Appendix C

AIR QUALITY TECHNICAL REPORT

HELIX
Environmental Planning

San Ysidro Community Plan Update and San Ysidro Historic Village Specific Plan

Air Quality Technical Report

May 2016
(Revised July 2016)

Prepared for:
City of San Diego
Planning Department
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San Diego, CA 92101

Prepared by:
HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
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for the

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and
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LIST OF ACRONYMS

$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
AQIA	Air Quality Impact Assessment
BAU	business as usual
BMPs	best management practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	California Commercial End Use Survey
City	City of San Diego
CO	carbon monoxide
County	County of San Diego
DPM	diesel particulate matter
ºF	Fahrenheit (degrees)
g/L	grams per liter
GHG	greenhouse gas
H_2S	hydrogen sulfide
IEM	Iowa Environmental Mesonet
I-	Interstate
LCFS	Low Carbon Fuel Standard
LOS	level of service
mph	miles per hour
NAAQS	National Ambient Air Quality Standard
NO	nitrogen oxide
NO_X	oxides of nitrogen
NO_2	nitrogen dioxide

LIST OF ACRONYMS (cont.)

O_3	Ozone
Pb	lead
$PM_{2.5}$	fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 microns or less)
PM_{10}	respirable particulate matter (particulate matter with an aerodynamic diameter of 10 microns or less)
ppm	parts per million
PVC	polyvinyl chloride
RAQS	Regional Air Quality Strategy
RASS	Residential Appliance Saturation Survey
ROG	reactive organic gas
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SDG&E	San Diego Gas & Electric
SIP	State Implementation Plan
SO_X	oxides of sulfur
SO_2	sulfur dioxide
SYCPU	San Ysidro Community Plan Update
SYHVSP	San Ysidro Historic Village Specific Plan
T-BACT	Toxics Best Available Control Technology
TAC	Toxic Air Contaminant
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WRCC	Western Regional Climate Center

EXECUTIVE SUMMARY

This report evaluates the potential air quality impacts associated with the San Ysidro Community Plan Update (SYCPU or "Project") and the San Ysidro Historic Village Specific Plan (SYHVSP) which is included within the SYCPU area. An assessment was made to estimate the criteria pollutant emissions that would be emitted as a result of full development of the SYCPU.

As discussed in Section 4.1.2, the proposed Project would involve changes in land use designations from the adopted community plan that would change the buildout condition of the SYCPU and SYHVSP project areas. Therefore, the land uses proposed under the SYHVSP and SYCPU would not be consistent with the adopted General Plan upon which the Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP) were based. However, as discussed in the traffic impact analysis prepared for the SYCPU, the adopted community plan land use designations would be expected to generate more average daily trips (ADT) than the uses proposed under the SYCPU (472,023 ADT compared to ~~407,233~~441,147 ADT) (Kimley-Horn 2015). Thus, while the proposed land uses under the SYCPU were not included in the emissions assumptions contained within the RAQS, the vehicle trips from the SYCPU are less than those anticipated from the adopted community plan. Thus, even though it was not assumed in the RAQS, the proposed SYCPU is therefore generally consistent with the intent of the RAQS, and would not impede the goals contained within the RAQS.

The Project would result in emissions of air pollutants during both the construction phase and operational phase of future development associated with the SYCPU and SYHVSP. Implementation of Mitigation Measures AQ-1 and AQ-2, discussed below, would reduce construction emissions associated with new development within the SYCPU and SYHVSP. Operational emissions would be associated with vehicle trips generated by the SYCPU and SYHVSP development, along with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the emissions would exceed the screening-level thresholds for volatile organic compounds (VOCs), carbon monoxide (CO), respirable particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), and fine particulate matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$), and would result in a significant impact for air quality. A wide range of current regulatory codes, project design features, and other measures would be incorporated into future development including energy-efficiency features that would meet ~~2013~~ 2016 California Title 24 Energy Efficiency Standards. Implementation of Mitigation Measures AQ-4 and AQ-5, discussed below, would reduce operational emissions. While implementation of Mitigation Measures AQ-1 through AQ-5 would reduce construction and operations emissions, the ability of future development to successfully implement the actions required to fully meet these mitigation measures at the project level cannot be guaranteed at this time. Thus, air pollutant impacts from construction and operation under the proposed SYCPU and SYHVSP are considered significant and unavoidable at the program-level.

If air emissions from a specific facility include toxic substances or would exceed identified limits, the facility would be required by the San Diego Air Pollution Control District (SDAPCD) to provide information regarding emission inventories and health risk assessments. If adverse health impacts exceeding public notification levels are identified, the facility would provide public notice, and if the facility poses a potentially significant public health risk, the facility would be required to submit a risk reduction audit and plan to demonstrate how the facility

would reduce health risks. Thus, with this regulatory framework, at the program level, impacts associated with stationary sources in the SYCPU area would be less than significant.

Future traffic generated by the SYCPU and SYHVSP could result in the degradation of roadway intersections such that emissions of CO would exceed state or federal standards that would result in a CO hot spot. While implementation of Mitigation Measures AQ-3 and AQ-4 would reduce construction and operations CO emissions, the ability of future development to successfully implement the actions required to fully meet CO hot spots cannot be guaranteed at this time. Thus, CO hotspot impacts from construction and operation under the proposed SYCPU and SYHVSP are considered significant and unavoidable at the program level.

High traffic volumes on Interstate (I-) 5 and State Route (SR-) 905 could generate diesel particulate matter (DPM) levels that would exceed allowable health standards for sensitive receptors. The California Air Resources Board (CARB) recommends that sensitive receptors (e.g. residential dwellings) be located at least 500 feet from major roadways. Thus, new uses within 500 feet of I-5 and SR-905 could be significantly impacted by DPM within both the SYCPU and SYHVSP areas. While implementation of Mitigation Measure AQ-6, which requires a health risk assessment to demonstrate that sensitive receptors located within 500 feet of these freeways would not be adversely affected by DPM, the ability of future development to successfully implement the actions required to fully meet the DPM standard cannot be guaranteed at this time. Thus, DPM impacts on future development under the proposed SYCPU and SYHVSP are considered significant and unavoidable at the program level.

An evaluation of potential odors from construction activities and land use operation indicated that the SYCPU and SYHVSP would not expose substantial numbers of people to objectionable odors.

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential air quality impacts associated with the San Ysidro Community Plan Update (SYCPU or "Project") and the San Ysidro Historic Village Specific Plan (SYHVSP), which includes an evaluation of existing conditions in the Project vicinity, and an evaluation of construction and operational impacts. The analysis of impacts and report is prepared in accordance with the City of San Diego's (City) *California Environmental Quality Act Significance Determination Thresholds* (City 2011).

1.2 PROJECT DESCRIPTION

The proposed Project consists of two components: (1) the SYCPU, and (2) the SYHVSP.

1.2.1 San Ysidro Community Plan Update

The SYCPU is a comprehensive update to the current community plan, which was adopted in 1990. The San Ysidro Community Plan covers a total of 1,863 acres within the southern tip of the City of San Diego, adjacent to Otay Mesa-Nestor, Otay Mesa, the Tijuana River Valley, and the international border with Mexico (see Figure 1, *Site Vicinity Map*, and Figure 2, *Project Vicinity Map [Aerial Photograph]*, respectively).

The SYCPU includes the following eight individual elements intended to guide development: Land Use; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services & Safety; Recreation; Conservation; and Historic Preservation. Each element would be updated to bring the community plan into conformance with the City's General Plan as well as embrace current urban planning and sustainability concepts.

The **Land Use Element** is designed to guide future development within the community. It establishes land use designations for each portion of the community (see Figure 3, *Land Use Plan*). The majority of the plan area (~~41~~ 34 percent) would be designated for residential uses. Commercial uses would comprise ~~18~~ 14 percent. Industrial development would comprise 2 percent of the community plan area. A total of ~~11~~ 9 percent of the plan area would be designated for institutional uses. Parks and Open Space would cover ~~5~~ 4 and ~~13~~ 9 percent of the area, respectively. The balance would be occupied by transportation facilities.

The **Mobility Element** is intended to improve mobility throughout the community through the development of a balanced multi-modal transportation network. The Element recommends future improvements to specific roadway segments ranging from restriping to new roadway connections. The Element also contains a number of policies designed to encourage the use of public transit including promoting pedestrian movement in the vicinity of transit and by enhancing existing bus and trolley stops.

The **Urban Design Element** establishes goals and policies that enhance the urban fabric of San Ysidro while retaining the historic elements that contribute to the overall character of the community.

The **Economic Prosperity Element** envisions a strategic approach that is focused on increasing opportunities for densification of residential and commercial development in selected parts of the community, while protecting the existing strong neighborhoods through enhancement of neighborhood villages.

The **Public Facilities, Services & Safety Element** identifies existing facilities and services, and addresses the capacity and needs for future services including potential sites and desired characteristics for future facilities.

The **Recreation Element** is intended to ensure that the recreational needs of the community are met. The Element establishes goals and policies for population-based parks and recreation facilities within the community. In addition, the Element establishes goals and policies related to open space and resource-based parks.

The **Conservation Element** contains policies designed to meet the City's sustainable development goals in areas that have been identified as suitable for development. The Conservation Element also addresses open space and habitat protection.

The **Historic Preservation Element** contains specific recommendations to address the history and cultural resources, unique to San Ysidro, in order to encourage protection and appreciation of these resources.

1.2.2 San Ysidro Historic Village Specific Plan

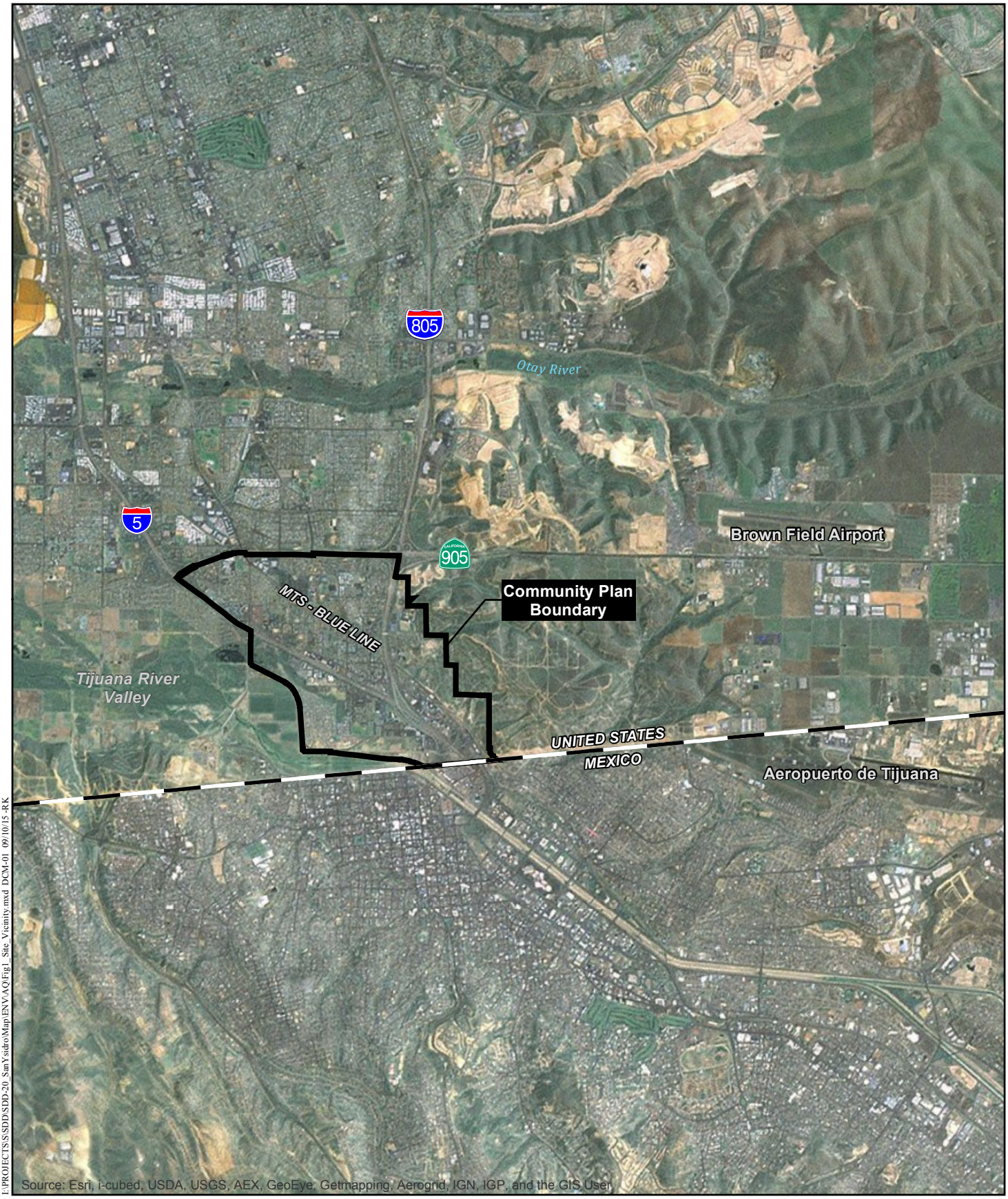
The SYHVSP, and identified on Figure 3, is a comprehensive planning document that will implement the vision for the SYCPU for this Specific Plan Area. The SYHVSP covers approximately 112 acres, and is bounded by Beyer Boulevard to the north, Interstate (I-) 5 to the south, I-805 to the east, and Smythe Avenue to the west.

