184**	**0.0000**	**1,834.4641**	**1,834.4641**	**0.0681**	**0.0330**	**1,846.1244**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Skyline Retirement Center

San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	147.00	Dwelling Unit	4.00	147,000.00	420
Retirement Community	85.00	Dwelling Unit	4.00	85,000.00	243

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)	622.74	**CH4 Intensity (lb/MWhr)**	0.026	**N2O Intensity (lb/MWhr)**	0.007

1.3 User Entered Comments & Non-Default Data

Area Coating - Rule 67.0.1 coatings

Land Use Change -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExterioValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0

tblConstDustMitigation	CleanPavedRoadPercentReduction	0	25
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	NumDays	230.00	347.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	PhaseEndDate	12/26/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	6/28/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	12/26/2019	6/30/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	1/1/2019
tblFireplaces	FireplaceDayYear	82.00	30.00
tblFireplaces	FireplaceDayYear	82.00	30.00
tblFireplaces	NumberGas	80.85	0.00
tblFireplaces	NumberGas	46.75	85.00
tblFireplaces	NumberNoFireplace	14.70	147.00
tblFireplaces	NumberNoFireplace	8.50	0.00
tblFireplaces	NumberWood	51.45	0.00
tblFireplaces	NumberWood	29.75	0.00
tblGrading	AcresOfGrading	21.50	8.00
tblGrading	MaterialExported	0.00	35.00
tblGrading	MaterialImported	0.00	35.00
tblLandUse	LotAcreage	9.19	4.00
tblLandUse	LotAcreage	17.00	4.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.026
tblProjectCharacteristics	CO2IntensityFactor	720.49	622.74
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.007
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	528.33	587.03
tblVehicleEF	HHD	1,547.78	1,719.76
tblVehicleEF	HHD	50.38	55.97
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	8.5820e-003	9.5356e-003
tblVehicleEF	LDA	244.25	271.39
tblVehicleEF	LDA	52.29	58.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	297.79	330.88
tblVehicleEF	LDT1	63.53	70.59
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.2780e-003	9.1978e-003
tblVehicleEF	LDT2	364.72	405.24
tblVehicleEF	LDT2	77.49	86.11
tblVehicleEF	LHD1	1.1720e-003	1.3022e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.98	8.87
tblVehicleEF	LHD1	734.00	815.56
tblVehicleEF	LHD1	36.60	40.66
tblVehicleEF	LHD2	8.7100e-004	9.6778e-004
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.6180e-003	0.01
tblVehicleEF	LHD2	8.84	9.82
tblVehicleEF	LHD2	623.36	692.62
tblVehicleEF	LHD2	22.28	24.75
tblVehicleEF	MCY	156.52	173.91
tblVehicleEF	MCY	38.51	42.79
tblVehicleEF	MDV	0.02	0.02

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	489.56	543.95
tblVehicleEF	MDV	103.31	114.79
tblVehicleEF	MH	681.06	756.73
tblVehicleEF	MH	28.25	31.39
tblVehicleEF	MHD	7.6150e-003	8.4611e-003
tblVehicleEF	MHD	5.1900e-003	5.7667e-003
tblVehicleEF	MHD	572.06	635.62
tblVehicleEF	MHD	995.11	1,105.68
tblVehicleEF	MHD	49.80	55.33
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.8860e-003	3.2067e-003
tblVehicleEF	OBUS	534.88	594.31
tblVehicleEF	OBUS	1,037.87	1,153.19
tblVehicleEF	OBUS	32.81	36.45
tblVehicleEF	SBUS	4.4530e-003	4.9478e-003
tblVehicleEF	SBUS	5.3930e-003	5.9922e-003
tblVehicleEF	SBUS	547.00	607.77
tblVehicleEF	SBUS	1,024.49	1,138.33
tblVehicleEF	SBUS	116.73	129.70
tblVehicleEF	UBUS	1,981.57	2,201.74
tblVehicleEF	UBUS	22.78	25.31
tblVehicleTrips	ST_TR	2.20	2.50
tblVehicleTrips	ST_TR	2.81	4.00
tblVehicleTrips	SU_TR	2.44	2.50
tblVehicleTrips	SU_TR	2.81	4.00
tblVehicleTrips	WD_TR	2.74	2.50
tblVehicleTrips	WD_TR	2.81	4.00
tblWoodstoves	NumberCatalytic	7.35	0.00
tblWoodstoves	NumberCatalytic	4.25	0.00

tblWoodstoves	NumberNoncatalytic	7.35	0.00
tblWoodstoves	NumberNoncatalytic	4.25	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.4366	31.1319	26.8264	0.0490	6.3429	1.7210	8.0638	3.3643	1.5833	4.9476	0.0000	4,442.1631	4,442.1631	0.9374	0.0000	4,461.8490
2019	18.9603	40.2759	43.5504	0.0790	1.9321	2.2629	4.1949	0.5158	2.1183	2.6341	0.0000	7,197.0898	7,197.0898	1.4306	0.0000	7,227.1324
Total	**22.3969**	**71.4078**	**70.3768**	**0.1280**	**8.2749**	**3.9838**	**12.2588**	**3.8801**	**3.7016**	**7.5816**	**0.0000**	**11,639.2528**	**11,639.2528**	**2.3680**	**0.0000**	**11,688.9813**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.4366	31.1319	26.8264	0.0490	2.5489	1.7210	4.2699	1.3320	1.5833	2.9153	0.0000	4,442.1631	4,442.1631	0.9374	0.0000	4,461.8490
2019	18.9603	40.2759	43.5504	0.0790	1.9321	2.2629	4.1949	0.5158	2.1183	2.6341	0.0000	7,197.0897	7,197.0897	1.4306	0.0000	7,227.1323
Total	**22.3969**	**71.4078**	**70.3768**	**0.1280**	**4.4810**	**3.9838**	**8.4648**	**1.8478**	**3.7016**	**5.5494**	**0.0000**	**11,639.2528**	**11,639.2528**	**2.3680**	**0.0000**	**11,688.9813**

