APPENDIX A

Air Quality and Greenhouse Gas Emissions Technical Report

Air Quality and Greenhouse Gas Emissions Technical Report for the Gateway Grand Transit Oriented Development (TOD) Project

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SUMMARY OF FINDINGS

The Gateway Grand – Transit Oriented Development (TOD) Project (project or proposed project) involves demolition of the existing development on site (former Escondido Police Headquarters) and construction of 126 multifamily residential units as well as 1,000 square feet of flex space in the City of Escondido (City), California. The project site is located within the San Diego Air Basin and is subject to the San Diego Air Pollution Control District's (SDAPCD) guidelines and regulations. The City has adopted guidance and significance thresholds for criteria air pollutants and greenhouse gas (GHG) emissions for projects subject to the California Environmental Quality Act (CEQA). The analysis provided herein was prepared consistent with the guidance provided in the City's Environmental Quality Regulations (EQR), as established in the City's Municipal Code Chapter 33, Article 47.

The air quality impact analysis evaluates the potential for significant adverse impacts to the ambient air quality due to construction and operational emissions resulting from the proposed project. Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. The analysis concludes that the daily construction emissions would not exceed the City's significance thresholds for criteria pollutants, and impacts during construction would be less than significant. Operational emissions were also estimated to be below the City's significance thresholds; therefore, impacts during project operation would be less than significant. As the project would not result in project-specific impacts, the project would also not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. In addition, the project was determined to not conflict with or obstruct implementation of the applicable air quality plan, to not expose sensitive receptors to substantial pollutant concentrations, and to not create objectionable odors affecting a substantial number of people.

The greenhouse gas (GHG) emissions analysis evaluates the potential for the project to generate GHG emissions that may have a significant impact on the environment, and the potential for the project to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Estimated annual project-generated emissions in 2018 from area, energy, mobile, solid waste, and water/wastewater emissions sources, as well as amortized project construction emissions, would be below the City of Escondido's 2,500 MT CO_2E (metric tons of carbon dioxide equivalent) per year screening threshold.

The City adopted the Escondido Climate Action Plan (E-CAP) in December 2013, which identifies a series of GHG reduction measures within their screening table, which projects can

incorporate in order to achieve the reduction targets and lessen GHG emissions. While these reduction measures were not intended to expressly define "consistency" of a specific project with the City's E-CAP, a project that would implement any of the reduction measures would assist in achieving attainment of the E-CAP's goals for the City as a whole and therefore would not conflict with the E-CAP. The project would comply with the Title 24 standard reduction measures, which would reduce the project's GHG emissions contribution and would support attainment of the E-CAP goals. As the project would not generate emissions that would exceed the City's screening threshold, the project would not conflict with the City's E-CAP. The project would support the goals and policies of San Diego Association of Governments (SANDAG's) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which has been adopted for the purpose of reducing GHG emissions attributable to passenger vehicles in the County of San Diego, by redeveloping the project site and avoiding sprawling development patterns and greenfield development. In addition, the SDAPCD has not adopted GHG reduction measures that would apply to the GHG emissions associated with the proposed project. Therefore, the project would not conflict with applicable GHG reduction plans, policies, or regulations.

1 INTRODUCTION

1.1 Regional and Local Setting

The project site is located at 700 West Grand Avenue in the City of Escondido (City) in north inland San Diego County (County), California (see Figures 1 and 2). The project site encompasses approximately 2.60 acres (Assessor's Parcel Numbers 232-100-1600) (see Figures 3 and 4). The proposed project is located in an urban setting and is surrounded by commercial uses to the north, west, and east, and industrial uses to the south. Major circulation corridors surrounding the project in less than a mile radius include Interstate 5 (I-15) directly west 0.48 mile, Valley Parkway adjacent to the project site's northern boundary, Grand Avenue adjacent to project site's southern boundary, and Centre City Parkway 0.07 mile east.

In a regional setting, the proposed project is approximately 12.98 miles east of the Pacific Ocean, approximately 27 miles northeast of downtown San Diego, approximately 4.5 miles southeast of the neighboring City of San Marcos, and approximately 7.5 miles south of the Hidden Meadows community. In relation to circulation, the Escondido Transit Center provides the Sprinter light rail service runs east-west serving the areas in between the City and the City of Oceanside. The Escondido Transit Center also serves as the northern terminus of the Breeze Rapid bus transit line. The Breeze Rapid runs north–south, providing service over a 6-mile stretch from the Escondido Transit Center to the Westfield North County.

The proposed project site is currently occupied by a 32,500 square foot building which used to serve as the Escondido Police Headquarters. The project site is currently zoned for S-P (Specific Plan) which permits residential, industrial, and commercial development.

1.2 Project Description

The proposed project involves demolition of the existing 32,500 square foot building on site and construction of three four-story, 126 multifamily residential units on an approximately 2.6-acre site. Of the 126 units to be developed, 63 would comprise of townhomes with each unit totaling 1,250 square feet and the remaining 63 units would comprise of studio lofts totaling 850 square feet. Up to 226 parking spaces. Entry to the parking areas for both residents and guests would be provided along Valley Parkway and Grand Avenue. The proposed project would also include a leasing office and community recreation areas. Demolition and construction of the proposed project is expected to begin June 2016 and would be operational by July 2017.

Water and wastewater service for the proposed project would be provided by the City of Escondido Water and Wastewater Division and fire service by the Escondido Fire Protection District.

1.3 Construction Assumptions and Methodology

Emissions from the construction phase of the project were estimated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2, available online (www.caleemod.com).

For the purposes of modeling, it was assumed that construction of the proposed project would commence in June 2016. Asbestos and lead based-paint removal would take approximately 10 days, followed by demolition of the existing building on site, which would take approximately nineteen days.

For purposes of estimating project emissions, and based on information provided by the applicant and CalEEMod default values, it is assumed that construction of the project will commence in June 2016 and will last approximately 13 months, ending in July 2017. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Asbestos and Lead-Based Paint Removal – 10 days (June 2016)
- Demolition – 19 days (June 2016 – July 2016)
- Grading and Site Improvements – 55 days (July 2016 – September 2016)
- Building Construction – 168 days (October 2016 – June 2017)
- Paving – 10 days (June 2017)
- Application of Architectural Coatings – 20 days (June 2017)

The construction equipment mix used for estimating the construction emissions of the project is based on information provided by the applicant and is shown in Table 1, Construction Scenario Assumptions. For this analysis, it was assumed that heavy construction equipment will operate 5 days a week during project construction.

Table 1
Construction Scenario Assumptions

Construction Phase	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment	Quantity	Usage Hours
Asbestos and Lead-Based Paint Removal	10	0	0	N/A	N/A	N/A
Demolition	16	0	148	Concrete/Industrial Saws	1	8
				Excavators	3	8
				Rubber Tired Dozers	2	8

Table 1
Construction Scenario Assumptions

Construction Phase	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment	Quantity	Usage Hours
Grading	16	0	0	Excavators	1	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Tractors/Loaders/Backhoes	3	8
Building Construction	150	32	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7
				Welders	1	8
Paving	14	0	0	Pavers	1	8
				Paving Equipment	2	6
				Rollers	2	6
Architectural Coating	30	0	0	Air Compressors	1	6

Notes: See Appendix A for details.
N/A = not applicable/not proposed

Prior to demolition, asbestos and lead-based paint found in the existing building would be removed and disposed of over 10 days. Demolition of the existing 32,500 square foot building would take approximately 19 days. Earthwork for the project would not require the export or import of soil, the project site was assumed to be balanced on site, grading and site improvements are expected to occur over 55 days. Building construction would take approximately 8 months to complete. Paving would take approximately 10 days while architectural coatings would take approximately 20 days to complete. Construction of the project would not be phased, and start to finish is estimated to take approximately 13 months.

Construction phasing specifications were provided by the project applicant, while the default values generated by CalEEMod was used for the construction equipment mix. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for approximately 8 hours per day, 5 days per week (22 days per month) during project construction. Construction-worker estimates by construction phase were provided by the project applicant. CalEEMod defaults, including haul trips, were applied for the demolition of the existing structures on-site. Default values in CalEEMod were applied to vendor and haul truck capacities and distances.

A detailed depiction of the construction schedule—including information regarding subphases, demolition, and equipment used during each subphase—is included in Appendix A of this report. The information contained in Appendix A was used as CalEEMod model inputs.

1.4 Operational Assumptions and Methodology

As shown in the Traffic Impact Analysis Report completed for the proposed project (MBI 2016), the project is calculated to generate 955 daily trips with 76 trips (22 inbound/54 outbound) in AM peak hours and 83 trips (54 inbound/30 outbound) during PM peak hours. CalEEMod was used to estimate daily emissions from proposed vehicular sources. CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, and trip distances, were conservatively used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2018 (the first full year of operation) were used to estimate emissions associated with full buildout of the proposed project.

In addition to estimating mobile source emissions, CalEEMod was used to estimate emissions from the project's energy use, which includes natural gas combustion. CalEEMod was also used to estimate emissions from the project's area sources, which include landscaping, consumer products, and architectural coatings for building maintenance.

2 AIR QUALITY

2.1 Existing Conditions

This section describes the existing conditions in the project area and identifies the resources that could be affected by the proposed project.

2.1.1 Climate and Topography

The weather of the San Diego region, as in most of Southern California, is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average temperature ranges (in degrees Fahrenheit (°F)) from the mid-40s to the high 90s. Most of the region's precipitation falls from November to April, with infrequent (approximately 10%) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches; the amount increases with elevation as moist air is lifted over the mountains.

The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east; along with local meteorology, it influences the dispersal and movement of pollutants in the air basin. The mountains to the east prohibit dispersal of pollutants in that direction and help trap them in inversion layers.

The interaction of ocean, land, and the Pacific High Pressure Zone maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

2.1.2 Air Pollution Climatology

The project site is located within the San Diego Air Basin (basin or SDAB) and is subject to the SDAPCD guidelines and regulations. The basin is one of 15 air basins that geographically divide the State of California. The basin is currently classified as a federal nonattainment area for ozone (O_3) and a state nonattainment area for particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), and O_3.

The basin lies in the southwest corner of California and comprises the entire San Diego region, covering 4,260 square miles, and is an area of high air pollution potential. The basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The basin experiences frequent temperature inversions. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High Pressure Zone meets 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 O_3, commonly known as smog.

Light daytime winds, predominately from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and oxides of nitrogen (NO_x) emissions. CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic. Nitrogen dioxide (NO_2) levels are also generally higher during fall and winter days.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O_3 concentrations, as measured at air pollutant monitoring stations within the County. The transport of air pollutants from Los Angeles to San Diego has also occurred within the stable layer of the elevated subsidence inversion, where high levels of O_3 are transported.

2.1.3 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The closest off-site sensitive receptors to the project are residential land uses to the west and are located within approximately 250 feet from the project site boundary. Receptors also include tenants of the proposed project.

2.2 Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include: O_3, NO_2, CO, sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb). These pollutants are discussed in the following paragraphs.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a colorless gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases (ROGs), and NO_x react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO_x, the precursors of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide. Most NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_x and are major contributors to O_3 formation. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant

[1] The descriptions of health effects for each of the criteria air pollutants associated with project construction and operation are based on the EPA's Six Common Air Pollutants (EPA 2016a) and the CARB Glossary of Air Pollutant Terms (CARB 2016a).

that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished lung function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOC. Inhalable or coarse particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as Pb, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases, such as chlorides or ammonium,

into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline, the manufacturing of batteries, paint, ink, ceramics, and ammunition and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill 2588, was enacted by the

legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

The California Air Resources Board (CARB) classified "particulate emissions from diesel-fueled engines" (i.e., diesel particulate matter) as a TAC in August 1998. Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. Diesel particulate matter is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with diesel particulate matter (CARB 2000). To reduce the cancer risk associated with diesel particulate matter, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

2.3 Regulatory Setting

This section describes the applicable regulatory plans, policies, and ordinances for the proposed project.

2.3.1 Federal

Federal Clean Air Act

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants, setting hazardous air pollutant standards, approving state attainment plans, setting motor vehicle emission standards, issuing stationary source emission standards and permits, and establishing acid rain control measures,

stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

2.3.2 State

California Air Resources Board

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 2, Ambient Air Quality Standards.

Table 2
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	

Table 2
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day Average	1.5 µg/m³	—	—
	Calendar Quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24- hours	25 µg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2016c.

Notes: ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter.

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility-reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter (µg/m³) is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the EPA Administrator signed the notice for the final rule to revise the primary and secondary NAAQS for O3 were lowered. The EPA is revising the levels of both standards from 0.075 ppm to 0.070 ppm, and retaining their indicators (O3), forms (fourth-highest daily maximum, averaged across three consecutive years) and averaging times (eight hours). The EPA is in the process of submitting the rule for publication in the Federal Register. The final rule will be effective 60 days after the date of publication in the Federal Register. The lowered national 8-hour standards are reflected in the table.

[g] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

As part of its diesel risk reduction program, CARB adopted an Airborne Toxic Control Measure (ATCM) that applies to new and in-use stationary compression-ignition (i.e., diesel) engines. The ATCM was adopted in 2004 and revised in November 2010 with an effective date of May 19, 2011. After December 31, 2008, the ATCM requires that new emergency standby engines must comply with EPA emissions standards applicable to a 2007-model-year off-road engine of the same horsepower rating. The ATCM further limits the particulate matter emissions from an emergency standby engine operated less than 50 hours per year for maintenance and testing to 0.15 gram per brake-horsepower-hour.

California Health and Safety Code Section 41700

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

2.3.3 Local

The following local/regional regulations pertaining to air quality would apply to the proposed project.

San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local AQMDs and APCDs are responsible for enforcing standards and regulating stationary sources. The project site is located within the basin and is subject to the guidelines and regulations of the SDAPCD.

In the basin, O_3 and particulate matter are the pollutants of main concern, since exceedances of state ambient air quality standards for those pollutants are experienced here in most years. For this reason, the basin has been designated as a nonattainment area for the state PM_{10}, $PM_{2.5}$, and O_3 standards. The basin is also a federal O_3 attainment (maintenance) area for 1997 8-hour O_3 standard, a O_3 nonattainment area for the 2008 8-hour O_3 standard, and a CO maintenance area (western and central part of the basin only). The project area is in the CO maintenance area.

The SDAPCD 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 basin. The County *Regional Air Quality Strategy* (RAQS) was initially adopted in 1991, and is updated on a triennial basis, most recently in 2009 (SDAPCD 2009a). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, and information regarding projected growth in the cities and San Diego County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the cities and San Diego County as part of the development of their general plans.

The *Eight-Hour Ozone Attainment Plan for San Diego County* indicates that local controls and state programs would allow the region to reach attainment of the federal 1997 8-hour O_3 standard by 2009 (SDAPCD 2007). In this plan, SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O_3 standard. The RAQS details how the region will manage and reduce O_3 precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these contaminants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and

projections in the RAQS address all potential sources, including those under the authority of CARB and the EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS. In the *Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County*, the basin did not reach attainment of the federal 1997 standard until 2011 (SDAPCD 2012). This plan, however, demonstrates the region's attainment of the 1997 O_3 NAAQS and outlines the plan for maintaining attainment status.

In December 2005, SDAPCD prepared a report titled *Measures to Reduce Particulate Matter in San Diego County* to address implementation of Senate Bill (SB) 656 in San Diego County (SB 656 required evaluation of additional controls to reduce ambient concentrations of PM_{10} and $PM_{2.5}$) (SDAPCD 2005). In the report, SDAPCD evaluated the implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including earthmoving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust.

As stated, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the basin. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD:

- **SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance.** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1969).
- **SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust.** Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009b).
- **SDAPCD Regulation IV: Prohibitions; Rule 67.0: Architectural Coatings.** Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2001).

City of Escondido General Plan

The City's General Plan (City of Escondido 2012) includes various goals and policies designed to help improve air quality within the City. As discussed in the General Plan, policies pertaining to improving air quality are addressed in multiple chapters of the General Plan.

The goals and policies for improving air quality in the General Plan are as follows:

Land Use and Community Form

- **Goal 1:** A community composed of distinct residential neighborhoods, business districts, and employment centers, whose urban form reflects the natural environmental setting.
- **Policy 1.9:** Promote development in downtown, at transit stations, and other key districts to accommodate a mix of land uses and configure uses to promote walkability, bicycling, and transit uses, reducing the need for the automobile.
- **Goal 4:** Residential neighborhoods that are well maintained and enduring, and continue to be great places to live for multiple generations.
- **Policy 4.3:** Integrate pedestrian-friendly features, promote walkability, and work with residents to enhance existing neighborhood character and aesthetics.
- **Goal 7:** Districts containing a mix of uses enabling residents to live close to their jobs, shopping, entertainment, and recreation, reducing the need to use the automobile and promoting walking and healthy lifestyles.
- **Policy 7.1:** Designate areas for the development of mixed-use projects in a pedestrian-friendly environment integrating housing with retail, office, and service uses.

Mobility and Infrastructure

- **Goal 1:** An accessible, safe, convenient, and integrated multi-modal network that connects all users and moves goods and people within the community and region efficiently.
- **Policy 3.2:** Develop and manage pedestrian facilities to maintain an acceptable Level of Service.
- **Policy 3.3:** Maintain a pedestrian environment that is accessible to all.
- **Policy 4.2:** Develop and manage bicycle facilities to maintain an acceptable Level of Service.
- **Policy 4.3:** Promote bicycling as a common mode of transportation and recreation to help reduce traffic congestion.

Resource Conservation

- **Goal 7:** Improved air quality in the city and the region to maintain the community's health and reduce greenhouse gas emissions that contribute to climate change.
- **Policy 7.3:** New development projects incorporate feasible measures that reduce construction and operational emissions.

2.4 Local Air Quality

2.4.1 San Diego Air Basin Attainment Designation

An area is designated in attainment when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The criteria pollutants of primary concern that are considered in this analysis are O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O_3.

The portion of the basin where the project site is located is designated by the EPA as an attainment area for the 1997 8-hour NAAQS for O_3 and as a marginal nonattainment area for the 2008 8-hour NAAQS for O_3.The basin is designated in attainment for all other criteria pollutants under the NAAQS with the exception of PM_{10}, which was determined to be unclassifiable. The basin is currently designated nonattainment for O_3 and particulate matter, PM_{10} and $PM_{2.5}$, under the CAAQS. It is designated attainment for the CAAQS for CO, NO_2, SO_2, lead, and sulfates.

Table 3 summarizes the basin's federal and state attainment designations for each of the criteria pollutants.

Table 3
San Diego Air Basin Attainment Classification

Pollutant	Federal Designation[a]	State Designation[b]
O_3 (1 hour)	Attainment[1]	Nonattainment
O_3 (8 hour – 1997) (8 hour – 2008)	Attainment (Maintenance) Nonattainment (Marginal)	Nonattainment
NO_2	Unclassifiable/Attainment	Attainment
CO	Unclassifiable/Attainment[2]	Attainment
SO_2	Attainment	Attainment
PM_{10}	Unclassifiable[3]	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
Lead	Attainment	Attainment

Table 3
San Diego Air Basin Attainment Classification

Pollutant	Federal Designation[a]	State Designation[b]
Sulfates	(no federal standard)	Attainment
Hydrogen Sulfide	(no federal standard)	Unclassified
Visibility-Reducing Particles	(no federal standard)	Unclassified

Source: [a]EPA 2016b; [b]CARB 2016b.

1 The federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in state implementation plans.

2 The western and central portions of the basin are designated attainment (maintenance), while the eastern portion is designated unclassifiable/attainment.

3 At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

2.4.2 Air Quality Monitoring Data

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County, which measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The SDAPCD monitors air quality conditions at 10 locations throughout the basin. The nearest SDAPCD-operated monitoring station in which criteria pollutants data was collected is the Escondido - East Valley Parkway monitoring station which was located approximately 1-mile east of the project site. Ambient concentrations of pollutants from 2011 through 2014 are presented in Table 4.