The overall goal of the Specific Plan is to create an attractive, intensified urban environment with a mix of land uses surrounding the Beyer Trolley Station and along San Ysidro Boulevard, while preserving the low-scale single- and multi-family character of the residential areas.

The **Land Use Component** of the Specific Plan includes guidelines intended to: (1) preserve the historic character of the area; (2) attract community-oriented development; (3) promote alternate forms of transportation (e.g., walking and biking); and (4) focus increased residential density on major transportation corridors and near transit. The Specific Plan Area includes the following five land use designations, as specified by the SYCPU: Low-Medium Density Residential, Medium Density Residential, Community Commercial (Residential Permitted), Institutional, and Park.

The **Mobility Component** of the Specific Plan sets forth a number of polices and guidelines to promote mobility including (1) install new, and widen existing, sidewalks; (2) improve lighting and landscaping along sidewalks; (3) improve street crossings, and (4) incorporate bikeway facilities on select roadways.

The **Urban Design Component** of the Specific Plan identifies policies intended to enhance public spaces, including parks, public plazas, and roadways. The Specific Plan encourages the



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Site Vicinity Map

SAN YSIDRO COMMUNITY PLAN UPDATE

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N 0 6,000 Feet

Figure 1

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Project Vicinity Map (Aerial Photograph)

SAN YSIDRO COMMUNITY PLAN UPDATE

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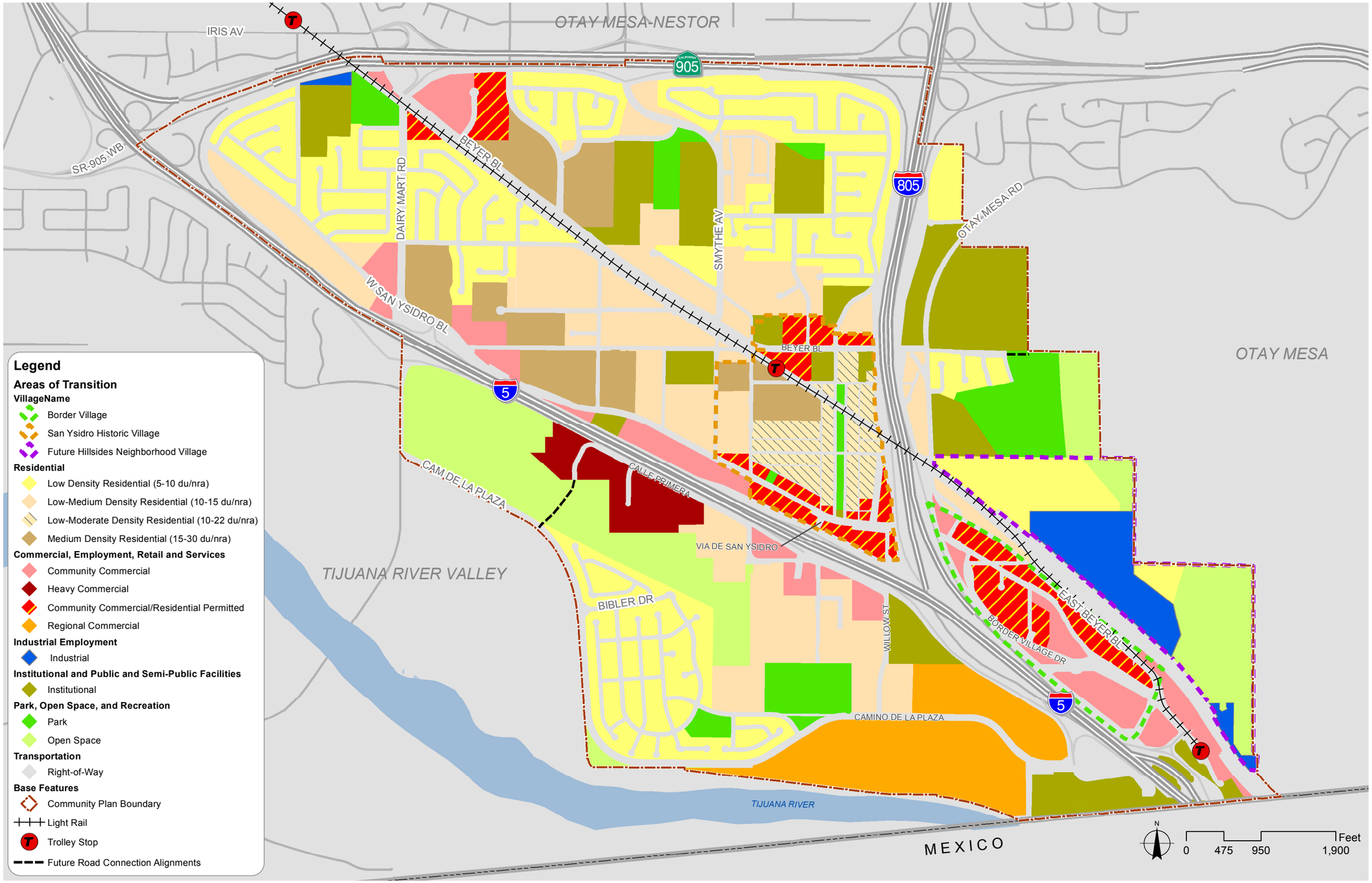
N 0 2,500 Feet

Figure 2



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Source: SYCPU 2016

Land Use Plan

SAN YSIDRO COMMUNITY PLAN UPDATE

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Figure 3

creation of pocket parks and neighborhood plazas. Enhanced streetscape is encouraged including benches, bicycle parking, and improved landscaping and lighting. Bioswales and pervious pavement are encouraged to reduce stormwater runoff and pollutants. Signage improvements are recommended to increase transit usage, and facilitate movement within the community. Lastly, the inclusion of public art is encouraged.

The **Infrastructure and Public Facilities Component** of the Specific Plan establishes policies and describes improvements necessary for the upgrading and expansion of public facilities, including water, wastewater, solid waste, stormwater, natural gas, police and fire protection, schools, libraries, parks, and other public services. Water conservation measures are identified to help ensure a reliable water supply. Stormwater facilities are encouraged to convey runoff through the Specific Plan Area, and reduce water pollution. Adequate staffing and equipment are identified as important to assuring adequate police and fire protection. A new location for the community library in the Specific Plan Area is proposed. Mini and pocket park locations are identified in the Specific Plan area to enhance recreational opportunities within the Specific Plan Area as well as the overall Community Plan Area.

1.3 REGULATORY REQUIREMENTS AND BEST MANAGEMENT PRACTICES

1.3.1 Regulatory Requirements

Construction Measures

Future development pursuant to the proposed SYCPU and SYHVSP would incorporate best management practices (BMPs) during construction to reduce emissions of fugitive dust. SDAPCD Rule 55 – Fugitive Dust Control states that no dust and/or dirt shall leave the property line. SDAPCD Rule 55 requires the following:

(1) Airborne Dust Beyond the Property Line: No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

(2) Track-Out/Carry-Out: Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

(i) be minimized by the use of any of the following or equally effective trackout/ carry-out and erosion control measures that apply to future development or operation:

(a) track-out grates or gravel beds at each egress point,

(b) wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks:

(c) using secured tarps or cargo covering, watering, or treating of transported material; and

(ii) be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only PM_{10}-efficient street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/ carry out is prohibited under any circumstances.

Area Source Reductions

- Use of low-VOC coatings in accordance with, or exceeding, SDAPCD Rule 67
    - Residential interior coatings are to be less than or equal to 50 grams of volatile organic compound (VOC) per liter (g/L)
    - Residential exterior coatings are to be less than or equal to 100 g/L
    - Non-residential interior/exterior coatings are to be less than or equal to 100 g/L

Energy Efficiencies

- Future development will be designed to meet ~~2013~~ 2016 Title 24 energy efficiency standards

1.3.2 Construction Best Management Practices

The control measures listed below are the BMPs that future development would incorporate for dust control:

- Contractor(s) will implement paving, chip sealing or chemical stabilization of internal roadways after completion of grading.
- Dirt storage piles will be stabilized by chemical binders, tarps, fencing or other erosion control.
- A 15-mile per hour (mph) speed limit will be enforced on unpaved surfaces.
- On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.
- Haul trucks hauling dirt, sand, soil, or other loose materials will be covered or two feet of freeboard will be maintained.
- Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the County of San Diego (County) and/or SDAPCD to reduce dust generation.
- Grading will be terminated if winds exceed 25 mph.

- Any blasting areas would be wetted down prior to initiating the blast.

- In accordance with California Green Building Standards Code (CALGreen) criteria, state, and local laws, at least 50 percent of on- site construction waste and ongoing operational waste would be diverted from landfills through reuse and recycling.

2.0 EXISTING CONDITIONS

2.1 CLIMATE AND METEOROLOGY

The climate in southern California, including the San Diego Air Basin (SDAB) in which the Project site is located in, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity. Precipitation is limited to a few storms during the winter season. The climate of the County is characterized by hot, dry summers, and mild, wet winters.

The predominant wind direction in the vicinity of Project site is from the west and the average wind speed is approximately five mph (Iowa Environmental Mesonet [IEM] 2015). The annual average maximum temperature in the Project area is approximately 69 degrees Fahrenheit (ºF), and the average annual minimum temperature is approximately 54ºF. Total precipitation in the Project area averages approximately 10 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2015).

Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions.

2.2 AIR POLLUTANTS OF CONCERN

2.2.1 Criteria Air Pollutants

Federal and state laws regulate air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as “criteria air pollutants” and are categorized as primary and secondary standards. Primary standards are set of limits based on human health. Another set of limits intended to prevent environmental and property damage is

called secondary standards. Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public.

The following specific descriptions of health effects for each air pollutant associated with Project construction and operation are based on U.S. Environmental Protection Agency (USEPA; 2007) and California Air Resources Board (CARB; 2009).

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

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

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

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

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

Lead. Lead (Pb) in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

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

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

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

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. These particles in the atmosphere would obstruct the range of visibility. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

2.2.2 Toxic Air Contaminants

The Health and Safety Code (§39655, subd. (a)) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Sec. 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

2.3 REGULATORY SETTING

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several criteria pollutants, which are introduced above. Table 1, *California and National Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and also has established CAAQS for additional pollutants, including sulfates, H_2S, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On April 30, 2012, the SDAB was classified as a marginal nonattainment area for the 8-hour NAAQS for ozone (CARB 2015b). Effective June 3, 2016, the USEPA determined that 11 areas, including the SDAB, failed to attain the 2008 Ozone NAAQS by the applicable attainment date of July 20, 2015 and, thus, are reclassified as "Moderate" for the 2008 Ozone NAAQS. The SDAB is an attainment area for the NAAQS for all other criteria pollutants including PM_{10} and $PM_{2.5}$. The SDAB currently falls under a national "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area (SDAPCD 2010). The SDAB is currently classified as a nonattainment area under the CAAQS for ozone ~~(serious nonattainment)~~, PM_{10}, and $PM_{2.5}$ (CARB 2014).

The CARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for the County.

Table 1
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[a]	Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	Same as Primary
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
SO_2	24 Hour	0.04 ppm (105 µg/m^3)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

Source: CARB 2013.
Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).
O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM_{10}: large particulate matter;
AAM: Annual Arithmetic Mean; $PM_{2.5}$: fine particulate matter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter;
NO_2 nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer; –: No Standard.

[a] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

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

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The most recent version of the RAQS was adopted by the SDAPCD in 2009. A 2016 version of the RAQS is currently under development. The local RAQS, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to the CARB, which develops the California State Implementation Plan (SIP).

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan. While SANDAG collaborates with the SDAPCD on the development of the SIP, the SDAPCD is the lead agency. As such, SDAPCD is responsible for projecting all future mobile source emissions using EMFAC2014.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin.

The current federal and state attainment status (Table 2, *Federal and State Air Quality Designation*) for the County is as follows:

Table 2
FEDERAL AND STATE AIR QUALITY DESIGNATION

Criteria Pollutant	Federal Designation	State Designation
Ozone (1-hour)	(No federal standard)	Nonattainment
Ozone (8-hour)	Nonattainment	Nonattainment
CO	Maintenance	Attainment
PM_{10}	Unclassifiable	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassifiable
Visibility	(No federal standard)	Unclassifiable

Source: CARB 2014 and USEPA 2015b

2.4 BACKGROUND AIR QUALITY

The SDAPCD operates a network of ambient air monitoring stations throughout the County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the Project site is the Chula Vista monitoring station located at

80 East J Street. The Chula Vista monitoring station does not monitor for CO, therefore, data from the San Diego Beardsley Street station was used to represent the area's ambient CO concentrations. Air quality data are shown on Table 3, *Air Quality Monitoring Data*.

Monitoring data at the Chula Vista station has had acceptable levels of the criteria air pollutants CO, NO_2, and $PM_{2.5}$ for 2012 to 2014. Violations of the state and federal 8-hour standards for ozone occurred in 2012 and 2014. The state annual PM_{10} standard was exceeded each of the three years.