	ROG	NOx	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**	**45.85**	**0.00**	**30.95**	**52.38**	**0.00**	**26.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244
Energy	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830
Mobile	2.2536	4.7110	22.5514	0.0602	4.2742	0.0697	4.3439	1.1409	0.0643	1.2052		4,605.4048	4,605.4048	0.1793		4,609.1697
Total	**10.0152**	**5.4326**	**41.9769**	**0.0644**	**4.2742**	**0.3297**	**4.6039**	**1.1409**	**0.3231**	**1.4640**	**0.0000**	**7,077.4716**	**7,077.4716**	**0.2596**	**0.0447**	**7,096.7771**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244
Energy	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830
Mobile	2.2536	4.7110	22.5514	0.0602	4.2742	0.0697	4.3439	1.1409	0.0643	1.2052		4,605.4048	4,605.4048	0.1793		4,609.1697
Total	**10.0152**	**5.4326**	**41.9769**	**0.0644**	**4.2742**	**0.3297**	**4.6039**	**1.1409**	**0.3231**	**1.4640**	**0.0000**	**7,077.4716**	**7,077.4716**	**0.2596**	**0.0447**	**7,096.7771**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e

Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	2/28/2018	5	43	
2	Building Construction	Building Construction	3/1/2018	6/30/2019	5	347	
3	Paving	Paving	1/1/2019	6/30/2019	5	129	
4	Architectural Coating	Architectural Coating	1/1/2019	6/30/2019	5	129	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 469,800; Residential Outdoor: 156,600; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	9.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2196	0.0000	6.2196	3.3316	0.0000	3.3316			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.2196**	**1.7201**	**7.9397**	**3.3316**	**1.5825**	**4.9141**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9700e-003	4.5000e-003	0.0376	0.0000	2.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005		0.4062	0.4062	1.0000e-005		0.4064
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0477**	**0.0618**	**0.5675**	**1.4600e-003**	**0.1232**	**8.9000e-004**	**0.1241**	**0.0327**	**8.2000e-004**	**0.0335**		**113.6105**	**113.6105**	**5.6300e-003**		**113.7288**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4257	0.0000	2.4257	1.2993	0.0000	1.2993			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.4257**	**1.7201**	**4.1457**	**1.2993**	**1.5825**	**2.8818**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

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

Hauling	1.9700e-003	4.5000e-003	0.0376	0.0000	2.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005		0.4062	0.4062	1.0000e-005		0.4064
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0477**	**0.0618**	**0.5675**	**1.4600e-003**	**0.1232**	**8.9000e-004**	**0.1241**	**0.0327**	**8.2000e-004**	**0.0335**		**113.6105**	**113.6105**	**5.6300e-003**		**113.7288**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2585	1.9582	3.3941	5.9000e-003	0.1659	0.0292	0.1951	0.0473	0.0268	0.0742		571.8821	571.8821	4.3900e-003		571.9743
Worker	0.5095	0.6375	5.8996	0.0163	1.3719	9.7900e-003	1.3817	0.3639	9.0600e-003	0.3729		1,260.3421	1,260.3421	0.0625		1,261.6555
Total	**0.7680**	**2.5957**	**9.2937**	**0.0222**	**1.5378**	**0.0390**	**1.5767**	**0.4112**	**0.0359**	**0.4471**		**1,832.2242**	**1,832.2242**	**0.0669**		**1,833.6297**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2585	1.9582	3.3941	5.9000e-003	0.1659	0.0292	0.1951	0.0473	0.0268	0.0742		571.8821	571.8821	4.3900e-003		571.9743
Worker	0.5095	0.6375	5.8996	0.0163	1.3719	9.7900e-003	1.3817	0.3639	9.0600e-003	0.3729		1,260.3421	1,260.3421	0.0625		1,261.6555
Total	**0.7680**	**2.5957**	**9.2937**	**0.0222**	**1.5378**	**0.0390**	**1.5767**	**0.4112**	**0.0359**	**0.4471**		**1,832.2242**	**1,832.2242**	**0.0669**		**1,833.6297**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2410	1.7818	3.2452	5.8900e-003	0.1659	0.0271	0.1930	0.0473	0.0249	0.0723		562.0225	562.0225	4.2900e-003		562.1125
Worker	0.4728	0.5891	5.4205	0.0163	1.3719	9.7200e-003	1.3816	0.3639	9.0100e-003	0.3729		1,214.7381	1,214.7381	0.0588		1,215.9734
Total	**0.7138**	**2.3709**	**8.6656**	**0.0222**	**1.5378**	**0.0368**	**1.5746**	**0.4112**	**0.0340**	**0.4452**		**1,776.7605**	**1,776.7605**	**0.0631**		**1,778.0859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2410	1.7818	3.2452	5.8900e-003	0.1659	0.0271	0.1930	0.0473	0.0249	0.0723		562.0225	562.0225	4.2900e-003		562.1125
Worker	0.4728	0.5891	5.4205	0.0163	1.3719	9.7200e-003	1.3816	0.3639	9.0100e-003	0.3729		1,214.7381	1,214.7381	0.0588		1,215.9734
Total	**0.7138**	**2.3709**	**8.6656**	**0.0222**	**1.5378**	**0.0368**	**1.5746**	**0.4112**	**0.0340**	**0.4452**		**1,776.7605**	**1,776.7605**	**0.0631**		**1,778.0859**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4259**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003		109.2192
Total	**0.0425**	**0.0529**	**0.4869**	**1.4600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**109.1082**	**109.1082**	**5.2800e-003**		**109.2192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4259**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003		109.2192
Total	**0.0425**	**0.0529**	**0.4869**	**1.4600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**109.1082**	**109.1082**	**5.2800e-003**		**109.2192**