Table 4
Ambient Air Quality Data

Pollutant	Averaging Time	2011	2012	2013	2014	Most Stringent Ambient Air Quality Standard	Monitoring Station
O_3	8-hour	0.089 ppm	0.073 ppm	0.074 ppm	0.079 ppm	0.070 ppm (State)	East Valley Parkway[a]
	1-hour	0.098 ppm	0.084 ppm	0.084 ppm	0.099 ppm	0.090 ppm (State)	
NO_2	1-hour	0.062 ppm	0.062 ppm	0.061 ppm	0.063 ppm	0.100 ppm (National)	East Valley Parkway[a]
	Annual	0.013 ppm	0.013 ppm	0.012 ppm	0.011 ppm	0.030 ppm (State)	
CO	1-hour	3.14 ppm	5.16 ppm	N/A	N/A	20 ppm (State)	East Valley Parkway[a]
	8-hour	2.20 ppm	3.61 ppm	N/A	N/A	9.0 ppm (State)	
SO_2	24-hour	N/A	N/A	N/A	N/A	0.04 ppm (State)	East Valley Parkway[a]
	Annual	N/A	N/A	N/A	N/A	0.030 ppm (National)	

Table 4
Ambient Air Quality Data

Pollutant	Averaging Time	2011	2012	2013	2014	Most Stringent Ambient Air Quality Standard	Monitoring Station
PM_{10}	24-hour	40.0 µg/m³	33.0 µg/m³	80.0 µg/m³	43.0 µg/m³	50 µg/m³ (State)	East Valley Parkway[a]
	Annual	18.8 µg/m³	18.0 µg/m³	23.2 µg/m³	21.6 µg/m³	20 µg/m³ (State)	
$PM_{2.5}$	24-hour	27.4 µg/m³	70.7 µg/m³	56.3 µg/m³	77.5 µg/m³	35 µg/m³ (National)	East Valley Parkway[a]
	Annual	10.4 µg/m³	10.5 µg/m³	11.0 µg/m³	9.9 µg/m³	12 µg/m³ (National)	

Sources: CARB 2015a; EPA 2015.

Notes: ppm = parts per million; µg/m3 = micrograms per cubic meter; O_3 = ozone; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; NO_2 = nitrogen dioxide; N/A = not available; CO = carbon monoxide; SO_2 = sulfur dioxide.
Data were taken from CARB iADAM (2015; http://www.arb.ca.gov/adam) or EPA AirData (2015; http://www.epa.gov/airdata/) and represent the highest concentrations experienced over a given year. Exceedances of federal and state standards are only shown for ozone and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed either federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.

[a] Escondido-East Valley Parkway Monitoring Station is located at 600 East Valley Parkway, California.

The number of days exceeding the ozone and particulate AAQS is shown in Table 5. The state 8-hour O_3 standards were exceeded in 2011, 2012, 2013, and 2014 while the federal 8-hour O_3 standard was exceeded in 2011 and 2014. The state 1-hour O_3 standards were exceeded in 2011. The state 24-Hour PM_{10} standards was exceeded in 2013. Air quality within the project region was in compliance with both CAAQS and NAAQS for NO_2, CO, $PM_{2.5}$, and SO_2 during this monitoring period.

Table 5
Frequency of Air Quality Standard Violations

Monitoring Site	Year	Number of Days Exceeding Standard			
		State 1-Hour O_3	*State 8-Hour O_3*	*National 8-Hour O_3*	*State 24-Hour PM_{10}*
East Valley Parkway	2011	1	2	2	0
	2012	0	2	0	0
	2013	0	4	0	1
	2014	0	8	5	0

Source: CARB 2015a.
Notes: O_3 = ozone; PM_{10} = coarse particulate matter.

2.5 Thresholds of Significance

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), which provides guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

City of Escondido Environmental Quality Regulations

The Environmental Quality Regulations (EQR), as established in the City's Municipal Code Chapter 33, Article 47 implement CEQA and CEQA Guidelines by applying the provisions and procedures contained in CEQA to development projects proposed within the City. The EQRs established screening thresholds to determine if additional analysis is required to determine whether a project would result in significant impacts. Air Quality impacts are addressed in Division 1, Section 33-924(a)(6). A project would require a technical study if, after mitigation, its air quality impacts for fixed, mobile, or construction sources within the General Plan area would exceed the thresholds identified in Table 6.

Table 6
City of Escondido Daily Emission Screening Level Criteria

Construction Emissions	
Pollutant	*Total Emissions (Pounds per Day)*
Volatile Organic Compounds (VOC)	75
Oxides of Nitrogen (NO_x)	250
Carbon Monoxide (CO)	550
Oxides of Sulfur (SO_x)	250
Respirable Particulate Matter (PM_{10})	100
Fine Particulate Matter ($PM_{2.5}$)	55

Table 6
City of Escondido Daily Emission Screening Level Criteria

Operational Emissions	
Pollutant	*Total Emissions (Pounds per Day)*
Volatile Organic Compounds (VOC)	55
Oxides of Nitrogen (NO_x)	250
Carbon Monoxide (CO)	550
Oxides of Sulfur (SO_x)	250
Respirable Particulate Matter (PM_{10})	100
Fine Particulate Matter ($PM_{2.5}$)	55

Source: City of Escondido Municipal Code: Chapter 33, Article 47, Division 1, Section 33-924(a)(6).

If a project exceeds the screening criteria in Table 6, it does not necessarily have a significant impact on the environment because the EQRs for air quality determine whether further analysis would be required to determine the potential significant impacts of the project. Emissions below the screening-level thresholds would not cause a significant impact. In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the CAAQS and NAAQS, including appropriate background levels. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 6, 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.

2.6 Impact Analysis

This section evaluates the air quality impacts associated with the proposed project. The City's significance criteria described in Section 2.5, Thresholds of Significance, was used to evaluate impacts associated with the construction and operation of the proposed project.

2.6.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

As mentioned in Section 2.3, Regulatory Setting, the SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin—specifically, the State Implementation Plan (SIP) and RAQS.[2] The federal O_3 maintenance plan, which is part of the SIP, was adopted in 2012. The

[2] For the purpose of this discussion, the relevant federal air quality plan is the ozone maintenance plan (SDAPCD 2012). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the basin.

SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2009). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. The project site is zoned S-P, which allows the site to be developed with residential, industrial, and commercial development. The proposed project would be consistent with the General Plan land use designation for the site and would not require a general plan amendment. While the SDAPCD does not provide guidance regarding the analysis of impacts associated with air quality plan conformance, the County's *Guidelines for Determining Significance and Report and Format and Content Requirements – Air Quality* does discuss conformance with the RAQS (County of San Diego 2007). The guidance indicates that, if the project, in conjunction with other projects, contributes to growth projections that would not exceed SANDAG's growth projections for the City, the project would not be in conflict with the RAQS (County of San Diego 2007).

The proposed project is currently zoned as S-P. The project would be consistent with the existing zoning and land use designation for the site; therefore, the project is considered to be accounted for in the underlying growth estimates for the basin used as the basis for the RAQS update. As such, the proposed project would not conflict with or obstruct implementation of the RAQS. Furthermore, the proposed project would not directly introduce substantial population growth in the area. While the proposed project would increase the amount of traffic to the surrounding area due to the transport of construction workers, supplies, and equipment, these activities would be temporary. The addition of an estimated 955 daily trips coupled with the small scale of the proposed project would not result in substantial operational emissions that would conflict with the local Air Quality plan. Therefore, at a regional level, the proposed project would be consistent with the underlying growth forecasts in the RAQS. Impacts would be less than significant.

2.6.2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. Construction emissions can vary substantially day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions.

Pollutant emissions associated with construction activity were quantified using CalEEMod. Default values provided by the program were used where detailed project information was not available. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Section 1.3, Construction Assumptions and Methodology, of this report. The information contained in Appendix A was used as CalEEMod inputs.

Implementation of the proposed project would generate construction-related air pollutant emissions from three general activity categories: entrained dust, equipment and vehicle exhaust emissions, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. The proposed project is subject to SDAPCD Rule 55, Fugitive Dust Control. This rule requires that the proposed project take steps to restrict visible emissions of fugitive dust beyond the property line. Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during grading and construction activities. To account for dust control measures in the calculations, it was assumed that the active sites would be watered at least three times daily, resulting in an approximately 61% reduction of particulate matter.

Exhaust from internal combustion engines used by construction equipment and hauling trucks (dump trucks) and vendor trucks (delivery trucks) and worker vehicles would result in emissions of NO_x, ROC, CO, SO_x, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SDAPCD Rule 67.0.1, Architectural Coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories. VOC content

used for this analysis include 150 grams per liter for exterior coatings and use of 50 grams per liter for interior coatings as outlined in SDAPCD Rule 67.0.1.

Table 7 shows the estimated maximum daily construction emissions associated with the construction of the proposed project. Complete details of the emissions calculations are provided in Appendix A of this document.

Table 7
Estimated Maximum Daily Construction Emissions

Construction Year	VOC (lb/day)	NO_x (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
2016	4.56	34.74	38.22	0.05	4.89	3.37
2017	57.54	29.81	28.53	0.05	3.28	2.11
Maximum Daily Emissions	**57.54**	**34.74**	**38.22**	**0.05**	**4.89**	**3.37**
Emission Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: See Appendix A for complete results.
VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SOx = oxides of sulfur; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns; lb/day = pounds per day.

As shown in Table 7, daily construction emissions would not exceed the significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$; therefore, impacts during construction would be less than significant.

Operation

Following the completion of construction activities, the proposed project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile and stationary sources, including vehicular traffic and area sources (water heating and landscaping). Because the existing building on-site that is proposed to be demolished currently is not operational infrastructure, emissions associated with the existing building were not subtracted from those resulting from the proposed project, but rather emissions estimates for the proposed project were calculated as though the project site was vacant.

Vehicular Traffic

The proposed project would impact air quality through the vehicular traffic generated by the proposed project. According to the proposed project's traffic report prepared by MBI, the proposed project would result in a total of 955 trips per day (MBI 2016).

Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2018 were used to estimate emissions associated with full buildout of the proposed project.

Energy

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from the proposed project's energy use, which includes natural gas combustion. CalEEMod default rates were applied to the proposed project.

Area Sources

CalEEMod was also used to estimate emissions from the project's area sources, which include landscaping, consumer products, and architectural coatings for building maintenance. It is assumed that the proposed project would not include wood-burning hearths.

Table 8 presents the maximum daily emissions associated with the operation of the proposed project after all construction has been completed. The values shown for motor vehicles, energy consumption, and area sources are for both maximum summer and winter daily emissions results from CalEEMod.

Table 8
Estimated Daily Maximum Operational Emissions

Emission Source	VOC (lb/day)	NO_x (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Summer Emissions						
Area	6.28	0.12	10.50	0.00	0.18	0.18
Energy	0.02	0.14	0.06	0.00	0.01	0.01
Mobile	2.94	5.78	27.34	0.07	4.57	1.27
Total	***9.24***	***6.04***	***37.90***	***0.07***	***4.76***	***1.46***
Emission Threshold	**55**	**250**	**550**	**250**	**100**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	6.28	0.12	10.50	0.00	0.18	0.18
Energy	0.02	0.14	0.06	0.00	0.01	0.01
Mobile	3.14	6.13	29.32	0.06	4.57	1.27
Total	***9.44***	***6.39***	***39.88***	***0.06***	***4.76***	***1.46***
Emission Threshold	**55**	**250**	**550**	**250**	**100**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: See Appendix A for complete results.
VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = oxides of sulfur; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns; lb/day = pounds per day.

Emissions represent maximum of summer and winter. Summer emissions are representative of the conditions that may occur during the ozone season (May 1 to October 31), and winter emissions are representative of the conditions that may occur during the balance of the year (November 1 to April 30).

As shown in Table 8, the daily operational emissions from the proposed project would not exceed the significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$. Therefore, operational emissions would be less than significant.

2.6.3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

In analyzing cumulative impacts from the proposed project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the basin is designated as nonattainment for the CAAQS and NAAQS. If the proposed project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, the project would only be considered to have a significant cumulative impact if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

Additionally, for the basin, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure the SDAB continues to make progress toward NAAQS- and CAAQS-attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections.

The SDAB has been designated as a federal nonattainment area for O_3 and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. PM_{10} and $PM_{2.5}$ emissions associated with construction generally result in near-field impacts. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the basin. As discussed previously, the emissions of all criteria pollutants would be below the significance levels. Construction would be short term and temporary in nature. Once construction is completed, construction-

related emissions would cease. Operational emissions generated by the proposed project would not exceed the significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$, and would not cause a significant impact. As such, the proposed project would result in less-than-significant impacts to air quality relative to operational emissions.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As stated previously, the proposed project would be consistent with the existing zoning and land use designation for the site, and would not result in significant regional growth that is not accounted for within the RAQS. Additionally, the proposed project is consistent with the existing use for the site; thus, at a regional level, it would be consistent with the underlying growth forecasts in the SIP and RAQS. As a result, the proposed project would not result in a cumulatively considerable contribution to regional O_3 concentrations or other criteria pollutant emissions. Cumulative impacts would be less than significant.

2.6.4 Would the project expose sensitive receptors to substantial pollutant concentrations?

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed "sensitive receptors" are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by CARB, include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases; however, for the purposes of this analysis, residents are also considered sensitive receptors. As such, sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The closest off-site sensitive receptors to the proposed project are residential land uses to the west and are located within approximately 250 feet from the project site boundary. Receptors also include tenants of the proposed project.

Table 9 presents a list of the criteria pollutants and other related pollutants of concern, emission sources, associated health effects, and current SDAB attainment status.

Table 9
Pollutants, Sources, Health Effects, and Attainment Status

Pollutant	Sources	Health Effects	Attainment Status	
			NAAQS	*CAAQS*
Ozone (O_3)	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil); solvents; petroleum processing and storage.	Breathing difficulties, lung tissue damage, vegetation damage, damage to rubber and some plastics.	Attainment	Nonattainment
Respirable Particulate Matter (PM_{10})	Road dust, windblown dust, agriculture and construction, fireplaces. Also formed from other pollutants (NO_x, SO_x, organics). Incomplete combustion.	Increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling.	Unclassifiable	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning. Also formed from reaction of other pollutants (NO_x, SO_x, organics, and NH_3).	Increases respiratory disease, lung damage, cancer, and premature death, reduced visibility, surface soiling. Particles can aggravate heart diseases such as congestive heart failure and coronary artery disease	Attainment	Nonattainment
Carbon Monoxide (CO)	Any source that burns fuel such as automobiles, trucks, heavy construction and farming equipment, residential heating.	Chest pain in heart patients, headaches, reduced mental alertness.	Unclassifiable/ Attainment	Attainment
Nitrogen Dioxide (NO_2)	See carbon monoxide.	Lung irritation and damage. Reacts in the atmosphere to form ozone and acid rain.	Unclassifiable/ Attainment	Attainment
Lead	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.	Learning disabilities, brain and kidney damage.	Attainment	Attainment
Sulfur Dioxide (SO_2)	Coal or oil burning power plants and industries, refineries, diesel engines.	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Attainment	Attainment
Sulfates	Produced by reaction in the air of SO_2, (see SO_2 sources), a component of acid rain.	Breathing difficulties, aggravates asthma, reduced visibility.	(no federal standard)	Attainment

Table 9
Pollutants, Sources, Health Effects, and Attainment Status

Pollutant	Sources	Health Effects	Attainment Status	
Hydrogen Sulfide	Geothermal power plants, petroleum production and refining, sewer gas.	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).	(no federal standard)	Unclassified
Visibly Reducing Particles	See $PM_{2.5}$	Reduced visibility (e.g., obscures mountains and other scenery), reduced airport safety.	(no federal standard)	Unclassified
Vinyl Chloride	Exhaust gases from factories that manufacture or process vinyl chloride (construction, packaging, and transportation industries)	Central nervous system effects (e.g., dizziness, drowsiness, headaches), kidney irritation, liver damage, liver cancer.	N/A	N/A
Toxic Air Contaminant (TAC)	Combustion engines (stationary and mobile), diesel combustion, storage and use of TAC-containing substances (i.e., gasoline, lead smelting, etc.)	Depends on TAC, but may include cancer, mutagenic and/or teratogenic effects, other acute or chronic health effects	N/A	N/A

Source: County of San Diego 2007.

Health Impacts of Toxic Air Contaminants

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as TACs or hazardous air pollutants. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and is adopting appropriate control measures for sources of these TACs. The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks and the associated health impacts to sensitive receptors. The following measures are required by state law to reduce diesel particulate emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, Section 2449), the purpose of which is to reduce diesel particulate matter (DPM) and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction

equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SDAPCD recommends an incremental cancer risk threshold of 10 in a million (SDAPCD 2014). "Incremental cancer risk" is the likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 70-year period will contract cancer based on the use of standard risk-assessment methodology (CARB 2010). The proposed project would not require the extensive use of heavy-duty construction equipment, which is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions, and would not involve extensive use of diesel trucks, which are also subject to a CARB Airborne Toxics Control Measure.

The maximum amount of on-site construction equipment on any one day would be 8 pieces of equipment, some of which would be backhoes and lifts, which are equipment that are typically rated less than 100 horsepower, and would generate less emissions compared to larger pieces of equipment, such as dozers and scrapers. Additionally, construction equipment would be continually moving over the 2.6-acre site during construction activities, and would not be located in any single location for an extended period of time.

Demolition material and hauling activities would require the greatest amount of diesel trucks travelling to and from the project site. Demolition would result in a maximum of 4 haul truck round trips per day (or 8 one-way trips). Maximum daily emissions generated during demolition would be associated with operation of a maximum of 5 pieces of equipment, a maximum of 4 round-trip truck trips per day, and associated worker vehicle trips (see Appendix A for details). Demolition would take place over a short-term, 19-day period, after which haul-truck trips associated with demolition would cease.

Grading and excavation activities, which would be conducted separately from demolition activities subsequent to completion of the demolition phase, would not involve the import or export of soil. It is assumed that the project site would be balanced. Maximum daily emissions generated during grading and excavation would be associated with operation of a maximum of 4 pieces of equipment and associated worker vehicle trips. The grading and site improvements phasing would occur over a 55-day period.

As shown in Table 7, maximum daily particulate matter (PM_{10} or $PM_{2.5}$) emissions generated by construction equipment operation and haul-truck trips during demolition (exhaust particulate matter, or DPM), combined with fugitive dust generated by equipment operation and vehicle travel, would be well below the City of Escondido's daily thresholds. Moreover, total construction

of the proposed project would last approximately 13 months, after which project-related TAC emissions would cease. Thus, the proposed project would not result in a long-term (i.e., 9-year, 30-year or 70-year) source of TAC emissions. No residual TAC emissions and corresponding cancer risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the proposed project. All emissions for criteria pollutants would be well below the City's thresholds. Therefore, the exposure of project-related TAC emission impacts to sensitive receptors would be less than significant.

Additionally, CARB has published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005), which identifies certain types of facilities or sources that may emit substantial quantities of TACs and therefore could conflict with sensitive land uses, such as "schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities." The *Air Quality and Land Use Handbook* is a guide for siting of new sensitive land uses, but it does not mandate specific separation distances to avoid potential health impacts. The enumerated facilities or sources include the following:

- High-traffic freeways and roads
- Distribution centers
- Rail yards
- Ports
- Refineries
- Chrome plating facilities
- Dry cleaners
- Large gas dispensing facilities.

CARB recommends that sensitive receptors not be located downwind or in proximity to such sources to avoid potential health hazards.

The adjacent rail line to the west of the project site is used for occasional freight deliveries to the neighboring industrial area. According to the Escondido General Plan's Downtown Specific Plan and Climate Action Plan EIR (Atkins, 2012) the rail line is used by AT&SF for freight approximately 1 round trip daily, 3 days a week. Therefore, rail line use is minimal. Additionally, the eastern terminus of the North Coast Transit District (NCTD) SPRINTER light rail line is located approximately 100 feet north of the project site. Current service to and from the Escondido Transit Center occurs every 30 minutes, from approximately 4 a.m. to 9:30 p.m. Monday through Sunday, with late-night service until 12:30 a.m. on Fridays and Saturdays. The

commercial/light industrial land use located to the south of the project site is a country supply store, which sells a variety of home and garden supplies, including feed and equipment for livestock and horses. The proposed project would not generate substantial TAC emissions that would conflict with surrounding sensitive receptors or would the project expose the project's inhabitants to TAC emissions from these sources. Impacts would be less than significant.

Health Impacts of Carbon Monoxide

As described previously, high concentrations CO exposure can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. Mobile-source impacts, including those related to CO, occur essentially on two scales of motion. Regionally, project-related construction travel would add to regional trip generation and increase the VMT within the local airshed and the SDAB. Locally, construction traffic would be added to the roadway system in the vicinity of the project site. Although the SDAB is currently an attainment area for CO, there is a potential for the formation of microscale CO "hotspots" to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and/or is operating on roadways already crowded with non-project traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SDAB is steadily decreasing (CARB 2004).

Carbon monoxide transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors such as residents, school children, hospital patients, and the elderly. Typically, high CO concentrations are associated with urban roadways or intersections operating at an unacceptable level of service (LOS). Projects contributing to adverse traffic impacts may result in the formation of CO hotspots.

To verify that the project would not cause or contribute to a violation of the CO standards, a screening evaluation of the potential for CO hotspots was conducted. The California Department of Transportation (Caltrans) and the U.C. Davis Institute of Transportation Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol) (Caltrans 1997) were followed. CO hotspots are typically evaluated when (1) the LOS of an intersection or roadway decreases to LOS E or worse, (2) signalization and/or channelization is added to an intersection, and (3) sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection or roadway segment.

The Traffic Impact Analysis Report prepared for the proposed project (MBI 2016) evaluated fourteen intersections for four scenarios including existing conditions, existing plus-project conditions, and existing plus cumulative conditions without project, and existing plus cumulative conditions with project. The results of the LOS assessment show that under existing plus project conditions, the fourteen study intersections are forecasted to operate at acceptable levels of service (LOS D or better) during the peak hours. Therefore, no project-related significant impacts are anticipated under existing plus project conditions. The existing plus cumulative conditions with project analysis determined that the fourteen study intersections were expected to operate at acceptable levels of service (LOS D or better) during the peak hours. Because project-generated traffic would not cause a studied intersection or roadway segment to decrease to LOS E or worse, and the project would not result in a significant peak hour traffic impact, a CO hotspot analysis would not be warranted. In addition, maximum background CO levels in San Diego County, as shown in Table 2, are around 25-35% of the 1-hour and 8-hour CAAQS and would be expected to improve further due to reductions in motor vehicle emissions. Based on these considerations, localized carbon monoxide impacts would be considered less than significant.

Health Impacts of Other Criteria Air Pollutants

Construction and operation of the proposed project would not result in emissions that exceed the City's emission thresholds for any criteria air pollutants including VOC, NO_x, CO, SO_x, PM_{10} or $PM_{2.5}$. Regarding VOCs, some VOCs would be associated with motor vehicles and construction equipment, while others are associated with architectural coatings, the emissions of which would not result in the exceedances of the City's thresholds as shown in Table 6. Generally, the VOCs in architectural coatings are of relatively low toxicity. Additionally, SDAPCD Rule 67.0.1 restricts the VOC content of coatings for both construction and operational applications.

In addition, VOCs and NO_x are precursors to O_3, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by the EPA as an attainment area for the 1-hour O_3 NAAQS standard and 1997 8-hour NAAQS standard). The health effects associated with O_3, as discussed in Section 3.2, are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O_3 AAQS tend to occur between April and October when solar radiation is highest.

The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and NO_x emissions associated with project construction could minimally contribute to regional O_3 concentrations and the associated health impacts. Due to the minimal contribution during construction and operation, as well as the existing good air quality in coastal San Diego areas, health impacts would be considered less than significant.

Similar to O_3, construction of the proposed project would not exceed thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter. The project would also not result in substantial DPM emissions during construction and operation and therefore, would not result in significant health effects related to DPM exposure. Due to the minimal contribution of particulate matter during construction and operation, health impacts would be considered less than significant.

Regarding nitrogen dioxide, according to the construction emissions analysis, construction of the proposed project would not contribute to exceedances of the NAAQS and CAAQS for NO_2. As described in Section 3.2, NO_2 and NO_x health impacts are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, these operations would be relatively short term, and the proposed project would be required to comply with SDAPCD Rule 55 which limits the amount of fugitive dust generated during construction. Additionally, off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. Construction of the proposed project would not require any stationary emission sources that would create substantial, localized NO_x impacts. Therefore, health impacts would be considered less than significant.

In summary, construction and operation of the proposed project would not result in exceedances of City's emission-based thresholds for criteria pollutants. The VOC and NO_x emissions, as described previously, would minimally contribute to regional O_3 concentrations and the associated health effects. In addition to O_3, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 4, the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected the project's operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO "hotspots" were discussed previously as a less-than-significant impact. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant. PM_{10} and $PM_{2.5}$ would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter and would not obstruct the SDAB from coming into attainment for these pollutants and would not contribute to

significant health effects associated with particulates. Therefore, health impacts associated with criteria air pollutants would be considered less than significant.

2.6.5 Would the project create objectionable odors affecting a substantial number of people?

Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the proposed project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be considered less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project would not result in the creation of a land use that is associated with odors. Therefore, project operations would result in an odor impact that is less than significant.

2.7 Mitigation Measures

The proposed project would not result in significant impacts; therefore, no mitigation is required.

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3 GREENHOUSE GAS EMISSIONS

3.1 Existing Conditions

3.1.1 The Greenhouse Effect and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called "greenhouse gases" (GHGs). The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3), which are associated with certain industrial products and processes (CAT 2015).

The greenhouse effect is a natural process that contributes to regulating the earth's temperature. Without it, the temperature of the Earth would be about 0°F (−18°C) instead of its present 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect (National Climatic Data Center 2015).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its "global warming potential" (GWP). GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG gas emissions are typically measured in terms of pounds or tons of "CO_2 equivalent" (CO_2E).[3]

[3] The CO_2 equivalent for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO_2E = (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH_4 is 21,

3.1.2 Contributions to Greenhouse Gas Emissions

In 2012, the United States produced 6,525 million metric tons (MMT) of CO_2E. The primary GHG emitted by human activities in the United States was CO_2, representing approximately 82.5% of total GHG emissions. The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 94.2% of the CO_2 emissions.

According to the 2013 GHG inventory data compiled by the CARB for the California GHG Inventory for 2000–2013, California emitted 459 MMT CO_2E of GHGs, including emissions resulting from out-of-state electrical generation (CARB 2015d). The primary contributors to GHG emissions in California are transportation, industry, electric power production from both in-state and out-of-state sources, agriculture, and other sources, which include commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions in 2013 are presented in Table 10, Greenhouse Gas Emissions Sources in California.

Table 10
Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2E)	Percent of Total[a]
Transportation	169.02	37%
Industrial Uses	92.68	20%
Electricity Generation	90.45[b]	20%
Residential and Commercial uses	43.54	9%
Agriculture	36.21	8%
High Global Warming Potential Substances	18.5	4%
Recycling and Waste	8.87	2%
Totals	**459.28**	**100%**

Source: CARB 2015c.
Notes:
Emissions reflect 2013 California GHG inventory
MT CO_2E = metric tons of carbon dioxide equivalent per year
[a] Percentage of total has been rounded.
[b] Includes emissions associated with imported electricity, which account for 39.99 MMT CO_2E annually.

which means that emissions of 1 metric ton of CH_4 are equivalent to emissions of 21 metric tons of CO_2, and the GWP for N_2O is 310, based on the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report. Although the IPCC has released subsequent Assessment Reports with updated GWPs, CARB reporting and other statewide documents utilize the GWP in the IPCC Second Assessment Report. As such, it is appropriate to use the hardwired GWP values in CalEEMod from the IPCC Second Assessment Report.

3.1.3 Potential Effects of Human Activity on Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 *Intergovernmental Panel on Climate Change Synthesis Report* indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice have, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a 0.2°C rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010a).

3.2 Regulatory Setting

3.2.1 Federal

Massachusetts v. EPA

On April 2, 2007, in *Massachusetts v. EPA*, the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the CAA. On

December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the CAA:

1. The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
2. The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

U.N. Framework Convention on Climate Change Pledge

On March 31, 2015, the State Department submitted the U.S. target to cut net greenhouse gas emissions to the United Nations Framework Convention on Climate Change (UNFCCC). The submission, referred to as an Intended Nationally Determined Contribution (INDC), is a formal statement of the U.S. target, announced in China last year, to reduce our emissions by 26%–28% below 2005 levels by 2025, and to make best efforts to reduce by 28% (U.S. State Department 2015).

The target reflects a planning process that examined opportunities under existing regulatory authorities to reduce emissions in 2025 of all greenhouse gases from all sources in every economic sector. Several U.S. laws, as well as existing and proposed regulations thereunder, are relevant to the implementation of the U.S. target, including the Clean Air Act (42 U.S.C. §7401 et seq.), the Energy Policy Act (42 U.S.C. §13201 et seq.), and the Energy Independence and Security Act (42 U.S.C. §17001 et seq.).

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the DOT, DOE, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines.

Currently, the EPA and the NHTSA are working with ARB to develop the next phase (Phase 2) of the fuel economy and GHG standards for medium- and heavy-duty trucks, which will apply to vehicles with model year 2018 and later. The EPA and the NHTSA issued a Notice of Proposed Rulemaking for Phase 2 in June 2015 and are expected to issue a final rule in spring 2016. Upon the EPA's adoption of the Phase 2 standards, ARB staff plan to propose a Phase 2 program for California, most likely in late 2016 or 2017.[4]

Energy Independence and Security Act

On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

[4] CARB Phase 2 GHG. Available at: http://www.arb.ca.gov/msprog/onroad/caphase2ghg/caphase2ghg.htm. Accessed August 2015.

- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Climate Action Plan

In June 2013, President Obama issued a national Climate Action Plan (Plan) that consisted of a wide variety of executive actions and had three pillars: 1) cut carbon in America, 2) prepare the U.S. for impacts of climate change, and 3) lead international efforts to combat global climate change and prepare for its impacts (EOP 2013). The Plan outlines 75 goals within the three main pillars.

1. **Cut Carbon in America** - The Plan consists of actions to help cut carbon by deploying clean energy, such as cutting carbon from power plants, promoting renewable energy, and unlocking long-term investment in clean energy innovation. In addition, the Plan includes actions designed to help build a 21st century transportation sector; cut energy waste in homes, businesses, and factories; and reduce other GHG emissions, such as HFCs and methane. The Plan commits to lead in clean energy and energy efficiency at the federal level.
2. **Prepare the U.S. for Impacts of Climate Change** - The Plan consists of actions to help prepare for the impacts of climate change through building stronger and safer communities and infrastructure, supporting climate resilient investments, supporting communities and tribal areas as they prepare for impacts, and boosting resilience of building and infrastructure; protecting the economy and natural resources by identifying vulnerabilities, promoting insurance leadership, conserving land and water resources, managing drought, reducing wildfire risks, and preparing for future floods; and using sound science to manage climate impacts.
3. **Lead International Efforts** - The Plan consists of actions to help the U.S. lead international efforts through working with other countries to take action by enhancing multilateral engagements with major economies, expanding bilateral cooperation with major emerging economies, combating short-lived climate pollutants, reducing deforestation and degradation, expanding clean energy use and cutting energy waste, global free trade in environmental goods and services, and phasing out subsidies that encourage wasteful use of fossil fuels and by leading efforts to address climate change through international negotiations.

In June 2014, the Center for Climate and Energy Solutions (C2ES) published a one-year review of progress in implementation of the Plan (C2ES 2014). The C2ES found that the

administration had made marked progress in its initial implementation. The administration made at least some progress on most of the Plan's 75 goals, and many of the specific tasks outlined had been completed. Notable areas of progress included steps to limit carbon pollution from power plants; improve energy efficiency; reduce CH_4 and HFC emissions; help communities and industry become more resilient to climate change impacts; and end U.S. lending for coal-fired power plants overseas.

EPA and NHTSA Joint Final Rules for Vehicle Standards

On April 1, 2010, the EPA and NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA approved the first-ever national GHG emissions standards under the CAA, and NHTSA approved Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (75 FR 25324–25728). The final rule became effective on July 6, 2010 (75 FR 25324–25728).

The EPA's GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 mpg if the automotive industry were to meet this CO_2 level through fuel economy improvements alone. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016. The final standards equivalent would be 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers.

In 2011, the EPA and NHTSA approved the first-ever program to reduce GHG emissions and increase fuel efficiency for medium- and heavy-duty vehicles (76 FR 57106–57513). Effective November 14, 2011, the CO_2 emissions and fuel efficiency standards of this regulation apply to the following car types with the model years 2014 to 2018: combination tractors (i.e., semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles including transit and school buses. This regulation covers vehicles with a gross vehicle weight rating of 8,500 pounds or greater; medium-duty passenger vehicles are covered by the previous regulation for passenger cars and light-duty trucks. In addition, the EPA has adopted standards to control hydrofluorocarbons leakage from air conditioning systems in combination tractors and heavy-duty pickup trucks and vans, as well as CH_4 and N_2O standards for heavy-duty engines, pickup trucks, and vans.

In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (77 FR 62624–63200). These standards will reduce motor vehicle GHG emissions to 163 grams of CO_2 per mile, which is equivalent to 54.5 mpg if this level was achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through reductions in air conditioning leakage and through use of alternative refrigerants, which would not contribute to fuel economy. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including the following:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel-cell vehicles
- Incentives for hybrid technologies for large pickup trucks and for other technologies that achieve high fuel economy levels on large pickup trucks
- Incentives for natural gas vehicles
- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standard test procedures

3.2.2 State

Executive Order S-3-05

In June 2005, Governor Schwarzenegger issued Executive Order S-3-05, which established the following statewide GHG emission reduction goals: GHG emissions should be reduced to 2000 levels by 2010; to 1990 levels by 2020; and to 80% below 1990 levels by 2050. In adopting the 2006 Global Warming Solutions Act (AB 32), discussed below, the Legislature did not adopt the 2050 horizon-year goal from Executive Order S-3-05; and, in the last legislative session, the Legislature rejected legislation to enact the Executive Order's 2050 goal (i.e., SB 32 (Pavley)).

AB 32

The California Global Warming Solutions Act of 2006, was enacted after considerable study and expert testimony before the Legislature. The heart of AB 32 is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020 (Health & Safety Code, §38550), which is one element of Executive Order S-3-05.

ARB has been assigned responsibility for carrying out and developing the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, ARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program

will be used to monitor and enforce compliance with the established standards. ARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 also authorized ARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, ARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

Of relevance to this analysis, in 2007, ARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2E). ARB's adoption of this limit is in accordance with Health & Safety Code Section 38550.

Further, in 2008, ARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) in accordance with Health & Safety Code Section 38561. The *Scoping Plan* establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020.

In the *Scoping Plan*, ARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]). For example, in further explaining ARB's BAU methodology, ARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the *Scoping Plan's* Functional Equivalent Document, ARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, ARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewable Portfolio Standard (12% to 20%), ARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the BAU conditions.

Most recently, in 2014, ARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*) (CARB 2014b). The stated purpose of the *First Update* is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050." The *First Update* found that California is on

track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.

In conjunction with the *First Update*, ARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050." Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The *First Update* identifies key recommended actions for each sector that will facilitate achievement of Executive Order S-3-05's 2050 reduction goal.

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

As part of the *First Update*, ARB recalculated the State's 1990 emissions level using more recent global warming potentials identified by the Intergovernmental Panel on Climate Change. Using the recalculated 1990 emissions level (431 MMT CO_2E) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, ARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the BAU conditions.

2015 State of the State Address

In January 2015, Governor Brown in his inaugural address and annual report to the Legislature established supplementary goals which would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50%, measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued an executive order which identified a mid-term GHG reduction target in support of targets previously identified in Executive Order S-3-05 and AB 32. Specifically, Executive Order B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or

exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050. To facilitate achievement of this goal, Executive Order B-30-15 directs ARB to update its *Scoping Plan*, and calls upon state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. In the last legislative session, the Legislature rejected legislation to enact the Executive Order's 2030 goal (i.e., SB 32 (Pavley)).

Energy-Related Sources

Renewable Portfolio Standard

California's Renewable Portfolio Standard requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33% of total retail sales by 2020.[5] The 33% standard is consistent with the Renewable Portfolio Standard goal established in the *Scoping Plan*. As interim measures, this standard requires 20% of retail sales to be sourced from renewable energy by 2013, and 25% by 2016.[6]

Additionally, pursuant to SB 350, which was chaptered into law in October 2015, and in furtherance of the State's long-term energy de-carbonization strategy, California's Renewable Portfolio Standard will increase to 50% by 2030.

Mobile Sources

Pavley Standards (AB 1493)

As enacted in 2002, AB 1493 (Pavley) required the ARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other noncommercial personal transportation vehicles. The bill required that ARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. ARB adopted the standards in 2004. In 2010, the ARB Executive Officer approved revisions to the motor vehicle GHG standards to harmonize the state program with the national program for 2012–2016 model years discussed above).

[5] Initially, the Renewable Portfolio Standard provisions applied only to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to the standard.

[6] On January 28, 2015, Assembly Member Eduardo Garcia introduced AB 197, which – if enacted – would require an electrical corporation or local publicly-owned electric utility to adopt a long-term procurement strategy to achieve a target of procuring 50% (not 33%) of its electricity products from eligible renewable energy resources by December 31, 2030.

Low Carbon Fuel Standard

Executive Order S-1-07 requires a 10% or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by the ARB by 2020.[7] In 2009, the ARB approved the Low Carbon Fuel Standard (LCFS) regulations, which became fully effective in April 2010. In 2013, an ethanol company obtained a court order compelling the ARB to remedy substantive and procedural defects under CEQA of the LCFS adoption process.[8] However, the court allowed implementation of the LCFS to continue pending correction of the identified defects. Consequently, this analysis assumes that the LCFS will remain in effect during construction and operation of the proposed project.

Advanced Clean Cars Program

In 2012, the ARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2017–2025. (This program is sometimes referred to as "Pavley II.") The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34% fewer greenhouse gases.

SB 375

In 2008, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans, was enacted into law. SB 375 required ARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPOs) are then responsible for preparing a Sustainable Communities Strategy within their Regional Transportation Plan. The goal of the Sustainable Communities Strategy is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If a Sustainable Communities Strategy is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), a sustainable communities strategy does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general

[7] Carbon intensity is a measure of the GHG emissions associated with the various production, distribution and use steps in the "lifecycle" of a transportation fuel.

[8] POET, LLC v. CARB (2013) 217 Cal.App.4th 1214.

plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, ARB adopted the SB 375 targets for the regional MPOs. The targets for the San Diego Association of Governments (SANDAG) are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SANDAG completed and adopted its *2050 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) in October 2011. In November 2011, ARB – by resolution – accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve ARB's 2020 and 2035 GHG emission reduction targets for the region.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. In November 2014, Division One of the Fourth District Court of Appeal issued its decision in *Cleveland National Forest Foundation v. SANDAG*, Case No. D063288. In its decision, the Fourth District held that SANDAG abused its discretion when it certified the EIR for the 2050 RTP/SCS because it did not adequately analyze and mitigate GHG emission levels after year 2020. The 2050 RTP/SCS EIR complied with ARB's AB 32-related GHG reduction target through 2020, but the EIR found that plan-related emissions would substantially increase after 2020 and through 2050. The majority of the Fourth District in the *Cleveland National* decision found SANDAG's EIR deficient because, although the EIR used three significance thresholds authorized by CEQA Guidelines Section 15064.4(b), it did not assess the 2050 RTP/SCS's consistency with the 2050 GHG emissions goal identified in Executive Order S-03-05, which the majority construed as "state climate policy." The Fourth District did not require the set aside of SANDAG's 2050 RTP/SCS itself. In March 2015, the California Supreme Court granted SANDAG's petition for review of the Fourth District's decision (Case No. S223603), and the matter currently is pending before the State's highest court.

Although the EIR for SANDAG's 2050 RTP/SCS is still pending before the California Supreme Court, SANDAG recently adopted the next iteration of its RTP/SCS in accordance with statutorily-mandated timelines. More specifically, in October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets ARB's 2020 and 2035 reduction targets for the region.

Executive Order B-16-2012

As issued by Governor Brown in March 2012, Executive Order B-16-2012 directs state entities under the Governor's direction and control to support and facilitate development and distribution of zero-emission vehicles (ZEVs). This Executive Order also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, the Executive Order also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050.

Building Standards

Building Energy Efficiency Standards (Title 24)

Title 24, Part 6, of the California Code of Regulations regulates the design of building shells and building components. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The California Energy Commission's (CEC) 2013 Building Energy Efficiency Standards (effective July 1, 2014) are 25% and 30% more efficient than the 2008 Title 24 standards for residential and nonresidential construction, respectively. The 2013 standards require higher efficiency windows, insulation, lighting, ventilation systems and other features that further reduce energy consumption in homes and businesses as compared to the prior 2008 standards.

In 2015, the CEC also adopted the 2016 Building Energy Efficiency Standards. The 2016 Title 24 standards will go into effect on January 1, 2017. In regards to single-family residences, the 2016 Title 24 standards will result in about 28% less energy use for lighting, heating, cooling, ventilation and water heating than the 2013 Title 24 standards (CEC 2015a). Data regarding the comparative efficiencies of the 2016 Title 24 standards relative to the 2013 Title 24 standards is not yet available for all building types (e.g., multi-family residences; commercial buildings).

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality.[9] CALGreen is periodically amended,

[9] Comparisons of the requirements of Tiers 1 and 2 of CALGreen with LEED v4 indicate where CALGreen and LEED points overlap and where additional effort is required to achieve LEED points. See https://www.bayren.org/sites/default/files/CG%202013_LEEDv4_Comparison_Detailed.pdf.

and was most recently amended in 2013 and became effective on January 1, 2014, with a supplement thereto recently becoming effective on July 1, 2015.

The California Public Utilities Commission, CEC, and ARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030.[10]

Appliance Energy Efficiency Standards

The CEC also has adopted the 2012 Appliance Efficiency Regulations (2012 Appliance Standards), which are contained in Title 20 of the California Code of Regulations and include standards for both federally-regulated appliances and non-federally regulated appliances.

Solid Waste Sources

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25% of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50% of all solid waste on and after January 1, 2000; and (3) diversion of 75% of all solid waste on or after 2020, and annually thereafter. The California Department of Resources Recycling and Recovery (CalRecycle) is required to develop strategies, including source reduction, recycling, and composting activities, to achieve the 2020 goal (CalRecycle 2015).

CalRecycle published a discussion document, entitled *California's New Goal: 75% Recycling*, which identified concepts that would assist the State in reaching the 75% goal by 2020. Subsequently, in October 2013, CalRecycle released a revised concept list, entitled *Update on AB 341 Legislative Report: Statewide Strategies to Achieve the 75% Goal by 2020* (CalRecycle 2013).

3.2.3 Local

Escondido Climate Action Plan (E-CAP). The E-CAP, adopted in December 5, 2013, looks at reducing 26,807 MT CO_2E per year from new development by 2020 within the City compared with the 2020 unmitigated conditions. Reductions of GHG emissions within the E-CAP are designed to follow the state's adopted AB 32 GHG reduction target. In order to meet the state's

[10] See, e.g., CPUC, California's Zero Net Energy Policies and Initiatives, Sept. 18, 2013, accessed at http://www.cpuc.ca.gov/NR/rdonlyres/C27FC108-A1FD-4D67-AA59- 7EA82011B257/0/3.pdf. It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

requirement to reduce GHG emissions, the E-CAP establishes a target of reducing GHG emissions within the City by 15% below existing by 2020.

New projects within the City are first screened to determine if compliance with the E-CAP measures is required. The E-CAP established guidance requiring a 2,500 MT CO_2E screening threshold for all small commercial, residential, and light industrial projects. The City determined the size of development that is too small to be able to provide the level of GHG emission reductions expected from the Screening Tables or alternate emission analysis method based upon the 90th percentile capture rate concept. This was achieved by determining the GHG emission amount allowed by a project such that 90% of the emissions on average from all projects within the City would exceed that level and be captured by the Screening Table or alternate emission analysis method. Small projects do not exceed the threshold of 2,500 MT CO2E would be considered to have a "less than significant GHG emissions impact" because of the low amount of GHG emissions generated.

Projects that are anticipated to generate more than 2,500 MT CO_2E would be required to use the Screening Tables to demonstrate compliance with the E-CAP. The E-CAP's Screening Tables provide guidance in measuring the reduction of GHG emissions attributed to certain design and construction measures incorporated into development projects. The Screening Table assigns points for each option incorporated into a project as mitigation or a project design feature. Point values correspond with the minimum emissions reduction that is expected from each feature. If a project were to meet 100 points, it would be considered consistent with the reduction quantities anticipated in the E-CAP. Projects that exceed 100 points or more do not require project specific emissions to be quantified.

2050 Regional Transportation Plan. On October 28, 2011, the SANDAG Board of Directors adopted the 2050 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS), which articulates future plans for San Diego's regional transportation system over the next 40 years. The SCS, which is included as part of the RTP, details the regional strategy for reducing GHG emissions to state-mandated levels over time as required by SB 375, including measures encouraging infill development. The San Diego region is the first in California to produce an RTP with a SCS.

Most recently, SANDAG prepared San Diego Forward: The Regional Plan, which has united two of SANDAG's major planning efforts into one with the next update of the RTP/SCS and an update of the Regional Comprehensive Plan (RCP) that was adopted in 2004. The updated RTP/SCS was adopted by the SANDAG Board of Directors on October 9, 2015.

City of Escondido General Plan

The City's General Plan (City of Escondido 2012) includes various goals and policies designed to help result in a reduction in GHG emissions. As discussed in the General Plan, climate change and GHG reduction policies are addressed in multiple chapters of the General Plan.

The goals and policies for reduction of GHG emissions in the General Plan are as follows:

Land Use and Community Form

- **Goal 1:** A community composed of distinct residential neighborhoods, business districts, and employment centers, whose urban form reflects the natural environmental setting.
- **Policy 1.8:** Require development projects to locate and design buildings, construct energy and water efficient infrastructure, reduce greenhouse gas emissions, enhance community livability and economic vitality, and implement other practices contributing to sustainable resources.
- **Policy 1.9:** Promote development in downtown, at transit stations, and other key districts to accommodate a mix of land uses and configure uses to promote walkability, bicycling, and transit uses, reducing the need for the automobile.
- **Goal 4:** Residential neighborhoods that are well maintained and enduring, and continue to be great places to live for multiple generations.
- **Policy 4.3:** Integrate pedestrian-friendly features, promote walkability, and work with residents to enhance existing neighborhood character and aesthetics.
- **Goal 7:** Districts containing a mix of uses enabling residents to live close to their jobs, shopping, entertainment, and recreation, reducing the need to use the automobile and promoting walking and healthy lifestyles.
- **Policy 7.1:** Designate areas for the development of mixed-use projects in a pedestrian-friendly environment integrating housing with retail, office, and service uses.

Mobility and Infrastructure

- **Goal 1:** An accessible, safe, convenient, and integrated multi-modal network that connects all users and moves goods and people within the community and region efficiently.
- **Policy 3.2:** Develop and manage pedestrian facilities to maintain an acceptable Level of Service.
- **Policy 3.3:** Maintain a pedestrian environment that is accessible to all.

- **Policy 4.2:** Develop and manage bicycle facilities to maintain an acceptable Level of Service.
- **Policy 4.3:** Promote bicycling as a common mode of transportation and recreation to help reduce traffic congestion.
- **Goal 2:** Adequate and sustainable infrastructure and water supply to serve a community that values and conserves water.
- **Policy 12.12:** Incorporate water conservation techniques into building and site design incorporating such elements as water efficient fixtures; drought-tolerant landscape, permeable hardscapes, and onsite stormwater capture and reuse facilities.
- **Goal 3:** Provision of adequate and sustainable wastewater infrastructure to serve residents, businesses and property.
- **Policy 13.11:** Require new development to implement appropriate and feasible systems that reduce the amount of wastewater requiring treatment.
- **Goal 4:** Provision of adequate and sustainable infrastructure that is environmentally sensitive to serve residents, businesses, and property.
- **Policy 14.4:** Require new development to create a mechanism to finance and fund ongoing maintenance of stormwater facilities.
- **Policy 14.5:** Require new development to prepare drainage studies and improvement plans that demonstrate no net increase in stormwater runoff and compliance with adopted stormwater plans.
- **Goal 6:** An increased use of renewable energy sources, and improved energy conservation and efficiency.
- **Policy 16.4:** Encourage site and building design that reduces exterior heat gain and heat island effects.
- **Policy 16.5:** Require building orientations and landscaping that use natural lighting to reduce energy demands.

Resource Conservation

- **Goal 7:** Improved air quality in the city and the region to maintain the community's health and reduce greenhouse gas emissions that contribute to climate change.
- **Policy 7.3:** New development projects incorporate feasible measures that reduce construction and operational emissions.

3.3 Thresholds of Significance

The State of California has developed guidelines to address the significance of climate change impacts based on Appendix G of the CEQA Guidelines, which provides guidance that a project would have a significant environmental impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the State of California nor the SDAPCD has adopted emission-based thresholds of significance for GHG emissions under CEQA.

OPR's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document states that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

Consistent with Appendix G of the CEQA Guidelines and under direction of the E-CAP, each new project within the City subject to CEQA would require to meet one of the following criteria:

- Projects below the screening threshold of 2,500 MT CO_2E for GHGs are determined to be less than significant and no further GHG analysis would be required, or
- Projects that exceed the screening threshold are able to tier from the GHG analysis associated with the E-CAP by accumulating 100 points from the E-CAP Screening Tables for New Development document.

3.4 Impact Analysis

This section evaluates the GHG emissions impacts associated with the proposed project. The City's significance criteria described in Section 3.3, Thresholds of Significance, were used to evaluate impacts associated with the construction and operation of the proposed project.

3.4.1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Impacts

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. GHG emissions associated with temporary construction activity were quantified using the CalEEMod. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Section 1.3, Construction Assumptions and Methodology, of this report.

Table 11 shows the estimated annual GHG construction emissions associated with the proposed project as well as the annualized construction emissions over a 30-year "project life."

Table 11
Estimated Annual Construction Greenhouse Gas Emissions

Construction Year	CO_2 (MT/yr)	CH_4 (MT/yr)	N_2O (MT/yr)	CO_2E (MT/yr)
2016	245.10	0.05	0.00	246.20
2017	240.24	0.04	0.00	241.04
Total	**485.34**	**0.09**	**0.00**	**487.24**
Annualized Emissions	**16 MT CO_2E/yr**			

Notes: See Appendix A for complete results.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent; MT = metric tons.

Estimated annualized project-generated construction emissions would be approximately 14 MT CO_2E. However, there is no separate GHG threshold for construction, the evaluation of significance is discussed in the operational emissions analysis below.

Operational Impacts

Operation of the proposed project would result in GHG emissions from vehicular traffic, area sources (e.g., natural gas combustion and landscaping), electrical generation, water supply, and solid waste as described below.

Vehicular Traffic

The proposed project would generate GHG emissions through the vehicular traffic generated by the proposed project. GHG emissions associated with project-generated daily traffic were estimated using CalEEMod and were based on the proposed project's traffic report prepared by MBI, which anticipates that the proposed project would result in a total of 955 trips per day (MBI 2016).

CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, and trip distances, were conservatively used for the model inputs (Section 1.4 Operational Assumptions and Methodology).

Area Sources

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from project area sources, including natural gas combustion for hearths and appliances, and landscape maintenance. Natural gas usage for the proposed project was based upon the CalEEMod default usage rate for a mid-rise apartment. The default CalEEMod hearth data was updated to reflect no wood burning fireplaces. The CalEEMod default value for wood burning fireplaces was distributed into the natural gas and no fireplace and was based on the default proportion of how fireplaces were allocated.

Electrical Generation

The generation of electricity through combustion of fossil fuels typically results in emissions of CO_2 and to a smaller extent CH_4 and N_2O. Annual electricity emissions were estimated using the reported CO_2 emissions per kilowatt-hour for SDG&E as utilized in CalEEMod.[11]

[11] Energy efficiency assumptions utilized in CalEEMod Version 2013.2.2 is based on 2008 Title 24 standards. The 2013 Title 24 standards went into effect July 1, 2014 and would be implemented as part of the proposed project. The 2013 Title 24 standards are 25% more efficient than the 2008 Title 24 standards for lighting, heating, cooling, ventilation, and water heating (CEC 2012). However, the default CalEEMod assumptions were conservatively assumed

Solid Waste

The proposed project would generate solid waste, and therefore, result in CO_2E emissions associated with landfill off-gassing. Solid waste generation was derived from the CalEEMod default rates for mid-rise apartment units. Emission estimates associated with solid waste were estimated using CalEEMod.

Water Supply and Wastewater

Water supplied to the proposed project requires the use of electricity. Accordingly, the supply, conveyance, treatment, and distribution of water would indirectly result in GHG emissions through use of electricity. Annual water use for the proposed project and GHG emissions associated with the electricity used for water supply were calculated based upon default water use estimates for a mid-rise apartment as estimated by CalEEMod and SDG&E factors.

Table 12 shows the operational GHG emissions associated with the proposed project.

Table 12
Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2 (MT/yr)	CH_4 (MT/yr)	N_2O (MT/yr)	CO_2E (MT/yr)
Area	73.48	0.00	0.00	73.95
Energy	258.43	0.01	0.00	259.39
Mobile	866.80	0.04	0.00	867.55
Solid Waste	12.38	0.73	0.00	27.74
Water Supply and Wastewater	56.83	0.27	0.01	64.66
Total	**1,197.92**	**1.05**	**0.01**	**1,293.29**
Amortized Construction Emissions	N/A			16
Operation + Amortized Construction Total	**1,309 MT CO_2E**			

Notes: See Appendix A for detailed results.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent; MT = metric tons.

As shown in Table 12, estimated annual project-generated GHG emissions in 2018 would be approximately 1,293 MT CO_2E per year as a result of project operations. Estimated annual project-generated emissions in 2018 from area, energy sources, mobile, solid waste, and water/wastewater sources, and amortized project construction emissions would be approximately 1,309 MT CO_2E per year.

Emissions from the proposed project would be below the City of Escondido's 2,500 MTCO_2E screening threshold. As such, impacts would be less than significant.

3.4.2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

In accordance with AB 32, CARB developed the Scoping Plan to outline the state's strategy to achieve 1990-level emissions by year 2020. To estimate the reductions necessary, CARB projected statewide 2020 business-as-usual (BAU) GHG emissions and identified that the state as a whole would be required to reduce GHG emissions by 28.5% from year 2020 BAU to achieve the targets of AB 32 (CARB 2008). Since release of the 2008 Scoping Plan, CARB has updated the 2020 GHG BAU forecast to reflect GHG emissions in light of the economic downturn and measures not previously considered in the 2008 Scoping Plan baseline inventory. The revised BAU 2020 forecast shows that the state would have to reduce GHG emissions by 21.6% from BAU or 15.7% from the adjusted baseline (i.e., with Pavley and 33% RPS). Additionally, the Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors and are not directly applicable to the proposed project. As shown in Table 13, the proposed project would not conflict with the applicable strategies and therefore, would not conflict with the recommendations of AB 32.

Table 13
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	The proposed project's residents and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure goes into effect, the standard would be applicable to the fuel used by vehicles that would access the project site.
Regional Transportation-Related GHG Targets	T-3	The proposed project is not related to developing greenhouse gas emission reduction targets. To meet the goals of SB 375, the 2050 RTP/SCS is applicable to the proposed project. The proposed project would not preclude the implementation of this strategy.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low Friction Oil 4. Solar Reflective Automotive Paint and Window Glazing	T-4	When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site. Motor vehicles driven by the proposed project's employees and visitors would maintain proper tire pressure when their vehicles are serviced. The proposed project's employees and visitors would replace tires

Table 13
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
		in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. Motor vehicles driven by the proposed project's residents and visitors would use low friction oils when their vehicles are serviced. The proposed project's residents and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Ship Electrification at Ports (Shore Power)	T-5	Not applicable.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	The proposed project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	Heavy-duty trucks associated with accessing the proposed project would be in compliance with CARB standards that are in effect at the time of purchase.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	This is a statewide measure that cannot be implemented by a project applicant or lead agency. The standards phase-in over model years 2016 through 2019 are applicable to the vehicles that access the project site.
High-Speed Rail	T-9	Not applicable.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	This is a measure for the State to increase its energy efficiency standards in new buildings. The proposed project is required to build to the new standards and would maximize its energy efficiency through compliance.
Energy Efficiency (Natural Gas)	CR-1	The proposed project will comply with energy efficiency standards for natural gas appliances and other devices at the time of building construction.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	Not applicable.
Combined Heat and Power	E-2	Not applicable.

Table 13
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Renewable Portfolios Standard (33% by 2020)	E-3	This is a statewide measure that cannot be implemented by a project applicant or lead agency. San Diego Gas and Electric is required to increase its percent of power supply from renewable sources by the year 2020 pursuant to various regulations.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and earlier solar programs	E-4	Not applicable.
Water Sector		
Water Use Efficiency	W-1	The proposed project would comply with Green Building Code regulations and would implement water conservation features.
Water Recycling	W-2	Not applicable.
Water System Energy Efficiency	W-3	Not applicable.
Reuse Urban Runoff	W-4	The proposed project's includes features that would reduce water; as such, reuse of urban runoff would be considered if feasible. The project would also be designed to reduce runoff through irrigation design standards.
Renewable Energy Production	W-5	Not applicable.
Green Buildings		
1. State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
2. Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	The proposed project would comply with the California Energy Code, and thus incorporate applicable energy efficiency features designed to reduce the project's energy consumption.
3. Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
4. Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	Not applicable for the proposed project, applicable for existing buildings only.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	This measure would apply to the direct greenhouse gas emissions at major industrial facilities emitting more than 500,000 $MTCO_2e$ per year. The proposed project is not an industrial land use.
Oil and Gas Extraction GHG Emission Reduction	I-2	Not applicable.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	Not applicable.
Refinery Flare Recovery Process Improvements	I-4	Not applicable.
Work with the local air districts to evaluate	I-5	Not applicable.

Table 13
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks.		
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	Applicable for certain municipal solid waste landfills. Not applicable for the proposed project.
Increasing the Efficiency of Landfill Methane Capture	RW-2	Applicable for certain municipal solid waste landfills. Not applicable for the proposed project.
Mandatory Commercial Recycling	RW-3	During both construction and operation, the project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act as amended. During construction, all wastes would be recycled to the maximum extent possible. The proposed project would also utilize the City of Escondido recycling services.
Increase Production and Markets for Compost and Other Organics	RW-3	Not applicable.
Anaerobic/Aerobic Digestion	RW-3	Not applicable.
Extended Producer Responsibility	RW-3	Not applicable.
Environmentally Preferable Purchasing	RW-3	Not applicable.
Forests Sector		
Sustainable Forest Target	F-1	Not applicable.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-professional Servicing	H-1	This measure is applicable to the high global warming potential gases that would be used by sources with large equipment (such as in air conditioning and commercial refrigerators.
SF_6 Limits in Non-utility and Non-semiconductor Applications	H-2	Not applicable.
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	Not applicable.
Limit High GWP Use in Consumer Products	H-4	The proposed project would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Motor vehicles driven by the proposed project's residents and visitors would comply with the leak test requirements during smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	Not applicable.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	Not applicable.

Table 13
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	Not applicable.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	Not applicable.

Source: CARB 2014.

The City's E-CAP identifies a series of GHG reduction measures within their Screening Table, which projects can incorporate in order to achieve the reduction targets and lessen GHG emissions. While these reduction measures were not intended to expressly define "consistency" of a specific project with the City's E-CAP, it can be said that a project that would implement any of the reduction measures would assist in achieving attainment of the E-CAP's goals for the City as a whole and therefore would not conflict with the E-CAP. Most of the reduction measures require all projects to at least meet Title 24 compliance. Some sustainable features may be included in development of the project, however without specific details it cannot be determined if the project could meet additional requirements within the Screening Table. Therefore, complying with the Title 24 standard reduction measures would ensure that the projects' contribution of GHGs would be reduced.

As discussed previously, the project would not exceed the City of Escondido screening threshold of 2,500 MT CO_2E per year. For comparison, the project would also be below GHG emission thresholds considered by several California air districts. Other such GHG thresholds include the Bay Area Air Quality Management District's interim threshold of 1,100 MT CO_2E per year for commercial, industrial, and public land-use projects (BAAQMD 2010);[12] the Sacramento Metropolitan Air Quality Management District's threshold of 1,100 MT CO_2E per year for projects with construction or operational phases (SMAQMD 2014); and the South Coast Air Quality Management District's recommended draft interim threshold of 3,000 MT CO_2E per year for residential and commercial projects (SCAQMD 2008). Because the project would not

[12] Subsequent to adoption of the BAAQMD's GHG and other significance thresholds, they were set aside by the Alameda County Superior Court, which concluded that the BAAQMD did not comply with CEQA when adopting its thresholds. The Superior Court did not find the thresholds were inadequate on their merits. Thereafter, the First District Court of Appeal reversed the Superior Court's decision in this respect, thereby reinstating the thresholds (*Cal. Building Industry Assn. v. BAAQMD*; Case No. A136212). In November 2013, the California Supreme Court granted a limited review of the decision (Case No. S213478) but the Supreme Court is not considering the adequacy of the BAAQMD's GHG thresholds. The Supreme Court issued their opinion on the case on December 17, 2015. The comparison to the 2010 BAAQMD's GHG thresholds herein is for discussion purposes only.

exceed the screening threshold of the City of Escondido or thresholds in other air districts with expertise in the area, this analysis provides support for the conclusion that the proposed project would not conflict with Executive Order S-3-05's GHG reduction goals for California.

At the regional level, SANDAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) has been adopted for the purpose of reducing GHG emissions attributable to passenger vehicles in the County of San Diego. While the RTP/SCS does not regulate land use or supersede the exercise of land use authority by SANDAG's member jurisdictions (i.e., the County and cities therein), the RTP/SCS is a relevant regional reference document for purposes of evaluating the intersection of land use and transportation patterns and the corresponding GHG emissions. The RTP/SCS is not directly applicable to the project because the underlying purpose of the RTP/SCS is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the County, as stipulated under SB 375. The proposed project would support the goals and strategies of the RTP/SCS, which would be accomplished through infill or redevelopment development of the project site.

Finally, the SDAPCD has not adopted GHG reduction measures that would apply to the GHG emissions associated with the proposed project. Therefore, this impact would be less than significant.

3.5 Mitigation Measures

The proposed project would not result in significant impacts; therefore, no mitigation is required.

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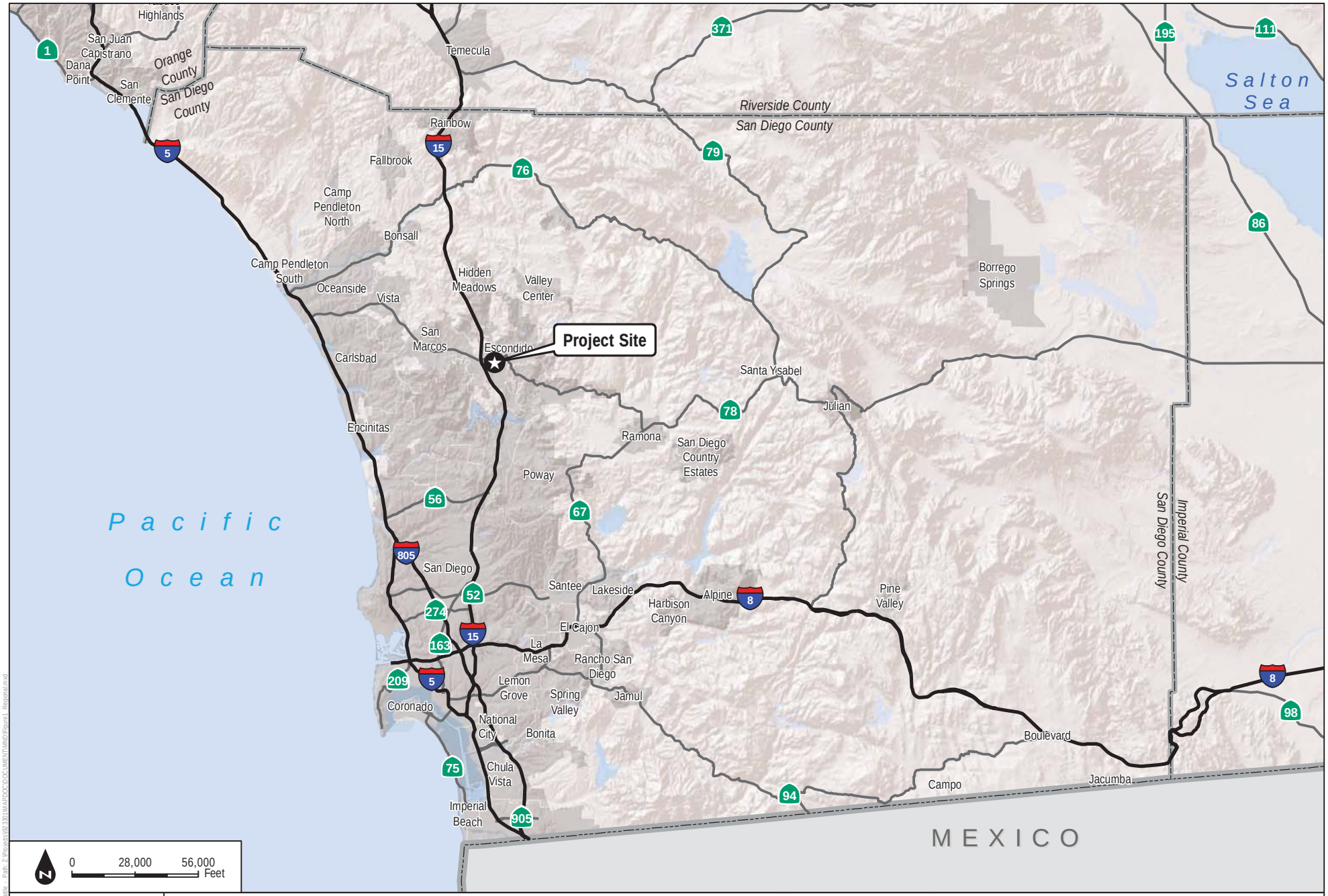

DUDEK

FIGURE 1

Regional Map

Gateway Grand - TOD Mitigated Negative Declaration

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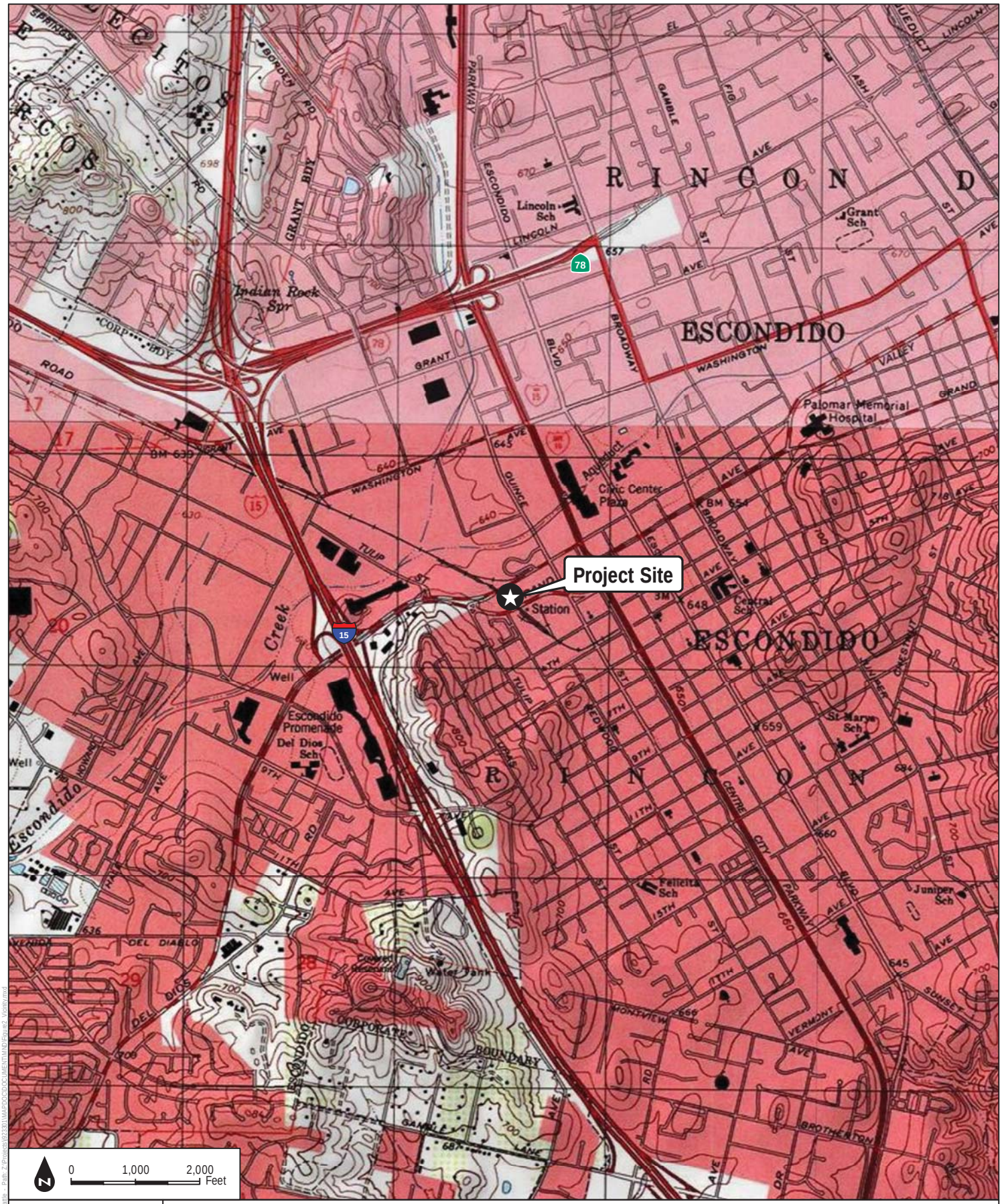

SOURCE: USGS 7.5-Minute Series Escondido Quadrangle

FIGURE 2

Vicinity Map

DUDEK

Gateway Grand - TOD Mitigated Negative Declaration

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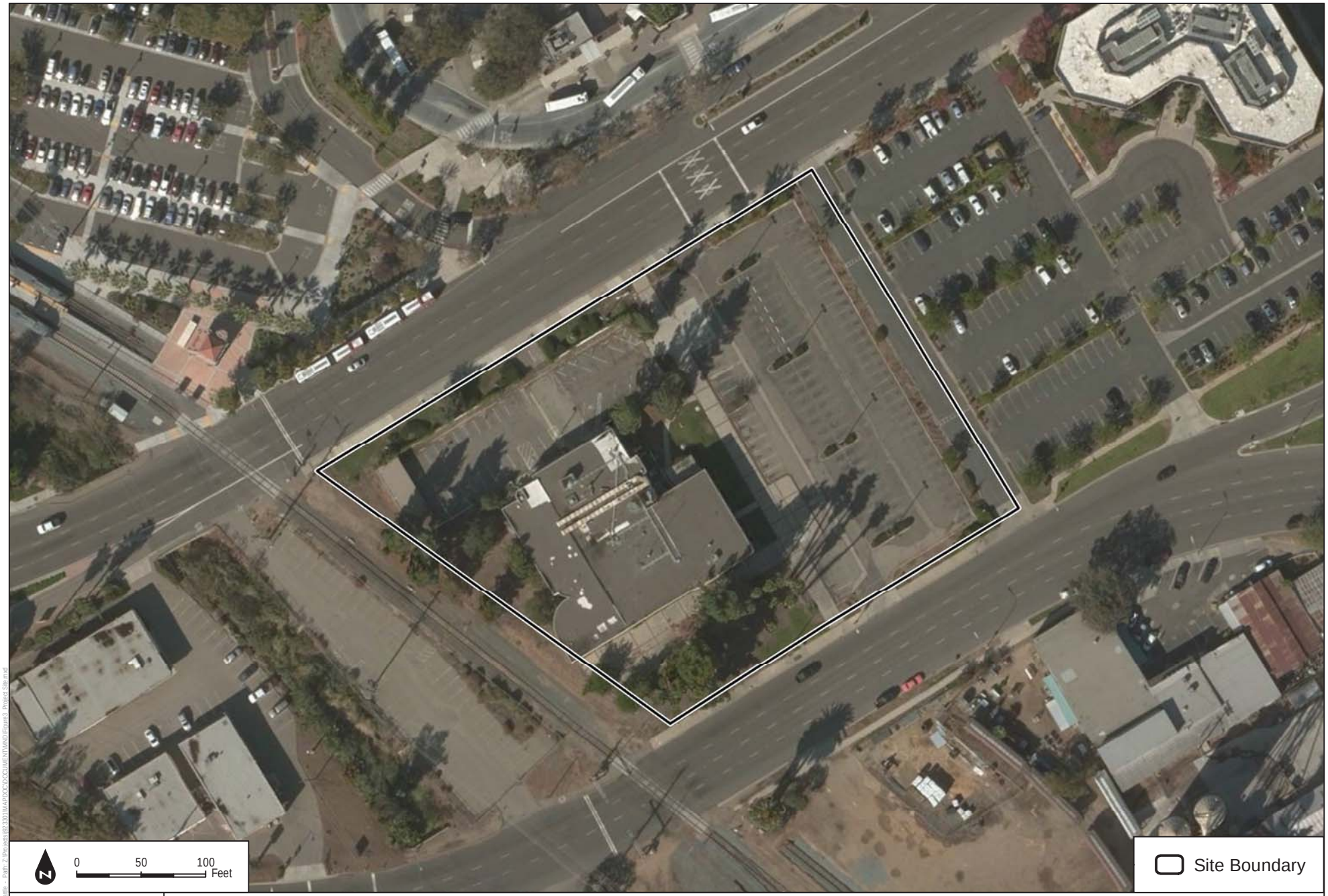

SOURCE: Bing Maps, 2015

FIGURE 3
Project Site

DUDEK

Gateway Grand - TOD Mitigated Negative Declaration

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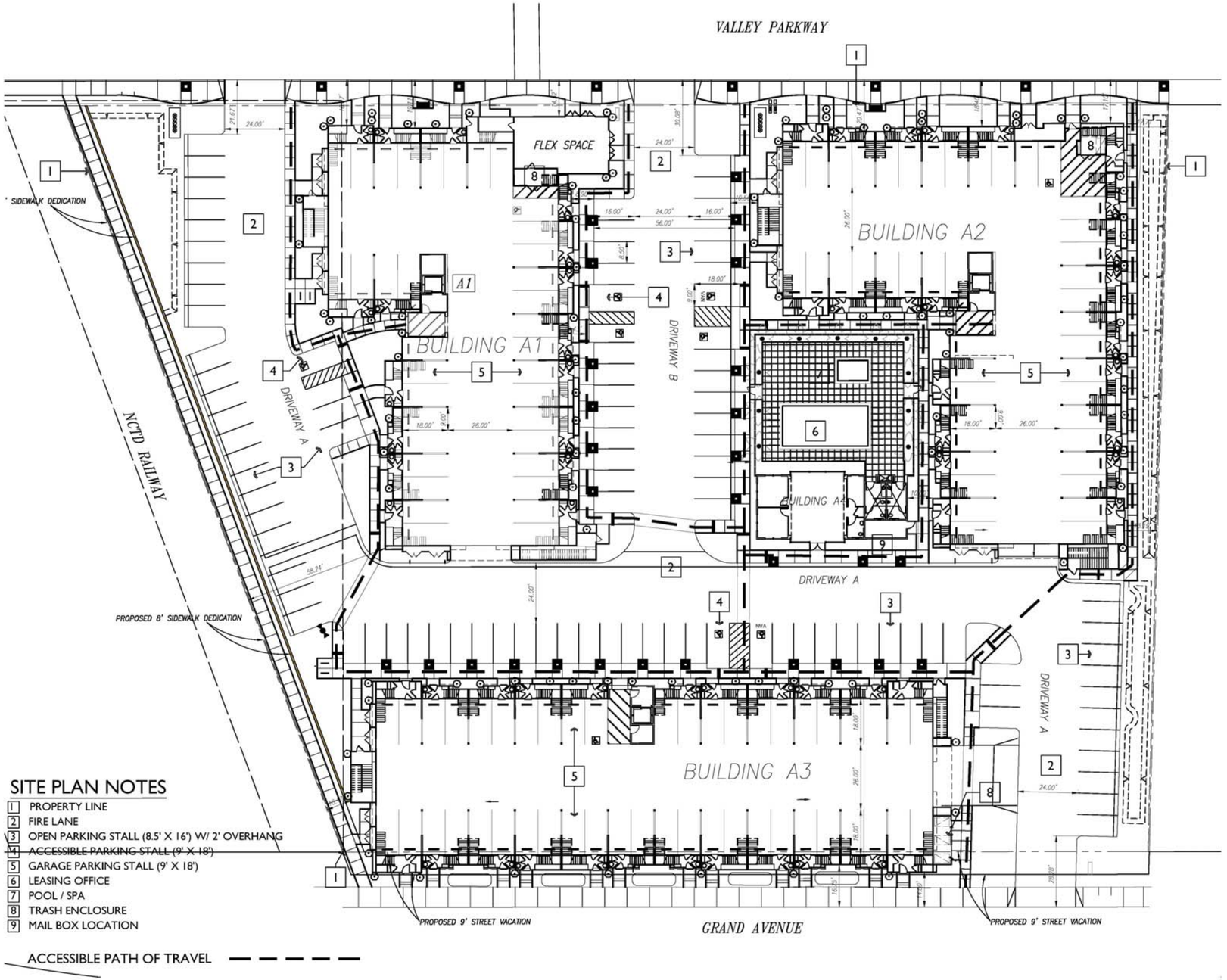

SITE PLAN NOTES

1. PROPERTY LINE
2. FIRE LANE
3. OPEN PARKING STALL (8.5' X 16') W/ 2' OVERHANG
4. ACCESSIBLE PARKING STALL (9' X 18')
5. GARAGE PARKING STALL (9' X 18')
6. LEASING OFFICE
7. POOL / SPA
8. TRASH ENCLOSURE
9. MAIL BOX LOCATION

ACCESSIBLE PATH OF TRAVEL

PROJECT SUMMARY

APN #	232-100-16
SITE AREA	2.6 ACRES (112,927 SF)
LOT COVERAGE	50,854 SF = 45%
FAR	1.53
DENSITY	48 DU/AC
RESIDENCES	126 HOMES
BUILDING HEIGHT	62' - (75' MAX)

PRODUCT:
4-STORY - TYPE VA WOOD PODIUM
R2 RESIDENTIAL W/ MEZZANINE O/ S-2 COMMON GARAGE

PROJECT AREAS

FLEX SPACE	1,000 SF (GROUND FLOOR)
RESIDENTIAL	134,185 SF
GARAGE	39,250 SF
LEASING	1,800 SF
FITNESS	1,200 SF
ROOF TOP DECK	600 SF

PARKING

63 - STUDIO LOFTS	94.5 SPACES (1.5)
42 - 2 BED TH	73.5 SPACES (1.75)
21 - 3 BED TH	42.0 SPACES (2.0)
GUEST (126)	31.5 SPACES (.25)
REQUIRED PARKING	242 SPACES (1.9 SP/DU)
PROVIDED	126 GARAGES (1:1)
	100 OPEN
	226 TOTAL (1.8 SP/DU)

OPEN SPACE

REQUIRED:
300 SF/DU = 300 SF X 126 UNITS = 37,800 SF

PROVIDED:

PRIVATE BALCONIES	11,200 SF
REC BLDG	3,600 SF
REC AREA	6,597 SF
WESTERN PATH	2,600 SF
MISC AREAS	14,115 SF
TOTAL	38,112 SF (302 SF/DU)

SETBACKS

	PROPOSED MINIMUM
VALLEY PARKWAY	14' TO CURB (FLEX SPACE)
VALLEY PARKWAY	17' TO CURB (RESIDENTIAL)
EAST SIDE YARD	13' MIN
WEST SIDE YARD	10' MIN
GRAND AVENUE	14' TO CURB

SOURCE: Summa Architecture 2016

FIGURE 4
Site Plan

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APPENDIX A

CalEEMod Output Files, Proposed Project

9368 Escondido Gateway

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	126.00	Space	1.10	39,250.00	0
Other Non-Asphalt Surfaces	0.51	Acre	0.51	38,112.00	0
Parking Lot	93.00	Space	0.84	37,200.00	0
Parking Lot	7.00	Space	0.06	2,800.00	0
Apartments Mid Rise	126.00	Dwelling Unit	0.07	137,185.00	360
Convenience Market (24 Hour)	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Escondido Gateway. San Diego County (San Diego Air Basin)

Land Use - The project includes development of a 126-unit apartment, 1,800 SF leasing office, 1,000 SF convenience market, 126-space garage, 93 open parking spaces and 7 disabled parking spaces on a 2.6-acre site.

Construction Phase - Construction Phase - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - Hand tools used for asbestos and lead-based paint removal.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Trips and VMT - See 3.0, Construction Detail.

Demolition - Demolition of 32,500 square foot building.

Grading - Modified disturbed acreage.

Architectural Coating - See note under Construction - Architectural Coatings. Comply with SDAPCD Rule 67.0.1.

Vehicle Trips - Based on trip rates provided in the MBI traffic report.

Woodstoves - No woodstoves. Gas fireplaces only.

Area Coating - Comply with SDAPCD Rule 67.0.1.

Construction Off-road Equipment Mitigation - Compliance with SDAPCD Rule 51 which limits fugitive dust emissions.

Energy Mitigation - Exceed Title 24 by 25%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,781.00	7,542.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,343.00	1,500.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Nonresidential_Exterior	39781	7542
tblAreaCoating	Area_Nonresidential_Interior	119343	1500
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	250
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	168.00
tblConstructionPhase	NumDays	20.00	19.00
tblConstructionPhase	NumDays	6.00	55.00
tblConstructionPhase	NumDays	3.00	10.00

tblConstructionPhase	PhaseEndDate	7/14/2017	6/30/2017
tblConstructionPhase	PhaseEndDate	5/17/2017	6/2/2017
tblConstructionPhase	PhaseEndDate	7/11/2016	7/8/2016
tblConstructionPhase	PhaseStartDate	6/17/2017	6/3/2017
tblConstructionPhase	PhaseStartDate	9/24/2016	10/12/2016
tblConstructionPhase	PhaseStartDate	6/15/2016	6/14/2016
tblConstructionPhase	PhaseStartDate	7/9/2016	7/10/2016
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	69.30	91.35
tblFireplaces	NumberNoFireplace	12.60	34.65
tblFireplaces	NumberWood	44.10	0.00
tblGrading	AcresOfGrading	28.50	0.00
tblLandUse	LandUseSquareFeet	50,400.00	39,250.00
tblLandUse	LandUseSquareFeet	22,215.60	38,112.00
tblLandUse	LandUseSquareFeet	126,000.00	137,185.00
tblLandUse	LotAcreage	1.13	1.10
tblLandUse	LotAcreage	3.32	0.07
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading/Site Improvements
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	VendorTripNumber	33.00	32.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	140.00	150.00
tblTripsAndVMT	WorkerTripNumber	15.00	14.00
tblTripsAndVMT	WorkerTripNumber	28.00	30.00
tblVehicleTrips	ST_TR	7.16	5.28
tblVehicleTrips	ST_TR	863.10	290.00
tblVehicleTrips	SU_TR	6.07	5.28
tblVehicleTrips	SU_TR	758.45	290.00
tblVehicleTrips	WD_TR	6.59	5.28
tblVehicleTrips	WD_TR	737.99	290.00
tblWoodstoves	NumberCatalytic	6.30	0.00
tblWoodstoves	NumberNoncatalytic	6.30	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	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					
2016	4.5370	48.0119	37.8032	0.0500	6.6838	2.3268	8.8832	3.4024	2.1685	5.4258	0.0000	4,910.4261	4,910.4261	1.1300	0.0000	4,934.1570
2017	57.5302	29.6769	27.5400	0.0500	1.4446	1.8300	3.2746	0.3874	1.7179	2.1053	0.0000	4,642.9167	4,642.9167	0.7157	0.0000	4,657.9458
Total	**62.0672**	**77.6887**	**65.3432**	**0.1001**	**8.1284**	**4.1568**	**12.1578**	**3.7898**	**3.8863**	**7.5311**	**0.0000**	**9,553.3428**	**9,553.3428**	**1.8457**	**0.0000**	**9,592.1028**

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					
2016	4.5370	34.6529	37.8032	0.0500	2.6869	2.3268	4.8862	1.3482	2.1685	3.3716	0.0000	4,910.4261	4,910.4261	1.1300	0.0000	4,934.1570
2017	57.5302	29.6769	27.5400	0.0500	1.4446	1.8300	3.2746	0.3874	1.7179	2.1053	0.0000	4,642.9167	4,642.9167	0.7157	0.0000	4,657.9458
Total	**62.0672**	**64.3298**	**65.3432**	**0.1001**	**4.1315**	**4.1568**	**8.1609**	**1.7356**	**3.8863**	**5.4769**	**0.0000**	**9,553.3428**	**9,553.3428**	**1.8457**	**0.0000**	**9,592.1028**

	ROG	NOx	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**	**17.20**	**0.00**	**0.00**	**49.17**	**0.00**	**32.88**	**54.20**	**0.00**	**27.28**	**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	6.2755	0.1217	10.5019	5.5000e-004		0.1797	0.1797		0.1785	0.1785	0.0000	1,953.2380	1,953.2380	0.0558	0.0355	1,965.4033
Energy	0.0205	0.1750	0.0747	1.1200e-003		0.0142	0.0142		0.0142	0.0142		223.3944	223.3944	4.2800e-003	4.1000e-003	224.7540
Mobile	2.9371	5.7793	27.3414	0.0671	4.4866	0.0794	4.5660	1.1977	0.0732	1.2709		5,475.7668	5,475.7668	0.2160		5,480.3018
Total	**9.2331**	**6.0761**	**37.9180**	**0.0687**	**4.4866**	**0.2733**	**4.7599**	**1.1977**	**0.2658**	**1.4635**	**0.0000**	**7,652.3992**	**7,652.3992**	**0.2760**	**0.0396**	**7,670.4590**

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	6.2755	0.1217	10.5019	5.5000e-004		0.1797	0.1797		0.1785	0.1785	0.0000	1,953.2380	1,953.2380	0.0558	0.0355	1,965.4033
Energy	0.0169	0.1446	0.0617	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.5081	184.5081	3.5400e-003	3.3800e-003	185.6310
Mobile	2.9371	5.7793	27.3414	0.0671	4.4866	0.0794	4.5660	1.1977	0.0732	1.2709		5,475.7668	5,475.7668	0.2160		5,480.3018
Total	**9.2295**	**6.0456**	**37.9050**	**0.0685**	**4.4866**	**0.2708**	**4.7574**	**1.1977**	**0.2633**	**1.4610**	**0.0000**	**7,613.5129**	**7,613.5129**	**0.2753**	**0.0389**	**7,631.3360**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**0.50**	**0.03**	**0.29**	**0.00**	**0.90**	**0.05**	**0.00**	**0.93**	**0.17**	**0.00**	**0.51**	**0.51**	**0.27**	**1.82**	**0.51**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asbestos and LBP Removal	Site Preparation	6/1/2016	6/14/2016	5	10	
2	Demolition	Demolition	6/14/2016	7/8/2016	5	19	
3	Grading/Site Improvements	Grading	7/10/2016	9/23/2016	5	55	
4	Building Construction	Building Construction	10/12/2016	6/2/2017	5	168	
5	Paving	Paving	6/3/2017	6/16/2017	5	10	
6	Architectural Coating	Architectural Coating	6/3/2017	6/30/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 277,800; Residential Outdoor: 92,600; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 7,542 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Site Improvements	Excavators	1	8.00	162	0.38
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading/Site Improvements	Graders	1	8.00	174	0.41
Grading/Site Improvements	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Site Improvements	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	1	8.00	125	0.42

Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	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
Asbestos and LBP Removal	3	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	16.00	0.00	148.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Site Improvements	4	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	150.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Asbestos and LBP Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

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	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

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	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7048	0.0000	1.7048	0.2582	0.0000	0.2582			0.0000			0.0000
Off-Road	4.2935	45.7223	35.0818	0.0400		2.2954	2.2954		2.1396	2.1396		4,097.5328	4,097.5328	1.1146		4,120.9384
Total	**4.2935**	**45.7223**	**35.0818**	**0.0400**	**1.7048**	**2.2954**	**4.0002**	**0.2582**	**2.1396**	**2.3977**		**4,097.5328**	**4,097.5328**	**1.1146**		**4,120.9384**

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	0.1527	2.1829	1.5582	5.8300e-003	0.1357	0.0298	0.1656	0.0372	0.0274	0.0646		587.0750	587.0750	4.1800e-003		587.1627
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	0.0559	0.0656	0.7158	1.6700e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		138.9651	138.9651	6.9600e-003		139.1113
Total	**0.2086**	**2.2485**	**2.2741**	**7.5000e-003**	**0.2672**	**0.0308**	**0.2980**	**0.0720**	**0.0283**	**0.1004**		**726.0401**	**726.0401**	**0.0111**		**726.2741**

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					0.6649	0.0000	0.6649	0.1007	0.0000	0.1007			0.0000			0.0000
Off-Road	4.2935	32.3634	35.0818	0.0400		2.2954	2.2954		2.1396	2.1396	0.0000	4,097.5328	4,097.5328	1.1146		4,120.9384
Total	**4.2935**	**32.3634**	**35.0818**	**0.0400**	**0.6649**	**2.2954**	**2.9603**	**0.1007**	**2.1396**	**2.2402**	**0.0000**	**4,097.5328**	**4,097.5328**	**1.1146**		**4,120.9384**

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	0.1527	2.1829	1.5582	5.8300e-003	0.1357	0.0298	0.1656	0.0372	0.0274	0.0646		587.0750	587.0750	4.1800e-003		587.1627
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	0.0559	0.0656	0.7158	1.6700e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		138.9651	138.9651	6.9600e-003		139.1113
Total	**0.2086**	**2.2485**	**2.2741**	**7.5000e-003**	**0.2672**	**0.0308**	**0.2980**	**0.0720**	**0.0283**	**0.1004**		**726.0401**	**726.0401**	**0.0111**		**726.2741**

3.4 Grading/Site Improvements - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.5523**	**2.1984**	**8.7507**	**3.3675**	**2.0225**	**5.3900**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

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	0.0559	0.0656	0.7158	1.6700e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		138.9651	138.9651	6.9600e-003		139.1113
Total	**0.0559**	**0.0656**	**0.7158**	**1.6700e-003**	**0.1314**	**9.9000e-004**	**0.1324**	**0.0349**	**9.1000e-004**	**0.0358**		**138.9651**	**138.9651**	**6.9600e-003**		**139.1113**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.6669	34.0158	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**34.0158**	**26.0787**	**0.0298**	**2.5554**	**2.1984**	**4.7538**	**1.3133**	**2.0225**	**3.3359**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

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	0.0559	0.0656	0.7158	1.6700e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		138.9651	138.9651	6.9600e-003		139.1113
Total	**0.0559**	**0.0656**	**0.7158**	**1.6700e-003**	**0.1314**	**9.9000e-004**	**0.1324**	**0.0349**	**9.1000e-004**	**0.0358**		**138.9651**	**138.9651**	**6.9600e-003**		**139.1113**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

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	0.3338	3.0327	3.5597	7.6200e-003	0.2124	0.0459	0.2583	0.0606	0.0422	0.1028		763.4831	763.4831	5.9000e-003		763.6070
Worker	0.5243	0.6153	6.7107	0.0156	1.2322	9.2500e-003	1.2415	0.3268	8.5000e-003	0.3353		1,302.7979	1,302.7979	0.0653		1,304.1687
Total	**0.8581**	**3.6481**	**10.2704**	**0.0232**	**1.4446**	**0.0551**	**1.4997**	**0.3874**	**0.0507**	**0.4381**		**2,066.2810**	**2,066.2810**	**0.0712**		**2,067.7757**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

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	0.3338	3.0327	3.5597	7.6200e-003	0.2124	0.0459	0.2583	0.0606	0.0422	0.1028		763.4831	763.4831	5.9000e-003		763.6070
Worker	0.5243	0.6153	6.7107	0.0156	1.2322	9.2500e-003	1.2415	0.3268	8.5000e-003	0.3353		1,302.7979	1,302.7979	0.0653		1,304.1687
Total	**0.8581**	**3.6481**	**10.2704**	**0.0232**	**1.4446**	**0.0551**	**1.4997**	**0.3874**	**0.0507**	**0.4381**		**2,066.2810**	**2,066.2810**	**0.0712**		**2,067.7757**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

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	0.3060	2.7120	3.3412	7.6000e-003	0.2124	0.0398	0.2522	0.0606	0.0366	0.0972		750.5852	750.5852	5.5800e-003		750.7023
Worker	0.4766	0.5592	6.0696	0.0156	1.2322	8.9600e-003	1.2412	0.3268	8.2700e-003	0.3351		1,252.5262	1,252.5262	0.0604		1,253.7944
Total	**0.7826**	**3.2712**	**9.4108**	**0.0232**	**1.4446**	**0.0488**	**1.4934**	**0.3874**	**0.0449**	**0.4323**		**2,003.1114**	**2,003.1114**	**0.0660**		**2,004.4968**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

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	0.3060	2.7120	3.3412	7.6000e-003	0.2124	0.0398	0.2522	0.0606	0.0366	0.0972		750.5852	750.5852	5.5800e-003		750.7023
Worker	0.4766	0.5592	6.0696	0.0156	1.2322	8.9600e-003	1.2412	0.3268	8.2700e-003	0.3351		1,252.5262	1,252.5262	0.0604		1,253.7944
Total	**0.7826**	**3.2712**	**9.4108**	**0.0232**	**1.4446**	**0.0488**	**1.4934**	**0.3874**	**0.0449**	**0.4323**		**2,003.1114**	**2,003.1114**	**0.0660**		**2,004.4968**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2505	13.2069	9.6273	0.0145		0.7546	0.7546		0.6943	0.6943		1,479.7870	1,479.7870	0.4534		1,489.3085
Paving	0.2358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4863**	**13.2069**	**9.6273**	**0.0145**		**0.7546**	**0.7546**		**0.6943**	**0.6943**		**1,479.7870**	**1,479.7870**	**0.4534**		**1,489.3085**

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	0.0445	0.0522	0.5665	1.4600e-003	0.1150	8.4000e-004	0.1158	0.0305	7.7000e-004	0.0313		116.9024	116.9024	5.6400e-003		117.0208
Total	**0.0445**	**0.0522**	**0.5665**	**1.4600e-003**	**0.1150**	**8.4000e-004**	**0.1158**	**0.0305**	**7.7000e-004**	**0.0313**		**116.9024**	**116.9024**	**5.6400e-003**		**117.0208**

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	1.2505	13.2069	9.6273	0.0145		0.7546	0.7546		0.6943	0.6943	0.0000	1,479.7870	1,479.7870	0.4534		1,489.3085
Paving	0.2358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4863**	**13.2069**	**9.6273**	**0.0145**		**0.7546**	**0.7546**		**0.6943**	**0.6943**	**0.0000**	**1,479.7870**	**1,479.7870**	**0.4534**		**1,489.3085**

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	0.0445	0.0522	0.5665	1.4600e-003	0.1150	8.4000e-004	0.1158	0.0305	7.7000e-004	0.0313		116.9024	116.9024	5.6400e-003		117.0208
Total	**0.0445**	**0.0522**	**0.5665**	**1.4600e-003**	**0.1150**	**8.4000e-004**	**0.1158**	**0.0305**	**7.7000e-004**	**0.0313**		**116.9024**	**116.9024**	**5.6400e-003**		**117.0208**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

Category	lb/day										lb/day					
Archit. Coating	55.5718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**55.9041**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0953	0.1118	1.2139	3.1200e-003	0.2464	1.7900e-003	0.2482	0.0654	1.6500e-003	0.0670		250.5052	250.5052	0.0121		250.7589
Total	**0.0953**	**0.1118**	**1.2139**	**3.1200e-003**	**0.2464**	**1.7900e-003**	**0.2482**	**0.0654**	**1.6500e-003**	**0.0670**		**250.5052**	**250.5052**	**0.0121**		**250.7589**

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	55.5718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**55.9041**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0953	0.1118	1.2139	3.1200e-003	0.2464	1.7900e-003	0.2482	0.0654	1.6500e-003	0.0670		250.5052	250.5052	0.0121		250.7589
Total	**0.0953**	**0.1118**	**1.2139**	**3.1200e-003**	**0.2464**	**1.7900e-003**	**0.2482**	**0.0654**	**1.6500e-003**	**0.0670**		**250.5052**	**250.5052**	**0.0121**		**250.7589**

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					
Unmitigated	2.9371	5.7793	27.3414	0.0671	4.4866	0.0794	4.5660	1.1977	0.0732	1.2709		5,475.7668	5,475.7668	0.2160		5,480.3018

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	665.28	665.28	665.28	1,899,576	1,899,576
Convenience Market (24 Hour)	290.00	290.00	290.00	220,857	220,857
Enclosed Parking Structure	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	955.28	955.28	955.28	2,120,434	2,120,434

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
Apartments Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0169	0.1446	0.0617	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.5081	184.5081	3.5400e-003	3.3800e-003	185.6310
NaturalGas Unmitigated	0.0205	0.1750	0.0747	1.1200e-003		0.0142	0.0142		0.0142	0.0142		223.3944	223.3944	4.2800e-003	4.1000e-003	224.7540

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					
Apartments Mid Rise	1892.58	0.0204	0.1744	0.0742	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.6563	222.6563	4.2700e-003	4.0800e-003	224.0114
Convenience Market (24 Hour)	6.27397	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.7381	0.7381	1.0000e-005	1.0000e-005	0.7426
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0205**	**0.1750**	**0.0747**	**1.1100e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**223.3944**	**223.3944**	**4.2800e-003**	**4.0900e-003**	**224.7540**

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					
Convenience Market (24 Hour)	0.00545205	6.0000e-005	5.3000e-004	4.5000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6414	0.6414	1.0000e-005	1.0000e-005	0.6453
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.56287	0.0169	0.1440	0.0613	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.8667	183.8667	3.5200e-003	3.3700e-003	184.9857
Total		**0.0169**	**0.1446**	**0.0617**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**		**184.5081**	**184.5081**	**3.5300e-003**	**3.3800e-003**	**185.6310**

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					
Unmitigated	6.2755	0.1217	10.5019	5.5000e-004		0.1797	0.1797		0.1785	0.1785	0.0000	1,953.2380	1,953.2380	0.0558	0.0355	1,965.4033

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	0.3045					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1773	1.0000e-005	9.6700e-003	0.0000		0.1225	0.1225		0.1212	0.1212	0.0000	1,934.4706	1,934.4706	0.0371	0.0355	1,946.2435
Landscaping	0.3250	0.1217	10.4922	5.5000e-004		0.0572	0.0572		0.0572	0.0572		18.7674	18.7674	0.0187		19.1598

Total	**6.2755**	**0.1217**	**10.5019**	**5.5000e-004**		**0.1797**	**0.1797**		**0.1785**	**0.1785**	**0.0000**	**1,953.2380**	**1,953.2380**	**0.0558**	**0.0355**	**1,965.4032**

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	0.3045					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1773	1.0000e-005	9.6700e-003	0.0000		0.1225	0.1225		0.1212	0.1212	0.0000	1,934.4706	1,934.4706	0.0371	0.0355	1,946.2435
Landscaping	0.3250	0.1217	10.4922	5.5000e-004		0.0572	0.0572		0.0572	0.0572		18.7674	18.7674	0.0187		19.1598
Total	**6.2755**	**0.1217**	**10.5019**	**5.5000e-004**		**0.1797**	**0.1797**		**0.1785**	**0.1785**	**0.0000**	**1,953.2380**	**1,953.2380**	**0.0558**	**0.0355**	**1,965.4032**

9368 Escondido Gateway

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	126.00	Space	1.10	39,250.00	0
Other Non-Asphalt Surfaces	0.51	Acre	0.51	38,112.00	0
Parking Lot	93.00	Space	0.84	37,200.00	0
Parking Lot	7.00	Space	0.06	2,800.00	0
Apartments Mid Rise	126.00	Dwelling Unit	0.07	137,185.00	360
Convenience Market (24 Hour)	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Escondido Gateway. San Diego County (San Diego Air Basin)

Land Use - The project includes development of a 126-unit apartment, 1,800 SF leasing office, 1,000 SF convenience market, 126-space garage, 93 open parking spaces and 7 disabled parking spaces on a 2.6-acre site.

Construction Phase - Construction Phase - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - Hand tools used for asbestos and lead-based paint removal.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Trips and VMT - See 3.0, Construction Detail.

Demolition - Demolition of 32,500 square foot building.

Grading - Modified disturbed acreage.

Architectural Coating - See note under Construction - Architectural Coatings. Comply with SDAPCD Rule 67.0.1.

Vehicle Trips - Based on trip rates provided in the MBI traffic report.

Woodstoves - No woodstoves. Gas fireplaces only.

Area Coating - Comply with SDAPCD Rule 67.0.1.

Construction Off-road Equipment Mitigation - Compliance with SDAPCD Rule 51 which limits fugitive dust emissions.

Energy Mitigation - Exceed Title 24 by 25%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,781.00	7,542.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,343.00	1,500.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Nonresidential_Exterior	39781	7542
tblAreaCoating	Area_Nonresidential_Interior	119343	1500
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	250
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	168.00
tblConstructionPhase	NumDays	20.00	19.00
tblConstructionPhase	NumDays	6.00	55.00
tblConstructionPhase	NumDays	3.00	10.00

tblConstructionPhase	PhaseEndDate	7/14/2017	6/30/2017
tblConstructionPhase	PhaseEndDate	5/17/2017	6/2/2017
tblConstructionPhase	PhaseEndDate	7/11/2016	7/8/2016
tblConstructionPhase	PhaseStartDate	6/17/2017	6/3/2017
tblConstructionPhase	PhaseStartDate	9/24/2016	10/12/2016
tblConstructionPhase	PhaseStartDate	6/15/2016	6/14/2016
tblConstructionPhase	PhaseStartDate	7/9/2016	7/10/2016
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	69.30	91.35
tblFireplaces	NumberNoFireplace	12.60	34.65
tblFireplaces	NumberWood	44.10	0.00
tblGrading	AcresOfGrading	28.50	0.00
tblLandUse	LandUseSquareFeet	50,400.00	39,250.00
tblLandUse	LandUseSquareFeet	22,215.60	38,112.00
tblLandUse	LandUseSquareFeet	126,000.00	137,185.00
tblLandUse	LotAcreage	1.13	1.10
tblLandUse	LotAcreage	3.32	0.07
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading/Site Improvements
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	VendorTripNumber	33.00	32.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	140.00	150.00
tblTripsAndVMT	WorkerTripNumber	15.00	14.00
tblTripsAndVMT	WorkerTripNumber	28.00	30.00
tblVehicleTrips	ST_TR	7.16	5.28
tblVehicleTrips	ST_TR	863.10	290.00
tblVehicleTrips	SU_TR	6.07	5.28
tblVehicleTrips	SU_TR	758.45	290.00
tblVehicleTrips	WD_TR	6.59	5.28
tblVehicleTrips	WD_TR	737.99	290.00
tblWoodstoves	NumberCatalytic	6.30	0.00
tblWoodstoves	NumberNoncatalytic	6.30	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	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					
2016	4.5597	48.0953	38.2248	0.0491	6.6838	2.3269	8.8832	3.4024	2.1685	5.4258	0.0000	4,895.3055	4,895.3055	1.1301	0.0000	4,919.0376
2017	57.5381	29.8094	28.5343	0.0490	1.4446	1.8304	3.2750	0.3874	1.7182	2.1057	0.0000	4,560.8399	4,560.8399	0.7158	0.0000	4,575.8721
Total	**62.0978**	**77.9047**	**66.7592**	**0.0981**	**8.1284**	**4.1573**	**12.1582**	**3.7898**	**3.8868**	**7.5314**	**0.0000**	**9,456.1454**	**9,456.1454**	**1.8459**	**0.0000**	**9,494.9097**

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					
2016	4.5597	34.7364	38.2248	0.0491	2.6869	2.3269	4.8862	1.3482	2.1685	3.3716	0.0000	4,895.3055	4,895.3055	1.1301	0.0000	4,919.0376
2017	57.5381	29.8094	28.5343	0.0490	1.4446	1.8304	3.2750	0.3874	1.7182	2.1057	0.0000	4,560.8399	4,560.8399	0.7158	0.0000	4,575.8721
Total	**62.0978**	**64.5457**	**66.7592**	**0.0981**	**4.1315**	**4.1573**	**8.1613**	**1.7356**	**3.8868**	**5.4773**	**0.0000**	**9,456.1454**	**9,456.1454**	**1.8459**	**0.0000**	**9,494.9097**

	ROG	NOx	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**	**17.15**	**0.00**	**0.00**	**49.17**	**0.00**	**32.87**	**54.20**	**0.00**	**27.27**	**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	6.2755	0.1217	10.5019	5.5000e-004		0.1797	0.1797		0.1785	0.1785	0.0000	1,953.2380	1,953.2380	0.0558	0.0355	1,965.4033
Energy	0.0205	0.1750	0.0747	1.1200e-003		0.0142	0.0142		0.0142	0.0142		223.3944	223.3944	4.2800e-003	4.1000e-003	224.7540
Mobile	3.1388	6.1338	29.3232	0.0637	4.4866	0.0798	4.5664	1.1977	0.0735	1.2712		5,213.2438	5,213.2438	0.2162		5,217.7829
Total	**9.4348**	**6.4306**	**39.8998**	**0.0654**	**4.4866**	**0.2737**	**4.7603**	**1.1977**	**0.2661**	**1.4638**	**0.0000**	**7,389.8762**	**7,389.8762**	**0.2762**	**0.0396**	**7,407.9402**

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	6.2755	0.1217	10.5019	5.5000e-004		0.1797	0.1797		0.1785	0.1785	0.0000	1,953.2380	1,953.2380	0.0558	0.0355	1,965.4033
Energy	0.0169	0.1446	0.0617	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.5081	184.5081	3.5400e-003	3.3800e-003	185.6310
Mobile	3.1388	6.1338	29.3232	0.0637	4.4866	0.0798	4.5664	1.1977	0.0735	1.2712		5,213.2438	5,213.2438	0.2162		5,217.7829
Total	**9.4312**	**6.4001**	**39.8868**	**0.0652**	**4.4866**	**0.2712**	**4.7578**	**1.1977**	**0.2637**	**1.4613**	**0.0000**	**7,350.9899**	**7,350.9899**	**0.2755**	**0.0389**	**7,368.8172**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**0.47**	**0.03**	**0.31**	**0.00**	**0.90**	**0.05**	**0.00**	**0.92**	**0.17**	**0.00**	**0.53**	**0.53**	**0.27**	**1.82**	**0.53**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asbestos and LBP Removal	Site Preparation	6/1/2016	6/14/2016	5	10	
2	Demolition	Demolition	6/14/2016	7/8/2016	5	19	
3	Grading/Site Improvements	Grading	7/10/2016	9/23/2016	5	55	
4	Building Construction	Building Construction	10/12/2016	6/2/2017	5	168	
5	Paving	Paving	6/3/2017	6/16/2017	5	10	
6	Architectural Coating	Architectural Coating	6/3/2017	6/30/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 277,800; Residential Outdoor: 92,600; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 7,542 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Site Improvements	Excavators	1	8.00	162	0.38
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading/Site Improvements	Graders	1	8.00	174	0.41
Grading/Site Improvements	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Site Improvements	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	1	8.00	125	0.42

Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	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
Asbestos and LBP Removal	3	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	16.00	0.00	148.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Site Improvements	4	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	150.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Asbestos and LBP Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

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	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

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	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7048	0.0000	1.7048	0.2582	0.0000	0.2582			0.0000			0.0000
Off-Road	4.2935	45.7223	35.0818	0.0400		2.2954	2.2954		2.1396	2.1396		4,097.5328	4,097.5328	1.1146		4,120.9384
Total	**4.2935**	**45.7223**	**35.0818**	**0.0400**	**1.7048**	**2.2954**	**4.0002**	**0.2582**	**2.1396**	**2.3977**		**4,097.5328**	**4,097.5328**	**1.1146**		**4,120.9384**

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	0.1699	2.2533	2.0131	5.8200e-003	0.1357	0.0299	0.1656	0.0372	0.0275	0.0647		585.6981	585.6981	4.2300e-003		585.7870
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	0.0593	0.0737	0.6954	1.5600e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		130.5074	130.5074	6.9600e-003		130.6536
Total	**0.2292**	**2.3269**	**2.7085**	**7.3800e-003**	**0.2672**	**0.0309**	**0.2981**	**0.0720**	**0.0284**	**0.1004**		**716.2056**	**716.2056**	**0.0112**		**716.4406**

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					0.6649	0.0000	0.6649	0.1007	0.0000	0.1007			0.0000			0.0000
Off-Road	4.2935	32.3634	35.0818	0.0400		2.2954	2.2954		2.1396	2.1396	0.0000	4,097.5328	4,097.5328	1.1146		4,120.9384
Total	**4.2935**	**32.3634**	**35.0818**	**0.0400**	**0.6649**	**2.2954**	**2.9603**	**0.1007**	**2.1396**	**2.2402**	**0.0000**	**4,097.5328**	**4,097.5328**	**1.1146**		**4,120.9384**

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	0.1699	2.2533	2.0131	5.8200e-003	0.1357	0.0299	0.1656	0.0372	0.0275	0.0647		585.6981	585.6981	4.2300e-003		585.7870
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	0.0593	0.0737	0.6954	1.5600e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		130.5074	130.5074	6.9600e-003		130.6536
Total	**0.2292**	**2.3269**	**2.7085**	**7.3800e-003**	**0.2672**	**0.0309**	**0.2981**	**0.0720**	**0.0284**	**0.1004**		**716.2056**	**716.2056**	**0.0112**		**716.4406**

3.4 Grading/Site Improvements - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.5523**	**2.1984**	**8.7507**	**3.3675**	**2.0225**	**5.3900**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

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	0.0593	0.0737	0.6954	1.5600e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		130.5074	130.5074	6.9600e-003		130.6536
Total	**0.0593**	**0.0737**	**0.6954**	**1.5600e-003**	**0.1314**	**9.9000e-004**	**0.1324**	**0.0349**	**9.1000e-004**	**0.0358**		**130.5074**	**130.5074**	**6.9600e-003**		**130.6536**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.6669	34.0158	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**34.0158**	**26.0787**	**0.0298**	**2.5554**	**2.1984**	**4.7538**	**1.3133**	**2.0225**	**3.3359**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

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	0.0593	0.0737	0.6954	1.5600e-003	0.1314	9.9000e-004	0.1324	0.0349	9.1000e-004	0.0358		130.5074	130.5074	6.9600e-003		130.6536
Total	**0.0593**	**0.0737**	**0.6954**	**1.5600e-003**	**0.1314**	**9.9000e-004**	**0.1324**	**0.0349**	**9.1000e-004**	**0.0358**		**130.5074**	**130.5074**	**6.9600e-003**		**130.6536**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

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	0.3862	3.1062	4.7908	7.5800e-003	0.2124	0.0463	0.2587	0.0606	0.0426	0.1032		757.6295	757.6295	6.0500e-003		757.7565
Worker	0.5558	0.6904	6.5194	0.0147	1.2322	9.2500e-003	1.2415	0.3268	8.5000e-003	0.3353		1,223.5071	1,223.5071	0.0653		1,224.8779
Total	**0.9420**	**3.7966**	**11.3101**	**0.0222**	**1.4446**	**0.0556**	**1.5002**	**0.3874**	**0.0511**	**0.4386**		**1,981.1366**	**1,981.1366**	**0.0713**		**1,982.6344**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

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	0.3862	3.1062	4.7908	7.5800e-003	0.2124	0.0463	0.2587	0.0606	0.0426	0.1032		757.6295	757.6295	6.0500e-003		757.7565
Worker	0.5558	0.6904	6.5194	0.0147	1.2322	9.2500e-003	1.2415	0.3268	8.5000e-003	0.3353		1,223.5071	1,223.5071	0.0653		1,224.8779
Total	**0.9420**	**3.7966**	**11.3101**	**0.0222**	**1.4446**	**0.0556**	**1.5002**	**0.3874**	**0.0511**	**0.4386**		**1,981.1366**	**1,981.1366**	**0.0713**		**1,982.6344**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

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	0.3529	2.7762	4.5376	7.5600e-003	0.2124	0.0402	0.2526	0.0606	0.0370	0.0976		744.8124	744.8124	5.7300e-003		744.9326
Worker	0.5035	0.6275	5.8676	0.0147	1.2322	8.9600e-003	1.2412	0.3268	8.2700e-003	0.3351		1,176.2222	1,176.2222	0.0604		1,177.4905
Total	**0.8564**	**3.4037**	**10.4052**	**0.0222**	**1.4446**	**0.0492**	**1.4938**	**0.3874**	**0.0453**	**0.4327**		**1,921.0346**	**1,921.0346**	**0.0661**		**1,922.4231**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

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	0.3529	2.7762	4.5376	7.5600e-003	0.2124	0.0402	0.2526	0.0606	0.0370	0.0976		744.8124	744.8124	5.7300e-003		744.9326
Worker	0.5035	0.6275	5.8676	0.0147	1.2322	8.9600e-003	1.2412	0.3268	8.2700e-003	0.3351		1,176.2222	1,176.2222	0.0604		1,177.4905
Total	**0.8564**	**3.4037**	**10.4052**	**0.0222**	**1.4446**	**0.0492**	**1.4938**	**0.3874**	**0.0453**	**0.4327**		**1,921.0346**	**1,921.0346**	**0.0661**		**1,922.4231**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2505	13.2069	9.6273	0.0145		0.7546	0.7546		0.6943	0.6943		1,479.7870	1,479.7870	0.4534		1,489.3085
Paving	0.2358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4863**	**13.2069**	**9.6273**	**0.0145**		**0.7546**	**0.7546**		**0.6943**	**0.6943**		**1,479.7870**	**1,479.7870**	**0.4534**		**1,489.3085**

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	0.0470	0.0586	0.5476	1.3700e-003	0.1150	8.4000e-004	0.1158	0.0305	7.7000e-004	0.0313		109.7807	109.7807	5.6400e-003		109.8991
Total	**0.0470**	**0.0586**	**0.5476**	**1.3700e-003**	**0.1150**	**8.4000e-004**	**0.1158**	**0.0305**	**7.7000e-004**	**0.0313**		**109.7807**	**109.7807**	**5.6400e-003**		**109.8991**

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	1.2505	13.2069	9.6273	0.0145		0.7546	0.7546		0.6943	0.6943	0.0000	1,479.7870	1,479.7870	0.4534		1,489.3085
Paving	0.2358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4863**	**13.2069**	**9.6273**	**0.0145**		**0.7546**	**0.7546**		**0.6943**	**0.6943**	**0.0000**	**1,479.7870**	**1,479.7870**	**0.4534**		**1,489.3085**

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	0.0470	0.0586	0.5476	1.3700e-003	0.1150	8.4000e-004	0.1158	0.0305	7.7000e-004	0.0313		109.7807	109.7807	5.6400e-003		109.8991
Total	**0.0470**	**0.0586**	**0.5476**	**1.3700e-003**	**0.1150**	**8.4000e-004**	**0.1158**	**0.0305**	**7.7000e-004**	**0.0313**		**109.7807**	**109.7807**	**5.6400e-003**		**109.8991**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.5718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**55.9041**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.1007	0.1255	1.1735	2.9300e-003	0.2464	1.7900e-003	0.2482	0.0654	1.6500e-003	0.0670		235.2444	235.2444	0.0121		235.4981
Total	**0.1007**	**0.1255**	**1.1735**	**2.9300e-003**	**0.2464**	**1.7900e-003**	**0.2482**	**0.0654**	**1.6500e-003**	**0.0670**		**235.2444**	**235.2444**	**0.0121**		**235.4981**

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	55.5718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**55.9041**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.1007	0.1255	1.1735	2.9300e-003	0.2464	1.7900e-003	0.2482	0.0654	1.6500e-003	0.0670		235.2444	235.2444	0.0121		235.4981
Total	**0.1007**	**0.1255**	**1.1735**	**2.9300e-003**	**0.2464**	**1.7900e-003**	**0.2482**	**0.0654**	**1.6500e-003**	**0.0670**		**235.2444**	**235.2444**	**0.0121**		**235.4981**

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					
Unmitigated	3.1388	6.1338	29.3232	0.0637	4.4866	0.0798	4.5664	1.1977	0.0735	1.2712		5,213.2438	5,213.2438	0.2162		5,217.7829

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	665.28	665.28	665.28	1,899,576	1,899,576
Convenience Market (24 Hour)	290.00	290.00	290.00	220,857	220,857
Enclosed Parking Structure	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	955.28	955.28	955.28	2,120,434	2,120,434

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
Apartments Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0169	0.1446	0.0617	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.5081	184.5081	3.5400e-003	3.3800e-003	185.6310
NaturalGas Unmitigated	0.0205	0.1750	0.0747	1.1200e-003		0.0142	0.0142		0.0142	0.0142		223.3944	223.3944	4.2800e-003	4.1000e-003	224.7540

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					
Apartments Mid Rise	1892.58	0.0204	0.1744	0.0742	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.6563	222.6563	4.2700e-003	4.0800e-003	224.0114
Convenience Market (24 Hour)	6.27397	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.7381	0.7381	1.0000e-005	1.0000e-005	0.7426
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0205**	**0.1750**	**0.0747**	**1.1100e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**223.3944**	**223.3944**	**4.2800e-003**	**4.0900e-003**	**224.7540**

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					
Apartments Mid Rise	1.56287	0.0169	0.1440	0.0613	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.8667	183.8667	3.5200e-003	3.3700e-003	184.9857
Convenience Market (24 Hour)	0.00545205	6.0000e-005	5.3000e-004	4.5000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6414	0.6414	1.0000e-005	1.0000e-005	0.6453
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0169**	**0.1446**	**0.0617**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**		**184.5081**	**184.5081**	**3.5300e-003**	**3.3800e-003**	**185.6310**

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					
Unmitigated	6.2755	0.1217	10.5019	5.5000e-004		0.1797	0.1797		0.1785	0.1785	0.0000	1,953.2380	1,953.2380	0.0558	0.0355	1,965.4033

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	0.3045					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1773	1.0000e-005	9.6700e-003	0.0000		0.1225	0.1225		0.1212	0.1212	0.0000	1,934.4706	1,934.4706	0.0371	0.0355	1,946.2435
Landscaping	0.3250	0.1217	10.4922	5.5000e-004		0.0572	0.0572		0.0572	0.0572		18.7674	18.7674	0.0187		19.1598
Total	**6.2755**	**0.1217**	**10.5019**	**5.5000e-004**		**0.1797**	**0.1797**		**0.1785**	**0.1785**	**0.0000**	**1,953.2380**	**1,953.2380**	**0.0558**	**0.0355**	**1,965.4032**

9368 Escondido Gateway

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	126.00	Space	1.10	39,250.00	0
Other Non-Asphalt Surfaces	0.51	Acre	0.51	38,112.00	0
Parking Lot	93.00	Space	0.84	37,200.00	0
Parking Lot	7.00	Space	0.06	2,800.00	0
Apartments Mid Rise	126.00	Dwelling Unit	0.07	137,185.00	360
Convenience Market (24 Hour)	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Escondido Gateway. San Diego County (San Diego Air Basin)

Land Use - The project includes development of a 126-unit apartment, 1,800 SF leasing office, 1,000 SF convenience market, 126-space garage, 93 open parking spaces and 7 disabled parking spaces on a 2.6-acre site.

Construction Phase - Construction Phase - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - Hand tools used for asbestos and lead-based paint removal.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Off-road Equipment - See 3.0, Construction Detail.

Trips and VMT - See 3.0, Construction Detail.

Demolition - Demolition of 32,500 square foot building.

Grading - Modified disturbed acreage.

Architectural Coating - See note under Construction - Architectural Coatings. Comply with SDAPCD Rule 67.0.1.

Vehicle Trips - Based on trip rates provided in the MBI traffic report.

Woodstoves - No woodstoves. Gas fireplaces only.

Area Coating - Comply with SDAPCD Rule 67.0.1.

Construction Off-road Equipment Mitigation - Compliance with SDAPCD Rule 51 which limits fugitive dust emissions.

Mobile Land Use Mitigation -

Energy Mitigation - Exceed Title 24 by 25%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,781.00	7,542.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,343.00	1,500.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Nonresidential_Exterior	39781	7542
tblAreaCoating	Area_Nonresidential_Interior	119343	1500
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	250
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	168.00
tblConstructionPhase	NumDays	20.00	19.00
tblConstructionPhase	NumDays	6.00	55.00

tblConstructionPhase	NumDays	3.00	10.00
tblConstructionPhase	PhaseEndDate	7/14/2017	6/30/2017
tblConstructionPhase	PhaseEndDate	5/17/2017	6/2/2017
tblConstructionPhase	PhaseEndDate	7/11/2016	7/8/2016
tblConstructionPhase	PhaseStartDate	6/17/2017	6/3/2017
tblConstructionPhase	PhaseStartDate	9/24/2016	10/12/2016
tblConstructionPhase	PhaseStartDate	6/15/2016	6/14/2016
tblConstructionPhase	PhaseStartDate	7/9/2016	7/10/2016
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	69.30	91.35
tblFireplaces	NumberNoFireplace	12.60	34.65
tblFireplaces	NumberWood	44.10	0.00
tblGrading	AcresOfGrading	28.50	0.00
tblLandUse	LandUseSquareFeet	50,400.00	39,250.00
tblLandUse	LandUseSquareFeet	22,215.60	38,112.00
tblLandUse	LandUseSquareFeet	126,000.00	137,185.00
tblLandUse	LotAcreage	1.13	1.10
tblLandUse	LotAcreage	3.32	0.07
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading/Site Improvements
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	VendorTripNumber	33.00	32.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	140.00	150.00
tblTripsAndVMT	WorkerTripNumber	15.00	14.00
tblTripsAndVMT	WorkerTripNumber	28.00	30.00
tblVehicleTrips	ST_TR	7.16	5.28
tblVehicleTrips	ST_TR	863.10	290.00
tblVehicleTrips	SU_TR	6.07	5.28
tblVehicleTrips	SU_TR	758.45	290.00
tblVehicleTrips	WD_TR	6.59	5.28
tblVehicleTrips	WD_TR	737.99	290.00
tblWoodstoves	NumberCatalytic	6.30	0.00
tblWoodstoves	NumberNoncatalytic	6.30	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.2696	2.4531	1.9475	2.7400e-003	0.2437	0.1412	0.3850	0.1078	0.1313	0.2391	0.0000	245.1023	245.1023	0.0525	0.0000	246.2041
2017	0.7822	1.7294	1.6271	2.8400e-003	0.0806	0.1062	0.1868	0.0216	0.0997	0.1214	0.0000	240.2378	240.2378	0.0382	0.0000	241.0394
Total	**1.0519**	**4.1825**	**3.5746**	**5.5800e-003**	**0.3243**	**0.2474**	**0.5717**	**0.1294**	**0.2310**	**0.3605**	**0.0000**	**485.3401**	**485.3401**	**0.0906**	**0.0000**	**487.2435**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.2696	2.2043	1.9475	2.7400e-003	0.1239	0.1412	0.2652	0.0498	0.1313	0.1811	0.0000	245.1021	245.1021	0.0525	0.0000	246.2039
2017	0.7822	1.7294	1.6271	2.8400e-003	0.0806	0.1062	0.1868	0.0216	0.0997	0.1214	0.0000	240.2376	240.2376	0.0382	0.0000	241.0392
Total	**1.0519**	**3.9337**	**3.5746**	**5.5800e-003**	**0.2045**	**0.2474**	**0.4519**	**0.0714**	**0.2310**	**0.3025**	**0.0000**	**485.3397**	**485.3397**	**0.0906**	**0.0000**	**487.2431**

	ROG	NOx	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**	**5.95**	**0.00**	**0.00**	**36.94**	**0.00**	**20.95**	**44.81**	**0.00**	**16.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0901	0.0110	0.9447	5.0000e-005		0.0102	0.0102		0.0101	0.0101	0.0000	73.4841	73.4841	2.9000e-003	1.3200e-003	73.9540
Energy	3.7400e-003	0.0319	0.0136	2.0000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	279.4097	279.4097	0.0105	2.7000e-003	280.4655
Mobile	0.5341	1.1116	5.1648	0.0117	0.7974	0.0145	0.8118	0.2133	0.0133	0.2266	0.0000	866.7991	866.7991	0.0356	0.0000	867.5473
Waste						0.0000	0.0000		0.0000	0.0000	12.3764	0.0000	12.3764	0.7314	0.0000	27.7362
Water						0.0000	0.0000		0.0000	0.0000	2.6280	54.2056	56.8336	0.2721	6.8200e-003	64.6633
Total	**1.6280**	**1.1545**	**6.1232**	**0.0119**	**0.7974**	**0.0272**	**0.8246**	**0.2133**	**0.0260**	**0.2393**	**15.0043**	**1,273.8985**	**1,288.9028**	**1.0525**	**0.0108**	**1,314.3663**

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	1.0901	0.0110	0.9447	5.0000e-005		0.0102	0.0102		0.0101	0.0101	0.0000	73.4841	73.4841	2.9000e-003	1.3200e-003	73.9540
Energy	3.0900e-003	0.0264	0.0113	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	258.4281	258.4281	9.7600e-003	2.4600e-003	259.3949
Mobile	0.5341	1.1116	5.1648	0.0117	0.7974	0.0145	0.8118	0.2133	0.0133	0.2266	0.0000	866.7991	866.7991	0.0356	0.0000	867.5473
Waste						0.0000	0.0000		0.0000	0.0000	12.3764	0.0000	12.3764	0.7314	0.0000	27.7362
Water						0.0000	0.0000		0.0000	0.0000	2.6280	54.2056	56.8336	0.2721	6.8100e-003	64.6591
Total	**1.6273**	**1.1490**	**6.1208**	**0.0119**	**0.7974**	**0.0268**	**0.8241**	**0.2133**	**0.0256**	**0.2388**	**15.0043**	**1,252.9169**	**1,267.9212**	**1.0518**	**0.0106**	**1,293.2915**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**0.48**	**0.04**	**0.25**	**0.00**	**1.65**	**0.05**	**0.00**	**1.73**	**0.19**	**0.00**	**1.65**	**1.63**	**0.07**	**2.31**	**1.60**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asbestos and LBP Removal	Site Preparation	6/1/2016	6/14/2016	5	10	
2	Demolition	Demolition	6/14/2016	7/8/2016	5	19	
3	Grading/Site Improvements	Grading	7/10/2016	9/23/2016	5	55	
4	Building Construction	Building Construction	10/12/2016	6/2/2017	5	168	
5	Paving	Paving	6/3/2017	6/16/2017	5	10	
6	Architectural Coating	Architectural Coating	6/3/2017	6/30/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 277,800; Residential Outdoor: 92,600; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 7,542 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Site Improvements	Excavators	1	8.00	162	0.38
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading/Site Improvements	Graders	1	8.00	174	0.41
Grading/Site Improvements	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Site Improvements	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	1	8.00	125	0.42

Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	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
Asbestos and LBP Removal	3	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	16.00	0.00	148.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Site Improvements	4	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	150.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Asbestos and LBP Removal - 2016

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.3000e-004	2.1600e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3737	0.3737	2.0000e-005	0.0000	0.3741
Total	**1.7000e-004**	**2.3000e-004**	**2.1600e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3737**	**0.3737**	**2.0000e-005**	**0.0000**	**0.3741**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.3000e-004	2.1600e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3737	0.3737	2.0000e-005	0.0000	0.3741
Total	**1.7000e-004**	**2.3000e-004**	**2.1600e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3737**	**0.3737**	**2.0000e-005**	**0.0000**	**0.3741**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0162	0.0000	0.0162	2.4500e-003	0.0000	2.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0408	0.4344	0.3333	3.8000e-004		0.0218	0.0218		0.0203	0.0203	0.0000	35.3136	35.3136	9.6100e-003	0.0000	35.5153
Total	**0.0408**	**0.4344**	**0.3333**	**3.8000e-004**	**0.0162**	**0.0218**	**0.0380**	**2.4500e-003**	**0.0203**	**0.0228**	**0.0000**	**35.3136**	**35.3136**	**9.6100e-003**	**0.0000**	**35.5153**

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	1.5500e-003	0.0215	0.0177	6.0000e-005	1.2600e-003	2.8000e-004	1.5500e-003	3.5000e-004	2.6000e-004	6.1000e-004	0.0000	5.0546	5.0546	4.0000e-005	0.0000	5.0553
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	5.2000e-004	6.9000e-004	6.5600e-003	2.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1359	1.1359	6.0000e-005	0.0000	1.1372
Total	**2.0700e-003**	**0.0222**	**0.0243**	**8.0000e-005**	**2.4800e-003**	**2.9000e-004**	**2.7800e-003**	**6.7000e-004**	**2.7000e-004**	**9.4000e-004**	**0.0000**	**6.1905**	**6.1905**	**1.0000e-004**	**0.0000**	**6.1925**

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					6.3200e-003	0.0000	6.3200e-003	9.6000e-004	0.0000	9.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0408	0.3075	0.3333	3.8000e-004		0.0218	0.0218		0.0203	0.0203	0.0000	35.3135	35.3135	9.6100e-003	0.0000	35.5153
Total	**0.0408**	**0.3075**	**0.3333**	**3.8000e-004**	**6.3200e-003**	**0.0218**	**0.0281**	**9.6000e-004**	**0.0203**	**0.0213**	**0.0000**	**35.3135**	**35.3135**	**9.6100e-003**	**0.0000**	**35.5153**

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	1.5500e-003	0.0215	0.0177	6.0000e-005	1.2600e-003	2.8000e-004	1.5500e-003	3.5000e-004	2.6000e-004	6.1000e-004	0.0000	5.0546	5.0546	4.0000e-005	0.0000	5.0553
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	5.2000e-004	6.9000e-004	6.5600e-003	2.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1359	1.1359	6.0000e-005	0.0000	1.1372
Total	**2.0700e-003**	**0.0222**	**0.0243**	**8.0000e-005**	**2.4800e-003**	**2.9000e-004**	**2.7800e-003**	**6.7000e-004**	**2.7000e-004**	**9.4000e-004**	**0.0000**	**6.1905**	**6.1905**	**1.0000e-004**	**0.0000**	**6.1925**

3.4 Grading/Site Improvements - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1802	0.0000	0.1802	0.0926	0.0000	0.0926	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1008	1.0573	0.7172	8.2000e-004		0.0605	0.0605		0.0556	0.0556	0.0000	77.1826	77.1826	0.0233	0.0000	77.6715
Total	**0.1008**	**1.0573**	**0.7172**	**8.2000e-004**	**0.1802**	**0.0605**	**0.2407**	**0.0926**	**0.0556**	**0.1482**	**0.0000**	**77.1826**	**77.1826**	**0.0233**	**0.0000**	**77.6715**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5100e-003	1.9900e-003	0.0190	4.0000e-005	3.5300e-003	3.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	3.2882	3.2882	1.7000e-004	0.0000	3.2918
Total	**1.5100e-003**	**1.9900e-003**	**0.0190**	**4.0000e-005**	**3.5300e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**2.0000e-005**	**9.6000e-004**	**0.0000**	**3.2882**	**3.2882**	**1.7000e-004**	**0.0000**	**3.2918**

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					0.0703	0.0000	0.0703	0.0361	0.0000	0.0361	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1008	0.9354	0.7172	8.2000e-004		0.0605	0.0605		0.0556	0.0556	0.0000	77.1825	77.1825	0.0233	0.0000	77.6714
Total	**0.1008**	**0.9354**	**0.7172**	**8.2000e-004**	**0.0703**	**0.0605**	**0.1307**	**0.0361**	**0.0556**	**0.0917**	**0.0000**	**77.1825**	**77.1825**	**0.0233**	**0.0000**	**77.6714**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5100e-003	1.9900e-003	0.0190	4.0000e-005	3.5300e-003	3.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	3.2882	3.2882	1.7000e-004	0.0000	3.2918
Total	**1.5100e-003**	**1.9900e-003**	**0.0190**	**4.0000e-005**	**3.5300e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**2.0000e-005**	**9.6000e-004**	**0.0000**	**3.2882**	**3.2882**	**1.7000e-004**	**0.0000**	**3.2918**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0988	0.8267	0.5367	7.8000e-004		0.0571	0.0571		0.0536	0.0536	0.0000	70.2245	70.2245	0.0174	0.0000	70.5903
Total	**0.0988**	**0.8267**	**0.5367**	**7.8000e-004**		**0.0571**	**0.0571**		**0.0536**	**0.0536**	**0.0000**	**70.2245**	**70.2245**	**0.0174**	**0.0000**	**70.5903**

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	0.0106	0.0907	0.1270	2.2000e-004	6.0400e-003	1.3400e-003	7.3700e-003	1.7300e-003	1.2300e-003	2.9600e-003	0.0000	20.0213	20.0213	1.6000e-004	0.0000	20.0246
Worker	0.0149	0.0197	0.1879	4.3000e-004	0.0349	2.7000e-004	0.0352	9.2700e-003	2.5000e-004	9.5200e-003	0.0000	32.5080	32.5080	1.7200e-003	0.0000	32.5441
Total	**0.0255**	**0.1104**	**0.3149**	**6.5000e-004**	**0.0409**	**1.6100e-003**	**0.0425**	**0.0110**	**1.4800e-003**	**0.0125**	**0.0000**	**52.5293**	**52.5293**	**1.8800e-003**	**0.0000**	**52.5687**

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	0.0988	0.8267	0.5367	7.8000e-004		0.0571	0.0571		0.0536	0.0536	0.0000	70.2245	70.2245	0.0174	0.0000	70.5902
Total	**0.0988**	**0.8267**	**0.5367**	**7.8000e-004**		**0.0571**	**0.0571**		**0.0536**	**0.0536**	**0.0000**	**70.2245**	**70.2245**	**0.0174**	**0.0000**	**70.5902**

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	0.0106	0.0907	0.1270	2.2000e-004	6.0400e-003	1.3400e-003	7.3700e-003	1.7300e-003	1.2300e-003	2.9600e-003	0.0000	20.0213	20.0213	1.6000e-004	0.0000	20.0246
Worker	0.0149	0.0197	0.1879	4.3000e-004	0.0349	2.7000e-004	0.0352	9.2700e-003	2.5000e-004	9.5200e-003	0.0000	32.5080	32.5080	1.7200e-003	0.0000	32.5441
Total	**0.0255**	**0.1104**	**0.3149**	**6.5000e-004**	**0.0409**	**1.6100e-003**	**0.0425**	**0.0110**	**1.4800e-003**	**0.0125**	**0.0000**	**52.5293**	**52.5293**	**1.8800e-003**	**0.0000**	**52.5687**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1706	1.4523	0.9971	1.4700e-003		0.0980	0.0980		0.0920	0.0920	0.0000	131.7135	131.7135	0.0324	0.0000	132.3943
Total	**0.1706**	**1.4523**	**0.9971**	**1.4700e-003**		**0.0980**	**0.0980**		**0.0920**	**0.0920**	**0.0000**	**131.7135**	**131.7135**	**0.0324**	**0.0000**	**132.3943**

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	0.0183	0.1537	0.2276	4.2000e-004	0.0115	2.2000e-003	0.0137	3.2800e-003	2.0200e-003	5.3000e-003	0.0000	37.3296	37.3296	2.8000e-004	0.0000	37.3355
Worker	0.0256	0.0340	0.3212	8.1000e-004	0.0662	4.9000e-004	0.0667	0.0176	4.5000e-004	0.0180	0.0000	59.2710	59.2710	3.0100e-003	0.0000	59.3343
Total	**0.0440**	**0.1877**	**0.5488**	**1.2300e-003**	**0.0776**	**2.6900e-003**	**0.0803**	**0.0209**	**2.4700e-003**	**0.0233**	**0.0000**	**96.6006**	**96.6006**	**3.2900e-003**	**0.0000**	**96.6698**

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	0.1706	1.4523	0.9971	1.4700e-003		0.0980	0.0980		0.0920	0.0920	0.0000	131.7134	131.7134	0.0324	0.0000	132.3941
Total	**0.1706**	**1.4523**	**0.9971**	**1.4700e-003**		**0.0980**	**0.0980**		**0.0920**	**0.0920**	**0.0000**	**131.7134**	**131.7134**	**0.0324**	**0.0000**	**132.3941**

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	0.0183	0.1537	0.2276	4.2000e-004	0.0115	2.2000e-003	0.0137	3.2800e-003	2.0200e-003	5.3000e-003	0.0000	37.3296	37.3296	2.8000e-004	0.0000	37.3355
Worker	0.0256	0.0340	0.3212	8.1000e-004	0.0662	4.9000e-004	0.0667	0.0176	4.5000e-004	0.0180	0.0000	59.2710	59.2710	3.0100e-003	0.0000	59.3343
Total	**0.0440**	**0.1877**	**0.5488**	**1.2300e-003**	**0.0776**	**2.6900e-003**	**0.0803**	**0.0209**	**2.4700e-003**	**0.0233**	**0.0000**	**96.6006**	**96.6006**	**3.2900e-003**	**0.0000**	**96.6698**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2500e-003	0.0660	0.0481	7.0000e-005		3.7700e-003	3.7700e-003		3.4700e-003	3.4700e-003	0.0000	6.7122	6.7122	2.0600e-003	0.0000	6.7554
Paving	1.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4300e-003**	**0.0660**	**0.0481**	**7.0000e-005**		**3.7700e-003**	**3.7700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**6.7122**	**6.7122**	**2.0600e-003**	**0.0000**	**6.7554**

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	2.2000e-004	2.9000e-004	2.7300e-003	1.0000e-005	5.6000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5029	0.5029	3.0000e-005	0.0000	0.5034
Total	**2.2000e-004**	**2.9000e-004**	**2.7300e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.7000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5029**	**0.5029**	**3.0000e-005**	**0.0000**	**0.5034**

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	6.2500e-003	0.0660	0.0481	7.0000e-005		3.7700e-003	3.7700e-003		3.4700e-003	3.4700e-003	0.0000	6.7122	6.7122	2.0600e-003	0.0000	6.7554
Paving	1.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4300e-003**	**0.0660**	**0.0481**	**7.0000e-005**		**3.7700e-003**	**3.7700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**6.7122**	**6.7122**	**2.0600e-003**	**0.0000**	**6.7554**

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	2.2000e-004	2.9000e-004	2.7300e-003	1.0000e-005	5.6000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5029	0.5029	3.0000e-005	0.0000	0.5034
Total	**2.2000e-004**	**2.9000e-004**	**2.7300e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.7000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5029**	**0.5029**	**3.0000e-005**	**0.0000**	**0.5034**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5557					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0219	0.0187	3.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	2.5533	2.5533	2.7000e-004	0.0000	2.5589
Total	**0.5590**	**0.0219**	**0.0187**	**3.0000e-005**		**1.7300e-003**	**1.7300e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**2.5533**	**2.5533**	**2.7000e-004**	**0.0000**	**2.5589**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e-004	1.2400e-003	0.0117	3.0000e-005	2.4100e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.1553	2.1553	1.1000e-004	0.0000	2.1576
Total	**9.3000e-004**	**1.2400e-003**	**0.0117**	**3.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4200e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.1553**	**2.1553**	**1.1000e-004**	**0.0000**	**2.1576**

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	0.5557					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0219	0.0187	3.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	2.5533	2.5533	2.7000e-004	0.0000	2.5589
Total	**0.5590**	**0.0219**	**0.0187**	**3.0000e-005**		**1.7300e-003**	**1.7300e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**2.5533**	**2.5533**	**2.7000e-004**	**0.0000**	**2.5589**

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	9.3000e-004	1.2400e-003	0.0117	3.0000e-005	2.4100e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.1553	2.1553	1.1000e-004	0.0000	2.1576
Total	**9.3000e-004**	**1.2400e-003**	**0.0117**	**3.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4200e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.1553**	**2.1553**	**1.1000e-004**	**0.0000**	**2.1576**

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					
Unmitigated	0.5341	1.1116	5.1648	0.0117	0.7974	0.0145	0.8118	0.2133	0.0133	0.2266	0.0000	866.7991	866.7991	0.0356	0.0000	867.5473

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	665.28	665.28	665.28	1,899,576	1,899,576
Convenience Market (24 Hour)	290.00	290.00	290.00	220,857	220,857
Enclosed Parking Structure	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	955.28	955.28	955.28	2,120,434	2,120,434

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
Apartments Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	227.8807	227.8807	9.1700e-003	1.9000e-003	228.6616
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	242.4242	242.4242	9.7600e-003	2.0200e-003	243.2550
NaturalGas Mitigated	3.0900e-003	0.0264	0.0113	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.5474	30.5474	5.9000e-004	5.6000e-004	30.7333
NaturalGas Unmitigated	3.7400e-003	0.0319	0.0136	2.0000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	36.9855	36.9855	7.1000e-004	6.8000e-004	37.2105

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	690791	3.7200e-003	0.0318	0.0135	2.0000e-004		2.5700e-003	2.5700e-003		2.5700e-003	2.5700e-003	0.0000	36.8633	36.8633	7.1000e-004	6.8000e-004	37.0876
Convenience Market (24 Hour)	2290	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1222	0.1222	0.0000	0.0000	0.1230
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.7300e-003**	**0.0319**	**0.0136**	**2.0000e-004**		**2.5800e-003**	**2.5800e-003**		**2.5800e-003**	**2.5800e-003**	**0.0000**	**36.9855**	**36.9855**	**7.1000e-004**	**6.8000e-004**	**37.2105**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	570446	3.0800e-003	0.0263	0.0112	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4412	30.4412	5.8000e-004	5.6000e-004	30.6265
Convenience Market (24 Hour)	1990	1.0000e-005	1.0000e-004	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1062	0.1062	0.0000	0.0000	0.1068
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.0900e-003**	**0.0264**	**0.0113**	**1.7000e-004**		**2.1400e-003**	**2.1400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**30.5474**	**30.5474**	**5.8000e-004**	**5.6000e-004**	**30.7333**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	435465	142.3137	5.7300e-003	1.1900e-003	142.8014
Convenience Market (24 Hour)	14040	4.5884	1.8000e-004	4.0000e-005	4.6041
Enclosed Parking Structure	257088	84.0185	3.3800e-003	7.0000e-004	84.3064
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	2464	0.8053	3.0000e-005	1.0000e-005	0.8080
Parking Lot	32736	10.6984	4.3000e-004	9.0000e-005	10.7351
Total		**242.4242**	**9.7500e-003**	**2.0300e-003**	**243.2550**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	430401	140.6587	5.6600e-003	1.1700e-003	141.1407
Convenience Market (24 Hour)	13067.5	4.2706	1.7000e-004	4.0000e-005	4.2852
Enclosed Parking Structure	218623	71.4478	2.8800e-003	5.9000e-004	71.6926
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	2464	0.8053	3.0000e-005	1.0000e-005	0.8080
Parking Lot	32736	10.6984	4.3000e-004	9.0000e-005	10.7351
Total		**227.8807**	**9.1700e-003**	**1.9000e-003**	**228.6616**

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					
Unmitigated	1.0901	0.0110	0.9447	5.0000e-005		0.0102	0.0102		0.0101	0.0101	0.0000	73.4841	73.4841	2.9000e-003	1.3200e-003	73.9540

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	0.0556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9980					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.2700e-003	0.0000	4.0000e-004	0.0000		5.0200e-003	5.0200e-003		4.9700e-003	4.9700e-003	0.0000	71.9518	71.9518	1.3800e-003	1.3200e-003	72.3897

Landscaping	0.0293	0.0110	0.9443	5.0000e-005		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	1.5323	1.5323	1.5300e-003	0.0000	1.5643
Total	**1.0901**	**0.0110**	**0.9447**	**5.0000e-005**		**0.0102**	**0.0102**		**0.0101**	**0.0101**	**0.0000**	**73.4841**	**73.4841**	**2.9100e-003**	**1.3200e-003**	**73.9540**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	56.8336	0.2721	6.8200e-003	64.6633

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.20941 / 5.1755	56.3300	0.2697	6.7600e-003	64.0898
Convenience Market (24 Hour)	0.0740725 / [illegible]	0.5035	2.4300e-003	6.0000e-005	0.5735
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**56.8336**	**0.2721**	**6.8200e-003**	**64.6633**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	12.3764	0.7314	0.0000	27.7362

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	57.96	11.7654	0.6953	0.0000	26.3669
Convenience Market (24 Hour)	3.01	0.6110	0.0361	0.0000	1.3693
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**12.3764**	**0.7314**	**0.0000**	**27.7362**