Table 3
AIR QUALITY MONITORING DATA

Air Pollutant	2012	2013	2014
Ozone			
Max 1-hour (ppm)	0.085	0.073	0.093
Days > CAAQS (0.09 ppm)	0	0	0
Max 8-hour (ppm)	0.078	0.062	0.072
Days > NAAQS (0.075 ppm)	1	0	0
Days > CAAQS (0.070 ppm)	1	0	1
Particulate Matter (PM_{10})			
Max Daily ($\mu g/m^3$)	38.0	40.0	39.0
Days > NAAQS (150 $\mu g/m^3$)	0	0	0
Days > CAAQS (50 $\mu g/m^3$)	0	0	0
Annual Average ($\mu g/m^3$)	21.5	29.7	23.4
Exceed CAAQS (20 $\mu g/m^3$)	Yes	Yes	Yes
Particulate Matter ($PM_{2.5}$)			
Max Daily ($\mu g/m^3$)	34.3	21.9	26.5
Days > NAAQS (35 $\mu g/m^3$)	0	0	0
Annual Average ($\mu g/m^3$)	10.2	9.4	9.2
Exceed NAAQS (15 $\mu g/m^3$)	No	No	No
Exceed CAAQS (12 $\mu g/m^3$)	No	No	No
Nitrogen Dioxide (NO_2)			
Max 1-hour (ppm)	0.057	0.057	0.055
Days > NAAQS (0.10 ppm)	0	0	0
Days > CAAQS (0.18 ppm)	0	0	0
Annual Average (ppm)	0.011	0.011	0.011
Exceed NAAQS (0.053 ppm)	No	No	No
Exceed CAAQS (0.030 ppm)	No	No	No
Carbon Monoxide (CO)			
Max 8-hour (ppm)	1.81	No Data	No Data
Days > NAAQS (9.0 ppm)	0	-	-
Days > CAAQS (9.0 ppm)	0	-	-
Max 1-hour (ppm)	4.4	3.2	3.5
Days > NAAQS (35 ppm)	0	0	0
Days > CAAQS (20 ppm)	0	0	0

Sources: CARB 2015a (www.arb.ca.gov); USEPA 2015a (http://www.epa.gov/airdata/ad_rep_con.html) (Used for 1-hour CO)
> = exceeding; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter;
Standard Mean = Annual Arithmetic Mean; No Data = Insufficient data available to determine the value.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 SIGNIFICANCE CRITERIA

The City (2011) has approved guidelines for determining significance based on Appendix G.III of the State California Environmental Quality Act (CEQA) Guidelines, which provide guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP;

2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3. Result in a cumulatively considerable net increase for which the SDAB is in non-attainment of NAAQS or CAAQS;

4. Expose sensitive receptors (including, but not limited to, residences, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations;

5. Create objectionable odors affecting a substantial number of people.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for ozone precursors, oxides of nitrogen and VOCs, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIAs). The SCAQMD's screening threshold of 55 pounds per day or 10 tons per year is being applied to this analysis as a significance threshold for $PM_{2.5}$.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in Table 4, *Screening-level Thresholds for Air Quality Impact Analysis*.

Table 4
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions (Pounds per Day)			
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: SDACPD Rule 20.2 and Rule 1210.
T-BACT = Toxics Best Available Control Technology

3.2 METHODOLOGY

Air emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2 (SCAQMD 2013). CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by the SCAMQD with the input of several air quality management and pollution control districts.

In brief, CalEEMod is a computer model that estimates criteria air pollutant and greenhouse gas emissions from mobile (i.e., vehicular) sources, area sources (fireplaces, woodstoves, and landscape maintenance equipment), energy use (electricity and natural gas used in space heating, ventilation, and cooling; lighting; and plug-in appliances), water use and wastewater generation, and solid waste disposal. Emissions are estimated based on land use information input to the model by the user.

In the first module, the user defines the specific land uses that will occur at the project site. The user also selects the appropriate land use setting (urban, suburban, or rural), operational year, location, climate zone, and utility provider. The input land uses, size features, and population are used throughout CalEEMod in determining default variables and calculations in each of the subsequent modules. The input land use information consists of land use subytpes (such as the

residential subtypes of single-family residential and multi-family medium-rise residential) and their unit or square footage quantities.

Subsequent modules include construction (including off-road vehicle emissions), mobile (on-road vehicle emissions), area sources (woodstoves, fireplaces, consumer products [cleansers, aerosols, solvents], landscape maintenance equipment, architectural coatings), water and wastewater, and solid waste. Each module comprises multiple components including an associated mitigation module to account for further reductions in the reported baseline calculations. Other inputs include trip generation rates, trip lengths, vehicle fleet mix (percentage autos, medium truck, etc.), trip distribution (i.e., percent work to home, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters.

In various places the user can input additional information and/or override the default assumptions to account for project- or location-specific parameters. For this assessment the default parameters including vehicle trip lengths and energy intensity factors were not changed unless otherwise noted. The input data and reported criteria pollutant emission estimates based on these inputs are discussed below. The CalEEMod input and output files are included in Appendix A.

4.0 PROJECT IMPACTS

This section evaluates potential direct impacts of the proposed Project related to the air pollutant emissions. The focus is on the effects of future development carried out in accordance with the SYCPU and SYHVSP.

4.1 SYCPU

4.1.1 Conformance to the Regional Air Quality Strategy

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

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

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

The RAQS includes anticipated growth associated with the currently adopted community plan. Amending the SYCPU to change development from the adopted community plan potential would, necessarily, result in an inconsistency between the RAQS and the proposed community plan update. Relative to the adopted community plan, the proposed SYCPU would:

- increase the number of residential units by ~~30~~ 81 percent;
- increase the amount of land designated for retail/commercial by 7 percent;
- increase the amount of land designated for institutional uses by ~~11~~ 38 percent; and
- decrease the amount of land designated for industrial uses by ~~2~~ 21 percent.

Due to these land use changes, the SYCPU is not consistent with the RAQS, however, as discussed in the traffic impact analysis prepared for the SYCPU, the adopted community plan land use designations would be expected to generate more average daily trips (ADT) than the uses that would be allowed under the proposed SYCPU (472,023 ADT compared to ~~407,233~~441,147 ADT) (Kimley-Horn 2015). Thus, while the proposed land uses under the SYCPU were not included in the emissions assumptions contained within the RAQS, the vehicle trips from the SYCPU are less than those anticipated from the adopted community plan, and would result in lower mobile source emissions. Thus, even though it was not assumed in the RAQS, the proposed SYCPU is therefore generally consistent with the intent of the RAQS, and would not impede the goals contained within the RAQS.

Another measurement tool in determining consistency with the RAQS is to determine how a project accommodates the expected increase in population or employment. Generally, if a project is planned in a way that results in the minimization of VMT both within the project and the community in which it is located, and consequently the minimization of air pollutant emissions, that aspect of the project is consistent with the RAQS. The proposed SYCPU would be consistent with the goals of the RAQS to develop compact, walkable communities close to transit connections and consistent with smart growth principles. The SYCPU proposes to establish two pedestrian-oriented, urban, and mixed-use community villages that would reduce reliance on the automobile, and promote walking and use of alternative transportation. The SYCPU supports the multi-modal strategy of the San Diego Association of Governments (SANDAG) Regional Plan (RP) through the designation of two villages along a trolley corridor, as well as a planned Intermodal Transit Center that would accommodate several transportation modes. Policies contained within the proposed SYCPU Land Use and Mobility Elements would serve to promote bus transit use as well as other forms of mobility, including walking and bicycling. This type of development is consistent with the goals of the RAQS for reducing the emissions associated with new development.

Emissions projections used to establish SDAB attainment objectives reflect adopted regional and local land use plans. Therefore, the emissions associated with the proposed SYCPU are within the amounts already accounted for in the RAQS, and no inconsistency with the RAQS would occur. Thus, the impact would be less than significant, and no mitigation is required.

4.1.2 Conformance to Federal and State Ambient Air Quality Standards

Future development pursuant to the SYCPU would generate criteria pollutants in the short term during construction and the long term during operation. To determine whether a project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SDAPCD (as shown in Table 4).

Construction

Construction activities associated with new land uses proposed under the SYCPU would result in emissions of fugitive dust from demolition and site grading activities, heavy construction equipment exhaust, and vehicle trips associated with workers commuting to and from the site and trucks hauling materials. The exact number and timing of individual development projects that would occur as a result of implementation of the SYCPU are unknown at this time and therefore project-level emission estimates cannot be determined at the program level. Subsequent development projects would need to analyze specific construction-related criteria air pollutant impacts to ensure that emissions remain below SDAPCD thresholds. Because of the likely potential of individual projects to exceed SDAPCD screening thresholds, implementation of the SYCPU would result in potentially significant impacts related to construction emissions.

Operation

Operational source emissions would originate from traffic generated within or as a result of future development pursuant to the proposed SYCPU. Area source emissions would result from activities such as the use of fireplaces and consumer products. In addition, landscape maintenance activities associated would the proposed land uses would produce pollutant emissions.

SYCPU Characteristic Assumptions

CalEEMod prompts the user to enter a given project's location, setting, climate zone, utility provider, operational year, and the specific land uses that will occur. For this analysis, the location was selected as San Diego County with an urban (versus suburban or rural) setting, in climate zone 13, served by San Diego Gas & Electric (SDG&E). The operational year was conservatively set to 2020.

Land Use Assumptions

For comparative purposes, air emissions were calculated for the existing land uses, and the proposed SYCPU land use plan using CalEEMod 2013.2.2. Table 5, *Existing and Future SYCPU Land Uses*, summarizes the existing and future build out land uses entered into CalEEMod (Kimley-Horn 2015).

Table 5
EXISTING AND FUTURE SYCPU LAND USES

Land Use	Existing	Existing to Remain	Proposed New Development	SYCPU Total
Financial Institution (square feet)	17,700	11,500	-	11,500
City Park (acres)	35.8	35.8	~~46.1~~56.4	~~81.9~~92.2
Multi-Family Residential (dwelling units)	4,476	4,479	~~2,930~~4,418	~~7,406~~8,894
Convenience Market (square feet)	2,700	-	-	-
Convenience Market with Gas Pumps (pumps)	84	84	~~-~~4	~~84~~88
Elementary School (students)	4,108	4,108	~~635~~1,029	~~4,743~~5,137
Transportation (acre)	9.8	~~6.7~~7.3	-	~~6.7~~7.3
Fast Food Restaurant (square feet)	45,400	44,900	-	44,900
General Light Industry (square feet)	1,309,800	~~1,281,500~~1,023,000	-	~~1,281,500~~1,023,000
General Office Building (square feet)	7,000	7,000	-	7,000
Government (Civic Center) (square feet)	12,900	6,000	-	6,000
Government Office Building (square feet)	317,500	317,500	48,700	366,200
High School (square feet)	37,600	37,600	96,700	134,300
High Turnover Restaurant (square feet)	40,000	22,400	-	22,400
Hotel (rooms)	756	756	-	756
Industrial Park (square feet)	46,900	46,900	-	46,900
Junior College (students)	2,300	2,300	-	2,300
Junior High School (students)	993	993	~~141~~1,759	~~1,134~~2,752
Library (square feet)	4,300	4,300	10,700	15,000
Medical Office Building (square feet)	48,300	48,300	-	48,300
Mobile Home Park (dwelling units)	532	~~419~~532	~~-~~110	~~419~~642
Motel (rooms)	35	35	-	35
Park and Ride Lot (spaces)	7,987	7,987	3,057	11,044,000
Place of Worship (square feet)	175,500	175,500	-	175,500
Regional Shopping Center (square feet)	1,443,400	1,443,400	909,800	2,353,200
Single Family Residential (dwelling units)	2,339	~~2,183~~2,339	~~-~~2,069	~~2,183~~4,408
Strip Mall (square feet)	507,200	507,200	518,100	1,025,300
Supermarket (square feet)	23,000	~~-~~4,600	-	~~-~~4,600
Warehouse (square feet)	11,500	11,500	22,800	34,300

Source: Kimley-Horn 2015

Portions of existing developed lands within the plan area would remain, and likely not change as part of the proposed SYCPU. These include single-family residences, recently constructed multi-family residences, recently entitled projects, and existing major public and institutional uses. Because these existing developed land uses were built to older, less stringent code requirements than those applicable to future development or re-development, the existing developed land uses that will remain and not change, and the land uses that would be developed or re-developed as part of the buildout of the proposed SYCPU would have different energy consumptions associated with them. In order to reflect these energy consumption differences, emissions were estimated using two separate CalEEMod runs for the land uses in the proposed SYCPU. These runs are discussed in further detail below.

The quantities listed in Table 5 include the existing developed land uses that were assumed to remain and not be redeveloped as part of the SYCPU, and the proposed new development. It was

assumed that the energy-related emissions associated with the existing land uses that would not be redeveloped were related to older energy codes, while those associated with new development project would be the result of recent energy code revisions. The two model runs were then added together to obtain the total project emissions associated with the SYCPU buildout.