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.0667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**14.3331**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0934	0.1164	1.0711	3.2200e-003	0.2711	1.9200e-003	0.2730	0.0719	1.7800e-003	0.0737		240.0381	240.0381	0.0116		240.2822
Total	**0.0934**	**0.1164**	**1.0711**	**3.2200e-003**	**0.2711**	**1.9200e-003**	**0.2730**	**0.0719**	**1.7800e-003**	**0.0737**		**240.0381**	**240.0381**	**0.0116**		**240.2822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.0667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**14.3331**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0934	0.1164	1.0711	3.2200e-003	0.2711	1.9200e-003	0.2730	0.0719	1.7800e-003	0.0737		240.0381	240.0381	0.0116		240.2822
Total	**0.0934**	**0.1164**	**1.0711**	**3.2200e-003**	**0.2711**	**1.9200e-003**	**0.2730**	**0.0719**	**1.7800e-003**	**0.0737**		**240.0381**	**240.0381**	**0.0116**		**240.2822**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2536	4.7110	22.5514	0.0602	4.2742	0.0697	4.3439	1.1409	0.0643	1.2052		4,605.4048	4,605.4048	0.1793		4,609.1697
Unmitigated	2.2536	4.7110	22.5514	0.0602	4.2742	0.0697	4.3439	1.1409	0.0643	1.2052		4,605.4048	4,605.4048	0.1793		4,609.1697

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	367.50	367.50	367.50	1,049,324	1,049,324
Retirement Community	340.00	340.00	340.00	970,803	970,803
Total	707.50	707.50	707.50	2,020,127	2,020,127

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
Congregate Care (Assisted	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Retirement Community	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

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

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830
NaturalGas Unmitigated	0.0585	0.4995	0.2125	3.1900e-003		0.0404	0.0404		0.0404	0.0404		637.6027	637.6027	0.0122	0.0117	641.4830

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	3211.61	0.0346	0.2960	0.1260	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.8370	377.8370	7.2400e-003	6.9300e-003	380.1364
Congregate Care (Assisted Living)	2208.01	0.0238	0.2035	0.0866	1.3000e-003		0.0165	0.0165		0.0165	0.0165		259.7657	259.7657	4.9800e-003	4.7600e-003	261.3466
Total		**0.0585**	**0.4995**	**0.2125**	**3.1900e-003**		**0.0404**	**0.0404**		**0.0404**	**0.0404**		**637.6027**	**637.6027**	**0.0122**	**0.0117**	**641.4830**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Congregate Care (Assisted Living)	2.20801	0.0238	0.2035	0.0866	1.3000e-003		0.0165	0.0165		0.0165	0.0165		259.7657	259.7657	4.9800e-003	4.7600e-003	261.3466
Retirement Community	3.21161	0.0346	0.2960	0.1260	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.8370	377.8370	7.2400e-003	6.9300e-003	380.1364
Total		**0.0585**	**0.4995**	**0.2125**	**3.1900e-003**		**0.0404**	**0.0404**		**0.0404**	**0.0404**		**637.6027**	**637.6027**	**0.0122**	**0.0117**	**641.4830**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244
Unmitigated	7.7032	0.2221	19.2129	1.0100e-003		0.2196	0.2196		0.2184	0.2184	0.0000	1,834.4641	1,834.4641	0.0681	0.0330	1,846.1244

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1650	1.0000e-005	9.0000e-003	0.0000		0.1140	0.1140		0.1128	0.1128	0.0000	1,800.0000	1,800.0000	0.0345	0.0330	1,810.9545

Landscaping	0.5848	0.2221	19.2039	1.0100e-003		0.1056	0.1056		0.1056	0.1056		34.4641	34.4641	0.0336		35.1699
Total	**7.7032**	**0.2221**	**19.2129**	**1.0100e-003**		**0.2196**	**0.2196**		**0.2184**	**0.2184**	**0.0000**	**1,834.4641**	**1,834.4641**	**0.0681**	**0.0330**	**1,846.1244**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1650	1.0000e-005	9.0000e-003	0.0000		0.1140	0.1140		0.1128	0.1128	0.0000	1,800.0000	1,800.0000	0.0345	0.0330	1,810.9545
Landscaping	0.5848	0.2221	19.2039	1.0100e-003		0.1056	0.1056		0.1056	0.1056		34.4641	34.4641	0.0336		35.1699
Total	**7.7032**	**0.2221**	**19.2129**	**1.0100e-003**		**0.2196**	**0.2196**		**0.2184**	**0.2184**	**0.0000**	**1,834.4641**	**1,834.4641**	**0.0681**	**0.0330**	**1,846.1244**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Skyline Retirement Center