Estimating Vehicle Emissions

CalEEMod estimates vehicle emissions by first calculating trip rate, trip length, trip purpose, and trip type percentages (e.g., home to work, home to shop, home to other) for each land use type, based on the land use types and quantities entered by the user in the land use module. For this analysis, the CalEEMod default trip rates were edited to reflect the trip rates identified for each land use subtype in the traffic impact analysis prepared for the SYCPU (Kimley-Horn 2015). The model's default trip lengths, purpose, and types were not edited.

Estimating Energy Use Emissions

Air pollutants are emitted as a result of activities in buildings for which natural gas are used as an energy source. CalEEMod estimates emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by the natural gas air pollutant emission factors applicable to the project location and utility provider.

CalEEMod default energy values are based on the California Energy Commission- (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies, which identify energy use by building type and climate zone. Each land use type input to the land use module is mapped in the energy module to the appropriate CEUS and RASS building type. Because these studies are based on older buildings, adjustments have been made in CalEEMod to account for changes to Title 24 building codes. The default adjustment is to the 2008 Title 24 energy code (part 6 of the building code). Adjustments to simulate the 2005 Title 24 energy code are available in the model by selecting the "use historical data" box. The CalEEMod User's Guide states that "a user should select the use historical box if they only want an adjustment to the 2005 standard which were in effect when CARB developed its Scoping Plan 2020 No Action Taken (i.e., business as usual [BAU]) predictions" (ENVIRON 2013). Therefore, the historical data box was selected in order to reflect emissions from energy use as associated with a building built to the 2005 Title 24 energy code.

The current ~~2013~~ 2016 Title 24 energy code results in a ~~25 to 30~~46 percent reduction in Title 24 regulated energy use over the 2008 Title 24 standards. For the estimates of the SYCPU, energy emissions were estimated using two runs of the model. One run assumed a ~~25~~ 46 percent reduction over the default 2008 Title 24 energy code for the portion of the total buildout land use quantities that would be new (i.e., the Proposed New Development land uses), and therefore constructed in accordance with the ~~2013~~ 2016 Title 24 energy code. The second model run for the SYCPU selected the historical data box for the portion of the total buildout land use quantities that comprise existing land uses that would not change (i.e., the Existing to Remain land uses). The two model runs were then added together to obtain the total projected energy emissions associated with the SYCPU buildout. Table 5 lists the buildout land use quantities that

were input to the Existing to Remain and Proposed New Development CalEEMod energy module runs.

Estimating Area Source Emissions

This CalEEMod module estimates the emissions that would occur from the use of hearths, woodstoves, and landscaping equipment. This module also estimates emissions due to use of consumer products and architectural coatings that have VOCs. The use of hearths and woodstoves directly emits air pollutants from the combustion of natural gas, wood, or biomass, some of which are thus classified as biogenic. CalEEMod estimates emissions from hearths and woodstoves only for residential uses based on the type and size of features of the residential land use inputs.

The use of landscape equipment emits air pollutants associated with the equipment's fuel combustion. CalEEMod estimates the number and type of equipment needed based on the number of summer days given the project's location as entered in the project characteristics module. The model defaults for hearths, woodstoves, and landscaping equipment were assumed.

Architectural VOC emissions for operations are primarily associated with maintenance activities. These activities are not covered under CALGreen. However, coatings sold in the County must comply with SDAPCD Rule 67.0. As a worst-case, the upper end SDAPCD architectural coating VOC limit of 250 milligrams per liter was used in each run.

Total Operational Emissions

A summary of the modeling results, which includes mobile, area, and energy source emissions, is shown in Table 6, *Average Daily Operational Emissions*. As seen in Table 6, total future ~~reactive organic gas (ROG), CO, SO_2, PM_{10}, and $PM_{2.5}$~~ emissions under the proposed SYCPU are projected to be greater than existing conditions for all criteria pollutants. This is due to the increase in development associated with buildout of the SYCPU.

As shown in Table 6, SYCPU emissions of the criteria pollutants ROG, CO, PM_{10}, and $PM_{2.5}$ during operation would exceed the daily thresholds. Therefore, operation of the SYCPU would result in a significant impact on air quality.

Table 6
AVERAGE DAILY OPERATIONAL EMISSIONS
(pounds per day)

Emission Sources	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Existing Emissions (Year 2010)						
Area Sources	11,831	160	14,499	5	1,949	1,949
Energy Sources	8	72	45	<1	6	6
Vehicular (Mobile) Sources	1,143	2,152	10,327	15	1,101	313
Total Existing	*12,983*	*2,384*	*24,871*	*21*	*3,056*	*2,268*
SYCPU Emissions (Year 2020)						
Area Sources	~~16,104~~ 22,320	~~217~~303	~~19,699~~ 27,445	~~7~~10	~~2,655~~ 3,700	~~2,655~~ 3,700
Energy Sources	~~9~~10	~~78~~91	~~48~~53	~~<1~~1	~~6~~7	~~6~~7
Vehicular (Mobile) Sources	~~1,163~~ 1,269	~~1,978~~ 2,193	~~10,177~~ 11,217	~~24~~ 26	~~1,691~~ 1,887	~~470~~ 524
Total SYCPU	~~*17,275*~~ *23,599*	~~*2,274*~~ *2,587*	~~*29,923*~~ *38,715*	~~*32*~~ *37*	~~*4,352*~~ *5,594*	~~*3,131*~~ *4,231*
Net SYCPU Emissions	**~~4,293~~ 10,617**	**~~(110)~~ 203**	**~~5,053~~ 13,845**	**~~10~~ 16**	**~~1,296~~ 2,538**	**~~863~~ 1,963**
Screening Level Thresholds	75	250	550	250	100	55
Exceed Threshold?	***Yes***	***No***	***Yes***	***No***	***Yes***	***Yes***

Source: CalEEMod output data is provided in Appendix A
Note: CalEEMod mobile sources emissions were adjusted to remove the greenhouse gas (GHG) reductions from the Pavley I and (Low Carbon Fuel Standards (LCFS). Totals may not add up exactly due to rounding.

4.1.3 Cumulatively Considerable Net Increase of Criteria Pollutants

The cumulative area for regional air quality analysis is the SDAB. The SDAB is designated as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ under State ~~and/or federal~~ standards and a nonattainment area for ozone under federal standards. The RAQS is the most appropriate document for evaluating the SYCPU's cumulative effects because the RAQS evaluated air quality emissions for the whole of the SDAB using a future development scenario. According to Section 4.1.1 of this report, the proposed SYCPU would conflict with implementation of the RAQS. Furthermore, as discussed under Section 4.1.2, the proposed SYCPU's operational regional ROG (an ozone precursor), PM_{10}, and $PM_{2.5}$ emissions would exceed the SDAPCD's Screening Level Thresholds. Because it cannot be demonstrated at the programmatic level, that future development would not exceed applicable air quality standards, impacts are considered cumulatively considerable and significant. Thus, the SYCPU's ROG emissions could contribute to existing violations of the State and federal ozone standards; the PM_{10} and $PM_{2.5}$ emissions could also contribute to existing violations of their respective standards.

4.1.4 Impacts to Sensitive Receptors

Impacts to sensitive receptors are typically analyzed for operational period CO hot spots, and exposure to TACs. An analysis of the SYCPU's potential to expose sensitive receptors to these pollutants is provided below.

Carbon Monoxide Hot Spots

A CO hot spot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at Level of Service (LOS) E or F, or causes an intersection that would operate at LOS D or better without the project to operate at LOS E or F with the project, a quantitative screening is required. According to the SYCPU Traffic Impact Analysis, 25 of the 48 intersections analyzed within the plan area would have a cumulative traffic related impact before inclusion of the recommended traffic mitigation measures (Kimley-Horn 2015). As such, there would be a potential for a CO hot spot or exposure of sensitive receptors to substantial CO emissions. Therefore, CO hot spot impacts would be potentially significant.

Exposure to Toxic Air Contaminants

Stationary Sources

The SYCPU includes land uses which may generate air pollutants affecting adjacent sensitive land uses. In air quality terms, individual land uses that emit air pollutants in sufficient quantities are known as stationary sources. The primary concern with stationary sources is local, however, they also contribute to air pollution in the SDAB. Stationary sources include gasoline stations, power plants, dry cleaners, and other commercial and industrial uses. Stationary sources are regulated by the local air pollution control or management district through the issuance of permits; in this case, the agency is the SDAPCD.

The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, AB 2588 was enacted in 1987, and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

In accordance with AB 2588, any new facility proposed that would have the potential to emit toxic air contaminants would be required to assess air toxic problems that would result from their facility's emissions (SDAPCD 2010). If air emissions from a specific facility include toxic substances or exceed identified limits, the facility is required by the SDAPCD to provide information regarding emission inventories and health risk assessments. If adverse health impacts exceeding public notification levels are identified, the facility would provide public notice, and if the facility poses a potentially significant public health risk, the facility must submit a risk reduction audit and plan to demonstrate how the facility would reduce health risks. Thus, with this regulatory framework, at the program level, impacts associated with stationary sources in the SYCPU area would be less than significant.

Table 7 CARB LAND USE SITING RECOMMENDATIONS	
Source Category	**Recommended Buffer Distance (feet)**
Freeways and High-Traffic Roads (freeways, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day)	500
Distribution Centers (that accommodate more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week)	1,000
Chrome Platers	1,000
Dry Cleaners using Perchloroethylene (1 machine)	300
Dry Cleaners using Perchloroethylene (2 machines)	500
Dry Cleaners using Perchloroethylene (3 or more machines)	Requires consultation with SDAPCD
Large Gas Station (3.6 million gallons or more per year)	300
Other Gas Stations	50

Source: CARB 2005

The proposed land uses within the SYCPU would include stationary sources of air pollutants as well as the potential for siting sensitive land uses in close proximity to stationary sources. Therefore, impacts associated with exposure of TACs to sensitive uses would be potentially significant.

Mobile Sources

The SYCPU contains several areas where new residential and other sensitive receptors could be placed within 500 feet of three major freeways (I-5, I-805, and SR-905). Based on the Table 7, these sensitive land uses could be exposed to unacceptable levels of DPM generated by diesel powered vehicles traveling these roadways. Furthermore, due to the community's location near the San Ysidro international border crossing, the potential for DPM could be greater than other communities in San Diego due the anticipated higher percentage of truck traffic and the diminished vehicle emission controls installed on trucks registered in Mexico. Thus, impacts from DPMs are considered significant.

4.1.5 Odor Impacts

Although the SYCPU area is adjacent to numerous industrial operations, there are no known sources of specific, long-term odors in the area. There are no agricultural operations in the SYCPU area. The SYCPU would allow a variety of land uses that are not typically associated with the creation of objectionable odors. The SYCPU does not propose any specific new sources of odor that could affect sensitive receptors. Thus, impacts associated with odors are anticipated to be less than significant.

4.2 SYHVSP

4.2.1 Conformance to the Regional Air Quality Strategy

The land uses which would occur within the SYHVSP would reflect the land use designations applied to the Specific Plan area by the SYCPU. As with the SYCPU, the land use designations within the SYHVSP would change which would create a potential inconsistency with the RAQS.

4.2.2 Conformance to Federal and State Ambient Air Quality Standards

As the land uses which would occur within the SYHVSP would reflect the land use designations applied to the Specific Plan area by the SYCPU, the emissions generated by future development of the SYHVSP are accounted for in the emissions evaluate for the SYCPU. As with general development within the SYCPU, new development within the SYHVSP would result in construction and operational emissions that could create emission levels that would exceed State and federal air quality standards and constitute a significant impact.

4.2.3 Cumulatively Considerable Net Increase of Criteria Pollutants

As discussed earlier, the proposed SYHVSP would conflict with implementation of the RAQS and operational regional emissions could result in significant impacts with respect to State and federal air quality standards. Thus, impacts would be cumulatively considerable and significant; the SYHVSP's ROG emissions could contribute to existing violations of the State and federal ozone standards and the PM10 and PM2.5 emissions could contribute to existing violations of their respective standards.

4.2.4 Impacts to Sensitive Receptors

Carbon Monoxide Hot Spots

As the land uses which would occur within the SYHVSP would reflect the land use designations applied to the Specific Plan area by the SYCPU, the trips generated by future development of the SYHVSP are accounted for in the trips evaluate for the SYCPU. As with the SYCPU, there would be potential for a CO hot spot and exposure of sensitive receptors to substantial, local CO emissions. Thus, the impact would be potentially significant.

Exposure to Toxic Air Contaminants

Stationary Sources

The SYHVSP does not include any land uses which could generate TACs. As such, there is no potential for exposure of TACs to sensitive receptors from new stationary sources. Impacts would be less than significant.

Mobile Sources

The SYHVSP contains several areas where residential and other sensitive uses would be placed near to commercial uses and major roadways/freeways. CARB and SDAPCD provide guidance

with the recommendation to site sensitive land uses outside specified buffers adjacent to or surrounding major emitters or facilities of concern. Sensitive uses located within the buffer distances of the facilities, indicated previously in Table 7, would be exposed to TACs. As with the SYCPU, impacts associated with exposure of TACs to sensitive uses would be potentially significant.

4.2.5 Odor Impacts

There are no known sources of specific, long-term odors in the area. There are no agricultural operations in the SYHVSP area. The SYHVSP would allow a variety of land uses that are not typically associated with the creation of objectionable odors. The SYHVSP does not propose any specific new sources of odor that could affect sensitive receptors. Impacts associated with odors are anticipated to be less than significant.

5.0 SUMMARY OF IMPACTS AND RECOMMENDED MEASURES

5.1 CONFORMANCE TO THE REGIONAL AIR QUALITY STRATEGY

Based on the analysis presented in Section 4.1, the land use designation changes associated with the SYCPU, the SYCPU and SYHVSP would, necessarily, result in an inconsistency between the RAQS and the proposed community plan update. However, as discussed in the traffic impact analysis prepared for the SYCPU, the adopted community plan land use designations would be expected to generate more ADT than the uses that would be allowed under the proposed SYCPU (472,023 ADT compared with ~~407,233~~441,147 ADT) (Kimley-Horn 2015). Furthermore, the proposed SYCPU is intended to further express General Plan policies in the proposed SYCPU area through the provision of site-specific recommendations that implement city-wide goals and policies, address community needs, and guide zoning. Thus, while the proposed land uses under the SYCPU were not included in the emissions assumptions contained within the RAQS, the vehicle trips from the SYCPU are less than those anticipated from the adopted community plan and the goals and recommendations are consistent with development design guidelines, other mobility and civic guidelines, incentives, and programs in accordance with the general goals stated in the General Plan. Therefore, the emissions associated with the proposed SYCPU are within the amounts already accounted for in the RAQS, and no inconsistency with the RAQS would occur. Thus, the impact of the SYCPU on the RAQS would be less than significant and no mitigation would be required.

5.2 CONFORMANCE TO FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Criteria air pollutants generated during construction of new development pursuant to the SYCPU and SYHVSP could produce pollutants that would exceed State and federal requirements. Operational emissions would be associated with vehicle trips generated by the SYCPU and SYHVSP development, along with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the SYCPU and SYHVSP emissions would exceed the screening-level thresholds for VOCs, CO, PM_{10}, and $PM_{2.5}$. Thus, the increase in future

emissions of carbon monoxide, particulates, and ozone precursors associated with the SYCPU and SYHVSP would result in a significant air quality impact.

The following mitigation framework would reduce potential impacts of buildout under the SYCPU and SYHVSP on State and federal air quality standards. However, the ability of future development to successfully implement the actions required to fully meet these mitigation measures cannot be guaranteed at this time. Thus, air pollutant impacts from construction and operation under the proposed SYCPU and SYHVSP are considered significant and unavoidable at the program level.

AQ-1 To identify potential impacts resulting from construction activities, proposed development projects that are subject to CEQA shall have construction-related air quality impacts analyzed using the latest available CalEEMod model, or other analytical method determined in conjunction with the City. The results of the construction-related air quality impacts analysis shall be included in the development project's CEQA documentation. If such analyses identify potentially significant regional or local air quality impacts based on the emissions thresholds presented in Table 4, the City shall require the incorporation of appropriate mitigation to reduce such impacts. Examples of potential mitigation measures are provided in Mitigation Measure AQ-2, below.

AQ-2 For individual construction project that would exceed daily emissions thresholds established by the City of San Diego, best available control measures/technology shall be incorporated to reduce construction emissions to the extent feasible. Best available control measures/technology include:

a) Minimizing simultaneous operation of multiple pieces of construction equipment;

b) Use of more efficient, or low pollutant emitting equipment, e.g., Tier III or Tier IV rated equipment;

c) Use of alternative fueled construction equipment;

d) Dust control measures for construction sites to minimize fugitive dust, (e.g. watering, soil stabilizers, and speed limits); and/or

e) Minimizing idling time by construction vehicles.

AQ-3 Each individual implementing development project shall submit a traffic control plan prior to the issuance of a grading permit. The traffic control plan shall describe in detail safe detours and provide temporary traffic control during construction activities for that project. To reduce traffic congestion, the plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic controls such as a flag person during all phases of construction to maintain smooth traffic flow, dedicated turn lanes for movement of construction trucks and equipment on and off site, scheduling of construction activities that affect traffic flow on the arterial system to off-peak hour,

consolidating truck deliveries, rerouting of construction trucks away from congested streets or sensitive receptors, and/or signal synchronization to improve traffic flow.

AQ-4 To identify potential impacts resulting from operational activities associated with future development, proposed development that are subject to CEQA shall have long-term operational-related air quality impacts analyzed using the latest available CalEEMod model, or other analytical method determined in conjunction with the City. The results of the operational-related air quality impacts analysis shall be included in the development project's CEQA documentation. To address potential localized impacts, the air quality analysis shall incorporate a CO hot spot analysis, or other appropriate analyses, as determined by the City. If such analyses identify potentially significant regional or local air quality impacts based on the thresholds presented in Table 2 or Table 4, the City shall require the incorporation of appropriate mitigation to reduce such impacts. Examples of potential measures include the following:

- Installation of electric vehicle charging stations;
- Improve walkability design and pedestrian network;
- Increase transit accessibility and frequency by incorporating Bus Rapid Transit ~~lines with permanent operational funding stream~~routes included in the SANDAG Regional Plan.
- Limit parking supply and unbundle parking costs. Lower parking supply below ITE rates and separate parking costs from property costs.

AQ-5 In order to reduce energy consumption from future development, applications (e.g., electrical plans, improvement maps) submitted to the City shall include the installation of energy-efficient street lighting throughout the project site where street lighting is proposed.

5.3 CUMULATIVELY CONSIDERABLE NET INCREASE OF CRITERIA POLLUTANTS

As discussed previously, the proposed SYCPU is intended to further express General Plan policies in the proposed SYCPU area through the provision of site-specific recommendations that implement city-wide goals and policies, address community needs, and guide zoning. The two documents work together to establish the framework for growth and development in the proposed SYCPU area. The proposed SYCPU contains eight elements, each providing neighborhood-specific goals and recommendations. These goals and recommendations are consistent with development design guidelines, other mobility and civic guidelines, incentives, and programs in accordance with the general goals stated in the General Plan. Mitigation Measures AQ-1 through AQ-5 would reduce criteria pollutant emissions but the contribution of air pollutants to the SDAB would result in a significant cumulative impact on air quality with the SDAB which would be unavoidable.

5.4 IMPACTS TO SENSITIVE RECEPTORS

5.4.1 Carbon Monoxide Hot Spots

The analysis indicated there would be the potential for a CO hot spot or exposure of sensitive receptors to substantial, project generated, local CO emissions. The impact would be potentially significant. While implementation of Mitigation Measures AQ-3 and AQ-4 would reduce construction and operations CO emissions, the ability of future development to successfully implement the actions required to fully meet these mitigation measures cannot be guaranteed at this time. Thus, CO hotspot impacts from construction and operation under the proposed SYCPU and SYHVSP are considered significant and unavoidable at the program level.

5.4.2 Diesel Particulate Matter

Sensitive uses located within the buffer distances of the facilities, indicated previously in Table 7, could be exposed to unacceptable DPM levels. Impacts would be significant. While implementation of Mitigation Measure AQ-6 would reduce DPM impacts, the ability of future development to successfully implement the actions required to fully meet DPM threshold cannot be guaranteed at this time. Thus, DPM impacts under the proposed SYCPU and SYHVSP are considered significant and unavoidable at the program-level.

AQ-6 Prior to the issuance of building permits for any facility within the buffer area identified in Table 7, a health risk assessment shall be prepared that demonstrates that health risks would be below the level of significance identified in Table 4.

5.5 ODORS

The SYCPU does not propose any specific new sources of odor that could affect sensitive receptors. Impacts associated with odors are anticipated to be less than significant.

6.0 REFERENCES

California Air Resources Board (CARB). 2015a. Top 4 Measurements and Days Above the Standard. Available at: http://www.arb.ca.gov/adam/welcome.html. Accessed September 2015.

2015b Federal Standard Area Designations. Available at: http://www.arb.ca.gov/desig/feddesig.htm. Accessed September 2015.

2014 Area Designations and Maps – 2013. November.

2013 Ambient Air Quality Standards. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. June.

2009 ARB Fact Sheet: Air Pollution and Health. December 2. Available at: http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm

2005 Air Quality and Land Use Handbook: A Community Health Perspective. April.

City of San Diego. 2011. California Environmental Quality Act Significance Determination Thresholds. Development Services Department.

ENVIRON. 2013. California Emissions Estimator Model User's Guide Version 2013.2.2. July. Available at: http://caleemod.com/

Iowa Environmental Mesonet. 2015. San Diego/Brown Field Windrose Plot. Available at: http://mesonet.agron.iastate.edu/sites/windrose.phtml?station=SDM&network=CA_ASOS

Kimley-Horn and Associates. 2015. San Ysidro CPU Traffic Impact Study – Draft Version 3. ~~September~~December.

San Diego County Air Pollution Control District (SDAPCD). 2010. Fact Sheet: Attainment Status. Available at: http://www.sdapcd.org/info/facts/attain.pdf. January.

South Coast Air Quality Management District (SCAQMD). 2013. California Emission Estimator Model (CalEEMod) Version 2013.2.2. Re-released September 2013.

United States Environmental Protection Agency (USEPA). 2015a. Monitor Values Report. http://www.epa.gov/airdata/ad_rep_mon.html. Accessed September 2015.

2015b Final Area Designations and Classification.

2007 The Effects of Air Pollutants – Health Effects. Available at: http://www.epa.gov/region7/air/quality/health.htm.

Western Regional Climate Center, Western U.S. Climate Summaries, California, Chula Vista (041758), 2015.

7.0 LIST OF PREPARERS

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Appendix A

CALEEMOD EMISSION CALCULATIONS

SYCPU - Changed Proposed (2020)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	0.00	1000sqft	0.00	0.00	0
General Office Building	0.00	1000sqft	0.00	0.00	0
Government (Civic Center)	0.00	1000sqft	0.00	0.00	0
Government Office Building	48.70	1000sqft	1.12	48,700.00	0
Medical Office Building	0.00	1000sqft	0.00	0.00	0
Elementary School	1,029.00	Student	1.97	86,027.87	0
High School	96.70	1000sqft	2.22	96,700.00	0
Junior College (2Yr)	0.00	Student	0.00	0.00	0
Junior High School	1,759.00	Student	4.75	206,791.00	0
Library	10.70	1000sqft	0.25	10,700.00	0
Place of Worship	0.00	1000sqft	0.00	0.00	0
General Light Industry	0.00	1000sqft	0.00	0.00	0
Industrial Park	0.00	1000sqft	0.00	0.00	0
Unrefrigerated Warehouse-No Rail	22.80	1000sqft	0.52	22,800.00	0
Enclosed Parking Structure	0.00	Acre	0.00	0.00	0
Parking Lot	3,057.00	Space	27.51	1,222,800.00	0
City Park	56.40	Acre	56.40	2,456,784.00	0
Fast Food Restaurant with Drive Thru	0.00	1000sqft	0.00	0.00	0
High Turnover (Sit Down Restaurant)	0.00	1000sqft	0.00	0.00	0
Hotel	0.00	Room	0.00	0.00	0
Motel	0.00	Room	0.00	0.00	0

Condo/Townhouse	4,418.00	Dwelling Unit	276.13	4,418,000.00	12635
Mobile Home Park	110.00	Dwelling Unit	13.86	132,000.00	315
Single Family Housing	2,069.00	Dwelling Unit	671.75	3,724,200.00	5917
Convenience Market (24 Hour)	0.00	1000sqft	0.00	0.00	0
Convenience Market With Gas Pumps	4.00	Pump	0.01	564.70	0
Regional Shopping Center	909.80	1000sqft	20.89	909,800.00	0
Strip Mall	518.10	1000sqft	11.89	518,100.00	0
Supermarket	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No change from Public Review Draft