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	147.00	Dwelling Unit	4.00	147,000.00	420
Retirement Community	85.00	Dwelling Unit	4.00	85,000.00	243

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)	622.74	**CH4 Intensity (lb/MWhr)**	0.026	**N2O Intensity (lb/MWhr)**	0.007

1.3 User Entered Comments & Non-Default Data

Area Coating - Rule 67.0.1 coatings

Land Use Change -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExterio rValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVa lue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorVal ue	250	0

tblConstDustMitigation	CleanPavedRoadPercentReduction	0	25
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	NumDays	230.00	347.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	PhaseEndDate	12/26/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	6/28/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	12/26/2019	6/30/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	1/1/2019
tblFireplaces	FireplaceDayYear	82.00	30.00
tblFireplaces	FireplaceDayYear	82.00	30.00
tblFireplaces	NumberGas	80.85	0.00
tblFireplaces	NumberGas	46.75	85.00
tblFireplaces	NumberNoFireplace	14.70	147.00
tblFireplaces	NumberNoFireplace	8.50	0.00
tblFireplaces	NumberWood	51.45	0.00
tblFireplaces	NumberWood	29.75	0.00
tblGrading	AcresOfGrading	21.50	8.00
tblGrading	MaterialExported	0.00	35.00
tblGrading	MaterialImported	0.00	35.00
tblLandUse	LotAcreage	9.19	4.00
tblLandUse	LotAcreage	17.00	4.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.026
tblProjectCharacteristics	CO2IntensityFactor	720.49	622.74
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.007
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	528.33	587.03
tblVehicleEF	HHD	1,547.78	1,719.76
tblVehicleEF	HHD	50.38	55.97
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	8.5820e-003	9.5356e-003
tblVehicleEF	LDA	244.25	271.39
tblVehicleEF	LDA	52.29	58.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	297.79	330.88
tblVehicleEF	LDT1	63.53	70.59
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.2780e-003	9.1978e-003
tblVehicleEF	LDT2	364.72	405.24
tblVehicleEF	LDT2	77.49	86.11
tblVehicleEF	LHD1	1.1720e-003	1.3022e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.98	8.87
tblVehicleEF	LHD1	734.00	815.56
tblVehicleEF	LHD1	36.60	40.66
tblVehicleEF	LHD2	8.7100e-004	9.6778e-004
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.6180e-003	0.01
tblVehicleEF	LHD2	8.84	9.82
tblVehicleEF	LHD2	623.36	692.62
tblVehicleEF	LHD2	22.28	24.75
tblVehicleEF	MCY	156.52	173.91
tblVehicleEF	MCY	38.51	42.79
tblVehicleEF	MDV	0.02	0.02

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	489.56	543.95
tblVehicleEF	MDV	103.31	114.79
tblVehicleEF	MH	681.06	756.73
tblVehicleEF	MH	28.25	31.39
tblVehicleEF	MHD	7.6150e-003	8.4611e-003
tblVehicleEF	MHD	5.1900e-003	5.7667e-003
tblVehicleEF	MHD	572.06	635.62
tblVehicleEF	MHD	995.11	1,105.68
tblVehicleEF	MHD	49.80	55.33
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.8860e-003	3.2067e-003
tblVehicleEF	OBUS	534.88	594.31
tblVehicleEF	OBUS	1,037.87	1,153.19
tblVehicleEF	OBUS	32.81	36.45
tblVehicleEF	SBUS	4.4530e-003	4.9478e-003
tblVehicleEF	SBUS	5.3930e-003	5.9922e-003
tblVehicleEF	SBUS	547.00	607.77
tblVehicleEF	SBUS	1,024.49	1,138.33
tblVehicleEF	SBUS	116.73	129.70
tblVehicleEF	UBUS	1,981.57	2,201.74
tblVehicleEF	UBUS	22.78	25.31
tblVehicleTrips	ST_TR	2.20	2.50
tblVehicleTrips	ST_TR	2.81	4.00
tblVehicleTrips	SU_TR	2.44	2.50
tblVehicleTrips	SU_TR	2.81	4.00
tblVehicleTrips	WD_TR	2.74	2.50
tblVehicleTrips	WD_TR	2.81	4.00
tblWoodstoves	NumberCatalytic	7.35	0.00
tblWoodstoves	NumberCatalytic	4.25	0.00

tblWoodstoves	NumberNoncatalytic	7.35	0.00
tblWoodstoves	NumberNoncatalytic	4.25	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					
2018	0.4345	3.4880	3.4170	6.0300e-003	0.3000	0.2041	0.5041	0.1162	0.1911	0.3072	0.0000	501.3665	501.3665	0.0881	0.0000	503.2156
2019	1.2192	2.5978	2.7890	5.1100e-003	0.1217	0.1459	0.2676	0.0326	0.1366	0.1692	0.0000	422.1857	422.1857	0.0837	0.0000	423.9435
Total	**1.6537**	**6.0859**	**6.2060**	**0.0111**	**0.4217**	**0.3500**	**0.7718**	**0.1487**	**0.3277**	**0.4764**	**0.0000**	**923.5521**	**923.5521**	**0.1718**	**0.0000**	**927.1590**