Trips and VMT -

Architectural Coating -

Vehicle Trips - Kimley Horn 2016

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	CC_TTP	0.00	80.20
tblVehicleTrips	CC_TTP	0.00	80.20
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	0.80
tblVehicleTrips	CW_TTP	0.00	0.80
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	86.32	200.26
tblVehicleTrips	ST_TR	1.59	50.66
tblVehicleTrips	ST_TR	7.16	6.69

tblVehicleTrips	ST_TR	863.10	706.30
tblVehicleTrips	ST_TR	204.47	150.23
tblVehicleTrips	ST_TR	0.00	122.88
tblVehicleTrips	ST_TR	722.03	699.22
tblVehicleTrips	ST_TR	1.32	12.94
tblVehicleTrips	ST_TR	2.37	25.14
tblVehicleTrips	ST_TR	158.37	129.69
tblVehicleTrips	ST_TR	8.19	10.03
tblVehicleTrips	ST_TR	2.49	16.20
tblVehicleTrips	ST_TR	46.55	49.87
tblVehicleTrips	ST_TR	8.96	49.96
tblVehicleTrips	ST_TR	5.00	4.97
tblVehicleTrips	ST_TR	5.63	9.00
tblVehicleTrips	ST_TR	0.00	2.26
tblVehicleTrips	ST_TR	10.37	11.95
tblVehicleTrips	ST_TR	49.97	42.21
tblVehicleTrips	ST_TR	10.08	9.01
tblVehicleTrips	ST_TR	42.04	93.10
tblVehicleTrips	ST_TR	177.59	150.17
tblVehicleTrips	ST_TR	2.59	5.10
tblVehicleTrips	SU_TR	31.90	200.26
tblVehicleTrips	SU_TR	1.59	50.66
tblVehicleTrips	SU_TR	6.07	6.69
tblVehicleTrips	SU_TR	758.45	706.30
tblVehicleTrips	SU_TR	166.88	150.23
tblVehicleTrips	SU_TR	0.00	122.88
tblVehicleTrips	SU_TR	542.72	699.22
tblVehicleTrips	SU_TR	0.68	12.94

tblVehicleTrips	SU_TR	0.98	25.14
tblVehicleTrips	SU_TR	131.84	129.69
tblVehicleTrips	SU_TR	5.95	10.03
tblVehicleTrips	SU_TR	0.73	16.20
tblVehicleTrips	SU_TR	25.49	49.87
tblVehicleTrips	SU_TR	1.55	49.96
tblVehicleTrips	SU_TR	4.36	4.97
tblVehicleTrips	SU_TR	5.63	9.00
tblVehicleTrips	SU_TR	0.00	2.26
tblVehicleTrips	SU_TR	36.63	11.95
tblVehicleTrips	SU_TR	25.24	42.21
tblVehicleTrips	SU_TR	8.77	9.01
tblVehicleTrips	SU_TR	20.43	93.10
tblVehicleTrips	SU_TR	166.44	150.17
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tblVehicleTrips	WD_TR	1.29	2.91
tblVehicleTrips	WD_TR	0.00	122.88
tblVehicleTrips	WD_TR	496.12	699.22
tblVehicleTrips	WD_TR	6.97	12.94
tblVehicleTrips	WD_TR	11.01	25.14
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tblVehicleTrips	WD_TR	68.93	27.80
tblVehicleTrips	WD_TR	12.89	18.00

tblVehicleTrips	WD_TR	127.15	129.69
tblVehicleTrips	WD_TR	8.17	10.03
tblVehicleTrips	WD_TR	6.96	16.20
tblVehicleTrips	WD_TR	1.20	1.66
tblVehicleTrips	WD_TR	1.62	1.41
tblVehicleTrips	WD_TR	56.24	49.87
tblVehicleTrips	WD_TR	36.13	49.96
tblVehicleTrips	WD_TR	4.99	4.97
tblVehicleTrips	WD_TR	5.63	9.00
tblVehicleTrips	WD_TR	0.00	2.26
tblVehicleTrips	WD_TR	9.11	11.95
tblVehicleTrips	WD_TR	42.94	42.21
tblVehicleTrips	WD_TR	9.57	9.01
tblVehicleTrips	WD_TR	44.32	93.10
tblVehicleTrips	WD_TR	102.24	150.17
tblVehicleTrips	WD_TR	2.59	5.10

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10,508.0110	143.2988	12,984.0489	4.8868		1,750.3576	1,750.3576		1,750.3064	1,750.3064	183,210.1076	77,817.2909	261,027.3985	170.0325	14.4109	269,065.4476
Energy	3.7660	32.2926	14.5070	0.2054		2.6019	2.6019		2.6019	2.6019		41,083.0808	41,083.0808	0.7874	0.7532	41,333.1056
Mobile	452.0644	805.0482	4,072.8554	9.8101	689.5902	11.5838	701.1740	184.0747	10.6895	194.7641		750,478.6882	750,478.6882	29.9311		751,107.2403
Total	**10,963.8414**	**980.6396**	**17,071.4113**	**14.9022**	**689.5902**	**1,764.5433**	**2,454.1335**	**184.0747**	**1,763.5978**	**1,947.6724**	**183,210.1076**	**869,379.0599**	**1,052,589.1675**	**200.7510**	**15.1641**	**1,061,505.7934**

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	10,508.0110	143.2988	12,984.0489	4.8868		1,750.3576	1,750.3576		1,750.3064	1,750.3064	183,210.1076	77,817.2909	261,027.3985	170.0325	14.4109	269,065.4476
Energy	2.4082	20.6540	9.3062	0.1314		1.6638	1.6638		1.6638	1.6638		26,271.1753	26,271.1753	0.5035	0.4816	26,431.0573
Mobile	452.0644	805.0482	4,072.8554	9.8101	689.5902	11.5838	701.1740	184.0747	10.6895	194.7641		750,478.6882	750,478.6882	29.9311		751,107.2403
Total	**10,962.4836**	**969.0010**	**17,066.2104**	**14.8282**	**689.5902**	**1,763.6052**	**2,453.1954**	**184.0747**	**1,762.6597**	**1,946.7343**	**183,210.1076**	**854,567.1544**	**1,037,777.2621**	**200.4671**	**14.8925**	**1,046,603.7452**

	ROG	NOx	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	0.01	1.19	0.03	0.50	0.00	0.05	0.04	0.00	0.05	0.05	0.00	1.70	1.41	0.14	1.79	1.40

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	452.0644	805.0482	4,072.8554	9.8101	689.5902	11.5838	701.1740	184.0747	10.6895	194.7641		750,478.6882	750,478.6882	29.9311		751,107.2403
Mitigated	452.0644	805.0482	4,072.8554	9.8101	689.5902	11.5838	701.1740	184.0747	10.6895	194.7641		750,478.6882	750,478.6882	29.9311		751,107.2403

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Bank (with Drive-Through)	0.00	0.00	0.00		
City Park	2,857.22	2,857.22	2857.22	6,099,752	6,099,752
Condo/Townhouse	29,556.42	29,556.42	29556.42	84,392,545	84,392,545
Convenience Market (24 Hour)	0.00	0.00	0.00		
Convenience Market With Gas Pumps	600.92	600.92	600.92	322,336	322,336
Elementary School	2,994.39	0.00	0.00	4,716,034	4,716,034
Enclosed Parking Structure	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Government (Civic Center)	0.00	0.00	0.00		
Government Office Building	1,353.86	0.00	0.00	1,658,363	1,658,363
High School	1,740.60	422.58	173.09	3,477,918	3,477,918
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Junior College (2Yr)	0.00	0.00	0.00		
Junior High School	2,480.19	0.00	0.00	3,982,821	3,982,821
Library	533.61	533.61	533.61	904,391	904,391
Medical Office Building	0.00	0.00	0.00		
Mobile Home Park	546.70	546.70	546.70	1,560,994	1,560,994
Motel	0.00	0.00	0.00		
Parking Lot	6,908.82	6,908.82	6908.82	18,402,377	18,402,377
Place of Worship	0.00	0.00	0.00		
Regional Shopping Center	38,402.66	38,402.66	38402.66	67,331,566	67,331,566
Single Family Housing	18,641.69	18,641.69	18641.69	53,227,680	53,227,680
Strip Mall	48,235.11	48,235.11	48235.11	74,283,663	74,283,663
Supermarket	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	116.28	116.28	116.28	339,481	339,481
Total	154,968.47	146,822.01	146,572.52	320,699,921	320,699,921

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	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
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Enclosed Parking Structure	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
High School	9.50	7.30	7.30	77.80	17.20	5.00	75	19	6
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Junior High School	9.50	7.30	7.30	72.80	22.20	5.00	63	25	12
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Mobile Home Park	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Motel	9.50	7.30	7.30	19.00	62.00	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

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

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	2.4082	20.6540	9.3062	0.1314		1.6638	1.6638		1.6638	1.6638		26,271.1753	26,271.1753	0.5035	0.4816	26,431.0573
NaturalGas Unmitigated	3.7660	32.2926	14.5070	0.2054		2.6019	2.6019		2.6019	2.6019		41,083.0808	41,083.0808	0.7874	0.7532	41,333.1056

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					
Bank (with Drive-Through)	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

	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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	166928	1.8002	15.3836	6.5462	0.0982		1.2438	1.2438		1.2438	1.2438		19,638.6330	19,638.6330	0.3764	0.3600	19,758.1505
Convenience Market (24 Hour)	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
Convenience Market With Gas Pumps	3.54291	4.0000e-005	3.5000e-004	2.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4168	0.4168	1.0000e-005	1.0000e-005	0.4194
Elementary School	1461.3	0.0158	0.1433	0.1203	8.6000e-004		0.0109	0.0109		0.0109	0.0109		171.9171	171.9171	3.3000e-003	3.1500e-003	172.9634
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
Fast Food Restaurant with Drive Thru	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
General Light Industry	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
General Office Building	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
Government (Civic Center)	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
Government Office Building	2805.92	0.0303	0.2751	0.2311	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.1083	330.1083	6.3300e-003	6.0500e-003	332.1173
High School	1642.58	0.0177	0.1610	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122		193.2442	193.2442	3.7000e-003	3.5400e-003	194.4202
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	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
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	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
Junior High School	3512.61	0.0379	0.3444	0.2893	2.0700e-003		0.0262	0.0262		0.0262	0.0262		413.2487	413.2487	7.9200e-003	7.5800e-003	415.7637
Library	345.625	3.7300e-003	0.0339	0.0285	2.0000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003		40.6617	40.6617	7.8000e-004	7.5000e-004	40.9092

	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					
Medical Office Building	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
Mobile Home Park	6684.69	0.0721	0.6160	0.2621	3.9300e-003		0.0498	0.0498		0.0498	0.0498		786.4346	786.4346	0.0151	0.0144	791.2207
Motel	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
Place of Worship	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
Regional Shopping Center	5708.06	0.0616	0.5596	0.4701	3.3600e-003		0.0425	0.0425		0.0425	0.0425		671.5365	671.5365	0.0129	0.0123	675.6234
Single Family Housing	156754	1.6905	14.4459	6.1472	0.0922		1.1680	1.1680		1.1680	1.1680		18,441.6022	18,441.6022	0.3535	0.3381	18,553.8347
Strip Mall	3250.55	0.0351	0.3187	0.2677	1.9100e-003		0.0242	0.0242		0.0242	0.0242		382.4171	382.4171	7.3300e-003	7.0100e-003	384.7444
Supermarket	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
Unrefrigerated Warehouse-No Rail	109.315	1.1800e-003	0.0107	9.0000e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		12.8606	12.8606	2.5000e-004	2.4000e-004	12.9389
Total		**3.7660**	**32.2926**	**14.5070**	**0.2054**		**2.6019**	**2.6019**		**2.6019**	**2.6019**		**41,083.0808**	**41,083.0808**	**0.7874**	**0.7532**	**41,333.1056**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	106.854	1.1523	9.8473	4.1903	0.0629		0.7962	0.7962		0.7962	0.7962		12,571.0280	12,571.0280	0.2409	0.2305	12,647.5332

	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market With Gas Pumps	0.0026889	3.0000e-005	2.6000e-004	2.2000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.3163	0.3163	1.0000e-005	1.0000e-005	0.3183
Elementary School	0.84114	9.0700e-003	0.0825	0.0693	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003		98.9577	98.9577	1.9000e-003	1.8100e-003	99.5599
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
Fast Food Restaurant with Drive Thru	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
General Light Industry	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
Bank (with Drive-Through)	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
General Office Building	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
Government (Civic Center)	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
Government Office Building	1.77297	0.0191	0.1738	0.1460	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.5851	208.5851	4.0000e-003	3.8200e-003	209.8545
High School	0.945488	0.0102	0.0927	0.0779	5.6000e-004		7.0400e-003	7.0400e-003		7.0400e-003	7.0400e-003		111.2338	111.2338	2.1300e-003	2.0400e-003	111.9108
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	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
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	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
Junior High School	2.02191	0.0218	0.1982	0.1665	1.1900e-003		0.0151	0.0151		0.0151	0.0151		237.8713	237.8713	4.5600e-003	4.3600e-003	239.3190
Library	0.284403	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003		33.4592	33.4592	6.4000e-004	6.1000e-004	33.6628
Medical Office Building	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

	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					
Mobile Home Park	3.90127	0.0421	0.3595	0.1530	2.2900e-003		0.0291	0.0291		0.0291	0.0291		458.9734	458.9734	8.8000e-003	8.4100e-003	461.7666
Motel	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
Place of Worship	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
Regional Shopping Center	4.33214	0.0467	0.4247	0.3568	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.6640	509.6640	9.7700e-003	9.3400e-003	512.7657
Single Family Housing	99.82	1.0765	9.1991	3.9145	0.0587		0.7438	0.7438		0.7438	0.7438		11,743.5337	11,743.5337	0.2251	0.2153	11,815.0029
Strip Mall	2.46701	0.0266	0.2419	0.2032	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.2362	290.2362	5.5600e-003	5.3200e-003	292.0025
Supermarket	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
Unrefrigerated Warehouse-No Rail	0.0621909	6.7000e-004	6.1000e-003	5.1200e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		7.3166	7.3166	1.4000e-004	1.3000e-004	7.3611
Total		**2.4082**	**20.6540**	**9.3062**	**0.1314**		**1.6639**	**1.6639**		**1.6639**	**1.6639**		**26,271.1753**	**26,271.1753**	**0.5035**	**0.4816**	**26,431.0574**