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					
2018	0.4345	3.4880	3.4170	6.0300e-003	0.2184	0.2041	0.4225	0.0725	0.1911	0.2635	0.0000	501.3661	501.3661	0.0881	0.0000	503.2152
2019	1.2192	2.5978	2.7890	5.1100e-003	0.1217	0.1459	0.2676	0.0326	0.1366	0.1692	0.0000	422.1853	422.1853	0.0837	0.0000	423.9431
Total	**1.6537**	**6.0859**	**6.2060**	**0.0111**	**0.3401**	**0.3500**	**0.6902**	**0.1050**	**0.3277**	**0.4327**	**0.0000**	**923.5514**	**923.5514**	**0.1718**	**0.0000**	**927.1583**

	ROG	NOx	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**	**19.34**	**0.00**	**10.57**	**29.38**	**0.00**	**9.17**	**0.00**	**0.00**	**0.00**	**0.01**	**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	1.3241	0.0200	1.7285	9.0000e-005		0.0112	0.0112		0.0112	0.0112	0.0000	27.3079	27.3079	3.2100e-003	4.5000e-004	27.5146
Energy	0.0107	0.0912	0.0388	5.8000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	353.1330	353.1330	0.0124	4.7200e-003	354.8552
Mobile	0.3857	0.8536	3.9943	0.0110	0.7596	0.0126	0.7723	0.2032	0.0117	0.2148	0.0000	850.7051	850.7051	0.0328	0.0000	851.3946
Waste						0.0000	0.0000		0.0000	0.0000	35.1662	0.0000	35.1662	2.0783	0.0000	78.8096
Water						0.0000	0.0000		0.0000	0.0000	4.7955	85.5022	90.2977	0.4961	0.0126	104.6194
Total	**1.7205**	**0.9647**	**5.7616**	**0.0117**	**0.7596**	**0.0312**	**0.7908**	**0.2032**	**0.0302**	**0.2334**	**39.9617**	**1,316.6481**	**1,356.6098**	**2.6228**	**0.0178**	**1,417.1934**

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	1.3241	0.0200	1.7285	9.0000e-005		0.0112	0.0112		0.0112	0.0112	0.0000	27.3079	27.3079	3.2100e-003	4.5000e-004	27.5146
Energy	0.0107	0.0912	0.0388	5.8000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	349.6376	349.6376	0.0122	4.6800e-003	351.3446
Mobile	0.3857	0.8536	3.9943	0.0110	0.7596	0.0126	0.7723	0.2032	0.0117	0.2148	0.0000	850.7051	850.7051	0.0328	0.0000	851.3946
Waste						0.0000	0.0000		0.0000	0.0000	28.1329	0.0000	28.1329	1.6626	0.0000	63.0477

Water						0.0000	0.0000		0.0000	0.0000	3.8364	72.5586	76.3951	0.3970	0.0101	87.8638
Total	**1.7205**	**0.9647**	**5.7616**	**0.0117**	**0.7596**	**0.0312**	**0.7908**	**0.2032**	**0.0302**	**0.2334**	**31.9693**	**1,300.2092**	**1,332.1786**	**2.1079**	**0.0152**	**1,381.1652**

	ROG	NOx	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**	**20.00**	**1.25**	**1.80**	**19.63**	**14.25**	**2.54**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-76.6480
Total	**-76.6480**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	2/28/2018	5	43	
2	Building Construction	Building Construction	3/1/2018	6/30/2019	5	347	
3	Paving	Paving	1/1/2019	6/30/2019	5	129	
4	Architectural Coating	Architectural Coating	1/1/2019	6/30/2019	5	129	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 469,800; Residential Outdoor: 156,600; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	9.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1337	0.0000	0.1337	0.0716	0.0000	0.0716	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0646	0.6680	0.5160	6.4000e-004		0.0370	0.0370		0.0340	0.0340	0.0000	58.3788	58.3788	0.0182	0.0000	58.7605
Total	**0.0646**	**0.6680**	**0.5160**	**6.4000e-004**	**0.1337**	**0.0370**	**0.1707**	**0.0716**	**0.0340**	**0.1057**	**0.0000**	**58.3788**	**58.3788**	**0.0182**	**0.0000**	**58.7605**

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	4.0000e-005	1.0000e-004	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.3300e-003	8.3300e-003	0.0000	0.0000	8.3300e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1000e-004	1.2100e-003	0.0114	3.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	2.0000e-005	7.0000e-004	0.0000	2.2300	2.2300	1.1000e-004	0.0000	2.2323
Total	**9.5000e-004**	**1.3100e-003**	**0.0121**	**3.0000e-005**	**2.5900e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**2.0000e-005**	**7.0000e-004**	**0.0000**	**2.2383**	**2.2383**	**1.1000e-004**	**0.0000**	**2.2406**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0522	0.0000	0.0522	0.0279	0.0000	0.0279	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0646	0.6680	0.5160	6.4000e-004		0.0370	0.0370		0.0340	0.0340	0.0000	58.3788	58.3788	0.0182	0.0000	58.7604
Total	**0.0646**	**0.6680**	**0.5160**	**6.4000e-004**	**0.0522**	**0.0370**	**0.0891**	**0.0279**	**0.0340**	**0.0620**	**0.0000**	**58.3788**	**58.3788**	**0.0182**	**0.0000**	**58.7604**

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	4.0000e-005	1.0000e-004	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.3300e-003	8.3300e-003	0.0000	0.0000	8.3300e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1000e-004	1.2100e-003	0.0114	3.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	2.0000e-005	7.0000e-004	0.0000	2.2300	2.2300	1.1000e-004	0.0000	2.2323
Total	**9.5000e-004**	**1.3100e-003**	**0.0121**	**3.0000e-005**	**2.5900e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**2.0000e-005**	**7.0000e-004**	**0.0000**	**2.2383**	**2.2383**	**1.1000e-004**	**0.0000**	**2.2406**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

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

Off-Road	0.2909	2.5354	1.9111	2.9200e-003		0.1629	0.1629		0.1531	0.1531	0.0000	258.0790	258.0790	0.0632	0.0000	259.4053
Total	**0.2909**	**2.5354**	**1.9111**	**2.9200e-003**		**0.1629**	**0.1629**		**0.1531**	**0.1531**	**0.0000**	**258.0790**	**258.0790**	**0.0632**	**0.0000**	**259.4053**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0266	0.2149	0.3369	6.5000e-004	0.0177	3.1600e-003	0.0209	5.0700e-003	2.9100e-003	7.9800e-003	0.0000	56.8043	56.8043	4.3000e-004	0.0000	56.8133
Worker	0.0514	0.0684	0.6410	1.8000e-003	0.1460	1.0700e-003	0.1470	0.0388	9.9000e-004	0.0398	0.0000	125.8661	125.8661	6.1800e-003	0.0000	125.9960
Total	**0.0781**	**0.2833**	**0.9779**	**2.4500e-003**	**0.1637**	**4.2300e-003**	**0.1679**	**0.0439**	**3.9000e-003**	**0.0478**	**0.0000**	**182.6704**	**182.6704**	**6.6100e-003**	**0.0000**	**182.8093**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2909	2.5354	1.9111	2.9200e-003		0.1629	0.1629		0.1531	0.1531	0.0000	258.0786	258.0786	0.0632	0.0000	259.4049
Total	**0.2909**	**2.5354**	**1.9111**	**2.9200e-003**		**0.1629**	**0.1629**		**0.1531**	**0.1531**	**0.0000**	**258.0786**	**258.0786**	**0.0632**	**0.0000**	**259.4049**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0266	0.2149	0.3369	6.5000e-004	0.0177	3.1600e-003	0.0209	5.0700e-003	2.9100e-003	7.9800e-003	0.0000	56.8043	56.8043	4.3000e-004	0.0000	56.8133
Worker	0.0514	0.0684	0.6410	1.8000e-003	0.1460	1.0700e-003	0.1470	0.0388	9.9000e-004	0.0398	0.0000	125.8661	125.8661	6.1800e-003	0.0000	125.9960
Total	**0.0781**	**0.2833**	**0.9779**	**2.4500e-003**	**0.1637**	**4.2300e-003**	**0.1679**	**0.0439**	**3.9000e-003**	**0.0478**	**0.0000**	**182.6704**	**182.6704**	**6.6100e-003**	**0.0000**	**182.8093**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1517	1.3522	1.1043	1.7300e-003		0.0829	0.0829		0.0779	0.0779	0.0000	151.0092	151.0092	0.0367	0.0000	151.7808
Total	**0.1517**	**1.3522**	**1.1043**	**1.7300e-003**		**0.0829**	**0.0829**		**0.0779**	**0.0779**	**0.0000**	**151.0092**	**151.0092**	**0.0367**	**0.0000**	**151.7808**

Unmitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0147	0.1157	0.1903	3.8000e-004	0.0105	1.7400e-003	0.0122	3.0000e-003	1.6000e-003	4.6000e-003	0.0000	33.0344	33.0344	2.5000e-004	0.0000	33.0396
Worker	0.0282	0.0374	0.3489	1.0600e-003	0.0864	6.3000e-004	0.0870	0.0230	5.8000e-004	0.0235	0.0000	71.7860	71.7860	3.4400e-003	0.0000	71.8582
Total	**0.0430**	**0.1531**	**0.5392**	**1.4400e-003**	**0.0969**	**2.3700e-003**	**0.0992**	**0.0260**	**2.1800e-003**	**0.0281**	**0.0000**	**104.8203**	**104.8203**	**3.6900e-003**	**0.0000**	**104.8978**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1517	1.3522	1.1043	1.7300e-003		0.0829	0.0829		0.0779	0.0779	0.0000	151.0090	151.0090	0.0367	0.0000	151.7806
Total	**0.1517**	**1.3522**	**1.1043**	**1.7300e-003**		**0.0829**	**0.0829**		**0.0779**	**0.0779**	**0.0000**	**151.0090**	**151.0090**	**0.0367**	**0.0000**	**151.7806**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0147	0.1157	0.1903	3.8000e-004	0.0105	1.7400e-003	0.0122	3.0000e-003	1.6000e-003	4.6000e-003	0.0000	33.0344	33.0344	2.5000e-004	0.0000	33.0396
Worker	0.0282	0.0374	0.3489	1.0600e-003	0.0864	6.3000e-004	0.0870	0.0230	5.8000e-004	0.0235	0.0000	71.7860	71.7860	3.4400e-003	0.0000	71.8582

Total	**0.0430**	**0.1531**	**0.5392**	**1.4400e-003**	**0.0969**	**2.3700e-003**	**0.0992**	**0.0260**	**2.1800e-003**	**0.0281**	**0.0000**	**104.8203**	**104.8203**	**3.6900e-003**	**0.0000**	**104.8978**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.9633	0.9266	1.4400e-003		0.0522	0.0522		0.0480	0.0480	0.0000	129.2546	129.2546	0.0409	0.0000	130.1134
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**0.9633**	**0.9266**	**1.4400e-003**		**0.0522**	**0.0522**		**0.0480**	**0.0480**	**0.0000**	**129.2546**	**129.2546**	**0.0409**	**0.0000**	**130.1134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5400e-003	3.3600e-003	0.0313	1.0000e-004	7.7600e-003	6.0000e-005	7.8100e-003	2.0600e-003	5.0000e-005	2.1100e-003	0.0000	6.4478	6.4478	3.1000e-004	0.0000	6.4543
Total	**2.5400e-003**	**3.3600e-003**	**0.0313**	**1.0000e-004**	**7.7600e-003**	**6.0000e-005**	**7.8100e-003**	**2.0600e-003**	**5.0000e-005**	**2.1100e-003**	**0.0000**	**6.4478**	**6.4478**	**3.1000e-004**	**0.0000**	**6.4543**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.9633	0.9266	1.4400e-003		0.0522	0.0522		0.0480	0.0480	0.0000	129.2544	129.2544	0.0409	0.0000	130.1132
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**0.9633**	**0.9266**	**1.4400e-003**		**0.0522**	**0.0522**		**0.0480**	**0.0480**	**0.0000**	**129.2544**	**129.2544**	**0.0409**	**0.0000**	**130.1132**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5400e-003	3.3600e-003	0.0313	1.0000e-004	7.7600e-003	6.0000e-005	7.8100e-003	2.0600e-003	5.0000e-005	2.1100e-003	0.0000	6.4478	6.4478	3.1000e-004	0.0000	6.4543
Total	**2.5400e-003**	**3.3600e-003**	**0.0313**	**1.0000e-004**	**7.7600e-003**	**6.0000e-005**	**7.8100e-003**	**2.0600e-003**	**5.0000e-005**	**2.1100e-003**	**0.0000**	**6.4478**	**6.4478**	**3.1000e-004**	**0.0000**	**6.4543**

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

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

Archit. Coating	0.9073					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0172	0.1184	0.1188	1.9000e-004		8.3100e-003	8.3100e-003		8.3100e-003	8.3100e-003	0.0000	16.4685	16.4685	1.3900e-003	0.0000	16.4977
Total	**0.9245**	**0.1184**	**0.1188**	**1.9000e-004**		**8.3100e-003**	**8.3100e-003**		**8.3100e-003**	**8.3100e-003**	**0.0000**	**16.4685**	**16.4685**	**1.3900e-003**	**0.0000**	**16.4977**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5800e-003	7.3900e-003	0.0689	2.1000e-004	0.0171	1.2000e-004	0.0172	4.5400e-003	1.1000e-004	4.6500e-003	0.0000	14.1853	14.1853	6.8000e-004	0.0000	14.1995
Total	**5.5800e-003**	**7.3900e-003**	**0.0689**	**2.1000e-004**	**0.0171**	**1.2000e-004**	**0.0172**	**4.5400e-003**	**1.1000e-004**	**4.6500e-003**	**0.0000**	**14.1853**	**14.1853**	**6.8000e-004**	**0.0000**	**14.1995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9073					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0172	0.1184	0.1188	1.9000e-004		8.3100e-003	8.3100e-003		8.3100e-003	8.3100e-003	0.0000	16.4685	16.4685	1.3900e-003	0.0000	16.4977
Total	**0.9245**	**0.1184**	**0.1188**	**1.9000e-004**		**8.3100e-003**	**8.3100e-003**		**8.3100e-003**	**8.3100e-003**	**0.0000**	**16.4685**	**16.4685**	**1.3900e-003**	**0.0000**	**16.4977**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5800e-003	7.3900e-003	0.0689	2.1000e-004	0.0171	1.2000e-004	0.0172	4.5400e-003	1.1000e-004	4.6500e-003	0.0000	14.1853	14.1853	6.8000e-004	0.0000	14.1995
Total	**5.5800e-003**	**7.3900e-003**	**0.0689**	**2.1000e-004**	**0.0171**	**1.2000e-004**	**0.0172**	**4.5400e-003**	**1.1000e-004**	**4.6500e-003**	**0.0000**	**14.1853**	**14.1853**	**6.8000e-004**	**0.0000**	**14.1995**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3857	0.8536	3.9943	0.0110	0.7596	0.0126	0.7723	0.2032	0.0117	0.2148	0.0000	850.7051	850.7051	0.0328	0.0000	851.3946
Unmitigated	0.3857	0.8536	3.9943	0.0110	0.7596	0.0126	0.7723	0.2032	0.0117	0.2148	0.0000	850.7051	850.7051	0.0328	0.0000	851.3946

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Congregate Care (Assisted Living)	367.50	367.50	367.50	1,049,324	1,049,324
Retirement Community	340.00	340.00	340.00	970,803	970,803
Total	707.50	707.50	707.50	2,020,127	2,020,127

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Retirement Community	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

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

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	244.0753	244.0753	0.0102	2.7400e-003	245.1398
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	247.5707	247.5707	0.0103	2.7800e-003	248.6505
NaturalGas Mitigated	0.0107	0.0912	0.0388	5.8000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	105.5623	105.5623	2.0200e-003	1.9400e-003	106.2047
NaturalGas Unmitigated	0.0107	0.0912	0.0388	5.8000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	105.5623	105.5623	2.0200e-003	1.9400e-003	106.2047