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	10,508.0110	143.2988	12,984.0489	4.8868		1,750.3576	1,750.3576		1,750.3064	1,750.3064	183,210.1076	77,817.2909	261,027.3985	170.0325	14.4109	269,065.4476
Mitigated	10,508.0110	143.2988	12,984.0489	4.8868		1,750.3576	1,750.3576		1,750.3064	1,750.3064	183,210.1076	77,817.2909	261,027.3985	170.0325	14.4109	269,065.4476

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	98.8196					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	296.4749					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10,096.0156	136.9759	12,437.2069	4.8580		1,747.3521	1,747.3521		1,747.3009	1,747.3009	183,210.1076	76,835.6471	260,045.7547	169.0725	14.4109	268,063.6437
Landscaping	16.7009	6.3229	546.8420	0.0288		3.0054	3.0054		3.0054	3.0054		981.6438	981.6438	0.9600		1,001.8039
Total	**10,508.0110**	**143.2988**	**12,984.0489**	**4.8868**		**1,750.3576**	**1,750.3576**		**1,750.3064**	**1,750.3064**	**183,210.1076**	**77,817.2909**	**261,027.3985**	**170.0325**	**14.4109**	**269,065.4476**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	98.8196					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	296.4749					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	10,096.0156	136.9759	12,437.2069	4.8580		1,747.3521	1,747.3521		1,747.3009	1,747.3009	183,210.1076	76,835.6471	260,045.7547	169.0725	14.4109	268,063.6437
Landscaping	16.7009	6.3229	546.8420	0.0288		3.0054	3.0054		3.0054	3.0054		981.6438	981.6438	0.9600		1,001.8039
Total	**10,508.0110**	**143.2988**	**12,984.0489**	**4.8868**		**1,750.3576**	**1,750.3576**		**1,750.3064**	**1,750.3064**	**183,210.1076**	**77,817.2909**	**261,027.3985**	**170.0325**	**14.4109**	**269,065.4476**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

SYCPU - No Change Proposed (2020)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	11.50	1000sqft	0.26	11,500.00	0
General Office Building	7.00	1000sqft	0.16	7,000.00	0
Government (Civic Center)	6.00	1000sqft	0.14	6,000.00	0
Government Office Building	317.50	1000sqft	7.29	317,500.00	0
Medical Office Building	48.30	1000sqft	1.11	48,300.00	0
Elementary School	4,108.00	Student	7.88	343,442.64	0
High School	37.60	1000sqft	0.86	37,600.00	0
Junior College (2Yr)	2,300.00	Student	2.30	100,400.15	0
Junior High School	993.00	Student	2.68	116,738.75	0
Library	4.30	1000sqft	0.10	4,300.00	0
Place of Worship	175.50	1000sqft	4.03	175,500.00	0
General Light Industry	1,023.00	1000sqft	23.48	1,023,000.00	0
Industrial Park	46.90	1000sqft	1.08	46,900.00	0
Unrefrigerated Warehouse-No Rail	11.50	1000sqft	0.26	11,500.00	0
Enclosed Parking Structure	7.30	Acre	7.30	317,988.00	0
Parking Lot	7,987.00	Space	71.88	3,194,800.00	0
City Park	35.80	Acre	35.80	1,559,448.00	0
Fast Food Restaurant with Drive Thru	44.90	1000sqft	1.03	44,900.00	0
High Turnover (Sit Down Restaurant)	22.40	1000sqft	0.51	22,400.00	0
Hotel	756.00	Room	25.20	1,097,712.00	0
Motel	35.00	Room	1.57	68,607.00	0

Condo/Townhouse	4,476.00	Dwelling Unit	279.75	4,476,000.00	12801
Mobile Home Park	532.00	Dwelling Unit	67.02	638,400.00	1522
Single Family Housing	2,339.00	Dwelling Unit	759.42	4,210,200.00	6690
Convenience Market (24 Hour)	0.00	1000sqft	0.00	0.00	0
Convenience Market With Gas Pumps	84.00	Pump	0.27	11,858.69	0
Regional Shopping Center	1,443.40	1000sqft	33.14	1,443,400.00	0
Strip Mall	507.20	1000sqft	11.64	507,200.00	0
Supermarket	4.60	1000sqft	0.11	4,600.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction for existing

Vehicle Trips - Kimley Horn 2015

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Energy Use -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Woodstoves -

Water And Wastewater -

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	CC_TTP	0.00	80.20
tblVehicleTrips	CC_TTP	0.00	80.20
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	0.80
tblVehicleTrips	CW_TTP	0.00	0.80
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	86.32	200.26
tblVehicleTrips	ST_TR	1.59	50.66

tblVehicleTrips	ST_TR	7.16	6.69
tblVehicleTrips	ST_TR	863.10	706.30
tblVehicleTrips	ST_TR	204.47	150.23
tblVehicleTrips	ST_TR	0.00	122.88
tblVehicleTrips	ST_TR	722.03	699.22
tblVehicleTrips	ST_TR	1.32	12.94
tblVehicleTrips	ST_TR	2.37	25.14
tblVehicleTrips	ST_TR	158.37	129.69
tblVehicleTrips	ST_TR	8.19	10.03
tblVehicleTrips	ST_TR	2.49	16.20
tblVehicleTrips	ST_TR	46.55	49.87
tblVehicleTrips	ST_TR	8.96	49.96
tblVehicleTrips	ST_TR	5.00	4.97
tblVehicleTrips	ST_TR	5.63	9.00
tblVehicleTrips	ST_TR	0.00	2.26
tblVehicleTrips	ST_TR	10.37	11.95
tblVehicleTrips	ST_TR	49.97	42.21
tblVehicleTrips	ST_TR	10.08	9.01
tblVehicleTrips	ST_TR	42.04	93.10
tblVehicleTrips	ST_TR	177.59	150.17
tblVehicleTrips	ST_TR	2.59	5.10
tblVehicleTrips	SU_TR	31.90	200.26
tblVehicleTrips	SU_TR	1.59	50.66
tblVehicleTrips	SU_TR	6.07	6.69
tblVehicleTrips	SU_TR	758.45	706.30
tblVehicleTrips	SU_TR	166.88	150.23
tblVehicleTrips	SU_TR	0.00	122.88
tblVehicleTrips	SU_TR	542.72	699.22

tblVehicleTrips	SU_TR	0.68	12.94
tblVehicleTrips	SU_TR	0.98	25.14
tblVehicleTrips	SU_TR	131.84	129.69
tblVehicleTrips	SU_TR	5.95	10.03
tblVehicleTrips	SU_TR	0.73	16.20
tblVehicleTrips	SU_TR	25.49	49.87
tblVehicleTrips	SU_TR	1.55	49.96
tblVehicleTrips	SU_TR	4.36	4.97
tblVehicleTrips	SU_TR	5.63	9.00
tblVehicleTrips	SU_TR	0.00	2.26
tblVehicleTrips	SU_TR	36.63	11.95
tblVehicleTrips	SU_TR	25.24	42.21
tblVehicleTrips	SU_TR	8.77	9.01
tblVehicleTrips	SU_TR	20.43	93.10
tblVehicleTrips	SU_TR	166.44	150.17
tblVehicleTrips	SU_TR	2.59	5.10
tblVehicleTrips	WD_TR	148.15	200.26
tblVehicleTrips	WD_TR	1.59	50.66
tblVehicleTrips	WD_TR	6.59	6.69
tblVehicleTrips	WD_TR	737.99	706.30
tblVehicleTrips	WD_TR	542.60	150.23
tblVehicleTrips	WD_TR	1.29	2.91
tblVehicleTrips	WD_TR	0.00	122.88
tblVehicleTrips	WD_TR	496.12	699.22
tblVehicleTrips	WD_TR	6.97	12.94
tblVehicleTrips	WD_TR	11.01	25.14
tblVehicleTrips	WD_TR	27.92	29.83
tblVehicleTrips	WD_TR	68.93	27.80

tblVehicleTrips	WD_TR	12.89	18.00
tblVehicleTrips	WD_TR	127.15	129.69
tblVehicleTrips	WD_TR	8.17	10.03
tblVehicleTrips	WD_TR	6.96	16.20
tblVehicleTrips	WD_TR	1.20	1.66
tblVehicleTrips	WD_TR	1.62	1.41
tblVehicleTrips	WD_TR	56.24	49.87
tblVehicleTrips	WD_TR	36.13	49.96
tblVehicleTrips	WD_TR	4.99	4.97
tblVehicleTrips	WD_TR	5.63	9.00
tblVehicleTrips	WD_TR	0.00	2.26
tblVehicleTrips	WD_TR	9.11	11.95
tblVehicleTrips	WD_TR	42.94	42.21
tblVehicleTrips	WD_TR	9.57	9.01
tblVehicleTrips	WD_TR	44.32	93.10
tblVehicleTrips	WD_TR	102.24	150.17
tblVehicleTrips	WD_TR	2.59	5.10

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11,812.1925	159.6013	14,461.3772	5.4424		1,949.3566	1,949.3566		1,949.2995	1,949.2995	204,038.9057	86,666.7361	290,705.6418	189.3700	16.0492	299,657.6645
Energy	7.9610	69.9826	43.2637	0.4342		5.5003	5.5003		5.5003	5.5003		86,847.5379	86,847.5379	1.6646	1.5922	87,376.0776
Mobile	816.7857	1,388.0575	7,144.5723	16.6504	1,166.2232	19.7931	1,186.0163	311.3039	18.2655	329.5694		1,273,600.0563	1,273,600.0563	51.2132		1,274,675.5331
Total	**12,636.9393**	**1,617.6413**	**21,649.2132**	**22.5271**	**1,166.2232**	**1,974.6500**	**3,140.8732**	**311.3039**	**1,973.0654**	**2,284.3693**	**204,038.9057**	**1,447,114.3303**	**1,651,153.2360**	**242.2478**	**17.6414**	**1,661,709.2752**

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	11,812.1925	159.6013	14,461.3772	5.4424		1,949.3566	1,949.3566		1,949.2995	1,949.2995	204,038.9057	86,666.7361	290,705.6418	189.3700	16.0492	299,657.6645
Energy	7.9610	69.9826	43.2637	0.4342		5.5003	5.5003		5.5003	5.5003		86,847.5379	86,847.5379	1.6646	1.5922	87,376.0776
Mobile	816.7857	1,388.0575	7,144.5723	16.6504	1,166.2232	19.7931	1,186.0163	311.3039	18.2655	329.5694		1,273,600.0563	1,273,600.0563	51.2132		1,274,675.5331
Total	**12,636.9393**	**1,617.6413**	**21,649.2132**	**22.5271**	**1,166.2232**	**1,974.6500**	**3,140.8732**	**311.3039**	**1,973.0654**	**2,284.3693**	**204,038.9057**	**1,447,114.3303**	**1,651,153.2360**	**242.2478**	**17.6414**	**1,661,709.2752**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	816.7857	1,388.0575	7,144.5723	16.6504	1,166.2232	19.7931	1,186.0163	311.3039	18.2655	329.5694		1,273,600.0563	1,273,600.0563	51.2132		1,274,675.5331
Mitigated	816.7857	1,388.0575	7,144.5723	16.6504	1,166.2232	19.7931	1,186.0163	311.3039	18.2655	329.5694		1,273,600.0563	1,273,600.0563	51.2132		1,274,675.5331

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Bank (with Drive-Through)	2,302.99	2,302.99	2302.99	2,130,210	2,130,210
City Park	1,813.63	1,813.63	1813.63	3,871,829	3,871,829
Condo/Townhouse	29,944.44	29,944.44	29944.44	85,500,460	85,500,460
Convenience Market (24 Hour)	0.00	0.00	0.00		
Convenience Market With Gas Pumps	12,619.32	12,619.32	12619.32	6,769,057	6,769,057
Elementary School	11,954.28	0.00	0.00	18,827,471	18,827,471
Enclosed Parking Structure	897.02	897.02	897.02	2,389,319	2,389,319
Fast Food Restaurant with Drive Thru	31,394.98	31,394.98	31394.98	29,333,114	29,333,114
General Light Industry	13,237.62	13,237.62	13237.62	38,647,379	38,647,379
General Office Building	175.98	175.98	175.98	420,549	420,549
Government (Civic Center)	178.98	0.00	0.00	244,389	244,389
Government Office Building	8,826.50	0.00	0.00	10,811,709	10,811,709
High School	676.80	164.31	67.30	1,352,324	1,352,324
High Turnover (Sit Down Restaurant)	2,905.06	2,905.06	2905.06	3,370,634	3,370,634
Hotel	7,582.68	7,582.68	7582.68	14,406,567	14,406,567
Industrial Park	759.78	759.78	759.78	1,992,013	1,992,013
Junior College (2Yr)	3,818.00	966.00	92.00	7,309,513	7,309,513
Junior High School	1,400.13	0.00	0.00	2,248,403	2,248,403
Library	214.44	214.44	214.44	363,447	363,447
Medical Office Building	2,413.07	2,413.07	2413.07	4,722,977	4,722,977
Mobile Home Park	2,644.04	2,644.04	2644.04	7,549,536	7,549,536
Motel	315.00	315.00	315.00	597,797	597,797
Parking Lot	18,050.62	18,050.62	18050.62	48,079,747	48,079,747
Place of Worship	2,097.23	2,097.23	2097.23	3,923,252	3,923,252
Regional Shopping Center	60,925.91	60,925.91	60925.91	106,821,699	106,821,699
Single Family Housing	21,074.39	21,074.39	21074.39	60,173,777	60,173,777
Strip Mall	47,220.32	47,220.32	47220.32	72,720,853	72,720,853
Supermarket	690.78	690.78	690.78	785,726	785,726
Unrefrigerated Warehouse-No Rail	58.65	58.65	58.65	171,229	171,229
Total	286,192.64	260,468.26	259,497.25	535,534,977	535,534,977