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					
Congregate Care (Assisted Living)	805923	4.3500e-003	0.0371	0.0158	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	43.0071	43.0071	8.2000e-004	7.9000e-004	43.2689
Retirement Community	1.17224e+006	6.3200e-003	0.0540	0.0230	3.4000e-004		4.3700e-003	4.3700e-003		4.3700e-003	4.3700e-003	0.0000	62.5552	62.5552	1.2000e-003	1.1500e-003	62.9359
Total		**0.0107**	**0.0912**	**0.0388**	**5.8000e-004**		**7.3700e-003**	**7.3700e-003**		**7.3700e-003**	**7.3700e-003**	**0.0000**	**105.5623**	**105.5623**	**2.0200e-003**	**1.9400e-003**	**106.2047**

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					
Congregate Care (Assisted Living)	805923	4.3500e-003	0.0371	0.0158	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	43.0071	43.0071	8.2000e-004	7.9000e-004	43.2689
Retirement Community	1.17224e+006	6.3200e-003	0.0540	0.0230	3.4000e-004		4.3700e-003	4.3700e-003		4.3700e-003	4.3700e-003	0.0000	62.5552	62.5552	1.2000e-003	1.1500e-003	62.9359
Total		**0.0107**	**0.0912**	**0.0388**	**5.8000e-004**		**7.3700e-003**	**7.3700e-003**		**7.3700e-003**	**7.3700e-003**	**0.0000**	**105.5623**	**105.5623**	**2.0200e-003**	**1.9400e-003**	**106.2047**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	508042	143.5068	5.9900e-003	1.6100e-003	144.1327
Retirement Community	368407	104.0640	4.3400e-003	1.1700e-003	104.5178
Total		**247.5707**	**0.0103**	**2.7800e-003**	**248.6505**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	508042	143.5068	5.9900e-003	1.6100e-003	144.1327
Retirement Community	356033	100.5686	4.2000e-003	1.1300e-003	101.0072
Total		**244.0753**	**0.0102**	**2.7400e-003**	**245.1398**

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	1.3241	0.0200	1.7285	9.0000e-005		0.0112	0.0112		0.0112	0.0112	0.0000	27.3079	27.3079	3.2100e-003	4.5000e-004	27.5146
Unmitigated	1.3241	0.0200	1.7285	9.0000e-005		0.0112	0.0112		0.0112	0.0112	0.0000	27.3079	27.3079	3.2100e-003	4.5000e-004	27.5146

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3629					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.4800e-003	0.0000	1.3000e-004	0.0000		1.7100e-003	1.7100e-003		1.6900e-003	1.6900e-003	0.0000	24.4940	24.4940	4.7000e-004	4.5000e-004	24.6431
Landscaping	0.0526	0.0200	1.7284	9.0000e-005		9.5000e-003	9.5000e-003		9.5000e-003	9.5000e-003	0.0000	2.8139	2.8139	2.7400e-003	0.0000	2.8715
Total	**1.3241**	**0.0200**	**1.7285**	**9.0000e-005**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**27.3079**	**27.3079**	**3.2100e-003**	**4.5000e-004**	**27.5146**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3629					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.4800e-003	0.0000	1.3000e-004	0.0000		1.7100e-003	1.7100e-003		1.6900e-003	1.6900e-003	0.0000	24.4940	24.4940	4.7000e-004	4.5000e-004	24.6431
Landscaping	0.0526	0.0200	1.7284	9.0000e-005		9.5000e-003	9.5000e-003		9.5000e-003	9.5000e-003	0.0000	2.8139	2.8139	2.7400e-003	0.0000	2.8715
Total	**1.3241**	**0.0200**	**1.7285**	**9.0000e-005**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**27.3079**	**27.3079**	**3.2100e-003**	**4.5000e-004**	**27.5146**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	76.3951	0.3970	0.0101	87.8638
Unmitigated	90.2977	0.4961	0.0126	104.6194

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	9.57764 / 6.03808	57.2145	0.3144	7.9800e-003	66.2890
Retirement Community	5.53809 / 3.49141	33.0832	0.1818	4.6100e-003	38.3304
Total		**90.2977**	**0.4961**	**0.0126**	**104.6194**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	7.66211 / 5.66976	48.4055	0.2516	6.4000e-003	55.6723
Retirement Community	4.43047 / 3.27843	27.9896	0.1455	3.7000e-003	32.1915
Total		**76.3951**	**0.3970**	**0.0101**	**87.8638**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.1329	1.6626	0.0000	63.0477
Unmitigated	35.1662	2.0783	0.0000	78.8096

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	134.14	27.2292	1.6092	0.0000	61.0224
Retirement Community	39.1	7.9370	0.4691	0.0000	17.7872
Total		**35.1662**	**2.0783**	**0.0000**	**78.8096**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	107.312	21.7834	1.2874	0.0000	48.8179
Retirement Community	31.28	6.3496	0.3753	0.0000	14.2298
Total		**28.1329**	**1.6626**	**0.0000**	**63.0477**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-76.6480	0.0000	0.0000	-76.6480

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Others	2.64 / 0	0.0000	0.0000	0.0000	0.0000
Scrub	5.36 / 0	-76.6480	0.0000	0.0000	-76.6480
Total		**-76.6480**	**0.0000**	**0.0000**	**-76.6480**