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	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
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Enclosed Parking Structure	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
High School	9.50	7.30	7.30	77.80	17.20	5.00	75	19	6
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Junior High School	9.50	7.30	7.30	72.80	22.20	5.00	63	25	12
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Mobile Home Park	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Motel	9.50	7.30	7.30	19.00	62.00	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

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

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.9610	69.9826	43.2637	0.4342		5.5003	5.5003		5.5003	5.5003		86,847.5379	86,847.5379	1.6646	1.5922	87,376.0776
NaturalGas Unmitigated	7.9610	69.9826	43.2637	0.4342		5.5003	5.5003		5.5003	5.5003		86,847.5379	86,847.5379	1.6646	1.5922	87,376.0776

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					
Bank (with Drive-Through)	387.219	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.5552	45.5552	8.7000e-004	8.4000e-004	45.8324
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

	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					
Condo/Townhouse	179079	1.9312	16.5033	7.0227	0.1053		1.3343	1.3343		1.3343	1.3343		21,068.0884	21,068.0884	0.4038	0.3863	21,196.3052
Convenience Market (24 Hour)	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
Convenience Market With Gas Pumps	78.2998	8.4000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2118	9.2118	1.8000e-004	1.7000e-004	9.2678
Elementary School	6473.66	0.0698	0.6347	0.5331	3.8100e-003		0.0482	0.0482		0.0482	0.0482		761.6069	761.6069	0.0146	0.0140	766.2419
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
Fast Food Restaurant with Drive Thru	21739	0.2344	2.1313	1.7903	0.0128		0.1620	0.1620		0.1620	0.1620		2,557.5272	2,557.5272	0.0490	0.0469	2,573.0918
General Light Industry	34445.7	0.3715	3.3770	2.8367	0.0203		0.2567	0.2567		0.2567	0.2567		4,052.4319	4,052.4319	0.0777	0.0743	4,077.0943
General Office Building	451.836	4.8700e-003	0.0443	0.0372	2.7000e-004		3.3700e-003	3.3700e-003		3.3700e-003	3.3700e-003		53.1571	53.1571	1.0200e-003	9.7000e-004	53.4806
Government (Civic Center)	387.288	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.5633	45.5633	8.7000e-004	8.4000e-004	45.8406
Government Office Building	20494	0.2210	2.0092	1.6877	0.0121		0.1527	0.1527		0.1527	0.1527		2,411.0556	2,411.0556	0.0462	0.0442	2,425.7289
High School	708.734	7.6400e-003	0.0695	0.0584	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003		83.3805	83.3805	1.6000e-003	1.5300e-003	83.8879
High Turnover (Sit Down Restaurant)	10845.3	0.1170	1.0633	0.8931	6.3800e-003		0.0808	0.0808		0.0808	0.0808		1,275.9156	1,275.9156	0.0245	0.0234	1,283.6806
Hotel	185228	1.9976	18.1596	15.2540	0.1090		1.3801	1.3801		1.3801	1.3801		21,791.4850	21,791.4850	0.4177	0.3995	21,924.1043
Industrial Park	3027.3	0.0327	0.2968	0.2493	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.1528	356.1528	6.8300e-003	6.5300e-003	358.3203
Junior College (2Yr)	11346.6	0.1224	1.1124	0.9344	6.6700e-003		0.0845	0.0845		0.0845	0.0845		1,334.8932	1,334.8932	0.0256	0.0245	1,343.0172
Junior High School	2200.45	0.0237	0.2157	0.1812	1.2900e-003		0.0164	0.0164		0.0164	0.0164		258.8759	258.8759	4.9600e-003	4.7500e-003	260.4514
Library	144.786	1.5600e-003	0.0142	0.0119	9.0000e-005		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003		17.0337	17.0337	3.3000e-004	3.1000e-004	17.1374
Medical Office Building	3117.67	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.7842	366.7842	7.0300e-003	6.7200e-003	369.0164

	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					
Mobile Home Park	34532.3	0.3724	3.1824	1.3542	0.0203		0.2573	0.2573		0.2573	0.2573		4,062.6246	4,062.6246	0.0779	0.0745	4,087.3491
Motel	11576.7	0.1249	1.1350	0.9534	6.8100e-003		0.0863	0.0863		0.0863	0.0863		1,361.9678	1,361.9678	0.0261	0.0250	1,370.2565
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
Place of Worship	5909.3	0.0637	0.5793	0.4867	3.4800e-003		0.0440	0.0440		0.0440	0.0440		695.2119	695.2119	0.0133	0.0128	699.4429
Regional Shopping Center	9530.39	0.1028	0.9344	0.7849	5.6100e-003		0.0710	0.0710		0.0710	0.0710		1,121.2229	1,121.2229	0.0215	0.0206	1,128.0465
Single Family Housing	192756	2.0787	17.7638	7.5591	0.1134		1.4362	1.4362		1.4362	1.4362		22,677.2176	22,677.2176	0.4347	0.4158	22,815.2273
Strip Mall	3348.91	0.0361	0.3283	0.2758	1.9700e-003		0.0250	0.0250		0.0250	0.0250		393.9894	393.9894	7.5500e-003	7.2200e-003	396.3871
Supermarket	332.334	3.5800e-003	0.0326	0.0274	2.0000e-004		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003		39.0982	39.0982	7.5000e-004	7.2000e-004	39.3361
Unrefrigerated Warehouse-No Rail	63.6438	6.9000e-004	6.2400e-003	5.2400e-003	4.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		7.4875	7.4875	1.4000e-004	1.4000e-004	7.5331
Total		**7.9610**	**69.9825**	**43.2637**	**0.4343**		**5.5004**	**5.5004**		**5.5004**	**5.5004**		**86,847.5379**	**86,847.5379**	**1.6646**	**1.5922**	**87,376.0776**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	179.079	1.9312	16.5033	7.0227	0.1053		1.3343	1.3343		1.3343	1.3343		21,068.0884	21,068.0884	0.4038	0.3863	21,196.3052
Convenience Market (24 Hour)	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

	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 With Gas Pumps	0.0782998	8.4000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2118	9.2118	1.8000e-004	1.7000e-004	9.2678
Elementary School	6.47366	0.0698	0.6347	0.5331	3.8100e-003		0.0482	0.0482		0.0482	0.0482		761.6069	761.6069	0.0146	0.0140	766.2419
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
Bank (with Drive-Through)	0.387219	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.5552	45.5552	8.7000e-004	8.4000e-004	45.8324
Fast Food Restaurant with Drive Thru	21.739	0.2344	2.1313	1.7903	0.0128		0.1620	0.1620		0.1620	0.1620		2,557.5272	2,557.5272	0.0490	0.0469	2,573.0918
General Light Industry	34.4457	0.3715	3.3770	2.8367	0.0203		0.2567	0.2567		0.2567	0.2567		4,052.4319	4,052.4319	0.0777	0.0743	4,077.0943
General Office Building	0.451836	4.8700e-003	0.0443	0.0372	2.7000e-004		3.3700e-003	3.3700e-003		3.3700e-003	3.3700e-003		53.1571	53.1571	1.0200e-003	9.7000e-004	53.4806
Government (Civic Center)	0.387288	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.5633	45.5633	8.7000e-004	8.4000e-004	45.8406
Government Office Building	20.494	0.2210	2.0092	1.6877	0.0121		0.1527	0.1527		0.1527	0.1527		2,411.0556	2,411.0556	0.0462	0.0442	2,425.7289
High School	0.708734	7.6400e-003	0.0695	0.0584	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003		83.3805	83.3805	1.6000e-003	1.5300e-003	83.8879
High Turnover (Sit Down Restaurant)	10.8453	0.1170	1.0633	0.8931	6.3800e-003		0.0808	0.0808		0.0808	0.0808		1,275.9156	1,275.9156	0.0245	0.0234	1,283.6806
Hotel	185.228	1.9976	18.1596	15.2540	0.1090		1.3801	1.3801		1.3801	1.3801		21,791.4850	21,791.4850	0.4177	0.3995	21,924.1043
Industrial Park	3.0273	0.0327	0.2968	0.2493	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.1528	356.1528	6.8300e-003	6.5300e-003	358.3203
Junior College (2Yr)	11.3466	0.1224	1.1124	0.9344	6.6700e-003		0.0845	0.0845		0.0845	0.0845		1,334.8932	1,334.8932	0.0256	0.0245	1,343.0172
Junior High School	2.20045	0.0237	0.2157	0.1812	1.2900e-003		0.0164	0.0164		0.0164	0.0164		258.8759	258.8759	4.9600e-003	4.7500e-003	260.4514
Library	0.144786	1.5600e-003	0.0142	0.0119	9.0000e-005		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003		17.0337	17.0337	3.3000e-004	3.1000e-004	17.1374
Medical Office Building	3.11767	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.7842	366.7842	7.0300e-003	6.7200e-003	369.0164
Mobile Home Park	34.5323	0.3724	3.1824	1.3542	0.0203		0.2573	0.2573		0.2573	0.2573		4,062.6246	4,062.6246	0.0779	0.0745	4,087.3491

	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					
Motel	11.5767	0.1249	1.1350	0.9534	6.8100e-003		0.0863	0.0863		0.0863	0.0863		1,361.9678	1,361.9678	0.0261	0.0250	1,370.2565
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
Place of Worship	5.9093	0.0637	0.5793	0.4867	3.4800e-003		0.0440	0.0440		0.0440	0.0440		695.2119	695.2119	0.0133	0.0128	699.4429
Regional Shopping Center	9.53039	0.1028	0.9344	0.7849	5.6100e-003		0.0710	0.0710		0.0710	0.0710		1,121.2229	1,121.2229	0.0215	0.0206	1,128.0465
Single Family Housing	192.756	2.0787	17.7638	7.5591	0.1134		1.4362	1.4362		1.4362	1.4362		22,677.2176	22,677.2176	0.4347	0.4158	22,815.2273
Strip Mall	3.34891	0.0361	0.3283	0.2758	1.9700e-003		0.0250	0.0250		0.0250	0.0250		393.9894	393.9894	7.5500e-003	7.2200e-003	396.3871
Supermarket	0.332334	3.5800e-003	0.0326	0.0274	2.0000e-004		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003		39.0982	39.0982	7.5000e-004	7.2000e-004	39.3361
Unrefrigerated Warehouse-No Rail	0.0636438	6.9000e-004	6.2400e-003	5.2400e-003	4.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		7.4875	7.4875	1.4000e-004	1.4000e-004	7.5331
Total		**7.9610**	**69.9825**	**43.2637**	**0.4343**		**5.5004**	**5.5004**		**5.5004**	**5.5004**		**86,847.5379**	**86,847.5379**	**1.6646**	**1.5922**	**87,376.0776**

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	11,812.1925	159.6013	14,461.3772	5.4424		1,949.3566	1,949.3566		1,949.2995	1,949.2995	204,038.9057	86,666.7361	290,705.6418	189.3700	16.0492	299,657.6645
Mitigated	11,812.1925	159.6013	14,461.3772	5.4424		1,949.3566	1,949.3566		1,949.2995	1,949.2995	204,038.9057	86,666.7361	290,705.6418	189.3700	16.0492	299,657.6645

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	124.9385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	424.7300					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	11,243.8118	152.5485	13,851.1686	5.4103		1,946.0052	1,946.0052		1,945.9481	1,945.9481	204,038.9057	85,570.9412	289,609.8469	188.2941	16.0492	298,539.2739
Landscaping	18.7123	7.0528	610.2086	0.0322		3.3514	3.3514		3.3514	3.3514		1,095.7949	1,095.7949	1.0760		1,118.3906
Total	**11,812.1925**	**159.6013**	**14,461.3772**	**5.4424**		**1,949.3566**	**1,949.3566**		**1,949.2995**	**1,949.2995**	**204,038.9057**	**86,666.7361**	**290,705.6418**	**189.3700**	**16.0492**	**299,657.6645**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	124.9385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	424.7300					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	11,243.8118	152.5485	13,851.1686	5.4103		1,946.0052	1,946.0052		1,945.9481	1,945.9481	204,038.9057	85,570.9412	289,609.8469	188.2941	16.0492	298,539.2739
Landscaping	18.7123	7.0528	610.2086	0.0322		3.3514	3.3514		3.3514	3.3514		1,095.7949	1,095.7949	1.0760		1,118.3906
Total	**11,812.1925**	**159.6013**	**14,461.3772**	**5.4424**		**1,949.3566**	**1,949.3566**		**1,949.2995**	**1,949.2995**	**204,038.9057**	**86,666.7361**	**290,705.6418**	**189.3700**	**16.0492**	**299,657.6645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation