

**Appendix D:**

**Greenhouse Gas Analysis**

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Greenhouse Gas Analysis  
for the  
Southeastern San Diego  
and Encanto  
Neighborhoods Community  
Plan Updates  
Project No. 386029  
SCH No. 2014051075

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A handwritten signature in black ink, reading "William A. Maddux".

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2:	2020 Business-as-Usual GHG Emissions – Model Outputs
3:	2020 Project Buildout GHG Emissions – Model Outputs

# Acronyms

AB	Assembly Bill
BAU	business as usual
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CPU	Community Plan Update
CH <sub>4</sub>	Methane
CO <sub>2</sub>	carbon dioxide
EO	Executive Order
GHG	greenhouse gas
GWP	Global Warming Potential
I-5	Interstate 5
I-15	Interstate 15
I-808	Interstate 805
LCFS	Low Carbon Fuel Standard
MMTCO <sub>2</sub> E	million metric ton of carbon dioxide equivalent
MTCO <sub>2</sub> E	metric ton of carbon dioxide equivalent
N <sub>2</sub> O	nitrous oxide
SCAQMD	South Coast Air Quality Management District
SDG&E	San Diego Gas & Electric
SESD	Southeastern San Diego
SR-94	State Route 94
VMТ	vehicle miles traveled

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## Executive Summary

The existing Southeastern San Diego Community Plan, which includes both the Southeastern San Diego (SESD) and Encanto Neighborhoods communities, was originally adopted in 1969 and comprehensively updated in 1987. In order to facilitate greater focus on each community, separate community plans are being prepared through the update process and are collectively referred to as the “community plan updates (CPUs)” or “Plans” or “draft Plans.” Approval of the CPUs would amend the General Plan and would establish land use designations and policies to guide future development consistent with the City of San Diego (City) General Plan (2008). The CPUs encompasses a broad range of the land use designations defined in the General Plan and contains a more detailed description and distribution of land uses than the citywide General Plan.

This greenhouse gas (GHG) analysis evaluates potential effects associated with cumulative greenhouse gas emissions that would result from adoption of the CPUs. In accordance with California Environmental Quality Act (CEQA) and City Guidelines for Determining Significance, this analysis evaluates the significance of the CPUs in terms of (1) their contribution of GHGs to cumulative statewide emissions and (2) their consistency with local and state regulations, plans, and policies aimed at reducing GHG emissions.

With regard to cumulative GHG emission impacts, GHG emissions were calculated for the CPUs using the California Emissions Estimator Model (CalEEMod). To determine the significance of GHG emissions, estimated GHG emissions for the CPUs are evaluated relative to business-as-usual (BAU) emissions to determine if the CPUs would achieve a reduction equal to or greater than the City’s threshold of 28.3 percent relative to BAU.

Under the 2020 BAU scenario, GHG emissions within SESD would total 508,451 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>E). Development under the SESD CPU would generate annual GHG emissions of 293,331 MTCO<sub>2</sub>E. This represents a 42.3 percent reduction in GHG emissions over the BAU scenario.

Under the 2020 BAU scenario, GHG emissions within Encanto Neighborhoods would total 472,511 MTCO<sub>2</sub>E. Development under the Encanto Neighborhoods CPU would generate annual GHG emissions of 282,060 MTCO<sub>2</sub>E, which represents a 40.3 percent reduction in GHG emissions over the BAU scenario.

Approximately 24 percent on the anticipated reductions would be due to state regulation of vehicle fuel efficiencies, fuel formulations, as well as energy- and water-efficiency requirements of the California Building Code, Title 24.

Consistency with local and state plans was evaluated against the City of San Diego General Plan and the California Air Resources Board (CARB) Scoping Plan. The CPUs would intensify land use around the San Diego Orange Line Trolley and would promote GHG reduction measures in a manner consistent with the Conservation Element of the City's General Plan. The SESD and Encanto Neighborhoods CPUs are projected to result in 42.3 and 40.3 percent reductions relative to 2020 emissions under BAU, respectively. This exceeds the target 28.3 percent reduction relative to BAU from the CARB 2008 Scoping Plan. The CPUs include land use, sustainability, and mobility policies that support measures of the Scoping Plan, which are intended to reduce vehicle miles traveled (VMT) and increase transit and other alternative forms of transportation, promote green building, encourage alternative energy use, and move to more mixed-use and compact development. As the CPUs would achieve a percentage reduction over BAU greater than 28.3 and their policies support the goals of the Scoping Plan, the CPUs are consistent with applicable plans and policies.

## **1.0 Project Description**

The proposed project would update the community plan for the Southeastern San Diego Planning Area. This update would subdivide the existing planning area into two distinct planning areas with separate community plans, Southeastern San Diego (SESD) and Encanto Neighborhoods.

### **1.1 Regional Location**

SESD and Encanto Neighborhoods encompass approximately 6,740 acres east of downtown San Diego and north of National City (Figure 1). Surrounding planning areas include Golden Hill, City Heights, and Eastern Area to the north, Barrio Logan to the west, and Skyline–Paradise Hills to the southeast. National City borders the two planning areas to the south, and the City of Lemon Grove forms the northeast border of Encanto Neighborhoods.

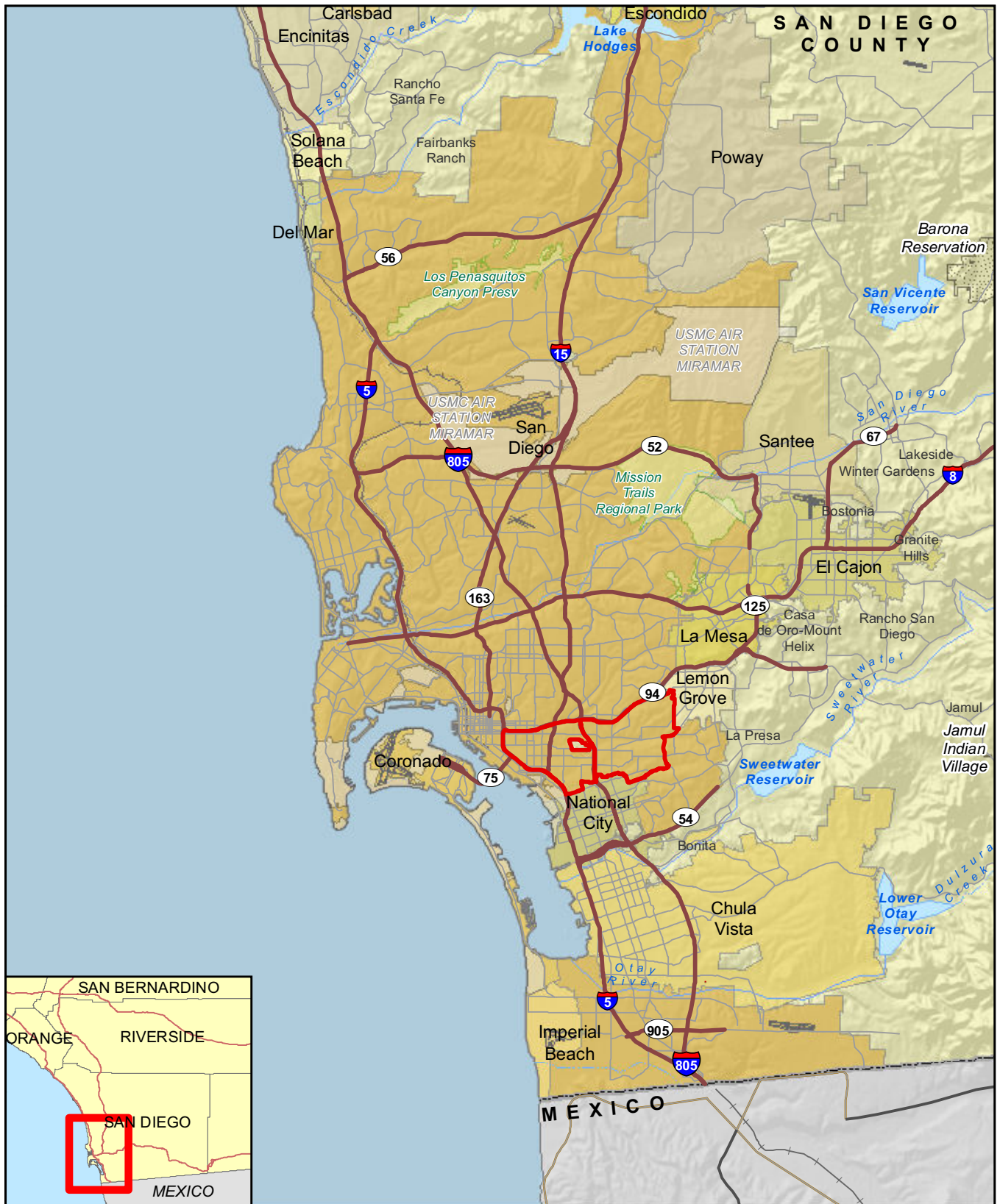
### **1.2 Planning Area Boundaries**

#### **1.2.1 Southeastern San Diego**

SESD is located just east of downtown San Diego, proximate to major employment and commercial centers in the South Bay and downtown and linked to them by trolley and bus (Figure 2a). SESD encompasses approximately 2,930 acres, excluding 121 acres of unincorporated San Diego County land (Greenwood Cemetery). SESD lies south of State Route 94 (SR-94), between Interstate 5 (I-5) and Interstate 805 (I-805), and north of the city limits of National City. Neighborhoods contained in SESD include Sherman Heights, Grant Hill, Stockton, Mt. Hope, Logan Heights, Mountain View, Southcrest, and Shelltown.

#### **1.2.2 Encanto Neighborhoods**

Encanto Neighborhoods encompasses approximately 3,810 acres, and is located approximately five miles east of downtown San Diego (Figure 2b). The area is bounded by SR-94 to the north and I-805 to the west, providing access to local and regional destinations. SESD is immediately to the west. The City of Lemon Grove defines the northeast boundary of the planning area, roughly along 69th Street, and National City defines the western half of the planning area's southern boundary. Plaza Boulevard marks the southern boundary to the east. Specific neighborhoods in



 Southeastern San Diego and Encanto  
Neighborhoods Community Plan Update Areas

FIGURE 1

Regional Location



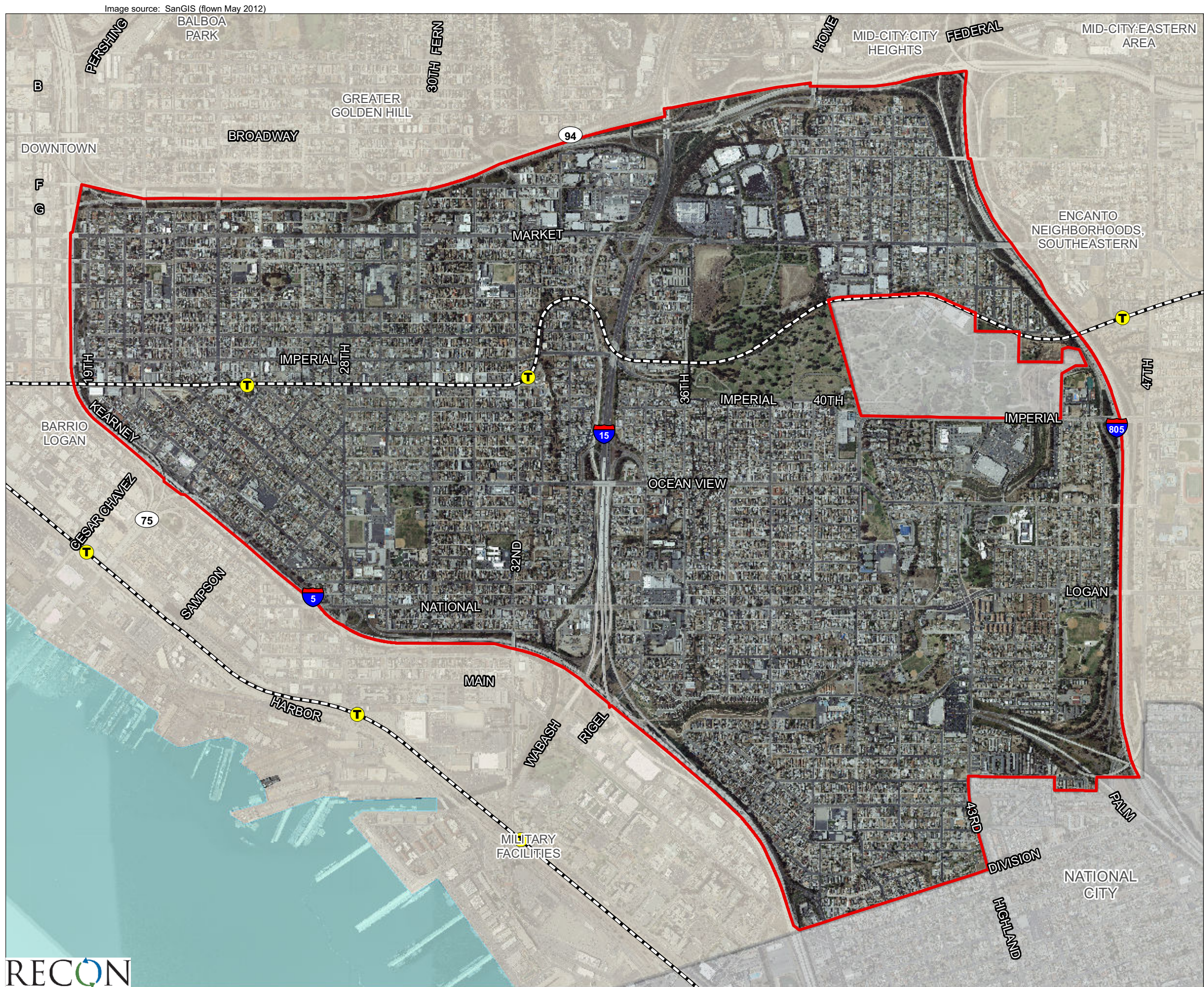
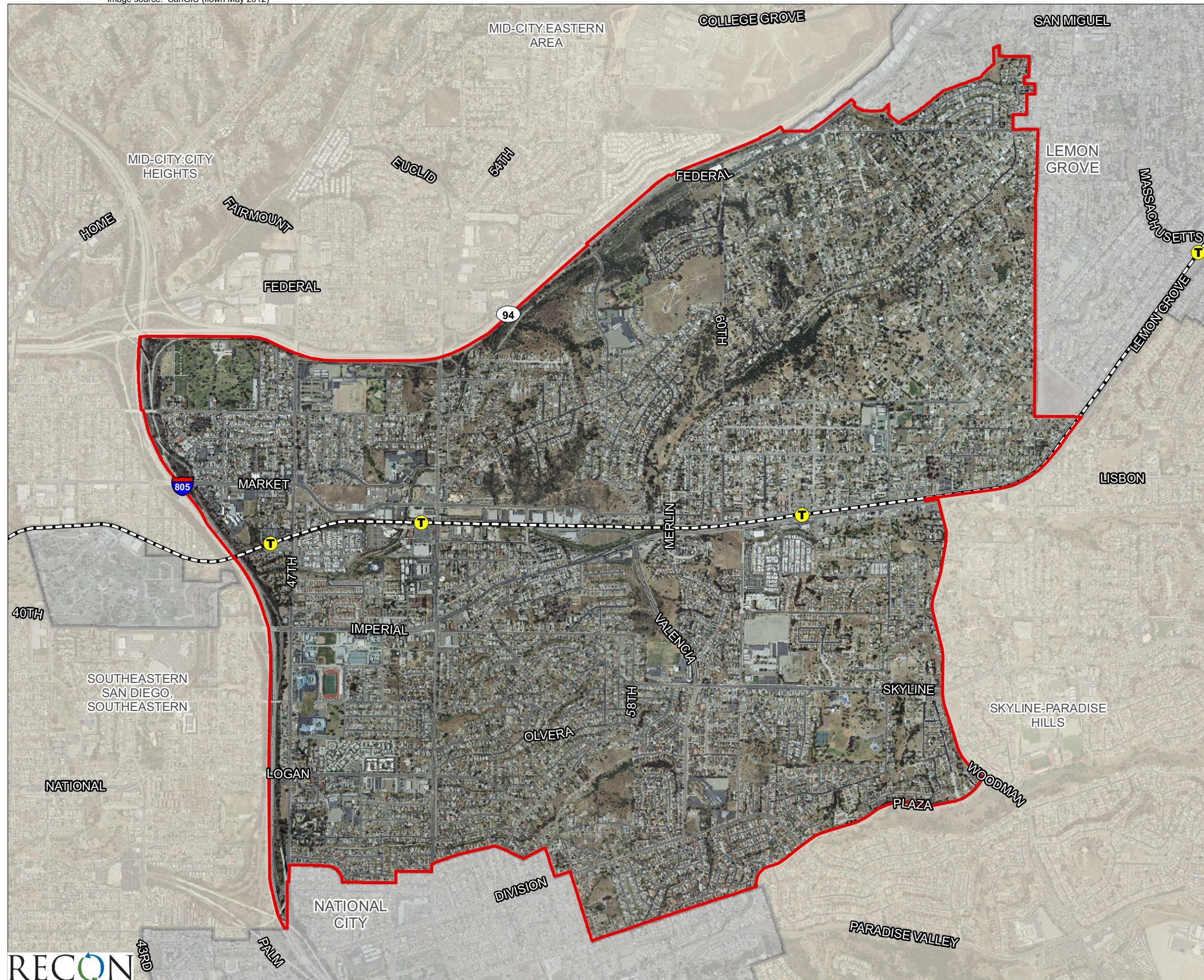


FIGURE 2a  
Aerial Photograph of the  
Southeastern San Diego CPU Area



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-  Encanto Neighborhoods Community Plan Boundary
-  Trolley Line
-  Trolley Stops



FIGURE 2b  
Aerial Photograph of the  
Encanto Neighborhoods CPU Area



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Encanto Neighborhoods community include Chollas View, Lincoln Park, Valencia Park, O'Farrell, Alta Vista, Encanto, and Broadway Heights.

## **1.3 Village Districts**

Each planning area contains village districts. SESD contains the Southeastern Village District (Figure 3a). The Southeastern Village District includes the Commercial/Imperial corridor from I-5 to Interstate-15 (I-15); trolley stops at 25th Street and 32nd Street are near the center of the district. Encanto Neighborhoods contains a village district that combines two areas known as the Village at Market Creek, centered at the intersection of Euclid Avenue and Market Street, and Imperial Avenue Village, centered at the 62nd Street Trolley station (Figure 3b). The village districts are considered “transit priority areas,” in proximity to high-frequency mass transit service.

## **1.4 Buildout of Plans**

Table 1 describes the existing and proposed development anticipated to result from application of land uses shown on the proposed SESD and Encanto Neighborhoods Land Use Maps on vacant and underutilized sites, according to analysis undertaken for the proposed plans.

## **1.5 Project features**

### **1.5.1 Southeastern San Diego CPU**

The SESD CPU places a great deal of emphasis on achieving the “City of Villages” concept from the City of San Diego General Plan. The community plan states:

“Central to the General Plan is the City of Villages strategy, which focuses growth into compact, pedestrian-friendly, mixed-use activity centers linked to an improved regional transit system that provides better connections between homes, jobs and services throughout the region. Infill development is promoted to conserve regional open space, promote transit, and revitalize existing communities.”

To achieve this goal the Mobility, Urban Design, and the Conservation and Sustainability elements of the SESD CPU include specific policies to require dense, compact, and diverse development; encourage highly efficient energy- and water-conservation design; increase walkability and bicycle accessibility; increase urban forestry practices and community gardens; decrease urban heat islands; and increase sustainable community design. Specifically, the plan proposes increasing land use intensity along key corridors

such as National Avenue, Market Street, and Ocean View Boulevard. Increased land use intensity would be achieved primarily through significant increases in area zoned for multi-family units and offices.

Reductions modeled are primarily a result of statewide measures; however, these policies would also serve to reduce consumption of fossil-fueled vehicles and energy use, resulting in a reduction in communitywide GHG emissions relative to BAU. Figure 3a shows proposed land use.

**TABLE 1**  
**RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT: EXISTING AND CPU BUILDOUT**

Land Use	Existing Development	Buildout of CPUs (2035)	Difference
<b>Southeastern San Diego</b>			
<b>Residential Development</b>			
Single-family Units <sup>1</sup>	5,648	5,765	117
Multi-family Units <sup>2</sup>	9,380	12,747	3,367
<i>Total Housing Units</i>	<i>15,058</i>	<i>18,042</i>	<i>2,984</i>
Population <sup>3</sup>	56,848	70,020	13,172
<b>Non-residential Development</b>			
Commercial (square feet)	1,758,200	2,520,000	761,800
Office (square feet)	163,600	277,400	113,800
Industrial and Utilities (square feet)	2,068,700	2,489,100	420,400
Community Facilities (square feet)	2,332,800	2,593,400	260,600
<i>Total Non-residential Development (square feet)</i>	<i>6,323,300</i>	<i>7,879,900</i>	<i>1,556,600</i>
<b>Encanto Neighborhoods</b>			
<b>Residential Development</b>			
Single-family Units <sup>1</sup>	9,846	9,027	(819)
Multi-family Units <sup>2</sup>	3,943	12,070	8,127
<i>Total Housing Units</i>	<i>13,789</i>	<i>21,097</i>	<i>7,308</i>
Population <sup>3</sup>	50,719	76,732	26,013
<b>Non-residential Development</b>			
Commercial (square feet)	413,900	1,281,500	867,600
Office (square feet)	150,200	135,000	(15,200)
Industrial and Utilities (square feet)	465,400	554,100	88,700
Community Facilities (square feet)	2,035,400	2,001,000	(34,400)
<i>Total Non-residential Development (square feet)</i>	<i>3,064,900</i>	<i>3,971,600</i>	<i>906,700</i>

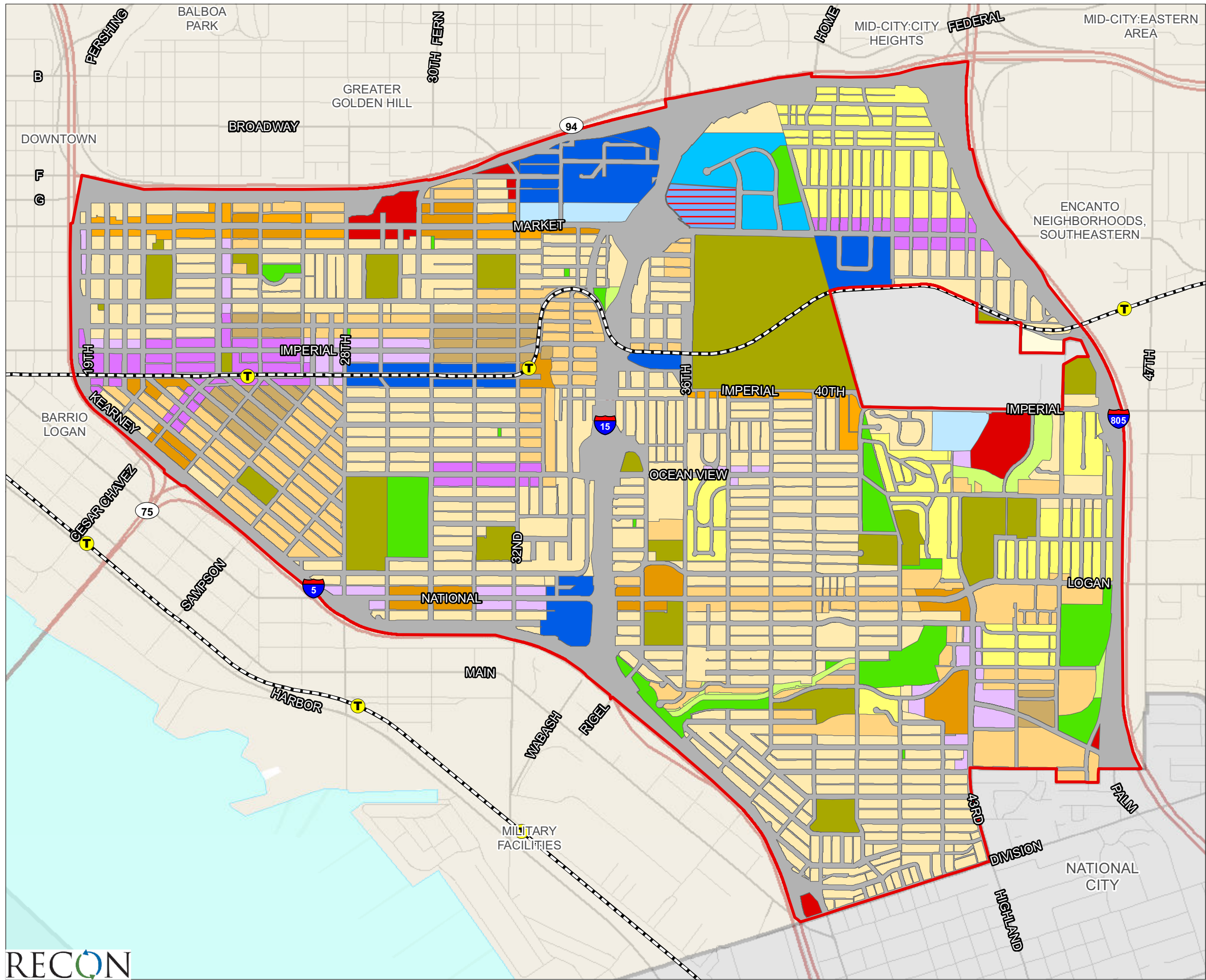
SOURCES: City of San Diego 2014; Dyett & Bhatia 2014; SANDAG, Current Estimates, 2012; SANDAG Regional Forecast 2050 (Series 12) for the year 2035, 2010; City of San Diego 2008.

NOTES:

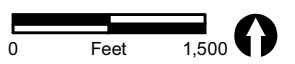
<sup>1</sup>Includes detached single-family, multiple-unit single-family.

<sup>2</sup>Includes residential units in mixed-use development and mobile homes.

<sup>3</sup>Assumes current ratio of population to housing units remains the same.

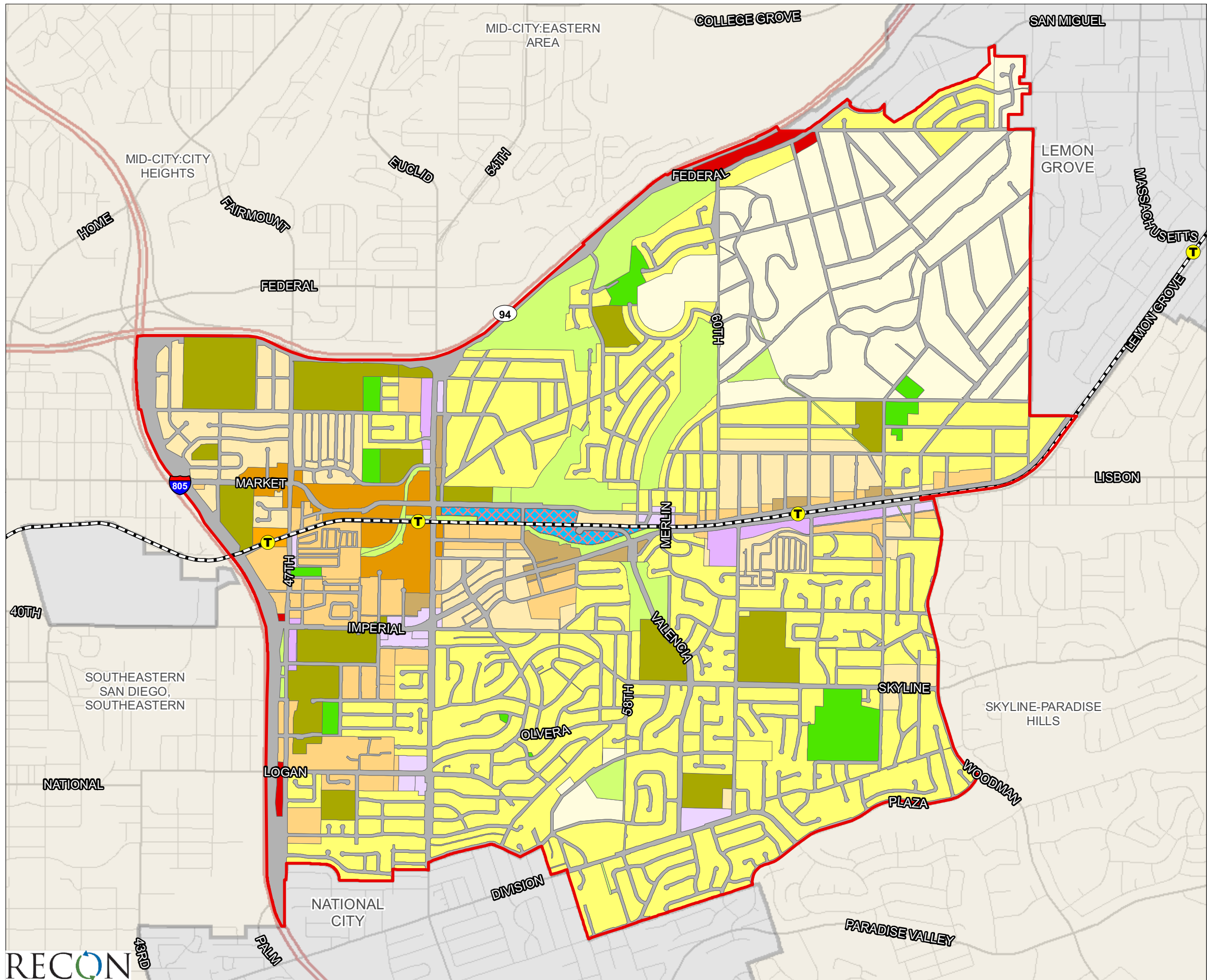


- Southeastern San Diego Community Plan Boundary
- Trolley Line
- Trolley Stops
- Proposed Land Use**
- Mixed Use**
- Neighborhood Mixed Use (30-44 du/ac)
- Neighborhood Mixed Use-Low (15-29 du/ac)
- Community Mixed Use-Medium (30-44 du/ac)
- Community Mixed Use-Low (15-29 du/ac)
- Residential**
- Residential - Very Low (0-4 du/ac)
- Residential - Low (5-9 du/ac)
- Residential - Low Medium (10-14 du/ac)
- Residential - Medium (15-29 du/ac)
- Residential - Medium High (30-44 du/ac)
- Commercial, Employment, and Industrial**
- Community Commercial - Residential Prohibited
- Regional Commercial - Residential Prohibited
- Office Commercial
- Light Industrial
- Business Park
- Institutional and Public/Semi-Public Facilities**
- Institutional
- Right-Of-Way
- Parks, Open Space & Recreation**
- Population-based Park
- Open Space



**FIGURE 3a**  
Proposed Land Uses for the  
Southeastern San Diego CPU

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- Encanto Neighborhoods Community Plan Boundary
- Trolley Line
- Trolley Stops
- Proposed Land Use**
- Mixed Use**
- Neighborhood Mixed Use (30-44 du/ac)
- Neighborhood Mixed Use-Low (15-29 du/ac)
- Community Mixed Use-Medium (30-44 du/ac)
- Community Mixed Use-Low (15-29 du/ac)
- Residential**
- Residential - Very Low (0-4 du/ac)
- Residential - Low (5-9 du/ac)
- Residential - Low Medium (10-14 du/ac)
- Residential - Medium (15-29 du/ac)
- Residential - Medium High (30-44 du/ac)
- Commercial, Employment, and Industrial**
- Community Commercial - Residential Prohibited
- Business Park - Residential Prohibited
- Institutional and Public/Semi-Public Facilities**
- Institutional
- Right-Of-Way
- Parks, Open Space & Recreation**
- Population-based Park
- Open Space



**FIGURE 3b**  
Proposed Land Uses  
for the Encanto CPU

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## 1.5.2 Encanto Neighborhoods CPU

The Encanto Neighborhoods CPU also emphasizes achieving the “City of Villages” concept from the City of San Diego General Plan. Two core “villages” are identified in the plan, Village at Market Creek (Market Creek between 47<sup>th</sup> and Euclid) and Encanto Village (centered on the Encanto Trolley Station at Imperial Avenue and 62<sup>nd</sup> Street). Key corridors are Imperial Avenue, Market Street, Euclid Avenue, and 47<sup>th</sup> Street.

Similar to the SESD CPU, the Encanto Neighborhoods CPU includes specific policies to require dense, compact, and diverse residential and commercial development; encourage highly efficient energy and water conservation design; increase walkability and bicycle accessibility; increase urban forestry practices and community gardens; decrease urban heat islands; and increase sustainable community design.

Unlike the SESD CPU, this plan proposes a Density Transfer Program. According to the plan, “The purpose of the Density Transfer (DT) program is to provide a mechanism for transferring density from sites anywhere inside the Village District (“Sending Sites”) to sites located within a ¼-mile radius of San Diego Trolley stops within the Village District (“Receiving Sites”). The goal of the program is to encourage increased density and compact development within defined village centers, and maintain the existing character of neighborhoods outside of the Village District.”

These policies, in combination with proposed programs focused on compact development and sustainability, would also serve to reduce consumption of fossil-fueled vehicles and energy use, resulting in a reduction in communitywide GHG emissions relative to BAU. Reductions modeled are primarily a result of statewide measures. Figure 3b shows proposed land use.

## 2.0 Regulatory Background

A detailed discussion of applicable GHG regulations is contained in the Existing Air Quality, Greenhouse Gas Emissions, and Noise Conditions Report for the Southeast San Diego Community Plan Update (existing conditions report) (RECON 2013). Since the completion of the existing conditions report, revisions to the CARB Scoping Plan, California Energy Code, and California Green Building Standards Code have been adopted. The City of San Diego has also published a Draft Climate Action Plan (CAP), which is in the public review process.



## **2.1 Scoping Plan**

The CARB Scoping Plan was originally developed in December 2008 in response to Assembly Bill (AB) 32. The scoping plan outlines measures to reduce statewide GHG emissions to 1990 levels by 2020. This reduction was estimated to equate to a 28.3 percent reduction from a BAU scenario.

Approved in May 2014, the First Update to the Scoping Plan (CARB 2014) defines CARB's priorities for the next five years and sets the groundwork to reach long-term goals set forth in Executive Order (EO) S-3-05. A stated goal of the update is to lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The update revises 2020 BAU forecasts from 596 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>E) to 509 MMTCO<sub>2</sub>E, based on economic downturn and the effects of state regulations that were in effect at the time of the original BAU but were not included in the GHG estimate. This, in turn, changes the BAU reduction target from 28.3 percent to 16.1 percent. The update describes advancements in climate science such as the quantification of the impacts of temperature change, further understanding of the mechanisms of climate pollutants (black carbon, methane, and hydrofluorocarbons), and improvements to GHG monitoring. The First Update also describes progress made since the original Scoping Plan including implementation of a more comprehensive Cap-and-Trade Program, Low Carbon Fuel Standard (LCFS), a 33 percent Renewable Portfolio Standard, and Advanced Clean Cars program, which has been adopted at the federal level.

## **2.2 California Code of Regulations Title 24**

### **2.2.1 Part 6—California Energy Code**

New construction and major renovations must demonstrate compliance with the current Energy Code through increases in energy efficiency given selection of various heating, ventilation, and air conditioning; sealing; window glazing; insulation; and other components related to the building envelope. The most recent amendments to the

Energy Code became effective January 1, 2014. The 2013 Energy Code provides mandatory energy-efficiency measures as well as voluntary tiers for increased energy efficiency. The 2013 Energy Code achieves a 25 percent improvement in residential structure energy efficiency and a 30 percent increase in energy efficiency for non-residential structures over the 2008 Title 24 standards (California Energy Commission 2013).



## **2.2.2 Part 11—California Green Building Standards Code**

California Green Building Standards (CalGreen) institutes mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. These mandatory standards include reduction of indoor water use by 20 percent, diversion of 50 percent of all construction/demolition waste, inspection of energy systems to ensure optimal working efficiency, and requirements for low-pollutant emitting finish materials. CalGreen also includes voluntary tiers (I and II) with stricter environmental performance standards. Local jurisdictions must enforce the minimum mandatory requirements and may adopt CalGreen with amendments for stricter requirements. The 2013 revisions to CalGreen clarify existing regulation.

## **2.3 San Diego Draft Climate Action Plan**

In March 2015, the City released its draft CAP for public review. The CAP identifies measures to meet GHG reduction targets for 2020 and 2035. The CAP consists of a 2010 inventory of GHG emissions, a BAU projection for emissions at 2020 and 2035, state GHG emissions reduction targets, and emission reductions with implementation of the CAP. The City identifies GHG reduction strategies focusing on energy- and water-efficient buildings; clean and renewable energy; bicycling, walking, transit, and land use; zero waste; and climate resiliency. Accounting for future population and economic growth, the City projects GHG emissions will be approximately 14.0 MMTCO<sub>2</sub>E in 2020 and 16.4 MMTCO<sub>2</sub>E in 2035. Carbon dioxide (CO<sub>2</sub>)-equivalent emissions are the preferred way to assess combined GHG emissions because they give weight to the Global Warming Potential (GWP) of a gas. The GWP is a unitless factor representing the potential of a gas to warm the global climate with respect equivalent amount of CO<sub>2</sub>.

According the City's CAP, to achieve its proportional share of the state reduction targets for 2020 (AB 32) and 2050 (EO S-3-05), the City would need to reduce emissions below the 2010 baseline by 15 percent in 2020 and 49 percent by 2035. To meet these goals, the City has developed implementation strategies that reduce emissions to approximately 11.9 MMTCO<sub>2</sub>E in 2020 and 8.4 MMTCO<sub>2</sub>E in 2035. Through implementation of the draft CAP, the City projects that it will reduce emissions 2,165,323 MTCO<sub>2</sub>E below the 2020 target and 1,995,169 MTCO<sub>2</sub>E below the 2035 GHG emissions target (City of San Diego 2015).

## 3.0 Significance Criteria

### 3.1 Determining Significance

Senate Bill 97 (Dutton) required the Office of Planning and Research to prepare, develop, and transmit to the Resources Agency amendments to the CEQA Guidelines to assist public agencies in the evaluation and mitigation of GHGs or the effects of GHGs as required under CEQA, including the effects associated with transportation and energy consumption. The CEQA Guidelines were amended and became effective March 18, 2010. The current CEQA Guidelines Appendix G Environmental Checklist includes the following two questions regarding assessment of GHG emissions:

- 1) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- 2) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs?

As stated in the Guidelines, these questions are “intended to encourage thoughtful assessment of impacts and do not necessarily represent thresholds of significance” (Title 14, Division 6, Chapter 3 Guidelines for Implementation of the CEQA, Appendix G, VII Greenhouse Gas Emissions). The CEQA Guidelines require Lead Agencies to adopt GHG thresholds of significance. When adopting these thresholds, the Guidelines allow lead agencies to develop their own significance threshold and/or to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence.

Section 15064.4 of the amended Guidelines includes the following requirements for determining the significance of impacts from GHG emissions:

- (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
  - (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with

substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

- (2) Rely on a qualitative analysis or performance-based standards.

While the amendments require calculation of a project's contribution, they do not establish a standard by which to judge a significant effect or a means to establish such a standard. The following is a discussion of the City's Guidelines for Determining Significance in accordance with CEQA.

### **3.1.1 Significance Thresholds**

On August 18, 2010, the City issued a memorandum on addressing GHG emissions from projects subject to CEQA (City of San Diego 2010). The memorandum cites guidance from the California Air Pollution Control Officers Association (CAPCOA) report *CEQA & Climate Change*, dated January 2008, as interim screening thresholds to determine when a GHG analysis would be required. Although these thresholds are interim guidance, they represent a good faith effort to evaluate whether GHG impacts from a project may be significant, taking into account the type and location of the proposed development, the best available scientific data regarding GHG emissions, and the current statewide goals and strategies for reduction of GHG emissions.

As stated in the Guidelines for Determining Significance section of the memorandum, projects that exceed these interim screening thresholds are further required to perform a focused GHG analysis. The GHG analysis is required to assess project emissions versus the "business-as-usual forecast model which represents the GHG emissions that would be expected to occur without any GHG project reducing features of mitigation." As discussed below, potential impacts are below a level of significance if the GHG analysis demonstrates a 28.3 percent reduction against 2020 BAU forecasts.

#### **3.1.1.1 900 MTCO<sub>2</sub>E Screening Threshold**

Guidance from CAPCOA references 900 MTCO<sub>2</sub>E as a conservative threshold for determining when further GHG analysis is required. This threshold is intended as a bright-line test that would exempt projects that are too small to have significant impacts from further analysis. The CAPCOA guidance identifies project sizes likely to be exempt under the 900 MTCO<sub>2</sub>E annual emission threshold as shown below in Table 2.

**TABLE 2**  
**PROJECT TYPES THAT REQUIRE GHG ANALYSIS**

Project Type	Project Size that Generates Approximately 900 Metric Tons of GHGs per Year
Single-family Residential	50 units
Apartments/Condominiums	70 units
General Commercial Office Space	35,000 square feet
Retail Space	11,000 square feet
Supermarket/Grocery Space	6,300 square feet

### 3.1.1.2 28.3 Percent Reduction in BAU

The City Guidelines for Determining Significance (City of San Diego 2010) require projects that exceed the 900 MTCO<sub>2</sub>E threshold perform a full analysis of GHG emissions. As discussed below, full analysis consists of assessing consistency with the CARB Scoping Plan to determine whether a cumulatively significant contribution of GHGs would occur.

As discussed in Section 2.1, the goal of the Scoping Plan is to reduce statewide GHG emissions to 1990 levels (427 MMTCO<sub>2</sub>E) by 2020. When the Scoping Plan was originally developed in 2008, CARB estimated that without any GHG reduction measures statewide GHG emissions in 2020 would be 596 MMTCO<sub>2</sub>E (Table 3). Thus, in order to return to 1990 emissions levels by 2020, a statewide reduction of 169 MMTCO<sub>2</sub>E relative to BAU is required to attain the 1990 levels by 2020. This equates to a 28.3 percent reduction relative to BAU.

**TABLE 3**  
**CALIFORNIA BAU 2020 GHG EMISSIONS FORECAST**

Sector	Projected 2020 Emissions in MMTCO <sub>2</sub> E (% total)
Transportation	225.4 (38%)
Electricity	139.2 (23%)
Commercial and Residential	46.7 (8%)
Industry	100.5 (17%)
Recycling and Waste	7.7 (1%)
High GWP	46.9 (8%)
Agriculture	29.8 (5%)
Forest Net Emissions	0.0
<b>TOTAL</b>	<b>596.4</b>

SOURCE: CARB 2008

MMTCO<sub>2</sub>E = million metric tons of carbon dioxide equivalent

GWP = global warming potential

Based on CARB's original BAU forecasts, the City Guidelines state, "to reduce potential impacts to below a level of significance, proposed projects must show a 28.3% reduction

to the 2020 business-as-usual model, consistent with AB 32”. To assess emissions against the City’s 28.3 percent reduction, BAU emissions are modeled without any GHG reduction measures that were adopted after passage of AB 32 in 2005. Emissions estimates of CPU buildout account for the GHG reductions achieved through reduction measures adopted after 2005.

Since 2005, statewide regulations that reduce GHG emissions include Pavley and LCFS measures, the 2013 update to the Title 24 Energy Efficiency Standards, and the 2011 effective date of implementing the mandatory water reduction requirements of CalGreen aimed at reducing water use emissions. Local and CPU-specific reduction measures are also accounted for in emissions estimates for buildout of the CPUs.

Impacts from the CPUs are then evaluated by comparing 2020 emissions reduction relative to BAU against the City’s threshold as follows:

$$\left( \frac{\dot{m}_{GHG,BAU} - \dot{m}_{GHG,PR}}{\dot{m}_{GHG,BAU}} \right) \times 100 \geq 28.3?$$

Where

$$\begin{aligned} \dot{m}_{GHG,BAU} &= 2020 \text{ BAU GHG emissions (MTCO}_2\text{E)} \\ \dot{m}_{GHG,PR} &= 2020 \text{ GHG emissions with GHG-reducing features incorporated (MTCO}_2\text{E)} \end{aligned}$$

Per City guidance, if a project’s 2020 GHG emissions represent a 28.3 percent reduction relative to the project’s BAU GHG emissions, then the project would not result in a significant impact to global climate change.

## 3.1.2 Consistency Review

### 3.1.2.1 Local Plans

The CPUs would have significant impacts if they conflicted with applicable sections of the General Plan. The City of San Diego General Plan Conservation Element outlines city policies to reduce climate change impacts. As stated previously, approval of the CPUs would not permit the construction of any individual project, and no specific development details are available at this time. Therefore, most policies such as promoting green building, energy efficient lighting, and water conservation strategies are inapplicable to program-level projects such as the CPUs. General Plan Policy CE-A.2 includes adopting programs that . . . “create sustainable and efficient land use patterns to reduce vehicular trips and preserve open space . . . reduce fuel emission levels by encouraging alternative modes of transportation.” Therefore, the CPUs would be considered consistent with the General Plan if it can be demonstrated that the CPUs would reduce vehicle miles traveled by encouraging alternative modes of transportation. Section 5.2 discusses consistency of the CPUs with applicable plans.

As discussed in Section 2.3, the City of San Diego has released for public review, but has not adopted, a climate action plan. Therefore, the CPUs are not required to demonstrate consistency with the draft CAP.

### **3.1.2.2 State Plans**

The City Guidelines for Determining Significance asserts that a project would be consistent with the CARB Scoping Plan if the project demonstrates it can reduce its GHG emissions by 28.3 percent relative to the BAU scenario prior to passage of AB 32 in 2005. This assertion is based on CARB's BAU emissions forecasts based on progress through 2005.

As discussed in Section 2.1, the First Update to the Scoping Plan (CARB 2014) revised the BAU emissions forecast and lowered the target to a 16.1 percent reduction compared to a BAU. However, in the First Update to the Scoping Plan the BAU was based on progress made through 2011 as well as the economic downturn. Therefore, to be consistent with City guidance on GHG emissions, this analysis uses a 28.3 percent reduction target and the BAU approach from the original Scoping Plan as the criterion for assessing consistency with the CARB Scoping Plan.

## **4.0 Methodology and Assumptions**

Based on current City guidance, the CPU land uses were evaluated relative to the 28.3 percent reduction relative to CARB's 2008 BAU forecast for the year 2020. The CPUs would alter existing zoning. Buildout of the CPUs is not anticipated to occur until 2035; however, no adopted GHG reduction target is applicable after 2020. Therefore, GHG emissions estimates for complete CPU buildout are assessed against 2020 GHG targets to evaluate significance.

### **4.1 Modeling Parameters**

GHG emissions from operation were estimated using CalEEMod Version 2013.2.2, released in October 2013. CalEEMod was developed by several state air districts.

As stated by CARB,

The purpose of CalEEMod is to provide a uniform platform for government agencies, land use planners, and environmental professionals to estimate potential emissions associated with both construction and operational use of land use projects. It is intended that these emission estimates are suitable for use in CEQA compliant documents for air quality and climate change impacts. CalEEMod utilizes

widely accepted models for emissions estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB vehicle emissions models, studies commissioned by California agencies such as the California Energy Commission and CALRecycle.

In brief, the model estimates criteria air pollutants and GHG emissions by multiplying emission intensity factors by estimated quantities of emission sources based on the land use information entered by the user.

BAU estimates were modeled with an operational year of 2005 to avoid accounting for measures that were adopted after passage AB 32. As described above, CPU buildout (non-BAU) was modeled with an operational year of 2020. CalEEMod methodology and input data are described below and are based on information provided in the CalEEMod User's Guide (SCAQMD 2013). CalEEMod emission estimates are output in terms of total MTCO<sub>2</sub>E.

## **4.2 Defining Project Characteristics**

Emission estimates were calculated for the three GHGs of primary concern (CO<sub>2</sub>, methane [CH<sub>4</sub>], and nitrous oxide [N<sub>2</sub>O]) that would be emitted from construction and operational sources that would be associated with buildout of the CPUs.

### **4.2.1 Estimating Construction Emissions**

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

CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Estimates of the amount and type of construction equipment are based on construction surveys performed by SCAQMD of projects ranging from up to 30 acres. As such, CalEEMod construction estimations are not accurate for large projects where project specific information is required. At a program level, it would be speculative to estimate the schedule and construction requirements of individual projects included in the CPUs. Thus, this analysis relies on

the methodology used in the San Diego County Updated Greenhouse Gas Inventory (San Diego County 2013), which forecasts that between 2015 and 2035 construction emissions would comprise roughly 2.1 percent of total GHG emissions within the county. Therefore, construction emissions are estimated at 2.1 percent of the total operational GHG emissions associated with each Plan Area.

## **4.2.2 Estimating Vehicle Emissions**

Transportation-related GHG emissions comprise the largest sector contributing to both inventoried and projected statewide GHG emissions, accounting for 38 percent of the projected total statewide 2020 BAU emissions (CARB 2008). On-road vehicles alone account for 35 percent of forecasted 2020 BAU emissions. GHG emissions from vehicles come from the combustion of fossil fuels in vehicle engines. Vehicle emissions are estimated 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.

Default trip rates are based on the Institute of Transportation Engineers Trip Generation 8<sup>th</sup> Edition trip rates for each respective land use category, and default trip lengths are based on either information provided by the local air district or, if not provided by an air district, are based on statewide averages.

Vehicle emission factors and fleet mix are derived from the Emission Factors 2011 model. Vehicle emission factors include GHG-reducing effects from the implementation of Pavley I (Clean Car Standards) and the LCFS. Post-model processing included reducing the emissions from mobile sources by an additional 0.6 percent to account for the Tire Pressure Program and an additional 2.4 percent to account for implementation of Low Emission Vehicles III (CARB 2011; see Attachment 1).

In addition to the effects of state actions, the proposed project's focus on community walkability, transit-oriented development, and increases in density and diversity of land uses were included in the CPU emission calculations. Based on an evaluation of the existing transit facilities and the proposed land use plan, the average distance a resident must travel to access transit facilities is a quarter mile in SESD and a half mile in the Encanto Neighborhoods. However, to be conservative, modeling assumed an average travel distance to transit facilities as half a mile for SESD and one mile for Encanto Neighborhoods. In Southeastern San Diego, the effects of increased density and the distance to transit infrastructure would result in an approximate 36 percent reduction in community VMT. In the Encanto Neighborhoods, these same concepts would result in an approximate 32 percent reduction in overall community VMT.



## 4.2.3 Estimating Energy Use Emissions

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are generated during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated as associated with a building's operation. Electric power generation accounts for the second largest sector contributing to both inventoried and projected statewide GHG emissions, comprising 24 percent of the projected total 2020 statewide BAU emissions (CARB 2008). Combustion of fossil fuel emits criteria pollutants and GHGs directly into the atmosphere. When this occurs in a building this is considered a direct emissions source associated with that building.

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

Energy values are based on the California Energy Commission-sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies, which identify energy use by building type and climate zone. CalEEMod energy emission factors are based on 2008 Title 24 buildings code. All proposed land use changes would be subject to 2013 Title 24 regulations; therefore energy use rates incorporate 25 percent residential and 30 percent commercial energy use reductions. Based on the percentage of commercial and residential land uses proposed within each planning area the total increase in energy efficiency was calculated as 26.1 percent.

San Diego Gas & Electric (SDG&E) serves both SESD and Encanto Neighborhoods. Existing and projected energy intensity factors for SDG&E are shown in Table 4.

**TABLE 4**  
**SAN DIEGO GAS & ELECTRIC INTENSITY FACTORS**

GHG	Existing Intensity Factor <sup>1</sup> (lbs/MWh) <sup>3</sup>	Projected 2020 Intensity Factor <sup>2</sup> (lbs/MWh)
Carbon Dioxide (CO <sub>2</sub> )	720.49	558.38
Methane (CH <sub>4</sub> )	0.029	0.022
Nitrous Oxide (N <sub>2</sub> O)	0.006	0.005

<sup>1</sup> SOURCE: CalEEMod Version 2013.2.2.

<sup>2</sup> The CalEEMod emission factor is based on a 2009 report, The 2020 factors have been reduced by 22.8 percent to account for the progress of the California Renewable Portfolio Standard between 2009 and 2020.

<sup>3</sup> lbs / MWh = pounds of CO<sub>2</sub>E per megaWatt hour

These energy intensity factors are used to determine the GHG emissions associated with electricity use and are based on SDG&E energy intensity factors in California Climate Action Registry reports (for CO<sub>2</sub>) and E-Grid (for CH<sub>4</sub> and N<sub>2</sub>O) values. The original California Renewable Portfolio Standard (RPS) was passed in 2002 setting renewable energy targets for 2010. California RPS 2020 targets were added in 2011 as part of Senate Bill 2. Therefore, BAU estimates use 2009 energy intensity factors and CPU buildout estimates use 2020 projected energy intensity factors adjusted to reflect the regulatory requirements of 33 percent.

#### **4.2.4 Estimating Area Source Emissions**

CalEEMod estimates the GHG emissions that would occur from the use of hearths, woodstoves, and landscaping equipment. The use of hearths (fireplaces) and woodstoves directly emits CO<sub>2</sub> from the combustion of natural gas, wood, or biomass. Emissions from hearths and woodstoves for residential uses are estimated based on the type and size features of the residential land use. Typically, commercial land uses do not have any hearths or woodstoves, but these sources can be added to the model for those cases where they may occur, such as in restaurants or hotels, if such information is known. The San Diego County average for hearths and stoves was used for modeling, which assumes that 35 percent of new residential development would include a wood-fueled fireplace, 55 percent would have natural gas-fueled fireplaces, and 10 percent would not have any functional fireplace.

Landscape equipment is another area source that emits GHGs associated with the equipment's fuel combustion. CalEEMod estimates the number and type of equipment needed based on the typical number of summer days given the project's location and the type of land use. For modeling purposes, landscaping equipment was assumed to be used an average of 180 days a year.

#### **4.2.5 Estimating Water and Wastewater Emissions**

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

Standard water consumption rates were assumed for the estimates of BAU and existing conditions; however, land uses proposed in the CPU were modeled with a 20 percent reduction in indoor water use in accordance with recent requirements of CalGreen. Similar to energy use, recent updates to the water conservation element of Title 24 have resulted in increased water conservation for development subsequent to 2010. New construction and redevelopment that would occur under the CPU would be constructed

in accordance with the current 2013 CalGreen, or later, water conservation requirements. Because CalGreen (i.e., Part 11 of Title 24) requires a minimum 20 percent reduction in indoor water use, a 20 percent reduction in indoor water use was factored into the CPU emissions.

## **4.2.6 Estimating Solid Waste Emissions**

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod estimates the GHG emissions associated with disposal of solid waste into landfills. To estimate the GHG emissions that would be generated by disposing of the solid waste associated with the CPUs, the total volume of solid waste was first estimated in the model using waste disposal rates identified by CalRecycle. Methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change method using the degradable organic content of waste.

# **5.0 Impact Analysis**

In accordance with CEQA and City guidelines, this analysis evaluates the significance of the CPU in terms of (1) its contribution of GHGs to cumulative statewide emissions and (2) its consistency with local and state regulations, plans, and policies aimed at reducing GHG emissions.

The CPU would subdivide the existing planning area into two distinct planning areas; therefore, impacts associated with each CPU are discussed separately.

## **5.1 CPU Emissions**

The following is a discussion and quantification of the GHG emissions that would occur as a result of the CPUs due to the following GHG sources: (1) vehicles, (2) energy, (3) area sources, (4) water use, (5) solid waste generation, and (6) construction. The complete calculations of project GHG emissions are included in Attachments 1-3. Table 5 summarizes the existing planning area emissions, the proposed planning area emissions, and the net increase in GHG emissions.

**TABLE 5**  
**SESD AND ENCANTO NEIGHBORHOODS GHG EMISSIONS**  
**(MTCO<sub>2</sub>E PER YEAR)**

Emission Source	Existing (2015)	BAU (2020)	Buildout (2020)	Buildout vs. BAU Reduction	
				MTCO <sub>2</sub> E	%
Southeastern San Diego					
Vehicles	245,071	350,592	170,004	180,588	51.5%
Energy Use	72,127	86,485	62,355	24,130	27.9%
Area Sources	22,899	27,496	27,493	3	0.0%
Water Use	13,101	15,072	15,072	0	0.0%
Solid Waste Generation	15,101	18,130	12,248	5,882	32.4%
Construction	7,900	10,677	6,160	4,517	42.3%
SUBTOTAL	376,199	508,451	293,331	215,120	42.3%
Encanto Neighborhoods					
Vehicles	197,353	321,322	161,630	159,692	49.7%
Energy Use	64,321	80,163	58,338	21,825	27.2%
Area Sources	21,011	32,153	32,150	3	0.0%
Water Use	11,879	13,514	13,514	0	0.0%
Solid Waste Generation	11,181	15,437	10,506	4,931	31.9%
Construction	6,558	9,923	5,923	4,000	40.3%
SUBTOTAL	312,303	472,511	282,060	190,451	40.3%

### 5.1.1 Southeastern San Diego CPU

As shown in Table 5, the SESD CPU would result in the annual emission of 293,331 MTCO<sub>2</sub>E of GHG. These emission levels far exceed the 900 MTCO<sub>2</sub>E bright-line threshold. The total GHG emissions in the SESD Planning Area, when compared to the BAU total annual emissions, would result in a 42.3 percent reduction in GHG emissions relative to BAU. This exceeds the City's threshold of a 28.3 percent reduction in GHG emissions relative to BAU. State regulations account for approximately 25 percent of this reduction with the remaining reductions due to the policies and land use plan for Southeastern San Diego. Therefore, GHG emissions associated with the SESD CPU would be less than significant.

### 5.1.2 Encanto Neighborhoods CPU

As shown in Table 5, the Encanto Neighborhoods CPU would result in the annual emission of 282,060 MTCO<sub>2</sub>E of greenhouse gases. These emission levels far exceed the 900 MTCO<sub>2</sub>E bright-line threshold.

The total GHG emissions in the Encanto Neighborhoods Planning Area, when compared to the BAU total annual emissions, would result in a 40.3 percent reduction in GHG emissions relative to BAU. This would exceed the City's threshold of a 28.3 percent reduction in GHG emissions relative to BAU. State regulations account for approximately

24 percent of this reduction with the remaining reductions due to the policies and land use plan for Encanto Neighborhoods. Therefore, GHG emissions associated with the Encanto Neighborhoods CPU would be less than significant.

### **5.1.3 Mitigation Framework**

While program-level impacts from GHG emissions have been identified as less than significant and no mitigation is required at a program level, all future discretionary projects would still be required to undergo individual environmental review and reduce GHG emissions consistent with City GHG emission reduction targets as well as conform to the policies of each CPU.

### **5.1.4 Significance of Impacts after Mitigation**

Based on the analysis of GHG emissions and considering that future development projects would be required to implement GHG emission reduction measures, the associated contribution of program-level GHG emissions to cumulative statewide emissions would be considered less than significant.

## **5.2 Consistency with Adopted Plans, Policies, and Regulations**

As discussed in Section 3.1.2, the CPU would be consistent with the General Plan if it would reduce vehicle miles traveled by encouraging alternative modes of transportation. In addition, the CPU would be consistent with the CARB Scoping Plan if it would reduce its GHG emissions by 28.3 percent compared to the BAU scenario prior to passage of AB 32 in 2005.

### **5.2.1 Southeastern San Diego CPU**

The SESD CPU includes specific policies to require dense, compact, and diverse residential and commercial development. This development is primarily within the Southeastern Village District, which is entirely within ½ mile roughly centered along the San Diego Orange Line Trolley. Policies P-MO-1 through P-MO-14 from the Mobility Element promote walking, bicycling, and mass transit, through infrastructure improvements. A stated goal of these policies is to make walking, bicycling, and mass transit pleasant, safe, and desirable modes of travel. Therefore, the SESD CPU encourages alternative modes of transportation and is consistent with the San Diego General Plan.

The SESD CPU would result in a 42.3 percent reduction relative to BAU. This exceeds the 28.3 percent required for consistency with the CARB Scoping Plan and is thus

consistent with the overall goals of the Scoping Plan and City thresholds. Additionally, the CPU includes land use, sustainability, and mobility policies that support measures of the Scoping Plan, which are intended to reduce VMT and increase transit and other alternative forms of transportation, promote green building, encourage alternative energy use, and move to more compact development. As the CPU would achieve a percentage reduction over BAU greater than 28.3 and its policies support the goals of the Scoping Plan, the impact from adoption of the CPU would be considered to have a less than significant impact on applicable plans, policies, and regulations adopted for the purpose of reducing the emission of GHGs.

## **5.2.2 Encanto Neighborhoods CPU**

The Encanto Neighborhoods CPU includes specific policies to require dense, compact, and diverse residential and commercial development. This development is almost entirely within  $\frac{1}{2}$  mile roughly centered along the San Diego Orange Line Trolley. Furthermore, the proposed Density Transfer Program would facilitate the transfer of land use density to within  $\frac{1}{4}$  mile of a San Diego Orange Line Trolley stop.

Policies P-MO-1 through P-MO-14 from the Mobility Element promote walking, bicycling, and mass transit, through infrastructure improvements. A stated goal of these policies is to develop a robust multimodal network that encourages walking, bicycling, and taking mass transit. Therefore, the Encanto Neighborhoods CPU encourages alternative modes of transportation and is consistent with the San Diego General Plan.

The Encanto Neighborhoods CPU would result in a 40.3 percent reduction relative to BAU. This exceeds the 28.3 percent required for consistency with the CARB Scoping Plan and is thus consistent with the overall goals of the Scoping Plan and City threshold. Additionally, as with the SESD CPU, the Encanto Neighborhoods CPU includes land use, sustainability, and mobility policies that support measures of the Scoping Plan, which are intended to reduce VMT and increase transit and other alternative forms of transportation, promote green building, encourage alternative energy use, and create more diverse and compact development. As the CPU would achieve a percentage reduction over BAU greater than 28.3 and its policies support the goals of the Scoping Plan, the impact from adoption of the CPU would be considered have a less than significant impact on applicable plans, policies, and regulations adopted for the purpose of reducing the emission of GHGs.

## 6.0 Conclusions and Recommendations

Approval of the CPUs would amend the General Plan and would establish land use designations and policies to guide future development consistent with the City of San Diego General Plan (2008). These designations would intensify land use around the San Diego Orange Line Trolley.

In accordance with CEQA and City guidelines, this analysis evaluates the significance of the CPUs in terms of (1) its contribution of GHGs to cumulative statewide emissions and (2) its consistency with local and state regulations, plans, and policies aimed at reducing GHG emissions.

As discussed in Section 3.0, cumulative CPU emissions were evaluated against the City's significance thresholds. Both the SEDS and Encanto Neighborhoods CPUs exceed the City's initial threshold of 900 MTCO<sub>2</sub>E. This fact required further analysis to determine whether the project would achieve the 28.3 percent reduction in GHGs relative to BAU as identified by the City and in the CARB 2008 Scoping Plan.

Based on an analysis of the regulatory and project-related emissions reductions, the SEDS CPU would result in annual emissions of 293,331 MTCO<sub>2</sub>E. This represents a 42.3 percent reduction in GHG emissions by 2020 over a BAU scenario, of which approximately 25 percent is directly attributable to statewide regulations and programs. Similarly, development with the Encanto Neighborhoods would generate 282,060 MTCO<sub>2</sub>E, which represents a 40.3 percent reduction in GHG emissions by 2020 over the BAU emissions. As with the SEDS CPU, a large portion of the GHG emissions reductions within Encanto Neighborhoods, approximately 24 percent, would be achieved due to statewide regulations and programs. As the CPUs would achieve a greater than 28.3 percent reduction over BAU, the adoption of the CPUs would result in less than significant impacts under CEQA.

As discussed in Section 5.1.3, while program level impacts from GHG emissions have been identified as less than significant and no mitigation is required at a program level, all future discretionary projects would still be required to undergo individual environmental review and reduce GHG emissions consistent with City GHG emission reduction targets as well as conform to the policies of each CPU.

SEDS and Encanto Neighborhoods CPUs would achieve an approximate 42 and 40 percent reduction relative to BAU, respectively. They exceed the 28.3 percent required for consistency with the CARB Scoping Plan and are thus consistent with the overall goals of the Scoping Plan and City thresholds. Additionally, both the SEDS and the Encanto Neighborhoods Plans include land use, sustainability, and mobility policies that support measures of the Scoping Plan, which are intended to reduce VMT and increase transit and other alternative forms of transportation, promote green building, encourage

alternative energy use, and move to more compact development. As the CPUs would achieve a greater than 28.3 percent reduction over BAU and each Plan's policies support the goals of the Scoping Plan, the impact from adoption of the Plans would be considered to have a less than significant impact on applicable plans, policies, and regulations adopted for the purpose of reducing the emission of GHGs.

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## **ATTACHMENTS**

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## **ATTACHMENT 1**

### **Existing GHG Emissions—Model Outputs**

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## Southeastern San Diego CPU Existing 2015

### San Diego County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	163.60	1000sqft	3.76	163,600.00	0
Government (Civic Center)	2,332.80	1000sqft	53.55	2,332,800.00	0
General Light Industry	2,068.70	1000sqft	47.49	2,068,700.00	0
Apartments Low Rise	9,380.00	Dwelling Unit	586.25	9,380,000.00	26827
Single Family Housing	5,648.00	Dwelling Unit	1,833.77	10,166,400.00	16153
Strip Mall	1,758.20	1000sqft	40.36	1,758,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13	<b>Operational Year</b>	2015		
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MW hr)</b>	720.49	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVa lue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorVal ue	250	150
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2015

## 2.0 Emissions Summary

### 2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,070.3689	14.1331	1,275.3499	0.4596		163.8084	163.8084		163.8037	163.8037	15,523.2884	6,692.6252	22,215.9136	14.5153	1.2210	22,899.2521
Energy	1.9701	17.0956	9.0723	0.1075		1.3612	1.3612		1.3612	1.3612	0.0000	71,828.9711	71,828.9711	2.4801	0.7933	72,126.9602
Mobile	171.8683	378.8537	1,722.6659	3.1012	212.1289	4.8176	216.9465	56.7344	4.4248	61.1592	0.0000	252,366.5632	252,366.5632	11.7301	0.0000	252,612.8960
Waste						0.0000	0.0000		0.0000	0.0000	5,845.7216	0.0000	5,845.7216	345.4723	0.0000	13,100.6388
Water						0.0000	0.0000		0.0000	0.0000	659.9726	12,479.3977	13,139.3703	68.2878	1.7045	15,101.8053



Total	1,244.2073	410.0824	3,007.0881	3.6683	212.1289	169.9872	382.1161	56.7344	169.5896	226.3240	22,028.9825	343,367.5572	365,396.5397	442.4856	3.7188	375,841.5524
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,070.3689	14.1331	1,275.3499	0.4596		163.8084	163.8084		163.8037	163.8037	15,523.2884	6,692.6252	22,215.9136	14.5153	1.2210	22,899.2521
Energy	1.9701	17.0956	9.0723	0.1075		1.3612	1.3612		1.3612	1.3612	0.0000	71,828.9711	71,828.9711	2.4801	0.7933	72,126.9602
Mobile	171.8683	378.8537	1,722.6659	3.1012	212.1289	4.8176	216.9465	56.7344	4.4248	61.1592	0.0000	252,366.5632	252,366.5632	11.7301	0.0000	252,612.8960
Waste						0.0000	0.0000		0.0000	0.0000	5,845.7216	0.0000	5,845.7216	345.4723	0.0000	13,100.6388
Water						0.0000	0.0000		0.0000	0.0000	659.9726	12,479.3977	13,139.3703	68.2754	1.7019	15,100.7524
Total	1,244.2073	410.0824	3,007.0881	3.6683	212.1289	169.9872	382.1161	56.7344	169.5896	226.3240	22,028.9825	343,367.5572	365,396.5397	442.4732	3.7162	375,840.4995

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00

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
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Category	tons/yr										MT/yr					
Mitigated	171.8683	378.8537	1,722.6659	3.1012	212.1289	4.8176	216.9465	56.7344	4.4248	61.1592	0.0000	252,366.5632	252,366.5632	11.7301	0.0000	252,612.8960
Unmitigated	171.8683	378.8537	1,722.6659	3.1012	212.1289	4.8176	216.9465	56.7344	4.4248	61.1592	0.0000	252,366.5632	252,366.5632	11.7301	0.0000	252,612.8960

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	61,814.20	67,160.80	56936.60	176,689,598	176,689,598
General Light Industry	14,418.84	2,730.68	1406.72	31,794,142	31,794,142
General Office Building	1,801.24	387.73	160.33	3,261,753	3,261,753
Government (Civic Center)	65,131.78	0.00	0.00	88,934,509	88,934,509
Single Family Housing	54,051.36	56,931.84	49532.96	153,664,921	153,664,921
Strip Mall	77,923.42	73,914.73	35920.03	109,881,770	109,881,770
Total	275,140.84	201,125.78	143,956.63	564,226,693	564,226,693

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
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
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

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509603	0.073619	0.192430	0.134105	0.036943	0.005309	0.012459	0.020989	0.001832	0.002087	0.006541	0.000614	0.003471

## 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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52,331.7562	52,331.7562	2.1064	0.4358	52,511.0885
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52,331.7562	52,331.7562	2.1064	0.4358	52,511.0885
NaturalGas Mitigated	1.9701	17.0956	9.0723	0.1075		1.3612	1.3612		1.3612	1.3612	0.0000	19,497.2149	19,497.2149	0.3737	0.3575	19,615.8717
NaturalGas Unmitigated	1.9701	17.0956	9.0723	0.1075		1.3612	1.3612		1.3612	1.3612	0.0000	19,497.2149	19,497.2149	0.3737	0.3575	19,615.8717

## 5.2 Energy by Land Use - NaturalGas Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	3.85442e+006	0.0208	0.1889	0.1587	1.1300e-003		0.0144	0.0144		0.0144	0.0144	0.0000	205.6863	205.6863	3.9400e-003	3.7700e-003	206.9381
Government (Civic Center)	5.49608e+007	0.2964	2.6942	2.2631	0.0162		0.2048	0.2048		0.2048	0.2048	0.0000	2,932.9159	2,932.9159	0.0562	0.0538	2,950.7651
Single Family Housing	1.69889e+008	0.9161	7.8282	3.3312	0.0500		0.6329	0.6329		0.6329	0.6329	0.0000	9,065.9399	9,065.9399	0.1738	0.1662	9,121.1137
Strip Mall	4.23726e+006	0.0229	0.2077	0.1745	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.1164	226.1164	4.3300e-003	4.1500e-003	227.4925
Apartments Low Rise	1.06998e+008	0.5770	4.9303	2.0980	0.0315		0.3986	0.3986		0.3986	0.3986	0.0000	5,709.8176	5,709.8176	0.1094	0.1047	5,744.5666
General Light Industry	2.54243e+007	0.1371	1.2463	1.0469	7.4800e-003		0.0947	0.0947		0.0947	0.0947	0.0000	1,356.7387	1,356.7387	0.0260	0.0249	1,364.9956

Total		1.9701	17.0956	9.0723	0.1075		1.3612	1.3612		1.3612	1.3612	0.0000	19,497.2149	19,497.2149	0.3737	0.3575	19,615.8717
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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	3.85442e+006	0.0208	0.1889	0.1587	1.1300e-003		0.0144	0.0144		0.0144	0.0144	0.0000	205.6863	205.6863	3.9400e-003	3.7700e-003	206.9381
Government (Civic Center)	5.49608e+007	0.2964	2.6942	2.2631	0.0162		0.2048	0.2048		0.2048	0.2048	0.0000	2,932.9159	2,932.9159	0.0562	0.0538	2,950.7651
Single Family Housing	1.69889e+008	0.9161	7.8282	3.3312	0.0500		0.6329	0.6329		0.6329	0.6329	0.0000	9,065.9399	9,065.9399	0.1738	0.1662	9,121.1137
Strip Mall	4.23726e+006	0.0229	0.2077	0.1745	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.1164	226.1164	4.3300e-003	4.1500e-003	227.4925
Apartments Low Rise	1.06998e+008	0.5770	4.9303	2.0980	0.0315		0.3986	0.3986		0.3986	0.3986	0.0000	5,709.8176	5,709.8176	0.1094	0.1047	5,744.5666
General Light Industry	2.54243e+007	0.1371	1.2463	1.0469	7.4800e-003		0.0947	0.0947		0.0947	0.0947	0.0000	1,356.7387	1,356.7387	0.0260	0.0249	1,364.9956
Total		1.9701	17.0956	9.0723	0.1075		1.3612	1.3612		1.3612	1.3612	0.0000	19,497.2149	19,497.2149	0.3737	0.3575	19,615.8717

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.44843e+007	11,269.7574	0.4536	0.0939	11,308.3770
General Light Industry	1.94044e+007	6,341.5300	0.2553	0.0528	6,363.2614
General Office Building	2.57506e+006	841.5535	0.0339	7.0100e-003	844.4374

Government (Civic Center)	3.67183e+007	11,999.8532	0.4830	0.0999	12,040.9747
Single Family Housing	4.09438e+007	13,380.7995	0.5386	0.1114	13,426.6533
Strip Mall	2.60038e+007	8,498.2626	0.3421	0.0708	8,527.3848
<b>Total</b>		<b>52,331.7562</b>	<b>2.1064</b>	<b>0.4358</b>	<b>52,511.0885</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.44843e+007	11,269.7574	0.4536	0.0939	11,308.3770
General Light Industry	1.94044e+007	6,341.5300	0.2553	0.0528	6,363.2614
General Office Building	2.57506e+006	841.5535	0.0339	7.0100e-003	844.4374
Government (Civic Center)	3.67183e+007	11,999.8532	0.4830	0.0999	12,040.9747
Single Family Housing	4.09438e+007	13,380.7995	0.5386	0.1114	13,426.6533
Strip Mall	2.60038e+007	8,498.2626	0.3421	0.0708	8,527.3848
<b>Total</b>		<b>52,331.7562</b>	<b>2.1064</b>	<b>0.4358</b>	<b>52,511.0885</b>

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,070.3689	14.1331	1,275.3499	0.4596		163.8084	163.8084		163.8037	163.8037	15,523.2884	6,692.6252	22,215.9136	14.5153	1.2210	22,899.2521
Unmitigated	1,070.3689	14.1331	1,275.3499	0.4596		163.8084	163.8084		163.8037	163.8037	15,523.2884	6,692.6252	22,215.9136	14.5153	1.2210	22,899.2521

### 6.2 Area by SubCategory

#### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	22.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	101.0341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	942.9498	12.7933	1,161.6129	0.4537		163.1996	163.1996		163.1948	163.1948	15,523.2884	6,510.2407	22,033.5291	14.3254	1.2210	22,712.8803
Landscaping	3.6427	1.3398	113.7371	5.9000e-003		0.6089	0.6089		0.6089	0.6089	0.0000	182.3845	182.3845	0.1899	0.0000	186.3719
Total	1,070.3689	14.1331	1,275.3499	0.4596		163.8084	163.8084		163.8037	163.8037	15,523.2884	6,692.6253	22,215.9136	14.5153	1.2210	22,899.2521

#### 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
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SubCategory	tons/yr										MT/yr					
Architectural Coating	22.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	101.0341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	942.9498	12.7933	1,161.6129	0.4537		163.1996	163.1996		163.1948	163.1948	15,523.2884	6,510.2407	22,033.5291	14.3254	1.2210	22,712.8803
Landscaping	3.6427	1.3398	113.7371	5.9000e-003		0.6089	0.6089		0.6089	0.6089	0.0000	182.3845	182.3845	0.1899	0.0000	186.3719
Total	1,070.3689	14.1331	1,275.3499	0.4596		163.8084	163.8084		163.8037	163.8037	15,523.2884	6,692.6253	22,215.9136	14.5153	1.2210	22,899.2521

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13,139.3703	68.2754	1.7019	15,100.7524
Unmitigated	13,139.3703	68.2878	1.7045	15,101.8053

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	611.145 / 385.287	4,193.4566	20.0751	0.5035	4,771.1269

General Light Industry	478.387 / 0	2,187.4866	15.6702	0.3850	2,635.9181
General Office Building	29.0772 / 17.8215	197.6667	0.9551	0.0239	225.1450
Government (Civic Center)	463.433 / 284.04	3,150.4140	15.2219	0.3816	3,588.3624
Single Family Housing	367.99 / 231.994	2,525.0152	12.0879	0.3032	2,872.8491
Strip Mall	130.234 / 79.821	885.3312	4.2777	0.1072	1,008.4038
<b>Total</b>		<b>13,139.3703</b>	<b>68.2878</b>	<b>1.7045</b>	<b>15,101.8053</b>

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	611.145 / 385.287	4,193.4566	20.0715	0.5028	4,770.8176
General Light Industry	478.387 / 0	2,187.4866	15.6673	0.3844	2,635.6760
General Office Building	29.0772 / 17.8215	197.6667	0.9549	0.0239	225.1303
Government (Civic Center)	463.433 / 284.04	3,150.4140	15.2191	0.3810	3,588.1279
Single Family Housing	367.99 / 231.994	2,525.0152	12.0857	0.3027	2,872.6629
Strip Mall	130.234 / 79.821	885.3312	4.2769	0.1071	1,008.3378
<b>Total</b>		<b>13,139.3703</b>	<b>68.2754</b>	<b>1.7019</b>	<b>15,100.7524</b>

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year



	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5,845.7216	345.4723	0.0000	13,100.6388
Unmitigated	5,845.7216	345.4723	0.0000	13,100.6388

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	4314.8	875.8654	51.7622	0.0000	1,962.8708
General Light Industry	2565.19	520.7104	30.7731	0.0000	1,166.9455
General Office Building	152.15	30.8851	1.8253	0.0000	69.2154
Government (Civic Center)	13297	2,699.1627	159.5160	0.0000	6,048.9976
Single Family Housing	6622.73	1,344.3543	79.4491	0.0000	3,012.7847
Strip Mall	1846.11	374.7437	22.1467	0.0000	839.8247
Total		5,845.7216	345.4723	0.0000	13,100.6388

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	4314.8	875.8654	51.7622	0.0000	1,962.8708
General Light Industry	2565.19	520.7104	30.7731	0.0000	1,166.9455
General Office Building	152.15	30.8851	1.8253	0.0000	69.2154
Government (Civic Center)	13297	2,699.1627	159.5160	0.0000	6,048.9976
Single Family Housing	6622.73	1,344.3543	79.4491	0.0000	3,012.7847
Strip Mall	1846.11	374.7437	22.1467	0.0000	839.8247
Total		5,845.7216	345.4723	0.0000	13,100.6388

9.0 Operational Offroad

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

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## Encanto CPU Existing 2015

### San Diego County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	150.20	1000sqft	3.45	150,200.00	0
Government (Civic Center)	2,035.40	1000sqft	46.73	2,035,400.00	0
General Light Industry	465.40	1000sqft	10.68	465,400.00	0
Apartments Low Rise	3,943.00	Dwelling Unit	246.44	3,943,000.00	11277
Single Family Housing	9,846.00	Dwelling Unit	3,196.75	17,722,800.00	28160
Strip Mall	413.90	1000sqft	9.50	413,900.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13	<b>Operational Year</b>	2015		
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVa lue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorVal ue	250	150
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2015

## 2.0 Emissions Summary

### 2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	987.5989	12.9676	1,170.176 3	0.4217		150.3030	150.3030		150.2986	150.2986	14,243.45 38	6,140.795 5	20,384.249 3	13.3184	1.1204	21,011.246 2
Energy	2.1534	18.5727	9.0859	0.1175		1.4878	1.4878		1.4878	1.4878	0.0000	64,044.56 99	64,044.569 9	2.1285	0.7466	64,320.705 7
Mobile	130.3275	301.2834	1,350.067 9	2.4969	171.3512	3.8634	175.2145	45.8283	3.5485	49.3768	0.0000	203,229.5 291	203,229.52 91	9.3648	0.0000	203,426.18 93
Waste						0.0000	0.0000		0.0000	0.0000	5,300.609 6	0.0000	5,300.6096	313.2571	0.0000	11,879.007 8
Water						0.0000	0.0000		0.0000	0.0000	465.6458	9,329.710 6	9,795.3564	48.2018	1.2070	11,181.757 3

Total	1,120.0798	332.8237	2,529.3301	3.0361	171.3512	155.6541	327.0053	45.8283	155.3349	201.1632	20,009.7092	282,744.6051	302,754.3143	386.2706	3.0739	311,818.9063
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	987.5989	12.9676	1,170.1763	0.4217		150.3030	150.3030		150.2986	150.2986	14,243.4538	6,140.7955	20,384.2493	13.3184	1.1204	21,011.2462
Energy	2.1534	18.5727	9.0859	0.1175		1.4878	1.4878		1.4878	1.4878	0.0000	64,044.5699	64,044.5699	2.1285	0.7466	64,320.7057
Mobile	130.3275	301.2834	1,350.0679	2.4969	171.3512	3.8634	175.2145	45.8283	3.5485	49.3768	0.0000	203,229.5291	203,229.5291	9.3648	0.0000	203,426.1893
Waste						0.0000	0.0000		0.0000	0.0000	5,300.6096	0.0000	5,300.6096	313.2571	0.0000	11,879.0078
Water						0.0000	0.0000		0.0000	0.0000	465.6458	9,329.7106	9,795.3564	48.1931	1.2052	11,181.0145
Total	1,120.0798	332.8237	2,529.3301	3.0361	171.3512	155.6541	327.0053	45.8283	155.3349	201.1632	20,009.7092	282,744.6051	302,754.3143	386.2619	3.0721	311,818.1635

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00

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
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Category	tons/yr										MT/yr					
Mitigated	130.3275	301.2834	1,350.0679	2.4969	171.3512	3.8634	175.2145	45.8283	3.5485	49.3768	0.0000	203,229.5291	203,229.5291	9.3648	0.0000	203,426.1893
Unmitigated	130.3275	301.2834	1,350.0679	2.4969	171.3512	3.8634	175.2145	45.8283	3.5485	49.3768	0.0000	203,229.5291	203,229.5291	9.3648	0.0000	203,426.1893

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	25,984.37	28,231.88	23934.01	74,273,677	74,273,677
General Light Industry	3,243.84	614.33	316.47	7,152,798	7,152,798
General Office Building	1,653.70	355.97	147.20	2,994,592	2,994,592
Government (Civic Center)	56,828.37	0.00	0.00	77,596,579	77,596,579
Single Family Housing	94,226.22	99,247.68	86349.42	267,879,748	267,879,748
Strip Mall	18,344.05	17,400.36	8455.98	25,867,401	25,867,401
Total	200,280.55	145,850.22	119,203.08	455,764,795	455,764,795

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
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
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

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509603	0.073619	0.192430	0.134105	0.036943	0.005309	0.012459	0.020989	0.001832	0.002087	0.006541	0.000614	0.003471

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42,733.6707	42,733.6707	1.7201	0.3559	42,880.1119
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42,733.6707	42,733.6707	1.7201	0.3559	42,880.1119
NaturalGas Mitigated	2.1534	18.5727	9.0859	0.1175		1.4878	1.4878		1.4878	1.4878	0.0000	21,310.8992	21,310.8992	0.4085	0.3907	21,440.5938
NaturalGas Unmitigated	2.1534	18.5727	9.0859	0.1175		1.4878	1.4878		1.4878	1.4878	0.0000	21,310.8992	21,310.8992	0.4085	0.3907	21,440.5938

## 5.2 Energy by Land Use - NaturalGas Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	3.53871e+006	0.0191	0.1735	0.1457	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.8392	188.8392	3.6200e-003	3.4600e-003	189.9884
Government (Civic Center)	4.7954e+007	0.2586	2.3507	1.9746	0.0141		0.1787	0.1787		0.1787	0.1787	0.0000	2,559.0093	2,559.0093	0.0491	0.0469	2,574.5831
Single Family Housing	2.96163e+008	1.5970	13.6467	5.8071	0.0871		1.1034	1.1034		1.1034	1.1034	0.0000	15,804.3988	15,804.3988	0.3029	0.2898	15,900.5818
Strip Mall	997499	5.3800e-003	0.0489	0.0411	2.9000e-004		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003	0.0000	53.2304	53.2304	1.0200e-003	9.8000e-004	53.5543
Apartments Low Rise	4.49779e+007	0.2425	2.0725	0.8819	0.0132		0.1676	0.1676		0.1676	0.1676	0.0000	2,400.1931	2,400.1931	0.0460	0.0440	2,414.8002
General Light Industry	5.71977e+006	0.0308	0.2804	0.2355	1.6800e-003		0.0213	0.0213		0.0213	0.0213	0.0000	305.2285	305.2285	5.8500e-003	5.6000e-003	307.0861

Total		2.1534	18.5727	9.0859	0.1175		1.4878	1.4878		1.4878	1.4878	0.0000	21,310.8992	21,310.8992	0.4085	0.3907	21,440.5938
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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government (Civic Center)	4.7954e+007	0.2586	2.3507	1.9746	0.0141		0.1787	0.1787		0.1787	0.1787	0.0000	2,559.0093	2,559.0093	0.0491	0.0469	2,574.5831
Single Family Housing	2.96163e+008	1.5970	13.6467	5.8071	0.0871		1.1034	1.1034		1.1034	1.1034	0.0000	15,804.3988	15,804.3988	0.3029	0.2898	15,900.5818
Strip Mall	997499	5.3800e-003	0.0489	0.0411	2.9000e-004		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003	0.0000	53.2304	53.2304	1.0200e-003	9.8000e-004	53.5543
Apartments Low Rise	4.49779e+007	0.2425	2.0725	0.8819	0.0132		0.1676	0.1676		0.1676	0.1676	0.0000	2,400.1931	2,400.1931	0.0460	0.0440	2,414.8002
General Light Industry	5.71977e+006	0.0308	0.2804	0.2355	1.6800e-003		0.0213	0.0213		0.0213	0.0213	0.0000	305.2285	305.2285	5.8500e-003	5.6000e-003	307.0861
General Office Building	3.53871e+006	0.0191	0.1735	0.1457	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.8392	188.8392	3.6200e-003	3.4600e-003	189.9884
Total		2.1534	18.5727	9.0859	0.1175		1.4878	1.4878		1.4878	1.4878	0.0000	21,310.8992	21,310.8992	0.4085	0.3907	21,440.5938

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.44959e+007	4,737.3831	0.1907	0.0395	4,753.6173
General Light Industry	4.36545e+006	1,426.6680	0.0574	0.0119	1,431.5569
General Office Building	2.36415e+006	772.6243	0.0311	6.4300e-003	775.2720



Government (Civic Center)	3.20372e+007	10,470.0365	0.4214	0.0872	10,505.9156
Single Family Housing	7.13762e+007	23,326.3725	0.9389	0.1943	23,406.3081
Strip Mall	6.12158e+006	2,000.5863	0.0805	0.0167	2,007.4420
<b>Total</b>		<b>42,733.6707</b>	<b>1.7200</b>	<b>0.3559</b>	<b>42,880.1119</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.44959e+007	4,737.3831	0.1907	0.0395	4,753.6173
General Light Industry	4.36545e+006	1,426.6680	0.0574	0.0119	1,431.5569
General Office Building	2.36415e+006	772.6243	0.0311	6.4300e-003	775.2720
Government (Civic Center)	3.20372e+007	10,470.0365	0.4214	0.0872	10,505.9156
Single Family Housing	7.13762e+007	23,326.3725	0.9389	0.1943	23,406.3081
Strip Mall	6.12158e+006	2,000.5863	0.0805	0.0167	2,007.4420
<b>Total</b>		<b>42,733.6707</b>	<b>1.7200</b>	<b>0.3559</b>	<b>42,880.1119</b>

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	987.5989	12.9676	1,170.1763	0.4217		150.3030	150.3030		150.2986	150.2986	14,243.4538	6,140.7955	20,384.2493	13.3184	1.1204	21,011.2462
Unmitigated	987.5989	12.9676	1,170.1763	0.4217		150.3030	150.3030		150.2986	150.2986	14,243.4538	6,140.7955	20,384.2493	13.3184	1.1204	21,011.2462

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	22.4661					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	96.5858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	865.2073	11.7386	1,065.8424	0.4163		149.7444	149.7444		149.7400	149.7400	14,243.4538	5,973.4968	20,216.9505	13.1443	1.1204	20,840.2919
Landscaping	3.3398	1.2291	104.3339	5.4100e-003		0.5586	0.5586		0.5586	0.5586	0.0000	167.2987	167.2987	0.1741	0.0000	170.9544
Total	987.5989	12.9676	1,170.1763	0.4217		150.3030	150.3030		150.2986	150.2986	14,243.4538	6,140.7955	20,384.2493	13.3184	1.1204	21,011.2462

### 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
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SubCategory	tons/yr										MT/yr					
Architectural Coating	22.4661					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	96.5858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	865.2073	11.7386	1,065.8424	0.4163		149.7444	149.7444		149.7400	149.7400	14,243.4538	5,973.4968	20,216.9505	13.1443	1.1204	20,840.2919
Landscaping	3.3398	1.2291	104.3339	5.4100e-003		0.5586	0.5586		0.5586	0.5586	0.0000	167.2987	167.2987	0.1741	0.0000	170.9544
Total	987.5989	12.9676	1,170.1763	0.4217		150.3030	150.3030		150.2986	150.2986	14,243.4538	6,140.7955	20,384.2493	13.3184	1.1204	21,011.2462

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9,795.3564	48.1931	1.2052	11,181.0145
Unmitigated	9,795.3564	48.2018	1.2070	11,181.7573

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	256.902 / 161.96	1,762.7718	8.4388	0.2117	2,005.6027

General Light Industry	107.624 / 0	492.1237	3.5254	0.0866	593.0083
General Office Building	26.6956 / 16.3618	181.4764	0.8768	0.0220	206.7040
Government (Civic Center)	404.352 / 247.829	2,748.7794	13.2813	0.3329	3,130.8954
Single Family Housing	641.507 / 404.428	4,401.7882	21.0725	0.5285	5,008.1573
Strip Mall	30.6586 / 18.7908	208.4169	1.0070	0.0252	237.3896
<b>Total</b>		<b>9,795.3564</b>	<b>48.2018</b>	<b>1.2070</b>	<b>11,181.7573</b>

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	256.902 / 161.96	1,762.7718	8.4373	0.2114	2,005.4727
General Light Industry	107.624 / 0	492.1237	3.5247	0.0865	592.9538
General Office Building	26.6956 / 16.3618	181.4764	0.8767	0.0220	206.6905
Government (Civic Center)	404.352 / 247.829	2,748.7794	13.2789	0.3324	3,130.6908
Single Family Housing	641.507 / 404.428	4,401.7882	21.0687	0.5278	5,007.8326
Strip Mall	30.6586 / 18.7908	208.4169	1.0068	0.0252	237.3740
<b>Total</b>		<b>9,795.3564</b>	<b>48.1931</b>	<b>1.2052</b>	<b>11,181.0145</b>

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5,300.6096	313.2571	0.0000	11,879.0078
Unmitigated	5,300.6096	313.2571	0.0000	11,879.0078

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	1813.78	368.1810	21.7589	0.0000	825.1172
General Light Industry	577.1	117.1461	6.9231	0.0000	262.5319
General Office Building	139.69	28.3558	1.6758	0.0000	63.5472
Government (Civic Center)	11601.8	2,355.0565	139.1799	0.0000	5,277.8334
Single Family Housing	11545.6	2,343.6525	138.5059	0.0000	5,252.2762
Strip Mall	434.59	88.2178	5.2135	0.0000	197.7019
Total		5,300.6096	313.2571	0.0000	11,879.0078

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	1813.78	368.1810	21.7589	0.0000	825.1172
General Light Industry	577.1	117.1461	6.9231	0.0000	262.5319
General Office Building	139.69	28.3558	1.6758	0.0000	63.5472
Government (Civic Center)	11601.8	2,355.0565	139.1799	0.0000	5,277.8334
Single Family Housing	11545.6	2,343.6525	138.5059	0.0000	5,252.2762
Strip Mall	434.59	88.2178	5.2135	0.0000	197.7019
Total		5,300.6096	313.2571	0.0000	11,879.0078

9.0 Operational Offroad

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

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## **ATTACHMENT 2**

### **2020 Business-as-usual GHG Emissions—Model Outputs**

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## Southeastern San Diego CPU Update BAU

### San Diego County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	277.40	1000sqft	6.37	277,400.00	0
Government (Civic Center)	2,593.40	1000sqft	59.54	2,593,400.00	0
General Light Industry	2,489.10	1000sqft	57.14	2,489,100.00	0
Apartments Low Rise	12,747.00	Dwelling Unit	796.69	12,747,000.00	36456
Single Family Housing	5,765.00	Dwelling Unit	1,871.75	10,377,000.00	16488
Strip Mall	2,520.00	1000sqft	57.85	2,520,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13	<b>Operational Year</b>	2005		
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblConstructionPhase	PhaseEndDate	1/28/2015	2/13/2015
tblConstructionPhase	PhaseEndDate	4/10/2015	1/29/2016
tblConstructionPhase	PhaseStartDate	3/14/2015	3/16/2015
tblConstructionPhase	PhaseStartDate	2/14/2015	2/16/2015
tblConstructionPhase	PhaseStartDate	1/15/2015	2/1/2015
tblConstructionPhase	PhaseStartDate	2/28/2015	3/1/2015
tblConstructionPhase	PhaseStartDate	3/28/2015	1/17/2016
tblProjectCharacteristics	OperationalYear	2014	2005

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

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

Area	1,286.5834	17.5249	1,553.8590	0.5519		196.5716	196.5716		196.5659	196.5659	18,633.5240	8,039.2972	26,672.8213	17.5559	1.4657	27,495.8512
Energy	2.2815	19.8032	10.5460	0.1245		1.5763	1.5763		1.5763	1.5763	0.0000	86,130.0583	86,130.0583	2.9907	0.9432	86,485.2492
Mobile	491.0988	971.7675	5,198.1471	7.7246	238.3948	28.9152	267.3100	69.3003	28.9152	98.2155	0.0000	360,626.6115	360,626.6115	35.9214	0.0000	361,380.9609
Waste						0.0000	0.0000		0.0000	0.0000	6,725.1657	0.0000	6,725.1657	397.4459	0.0000	15,071.5298
Water						0.0000	0.0000		0.0000	0.0000	792.4693	14,982.1323	15,774.6016	81.9972	2.0467	18,131.0081
Total	1,779.9637	1,009.0956	6,762.5521	8.4009	238.3948	227.0631	465.4579	69.3003	227.0574	296.3577	26,151.1591	469,778.0993	495,929.2583	535.9111	4.4555	508,564.5992

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,286.5834	17.5249	1,553.8590	0.5519		196.5716	196.5716		196.5659	196.5659	18,633.5240	8,039.2972	26,672.8213	17.5559	1.4657	27,495.8512
Energy	2.2815	19.8032	10.5460	0.1245		1.5763	1.5763		1.5763	1.5763	0.0000	86,130.0583	86,130.0583	2.9907	0.9432	86,485.2492
Mobile	491.0988	971.7675	5,198.1471	7.7246	238.3948	28.9152	267.3100	69.3003	28.9152	98.2155	0.0000	360,626.6115	360,626.6115	35.9214	0.0000	361,380.9609
Waste						0.0000	0.0000		0.0000	0.0000	6,725.1657	0.0000	6,725.1657	397.4459	0.0000	15,071.5298
Water						0.0000	0.0000		0.0000	0.0000	792.4693	14,982.1323	15,774.6016	81.9824	2.0436	18,129.7438
Total	1,779.9637	1,009.0956	6,762.5521	8.4009	238.3948	227.0631	465.4579	69.3003	227.0574	296.3577	26,151.1591	469,778.0993	495,929.2583	535.8963	4.4524	508,563.3349

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00

**4.0 Operational Detail - Mobile**

## 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	491.0988	971.7675	5,198.1471	7.7246	238.3948	28.9152	267.3100	69.3003	28.9152	98.2155	0.0000	360,626.6115	360,626.6115	35.9214	0.0000	361,380.9609
Unmitigated	491.0988	971.7675	5,198.1471	7.7246	238.3948	28.9152	267.3100	69.3003	28.9152	98.2155	0.0000	360,626.6115	360,626.6115	35.9214	0.0000	361,380.9609

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	84,002.73	91,268.52	77374.29	240,113,253	240,113,253
General Light Industry	17,349.03	3,285.61	1692.59	38,255,328	38,255,328
General Office Building	3,054.17	657.44	271.85	5,530,625	5,530,625
Government (Civic Center)	72,407.73	0.00	0.00	98,869,494	98,869,494
Single Family Housing	55,171.05	58,111.20	50559.05	156,848,136	156,848,136
Strip Mall	111,686.40	105,940.80	51483.60	157,491,787	157,491,787
Total	343,671.11	259,263.57	181,381.38	697,108,623	697,108,623

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
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
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

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.477891	0.088801	0.251806	0.106955	0.021373	0.005547	0.013268	0.017971	0.001099	0.001361	0.008804	0.001096	0.004028

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63,551.0677	63,551.0677	2.5580	0.5292	63,768.8467
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63,551.0677	63,551.0677	2.5580	0.5292	63,768.8467
NaturalGas Mitigated	2.2815	19.8032	10.5460	0.1245		1.5763	1.5763		1.5763	1.5763	0.0000	22,578.9906	22,578.9906	0.4328	0.4140	22,716.4026
NaturalGas Unmitigated	2.2815	19.8032	10.5460	0.1245		1.5763	1.5763		1.5763	1.5763	0.0000	22,578.9906	22,578.9906	0.4328	0.4140	22,716.4026

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	3.0591e+007	0.1650	1.4996	1.2596	9.0000e-003		0.1140	0.1140		0.1140	0.1140	0.0000	1,632.4543	1,632.4543	0.0313	0.0299	1,642.3892
General Office Building	6.53554e+006	0.0352	0.3204	0.2691	1.9200e-003		0.0244	0.0244		0.0244	0.0244	0.0000	348.7615	348.7615	6.6800e-003	6.3900e-003	350.8840

Government (Civic Center)	6.11005e+007	0.3295	2.9951	2.5159	0.0180		0.2276	0.2276		0.2276	0.2276	0.0000	3,260.5556	3,260.5556	0.0625	0.0598	3,280.3988
Single Family Housing	1.73409e+008	0.9351	7.9904	3.4002	0.0510		0.6460	0.6460		0.6460	0.6460	0.0000	9,253.7436	9,253.7436	0.1774	0.1697	9,310.0603
Strip Mall	6.0732e+006	0.0328	0.2977	0.2501	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	324.0891	324.0891	6.2100e-003	5.9400e-003	326.0614
Apartments Low Rise	1.45405e+008	0.7841	6.7001	2.8511	0.0428		0.5417	0.5417		0.5417	0.5417	0.0000	7,759.3865	7,759.3865	0.1487	0.1423	7,806.6088
<b>Total</b>		<b>2.2815</b>	<b>19.8032</b>	<b>10.5460</b>	<b>0.1245</b>		<b>1.5763</b>	<b>1.5763</b>		<b>1.5763</b>	<b>1.5763</b>	<b>0.0000</b>	<b>22,578.9906</b>	<b>22,578.9906</b>	<b>0.4328</b>	<b>0.4140</b>	<b>22,716.4026</b>

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	6.53554e+006	0.0352	0.3204	0.2691	1.9200e-003		0.0244	0.0244		0.0244	0.0244	0.0000	348.7615	348.7615	6.6800e-003	6.3900e-003	350.8840
Government (Civic Center)	6.11005e+007	0.3295	2.9951	2.5159	0.0180		0.2276	0.2276		0.2276	0.2276	0.0000	3,260.5556	3,260.5556	0.0625	0.0598	3,280.3988
Single Family Housing	1.73409e+008	0.9351	7.9904	3.4002	0.0510		0.6460	0.6460		0.6460	0.6460	0.0000	9,253.7436	9,253.7436	0.1774	0.1697	9,310.0603
Strip Mall	6.0732e+006	0.0328	0.2977	0.2501	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	324.0891	324.0891	6.2100e-003	5.9400e-003	326.0614
Apartments Low Rise	1.45405e+008	0.7841	6.7001	2.8511	0.0428		0.5417	0.5417		0.5417	0.5417	0.0000	7,759.3865	7,759.3865	0.1487	0.1423	7,806.6088
General Light Industry	3.0591e+007	0.1650	1.4996	1.2596	9.0000e-003		0.1140	0.1140		0.1140	0.1140	0.0000	1,632.4543	1,632.4543	0.0313	0.0299	1,642.3892
<b>Total</b>		<b>2.2815</b>	<b>19.8032</b>	<b>10.5460</b>	<b>0.1245</b>		<b>1.5763</b>	<b>1.5763</b>		<b>1.5763</b>	<b>1.5763</b>	<b>0.0000</b>	<b>22,578.9906</b>	<b>22,578.9906</b>	<b>0.4328</b>	<b>0.4140</b>	<b>22,716.4026</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.68626e+007	15,315.0957	0.6164	0.1275	15,367.5780
General Light Industry	2.33478e+007	7,630.2520	0.3071	0.0635	7,656.3996
General Office Building	4.36628e+006	1,426.9373	0.0574	0.0119	1,431.8272
Government (Civic Center)	4.08201e+007	13,340.3718	0.5370	0.1111	13,386.0870
Single Family Housing	4.1792e+007	13,657.9867	0.5497	0.1137	13,704.7904
Strip Mall	3.72708e+007	12,180.4242	0.4903	0.1014	12,222.1645
<b>Total</b>		<b>63,551.0677</b>	<b>2.5580</b>	<b>0.5292</b>	<b>63,768.8467</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.68626e+007	15,315.0957	0.6164	0.1275	15,367.5780
General Light Industry	2.33478e+007	7,630.2520	0.3071	0.0635	7,656.3996
General Office Building	4.36628e+006	1,426.9373	0.0574	0.0119	1,431.8272
Government (Civic Center)	4.08201e+007	13,340.3718	0.5370	0.1111	13,386.0870
Single Family Housing	4.1792e+007	13,657.9867	0.5497	0.1137	13,704.7904
Strip Mall	3.72708e+007	12,180.4242	0.4903	0.1014	12,222.1645
<b>Total</b>		<b>63,551.0677</b>	<b>2.5580</b>	<b>0.5292</b>	<b>63,768.8467</b>

6.0 Area Detail

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6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,286.5834	17.5249	1,553.8590	0.5519		196.5716	196.5716		196.5659	196.5659	18,633.5240	8,039.2972	26,672.8213	17.5559	1.4657	27,495.8512
Unmitigated	1,286.5834	17.5249	1,553.8590	0.5519		196.5716	196.5716		196.5659	196.5659	18,633.5240	8,039.2972	26,672.8213	17.5559	1.4657	27,495.8512

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	26.7104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	121.0857					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,131.8786	15.3566	1,394.3529	0.5446		195.8981	195.8981		195.8924	195.8924	18,633.5240	7,814.6282	26,448.1522	17.1957	1.4657	27,263.6177
Landscaping	6.9087	2.1683	159.5062	7.2600e-003		0.6735	0.6735		0.6735	0.6735	0.0000	224.6690	224.6690	0.3602	0.0000	232.2335
Total	1,286.5834	17.5249	1,553.8590	0.5519		196.5716	196.5716		196.5659	196.5659	18,633.5240	8,039.2972	26,672.8213	17.5559	1.4657	27,495.8512



Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	26.7104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	121.0857					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,131.8786	15.3566	1,394.3529	0.5446		195.8981	195.8981		195.8924	195.8924	18,633.5240	7,814.6282	26,448.1522	17.1957	1.4657	27,263.6177
Landscaping	6.9087	2.1683	159.5062	7.2600e-003		0.6735	0.6735		0.6735	0.6735	0.0000	224.6690	224.6690	0.3602	0.0000	232.2335
Total	1,286.5834	17.5249	1,553.8590	0.5519		196.5716	196.5716		196.5659	196.5659	18,633.5240	8,039.2972	26,672.8213	17.5559	1.4657	27,495.8512

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15,774.6016	81.9824	2.0436	18,129.7438
Unmitigated	15,774.6016	81.9972	2.0467	18,131.0081

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	798.723 / 503.543	5,480.5527	26.2368	0.6581	6,235.5272
General Light Industry	575.604 / 0	2,632.0263	18.8547	0.4633	3,171.5879
General Office Building	49.3033 / 30.2182	335.1635	1.6194	0.0406	381.7556
Government (Civic Center)	515.204 / 315.77	3,502.3506	16.9223	0.4242	3,989.2229
Single Family Housing	376.59 / 237.416	2,584.0276	12.3704	0.3103	2,939.9908
Strip Mall	182.478 / 111.841	1,240.4809	5.9936	0.1503	1,412.9238
<b>Total</b>		<b>15,774.6016</b>	<b>81.9972</b>	<b>2.0467</b>	<b>18,131.0081</b>

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	798.723 / 503.543	5,480.5527	26.2321	0.6571	6,235.1229
General Light Industry	575.604 / 0	2,632.0263	18.8512	0.4626	3,171.2965
General Office Building	49.3033 / 30.2182	335.1635	1.6191	0.0405	381.7306
Government (Civic Center)	515.204 / 315.77	3,502.3506	16.9193	0.4236	3,988.9621
Single Family Housing	376.59 / 237.416	2,584.0276	12.3682	0.3098	2,939.8002
Strip Mall	182.478 / 111.841	1,240.4809	5.9926	0.1500	1,412.8315

Total		15,774.6016	81.9824	2.0436	18,129.7438
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6,725.1657	397.4459	0.0000	15,071.5298
Unmitigated	6,725.1657	397.4459	0.0000	15,071.5298

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5639.14	1,144.6945	67.6495	0.0000	2,565.3341
General Light Industry	3086.48	626.5276	37.0267	0.0000	1,404.0886
General Office Building	257.98	52.3676	3.0948	0.0000	117.3592
Government (Civic Center)	14782.4	3,000.6896	177.3357	0.0000	6,724.7387
Single Family Housing	6777.71	1,375.8139	81.3083	0.0000	3,083.2876

Strip Mall	2586.68	525.0727	31.0309	0.0000	1,176.7217
Total		6,725.1657	397.4459	0.0000	15,071.5298

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5639.14	1,144.6945	67.6495	0.0000	2,565.3341
General Light Industry	3086.48	626.5276	37.0267	0.0000	1,404.0886
General Office Building	257.98	52.3676	3.0948	0.0000	117.3592
Government (Civic Center)	14782.4	3,000.6896	177.3357	0.0000	6,724.7387
Single Family Housing	6777.71	1,375.8139	81.3083	0.0000	3,083.2876
Strip Mall	2586.68	525.0727	31.0309	0.0000	1,176.7217
Total		6,725.1657	397.4459	0.0000	15,071.5298

9.0 Operational Offroad

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

## Encanto CPU Update BAU

### San Diego County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	135.00	1000sqft	3.10	135,000.00	0
Government (Civic Center)	2,001.00	1000sqft	45.94	2,001,000.00	0
General Light Industry	554.10	1000sqft	12.72	554,100.00	0
Apartments Low Rise	12,070.00	Dwelling Unit	754.38	12,070,000.00	34520
Single Family Housing	9,027.00	Dwelling Unit	2,930.84	16,248,600.00	25817
Strip Mall	1,281.50	1000sqft	29.42	1,281,500.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13	<b>Operational Year</b>	2005		
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MW hr)</b>	720.49	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.00617

### 1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVa lue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorVal ue	250	150
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblConstructionPhase	PhaseEndDate	1/28/2015	1/30/2015
tblConstructionPhase	PhaseStartDate	3/14/2015	3/16/2015
tblConstructionPhase	PhaseStartDate	2/14/2015	2/16/2015
tblConstructionPhase	PhaseStartDate	1/31/2015	2/1/2015
tblConstructionPhase	PhaseStartDate	2/28/2015	3/1/2015
tblConstructionPhase	PhaseStartDate	1/15/2015	1/17/2015
tblProjectCharacteristics	OperationalYear	2014	2005

## 2.0 Emissions Summary

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### 2.2 Overall Operational

#### Unmitigated Operational

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

Area	1,487.2035	20.4319	1,812.601 2	0.6453		229.8961	229.8961		229.8894	229.8894	21,794.37 46	9,396.195 0	31,190.569 6	20.5227	1.7143	32,152.976 5
Energy	2.5313	21.8079	10.5035	0.1381		1.7489	1.7489		1.7489	1.7489	0.0000	79,818.74 64	79,818.746 4	2.6846	0.9283	80,162.887 9
Mobile	430.8025	883.4894	4,690.382 3	7.0730	219.0497	26.4171	245.4668	63.6768	26.4171	90.0939	0.0000	330,525.2 761	330,525.27 61	32.6251	0.0000	331,210.40 35
Waste						0.0000	0.0000		0.0000	0.0000	6,030.019 1	0.0000	6,030.0191	356.3639	0.0000	13,513.661 4
Water						0.0000	0.0000		0.0000	0.0000	640.6169	12,888.62 07	13,529.237 6	66.3163	1.6640	15,437.717 6
Total	1,920.5372	925.7291	6,513.487 0	7.8564	219.0497	258.0621	477.1118	63.6768	258.0554	321.7322	28,465.01 06	432,628.8 380	461,093.84 86	478.5126	4.3066	472,477.64 70

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,487.2035	20.4319	1,812.601 2	0.6453		229.8961	229.8961		229.8894	229.8894	21,794.37 46	9,396.195 0	31,190.569 6	20.5227	1.7143	32,152.976 5
Energy	2.5313	21.8079	10.5035	0.1381		1.7489	1.7489		1.7489	1.7489	0.0000	79,818.74 64	79,818.746 4	2.6846	0.9283	80,162.887 9
Mobile	430.8025	883.4894	4,690.382 3	7.0730	219.0497	26.4171	245.4668	63.6768	26.4171	90.0939	0.0000	330,525.2 761	330,525.27 61	32.6251	0.0000	331,210.40 35
Waste						0.0000	0.0000		0.0000	0.0000	6,030.019 1	0.0000	6,030.0191	356.3639	0.0000	13,513.661 4
Water						0.0000	0.0000		0.0000	0.0000	640.6169	12,888.62 07	13,529.237 6	66.3043	1.6614	15,436.673 8
Total	1,920.5372	925.7291	6,513.487 0	7.8564	219.0497	258.0621	477.1118	63.6768	258.0554	321.7322	28,465.01 06	432,628.8 380	461,093.84 86	478.5006	4.3040	472,476.60 32

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00

**4.0 Operational Detail - Mobile**

## 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	430.8025	883.4894	4,690.3823	7.0730	219.0497	26.4171	245.4668	63.6768	26.4171	90.0939	0.0000	330,525.2761	330,525.2761	32.6251	0.0000	331,210.4035
Unmitigated	430.8025	883.4894	4,690.3823	7.0730	219.0497	26.4171	245.4668	63.6768	26.4171	90.0939	0.0000	330,525.2761	330,525.2761	32.6251	0.0000	331,210.4035

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	79,541.30	86,421.20	73264.90	227,360,709	227,360,709
General Light Industry	3,862.08	731.41	376.79	8,516,041	8,516,041
General Office Building	1,486.35	319.95	132.30	2,691,544	2,691,544
Government (Civic Center)	55,867.92	0.00	0.00	76,285,131	76,285,131
Single Family Housing	86,388.39	90,992.16	79166.79	245,597,246	245,597,246
Strip Mall	56,796.08	53,874.26	26181.05	80,089,573	80,089,573
Total	283,942.12	232,338.98	179,121.82	640,540,245	640,540,245

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
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
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



LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.477891	0.088801	0.251806	0.106955	0.021373	0.005547	0.013268	0.017971	0.001099	0.001361	0.008804	0.001096	0.004028

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54,767.9917	54,767.9917	2.2044	0.4690	54,959.6785
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54,767.9917	54,767.9917	2.2044	0.4690	54,959.6785
NaturalGas Mitigated	2.5313	21.8079	10.5035	0.1381		1.7489	1.7489		1.7489	1.7489	0.0000	25,050.7547	25,050.7547	0.4801	0.4593	25,203.2094
NaturalGas Unmitigated	2.5313	21.8079	10.5035	0.1381		1.7489	1.7489		1.7489	1.7489	0.0000	25,050.7547	25,050.7547	0.4801	0.4593	25,203.2094

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	3.1806e+006	0.0172	0.1559	0.1310	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	169.7289	169.7289	3.2500e-003	3.1100e-003	170.7619
Government (Civic Center)	4.71436e+007	0.2542	2.3110	1.9412	0.0139		0.1756	0.1756		0.1756	0.1756	0.0000	2,515.7599	2,515.7599	0.0482	0.0461	2,531.0704

Single Family Housing	2.71528e+008	1.4641	12.5116	5.3241	0.0799		1.0116	1.0116		1.0116	1.0116	0.0000	14,489.7733	14,489.7733	0.2777	0.2657	14,577.9557
Strip Mall	3.08842e+006	0.0167	0.1514	0.1272	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.8096	164.8096	3.1600e-003	3.0200e-003	165.8126
Apartments Low Rise	1.37683e+008	0.7424	6.3442	2.6997	0.0405		0.5129	0.5129		0.5129	0.5129	0.0000	7,347.2813	7,347.2813	0.1408	0.1347	7,391.9957
General Light Industry	6.80989e+006	0.0367	0.3338	0.2804	2.0000e-003		0.0254	0.0254		0.0254	0.0254	0.0000	363.4016	363.4016	6.9700e-003	6.6600e-003	365.6132
<b>Total</b>		<b>2.5313</b>	<b>21.8079</b>	<b>10.5035</b>	<b>0.1381</b>		<b>1.7489</b>	<b>1.7489</b>		<b>1.7489</b>	<b>1.7489</b>	<b>0.0000</b>	<b>25,050.7547</b>	<b>25,050.7547</b>	<b>0.4801</b>	<b>0.4593</b>	<b>25,203.2094</b>

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government (Civic Center)	4.71436e+007	0.2542	2.3110	1.9412	0.0139		0.1756	0.1756		0.1756	0.1756	0.0000	2,515.7599	2,515.7599	0.0482	0.0461	2,531.0704
Single Family Housing	2.71528e+008	1.4641	12.5116	5.3241	0.0799		1.0116	1.0116		1.0116	1.0116	0.0000	14,489.7733	14,489.7733	0.2777	0.2657	14,577.9557
Strip Mall	3.08842e+006	0.0167	0.1514	0.1272	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.8096	164.8096	3.1600e-003	3.0200e-003	165.8126
Apartments Low Rise	1.37683e+008	0.7424	6.3442	2.6997	0.0405		0.5129	0.5129		0.5129	0.5129	0.0000	7,347.2813	7,347.2813	0.1408	0.1347	7,391.9957
General Light Industry	6.80989e+006	0.0367	0.3338	0.2804	2.0000e-003		0.0254	0.0254		0.0254	0.0254	0.0000	363.4016	363.4016	6.9700e-003	6.6600e-003	365.6132
General Office Building	3.1806e+006	0.0172	0.1559	0.1310	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	169.7289	169.7289	3.2500e-003	3.1100e-003	170.7619
<b>Total</b>		<b>2.5313</b>	<b>21.8079</b>	<b>10.5035</b>	<b>0.1381</b>		<b>1.7489</b>	<b>1.7489</b>		<b>1.7489</b>	<b>1.7489</b>	<b>0.0000</b>	<b>25,050.7547</b>	<b>25,050.7547</b>	<b>0.4801</b>	<b>0.4593</b>	<b>25,203.2094</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.43737e+007	14,501.7028	0.5837	0.1242	14,552.4585
General Light Industry	5.19746e+006	1,698.5748	0.0684	0.0146	1,704.5198
General Office Building	2.1249e+006	694.4360	0.0280	5.9500e-003	696.8665
Government (Civic Center)	3.14957e+007	10,293.0839	0.4143	0.0882	10,329.1095
Single Family Housing	6.54391e+007	21,386.0618	0.8608	0.1831	21,460.9125
Strip Mall	1.89534e+007	6,194.1324	0.2493	0.0530	6,215.8117
<b>Total</b>		<b>54,767.9917</b>	<b>2.2044</b>	<b>0.4690</b>	<b>54,959.6785</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.43737e+007	14,501.7028	0.5837	0.1242	14,552.4585
General Light Industry	5.19746e+006	1,698.5748	0.0684	0.0146	1,704.5198
General Office Building	2.1249e+006	694.4360	0.0280	5.9500e-003	696.8665
Government (Civic Center)	3.14957e+007	10,293.0839	0.4143	0.0882	10,329.1095
Single Family Housing	6.54391e+007	21,386.0618	0.8608	0.1831	21,460.9125
Strip Mall	1.89534e+007	6,194.1324	0.2493	0.0530	6,215.8117
<b>Total</b>		<b>54,767.9917</b>	<b>2.2044</b>	<b>0.4690</b>	<b>54,959.6785</b>

6.0 Area Detail

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6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,487.2035	20.4319	1,812.6012	0.6453		229.8961	229.8961		229.8894	229.8894	21,794.3746	9,396.1950	31,190.5696	20.5227	1.7143	32,152.9765
Unmitigated	1,487.2035	20.4319	1,812.6012	0.6453		229.8961	229.8961		229.8894	229.8894	21,794.3746	9,396.1950	31,190.5696	20.5227	1.7143	32,152.9765

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	29.3464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	126.1094					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,323.8819	17.9615	1,630.8804	0.6370		229.1288	229.1288		229.1221	229.1221	21,794.3746	9,140.2428	30,934.6174	20.1126	1.7143	31,888.4124
Landscaping	7.8658	2.4704	181.7209	8.2700e-003		0.7673	0.7673		0.7673	0.7673	0.0000	255.9521	255.9521	0.4101	0.0000	264.5641
Total	1,487.2035	20.4319	1,812.6012	0.6453		229.8961	229.8961		229.8894	229.8894	21,794.3746	9,396.1950	31,190.5696	20.5227	1.7143	32,152.9765

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	29.3464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	126.1094					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,323.8819	17.9615	1,630.8804	0.6370		229.1288	229.1288		229.1221	229.1221	21,794.3746	9,140.2428	30,934.6174	20.1126	1.7143	31,888.4124
Landscaping	7.8658	2.4704	181.7209	8.2700e-003		0.7673	0.7673		0.7673	0.7673	0.0000	255.9521	255.9521	0.4101	0.0000	264.5641
Total	1,487.2035	20.4319	1,812.6012	0.6453		229.8961	229.8961		229.8894	229.8894	21,794.3746	9,396.1950	31,190.5696	20.5227	1.7143	32,152.9765

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13,529.2376	66.3043	1.6614	15,436.6738
Unmitigated	13,529.2376	66.3163	1.6640	15,437.7176

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	786.214 / 495.656	5,394.7165	25.8259	0.6490	6,138.2430
General Light Industry	128.136 / 0	585.9169	4.1973	0.1033	706.0689
General Office Building	23.9941 / 14.706	163.1113	0.7881	0.0198	185.7973
Government (Civic Center)	397.518 / 243.64	2,702.3227	13.0568	0.3279	3,078.1691
Single Family Housing	588.471 / 370.993	4,037.8785	19.3304	0.4858	4,594.3988
Strip Mall	94.9239 / 58.1792	645.2918	3.1179	0.0783	735.0407
<b>Total</b>		<b>13,529.2376</b>	<b>66.3163</b>	<b>1.6640</b>	<b>15,437.7177</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	786.214 / 495.656	5,394.7165	25.8212	0.6480	6,137.8365
General Light Industry	128.136 / 0	585.9169	4.1965	0.1031	706.0027
General Office Building	23.9941 / 14.706	163.1113	0.7880	0.0198	185.7849
Government (Civic Center)	397.518 / 243.64	2,702.3227	13.0545	0.3274	3,077.9636
Single Family Housing	588.471 / 370.993	4,037.8785	19.3269	0.4850	4,594.0946
Strip Mall	94.9239 / 58.1792	645.2918	3.1173	0.0782	734.9916

Total		13,529.2376	66.3043	1.6614	15,436.6738
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6,030.0191	356.3639	0.0000	13,513.6614
Unmitigated	6,030.0191	356.3639	0.0000	13,513.6614

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5550.82	1,126.7663	66.5900	0.0000	2,525.1559
General Light Industry	687.08	139.4710	8.2425	0.0000	312.5636
General Office Building	125.55	25.4855	1.5062	0.0000	57.1147
Government (Civic Center)	11405.7	2,315.2540	136.8276	0.0000	5,188.6335
Single Family Housing	10591.1	2,149.9017	127.0556	0.0000	4,818.0681

Strip Mall	1345.58	273.1406	16.1422	0.0000	612.1256
Total		6,030.0191	356.3639	0.0000	13,513.6614

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5550.82	1,126.7663	66.5900	0.0000	2,525.1559
General Light Industry	687.08	139.4710	8.2425	0.0000	312.5636
General Office Building	125.55	25.4855	1.5062	0.0000	57.1147
Government (Civic Center)	11405.7	2,315.2540	136.8276	0.0000	5,188.6335
Single Family Housing	10591.1	2,149.9017	127.0556	0.0000	4,818.0681
Strip Mall	1345.58	273.1406	16.1422	0.0000	612.1256
Total		6,030.0191	356.3639	0.0000	13,513.6614

9.0 Operational Offroad

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



## **ATTACHMENT 3**

### **2020 Project Buildout GHG Emissions—Model Outputs**

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## Southeastern San Diego CPU Update 2020 Buildout San Diego County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	277.40	1000sqft	6.37	277,400.00	0
Government (Civic Center)	2,593.40	1000sqft	59.54	2,593,400.00	0
General Light Industry	2,489.10	1000sqft	57.14	2,489,100.00	0
Apartments Low Rise	12,747.00	Dwelling Unit	796.69	12,747,000.00	36456
Single Family Housing	5,765.00	Dwelling Unit	1,871.75	10,377,000.00	16488
Strip Mall	2,520.00	1000sqft	57.85	2,520,000.00	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13	<b>Operational Year</b>	2020		
<b>Utility Company</b>	User Defined				
<b>CO2 Intensity (lb/MW hr)</b>	558.38	<b>CH4 Intensity (lb/MW hr)</b>	0.022	<b>N2O Intensity (lb/MW hr)</b>	0.005

#### 1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.022
tblProjectCharacteristics	CO2IntensityFactor	0	558.38
tblProjectCharacteristics	N2OIntensityFactor	0	0.005
tblProjectCharacteristics	OperationalYear	2014	2020

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,283.8811	16.9523	1,532.3364	0.5519		196.6567	196.6567		196.6510	196.6510	18,633.5240	8,039.2973	26,672.8213	17.4150	1.4657	27,492.8924
Energy	2.1157	18.3606	9.7531	0.1154		1.4618	1.4618		1.4618	1.4618	0.0000	68,597.9415	68,597.9415	2.2791	0.8106	68,897.0996
Mobile	156.1976	307.3986	1,490.9269	3.8355	262.1285	4.4580	266.5865	70.1064	4.1137	74.2202	0.0000	266,181.7776	266,181.7776	10.4573	0.0000	266,401.3801

Waste						0.0000	0.0000		0.0000	0.0000	6,725.1657	0.0000	6,725.1657	397.4459	0.0000	15,071.5298
Water						0.0000	0.0000		0.0000	0.0000	792.4693	11,611.1577	12,403.6271	81.8517	2.0259	14,750.5305
<b>Total</b>	<b>1,442.1944</b>	<b>342.7114</b>	<b>3,033.0163</b>	<b>4.5028</b>	<b>262.1285</b>	<b>202.5765</b>	<b>464.7049</b>	<b>70.1064</b>	<b>202.2264</b>	<b>272.3329</b>	<b>26,151.1591</b>	<b>354,430.1741</b>	<b>380,581.3332</b>	<b>509.4489</b>	<b>4.3022</b>	<b>392,613.4324</b>

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,283.8811	16.9523	1,532.3364	0.5519		196.6567	196.6567		196.6510	196.6510	18,633.5240	8,039.2973	26,672.8213	17.4150	1.4657	27,492.8924
Energy	1.6938	14.7065	7.8596	0.0924		1.1703	1.1703		1.1703	1.1703	0.0000	62,089.7385	62,089.7385	2.1072	0.7132	62,355.0807
Mobile	140.1063	220.1665	1,153.4936	2.5242	169.1062	3.0394	172.1456	45.2276	2.8052	48.0328	0.0000	175,084.4873	175,084.4873	7.1888	0.0000	175,235.4523
Waste						0.0000	0.0000		0.0000	0.0000	6,725.1657	0.0000	6,725.1657	397.4459	0.0000	15,071.5298
Water						0.0000	0.0000		0.0000	0.0000	633.9755	9,734.8434	10,368.8188	65.4989	1.6247	12,247.9484
<b>Total</b>	<b>1,425.6812</b>	<b>251.8253</b>	<b>2,693.6896</b>	<b>3.1685</b>	<b>169.1062</b>	<b>200.8664</b>	<b>369.9726</b>	<b>45.2276</b>	<b>200.6264</b>	<b>245.8540</b>	<b>25,992.6652</b>	<b>254,948.3665</b>	<b>280,941.0316</b>	<b>489.6558</b>	<b>3.8036</b>	<b>292,402.9035</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.15	26.52	11.19	29.63	35.49	0.84	20.39	35.49	0.79	9.72	0.61	28.07	26.18	3.89	11.59	25.52

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	140.1063	220.1665	1,153.4936	2.5242	169.1062	3.0394	172.1456	45.2276	2.8052	48.0328	0.0000	175,084.4873	175,084.4873	7.1888	0.0000	175,235.4523
Unmitigated	156.1976	307.3986	1,490.9269	3.8355	262.1285	4.4580	266.5865	70.1064	4.1137	74.2202	0.0000	266,181.7776	266,181.7776	10.4573	0.0000	266,401.3801

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	84,002.73	91,268.52	77374.29	240,113,253	154,903,542
General Light Industry	17,349.03	3,285.61	1692.59	38,255,328	24,679,545
General Office Building	3,054.17	657.44	271.85	5,530,625	3,567,956
Government (Civic Center)	72,407.73	0.00	0.00	98,869,494	63,783,380
Single Family Housing	55,171.05	58,111.20	50559.05	156,848,136	101,186,967
Strip Mall	111,686.40	105,940.80	51483.60	157,491,787	101,602,204
Total	343,671.11	259,263.57	181,381.38	697,108,623	449,723,595

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
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
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

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	45,326.5639	45,326.5639	1.7859	0.4059	45,489.8882
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47,659.6597	47,659.6597	1.8778	0.4268	47,831.3909
NaturalGas Mitigated	1.6938	14.7065	7.8596	0.0924		1.1703	1.1703		1.1703	1.1703	0.0000	16,763.1746	16,763.1746	0.3213	0.3073	16,865.1924
NaturalGas Unmitigated	2.1157	18.3606	9.7531	0.1154		1.4618	1.4618		1.4618	1.4618	0.0000	20,938.2818	20,938.2818	0.4013	0.3839	21,065.7087

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	5.83372e+006	0.0315	0.2860	0.2402	1.7200e-003		0.0217	0.0217		0.0217	0.0217	0.0000	311.3096	311.3096	5.9700e-003	5.7100e-003	313.2042
Government (Civic Center)	5.45392e+007	0.2941	2.6735	2.2457	0.0160		0.2032	0.2032		0.2032	0.2032	0.0000	2,910.4195	2,910.4195	0.0558	0.0534	2,928.1318
Single Family Housing	1.59422e+008	0.8596	7.3459	3.1259	0.0469		0.5939	0.5939		0.5939	0.5939	0.0000	8,507.3848	8,507.3848	0.1631	0.1560	8,559.1593

Strip Mall	5.7708e+006	0.0311	0.2829	0.2376	1.7000e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.9519	307.9519	5.9000e-003	5.6500e-003	309.8260
Apartments Low Rise	1.37456e+008	0.7412	6.3338	2.6952	0.0404		0.5121	0.5121		0.5121	0.5121	0.0000	7,335.1756	7,335.1756	0.1406	0.1345	7,379.8163
General Light Industry	2.93465e+007	0.1582	1.4386	1.2084	8.6300e-003		0.1093	0.1093		0.1093	0.1093	0.0000	1,566.0404	1,566.0404	0.0300	0.0287	1,575.5711
<b>Total</b>		<b>2.1157</b>	<b>18.3606</b>	<b>9.7531</b>	<b>0.1154</b>		<b>1.4618</b>	<b>1.4618</b>		<b>1.4618</b>	<b>1.4618</b>	<b>0.0000</b>	<b>20,938.2818</b>	<b>20,938.2818</b>	<b>0.4013</b>	<b>0.3839</b>	<b>21,065.7087</b>

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	4.59186e+006	0.0248	0.2251	0.1891	1.3500e-003		0.0171	0.0171		0.0171	0.0171	0.0000	245.0393	245.0393	4.7000e-003	4.4900e-003	246.5306
Government (Civic Center)	4.29291e+007	0.2315	2.1044	1.7677	0.0126		0.1599	0.1599		0.1599	0.1599	0.0000	2,290.8614	2,290.8614	0.0439	0.0420	2,304.8032
Single Family Housing	1.25939e+008	0.6791	5.8031	2.4694	0.0370		0.4692	0.4692		0.4692	0.4692	0.0000	6,720.6059	6,720.6059	0.1288	0.1232	6,761.5064
Strip Mall	4.96642e+006	0.0268	0.2435	0.2045	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	265.0269	265.0269	5.0800e-003	4.8600e-003	266.6398
Apartments Low Rise	1.09363e+008	0.5897	5.0393	2.1444	0.0322		0.4074	0.4074		0.4074	0.4074	0.0000	5,836.0090	5,836.0090	0.1119	0.1070	5,871.5259
General Light Industry	2.63406e+007	0.1420	1.2912	1.0846	7.7500e-003		0.0981	0.0981		0.0981	0.0981	0.0000	1,405.6322	1,405.6322	0.0269	0.0258	1,414.1866
<b>Total</b>		<b>1.6938</b>	<b>14.7065</b>	<b>7.8596</b>	<b>0.0924</b>		<b>1.1703</b>	<b>1.1703</b>		<b>1.1703</b>	<b>1.1703</b>	<b>0.0000</b>	<b>16,763.1746</b>	<b>16,763.1746</b>	<b>0.3213</b>	<b>0.3073</b>	<b>16,865.1924</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			



Apartments Low Rise	4.62847e+007	11,722.8557	0.4619	0.1050	11,765.0964
General Light Industry	2.24019e+007	5,673.8840	0.2236	0.0508	5,694.3286
General Office Building	4.15823e+006	1,053.1826	0.0415	9.4300e-003	1,056.9775
Government (Civic Center)	3.88751e+007	9,846.1565	0.3879	0.0882	9,881.6350
Single Family Housing	4.10714e+007	10,402.4414	0.4099	0.0932	10,439.9243
Strip Mall	3.53808e+007	8,961.1396	0.3531	0.0802	8,993.4291
<b>Total</b>		<b>47,659.6597</b>	<b>1.8778</b>	<b>0.4268</b>	<b>47,831.3909</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.56583e+007	11,564.1949	0.4556	0.1036	11,605.8639
General Light Industry	2.1422e+007	5,425.6957	0.2138	0.0486	5,445.2460
General Office Building	3.73837e+006	946.8428	0.0373	8.4800e-003	950.2545
Government (Civic Center)	3.49499e+007	8,851.9903	0.3488	0.0793	8,883.8865
Single Family Housing	4.04187e+007	10,237.1316	0.4033	0.0917	10,274.0189
Strip Mall	3.27733e+007	8,300.7087	0.3271	0.0743	8,330.6185
<b>Total</b>		<b>45,326.5639</b>	<b>1.7859</b>	<b>0.4059</b>	<b>45,489.8882</b>

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,283.8811	16.9523	1,532.3364	0.5519		196.6567	196.6567		196.6510	196.6510	18,633.5240	8,039.2973	26,672.8213	17.4150	1.4657	27,492.8924
Unmitigated	1,283.8811	16.9523	1,532.3364	0.5519		196.6567	196.6567		196.6510	196.6510	18,633.5240	8,039.2973	26,672.8213	17.4150	1.4657	27,492.8924

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	26.7104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	121.0857					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,131.8786	15.3566	1,394.3529	0.5446		195.8981	195.8981		195.8924	195.8924	18,633.5240	7,814.6282	26,448.1522	17.1957	1.4657	27,263.6177
Landscaping	4.2064	1.5957	137.9835	7.2600e-003		0.7586	0.7586		0.7586	0.7586	0.0000	224.6691	224.6691	0.2193	0.0000	229.2747
Total	1,283.8811	16.9523	1,532.3364	0.5519		196.6567	196.6567		196.6510	196.6510	18,633.5240	8,039.2973	26,672.8213	17.4150	1.4657	27,492.8924

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	26.7104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	121.0857					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,131.8786	15.3566	1,394.3529	0.5446		195.8981	195.8981		195.8924	195.8924	18,633.5240	7,814.6282	26,448.1522	17.1957	1.4657	27,263.6177
Landscaping	4.2064	1.5957	137.9835	7.2600e-003		0.7586	0.7586		0.7586	0.7586	0.0000	224.6691	224.6691	0.2193	0.0000	229.2747
Total	1,283.8811	16.9523	1,532.3364	0.5519		196.6567	196.6567		196.6510	196.6510	18,633.5240	8,039.2973	26,672.8213	17.4150	1.4657	27,492.8924

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10,368.8188	65.4989	1.6247	12,247.9484
Unmitigated	12,403.6271	81.8517	2.0259	14,750.5305

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	798.723 / 503.543	4,304.4447	26.1860	0.6508	5,056.1037
General Light Industry	575.604 / 0	2,080.9091	18.8309	0.4599	2,618.9170
General Office Building	49.3033 / 30.2182	263.2712	1.6163	0.0402	309.6606
Government (Civic Center)	515.204 / 315.77	2,751.0993	16.8899	0.4196	3,235.8537
Single Family Housing	376.59 / 237.416	2,029.5041	12.3465	0.3069	2,383.9040
Strip Mall	182.478 / 111.841	974.3987	5.9822	0.1486	1,146.0916
<b>Total</b>		<b>12,403.6271</b>	<b>81.8517</b>	<b>2.0259</b>	<b>14,750.5305</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	638.979 / 503.543	3,653.7995	20.9571	0.5225	4,255.8842
General Light Industry	460.483 / 0	1,612.0180	15.0626	0.3674	2,042.2344
General Office Building	39.4427 / 30.2182	223.1084	1.2935	0.0322	260.2649
Government (Civic Center)	412.163 / 315.77	2,331.4107	13.5171	0.3368	2,719.6845
Single Family Housing	301.272 / 237.416	1,722.7311	9.8811	0.2464	2,006.6083
Strip Mall	145.982 / 111.841	825.7512	4.7875	0.1193	963.2721

Total		10,368.818 8	65.4989	1.6247	12,247.94 84
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6,725.1657	397.4459	0.0000	15,071.529 8
Unmitigated	6,725.1657	397.4459	0.0000	15,071.529 8

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5639.14	1,144.6945	67.6495	0.0000	2,565.334 1
General Light Industry	3086.48	626.5276	37.0267	0.0000	1,404.088 6
General Office Building	257.98	52.3676	3.0948	0.0000	117.3592
Government (Civic Center)	14782.4	3,000.6896	177.3357	0.0000	6,724.738 7
Single Family Housing	6777.71	1,375.8139	81.3083	0.0000	3,083.287 6

Strip Mall	2586.68	525.0727	31.0309	0.0000	1,176.7217
Total		6,725.1657	397.4459	0.0000	15,071.5298

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5639.14	1,144.6945	67.6495	0.0000	2,565.3341
General Light Industry	3086.48	626.5276	37.0267	0.0000	1,404.0886
General Office Building	257.98	52.3676	3.0948	0.0000	117.3592
Government (Civic Center)	14782.4	3,000.6896	177.3357	0.0000	6,724.7387
Single Family Housing	6777.71	1,375.8139	81.3083	0.0000	3,083.2876
Strip Mall	2586.68	525.0727	31.0309	0.0000	1,176.7217
Total		6,725.1657	397.4459	0.0000	15,071.5298

9.0 Operational Offroad

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

## Encanto CPU Update 2020 Buildout

### San Diego County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	135.00	1000sqft	3.10	135,000.00	0
Government (Civic Center)	2,001.00	1000sqft	45.94	2,001,000.00	0
General Light Industry	554.10	1000sqft	12.72	554,100.00	0
Apartments Low Rise	12,070.00	Dwelling Unit	754.38	12,070,000.00	34520
Single Family Housing	9,027.00	Dwelling Unit	2,930.84	16,248,600.00	25817
Strip Mall	1,281.50	1000sqft	29.42	1,281,500.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13	<b>Operational Year</b>	2020		
<b>Utility Company</b>	User Defined				
<b>CO2 Intensity (lb/MW hr)</b>	558.38	<b>CH4 Intensity (lb/MW hr)</b>	0.022	<b>N2O Intensity (lb/MW hr)</b>	0.005

### 1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.022
tblProjectCharacteristics	CO2IntensityFactor	0	558.38
tblProjectCharacteristics	N2OIntensityFactor	0	0.005
tblProjectCharacteristics	OperationalYear	2014	2020

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,484.1271	19.7797	1,788.0854	0.6453		229.9932	229.9932		229.9864	229.9864	21,794.3746	9,396.1950	31,190.5696	20.3623	1.7143	32,149.6083
Energy	2.3411	20.1659	9.6862	0.1277		1.6175	1.6175		1.6175	1.6175	0.0000	64,487.3892	64,487.3892	2.0720	0.7948	64,777.2737
Mobile	135.6857	278.1001	1,331.7617	3.5144	240.8575	4.0637	244.9212	64.4175	3.7498	68.1673	0.0000	243,911.8395	243,911.8395	9.5205	0.0000	244,111.7706



Waste						0.0000	0.0000		0.0000	0.0000	6,030.019 1	0.0000	6,030.0191	356.3639	0.0000	13,513.661 4
Water						0.0000	0.0000		0.0000	0.0000	640.6169	9,988.685 5	10,629.302 4	66.1911	1.6431	12,528.664 6
<b>Total</b>	<b>1,622.1539</b>	<b>318.0457</b>	<b>3,129.533 3</b>	<b>4.2874</b>	<b>240.8575</b>	<b>235.6743</b>	<b>476.5318</b>	<b>64.4175</b>	<b>235.3537</b>	<b>299.7712</b>	<b>28,465.01 06</b>	<b>327,784.1 092</b>	<b>356,249.11 98</b>	<b>454.5098</b>	<b>4.1521</b>	<b>367,080.97 85</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,484.1271	19.7797	1,788.085 4	0.6453		229.9932	229.9932		229.9864	229.9864	21,794.37 46	9,396.195 0	31,190.569 6	20.3623	1.7143	32,149.608 3
Energy	1.8576	16.0027	7.6985	0.1013		1.2834	1.2834		1.2834	1.2834	0.0000	58,083.22 69	58,083.226 9	1.9165	0.6925	58,338.156 0
Mobile	122.0051	203.9369	1,044.881 4	2.3995	161.7714	2.8576	164.6291	43.2659	2.6373	45.9031	0.0000	166,462.4 046	166,462.40 46	6.7417	0.0000	166,603.98 11
Waste						0.0000	0.0000		0.0000	0.0000	6,030.019 1	0.0000	6,030.0191	356.3639	0.0000	13,513.661 4
Water						0.0000	0.0000		0.0000	0.0000	512.4935	8,471.909 2	8,984.4027	52.9718	1.3188	10,505.625 5
<b>Total</b>	<b>1,607.9898</b>	<b>239.7193</b>	<b>2,840.665 3</b>	<b>3.1461</b>	<b>161.7714</b>	<b>234.1342</b>	<b>395.9056</b>	<b>43.2659</b>	<b>233.9071</b>	<b>277.1730</b>	<b>28,336.88 72</b>	<b>242,413.7 357</b>	<b>270,750.62 29</b>	<b>438.3562</b>	<b>3.7256</b>	<b>281,111.03 23</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.87</b>	<b>24.63</b>	<b>9.23</b>	<b>26.62</b>	<b>32.84</b>	<b>0.65</b>	<b>16.92</b>	<b>32.84</b>	<b>0.61</b>	<b>7.54</b>	<b>0.45</b>	<b>26.04</b>	<b>24.00</b>	<b>3.55</b>	<b>10.27</b>	<b>23.42</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Diversity

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	122.0051	203.9369	1,044.8814	2.3995	161.7714	2.8576	164.6291	43.2659	2.6373	45.9031	0.0000	166,462.4046	166,462.4046	6.7417	0.0000	166,603.9811
Unmitigated	135.6857	278.1001	1,331.7617	3.5144	240.8575	4.0637	244.9212	64.4175	3.7498	68.1673	0.0000	243,911.8395	243,911.8395	9.5205	0.0000	244,111.7706

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	79,541.30	86,421.20	73264.90	227,360,709	152,706,345
General Light Industry	3,862.08	731.41	376.79	8,516,041	5,719,781
General Office Building	1,486.35	319.95	132.30	2,691,544	1,807,770
Government (Civic Center)	55,867.92	0.00	0.00	76,285,131	51,236,749
Single Family Housing	86,388.39	90,992.16	79166.79	245,597,246	164,954,877
Strip Mall	56,796.08	53,874.26	26181.05	80,089,573	53,791,994
Total	283,942.12	232,338.98	179,121.82	640,540,245	430,217,516

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
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
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

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	39,699.3533	39,699.353	1.5641	0.3555	39,842.4012
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	41,318.3581	41,318.358	1.6279	0.3700	41,467.2397
NaturalGas Mitigated	1.8576	16.0027	7.6985	0.1013		1.2834	1.2834		1.2834	1.2834	0.0000	18,383.8736	18,383.873	0.3524	0.3370	18,495.7548
NaturalGas Unmitigated	2.3411	20.1659	9.6862	0.1277		1.6175	1.6175		1.6175	1.6175	0.0000	23,169.0311	23,169.031	0.4441	0.4248	23,310.0340

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	2.83905e+006	0.0153	0.1392	0.1169	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.5025	151.5025	2.9000e-003	2.7800e-003	152.4245
Government (Civic Center)	4.2081e+007	0.2269	2.0628	1.7328	0.0124		0.1568	0.1568		0.1568	0.1568	0.0000	2,245.6040	2,245.6040	0.0430	0.0412	2,259.2704
Single Family Housing	2.49628e+008	1.3460	11.5025	4.8947	0.0734		0.9300	0.9300		0.9300	0.9300	0.0000	13,321.1036	13,321.1036	0.2553	0.2442	13,402.1736

Strip Mall	2.93464e+006	0.0158	0.1439	0.1208	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	156.6033	156.6033	3.0000e-003	2.8700e-003	157.5564
Apartments Low Rise	1.30156e+008	0.7018	5.9974	2.5521	0.0383		0.4849	0.4849		0.4849	0.4849	0.0000	6,945.6005	6,945.6005	0.1331	0.1273	6,987.8703
General Light Industry	6.53284e+006	0.0352	0.3202	0.2690	1.9200e-003		0.0243	0.0243		0.0243	0.0243	0.0000	348.6172	348.6172	6.6800e-003	6.3900e-003	350.7388
<b>Total</b>		<b>2.3411</b>	<b>20.1659</b>	<b>9.6862</b>	<b>0.1277</b>		<b>1.6175</b>	<b>1.6175</b>		<b>1.6175</b>	<b>1.6175</b>	<b>0.0000</b>	<b>23,169.0311</b>	<b>23,169.0311</b>	<b>0.4441</b>	<b>0.4248</b>	<b>23,310.0340</b>

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government (Civic Center)	3.3123e+007	0.1786	1.6237	1.3639	9.7400e-003		0.1234	0.1234		0.1234	0.1234	0.0000	1,767.5691	1,767.5691	0.0339	0.0324	1,778.3262
Single Family Housing	1.97199e+008	1.0633	9.0866	3.8667	0.0580		0.7347	0.7347		0.7347	0.7347	0.0000	10,523.3147	10,523.3147	0.2017	0.1929	10,587.3578
Strip Mall	2.52558e+006	0.0136	0.1238	0.1040	7.4000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.0000	134.7746	134.7746	2.5800e-003	2.4700e-003	135.5948
Apartments Low Rise	1.03554e+008	0.5584	4.7716	2.0305	0.0305		0.3858	0.3858		0.3858	0.3858	0.0000	5,526.0554	5,526.0554	0.1059	0.1013	5,559.6860
General Light Industry	5.86369e+006	0.0316	0.2874	0.2415	1.7200e-003		0.0219	0.0219		0.0219	0.0219	0.0000	312.9086	312.9086	6.0000e-003	5.7400e-003	314.8129
General Office Building	2.23468e+006	0.0121	0.1095	0.0920	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003	0.0000	119.2513	119.2513	2.2900e-003	2.1900e-003	119.9770
<b>Total</b>		<b>1.8576</b>	<b>16.0027</b>	<b>7.6985</b>	<b>0.1013</b>		<b>1.2834</b>	<b>1.2834</b>		<b>1.2834</b>	<b>1.2834</b>	<b>0.0000</b>	<b>18,383.8736</b>	<b>18,383.8736</b>	<b>0.3524</b>	<b>0.3371</b>	<b>18,495.7548</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Apartments Low Rise	4.38265e+007	11,100.2485	0.4374	0.0994	11,140.2458
General Light Industry	4.9869e+006	1,263.0666	0.0498	0.0113	1,267.6178
General Office Building	2.02365e+006	512.5438	0.0202	4.5900e-003	514.3907
Government (Civic Center)	2.9995e+007	7,597.0383	0.2993	0.0680	7,624.4126
Single Family Housing	6.43108e+007	16,288.4368	0.6418	0.1459	16,347.1286
Strip Mall	1.79923e+007	4,557.0240	0.1796	0.0408	4,573.4442
<b>Total</b>		<b>41,318.3580</b>	<b>1.6279</b>	<b>0.3700</b>	<b>41,467.2397</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.32334e+007	10,950.0143	0.4314	0.0981	10,989.4703
General Light Industry	4.76876e+006	1,207.8173	0.0476	0.0108	1,212.1694
General Office Building	1.81932e+006	460.7923	0.0182	4.1300e-003	462.4526
Government (Civic Center)	2.69664e+007	6,829.9655	0.2691	0.0612	6,854.5758
Single Family Housing	6.32888e+007	16,029.5901	0.6316	0.1435	16,087.3492
Strip Mall	1.66662e+007	4,221.1739	0.1663	0.0378	4,236.3840
<b>Total</b>		<b>39,699.3533</b>	<b>1.5642</b>	<b>0.3555</b>	<b>39,842.4012</b>

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,484.1271	19.7797	1,788.0854	0.6453		229.9932	229.9932		229.9864	229.9864	21,794.3746	9,396.1950	31,190.5696	20.3623	1.7143	32,149.6083
Unmitigated	1,484.1271	19.7797	1,788.0854	0.6453		229.9932	229.9932		229.9864	229.9864	21,794.3746	9,396.1950	31,190.5696	20.3623	1.7143	32,149.6083

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	29.3464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	126.1094					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,323.8819	17.9615	1,630.8804	0.6370		229.1288	229.1288		229.1221	229.1221	21,794.3746	9,140.2428	30,934.6174	20.1126	1.7143	31,888.4124
Landscaping	4.7894	1.8181	157.2051	8.2700e-003		0.8644	0.8644		0.8644	0.8644	0.0000	255.9522	255.9522	0.2497	0.0000	261.1959
Total	1,484.1271	19.7797	1,788.0855	0.6453		229.9932	229.9932		229.9864	229.9864	21,794.3746	9,396.1950	31,190.5696	20.3623	1.7143	32,149.6083

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	29.3464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	126.1094					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,323.8819	17.9615	1,630.8804	0.6370		229.1288	229.1288		229.1221	229.1221	21,794.3746	9,140.2428	30,934.6174	20.1126	1.7143	31,888.4124
Landscaping	4.7894	1.8181	157.2051	8.2700e-003		0.8644	0.8644		0.8644	0.8644	0.0000	255.9522	255.9522	0.2497	0.0000	261.1959
Total	1,484.1271	19.7797	1,788.0855	0.6453		229.9932	229.9932		229.9864	229.9864	21,794.3746	9,396.1950	31,190.5696	20.3623	1.7143	32,149.6083

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8,984.40275	52.9718	1.3188	10,505.6255
Unmitigated	10,629.3024	66.1911	1.6431	12,528.6646

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	786.214 / 495.656	4,237.0287	25.7759	0.6406	4,976.9152
General Light Industry	128.136 / 0	463.2324	4.1920	0.1024	582.9986
General Office Building	23.9941 / 14.706	128.1241	0.7866	0.0195	150.7000
Government (Civic Center)	397.518 / 243.64	2,122.6767	13.0318	0.3237	2,496.7005
Single Family Housing	588.471 / 370.993	3,171.3635	19.2929	0.4795	3,725.1593
Strip Mall	94.9239 / 58.1792	506.8772	3.1119	0.0773	596.1909
<b>Total</b>		<b>10,629.3024</b>	<b>66.1910</b>	<b>1.6431</b>	<b>12,528.6646</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	628.971 / 495.656	3,596.5738	20.6289	0.5144	4,189.2287
General Light Industry	102.509 / 0	358.8523	3.3531	0.0818	454.6230
General Office Building	19.1952 / 14.706	108.5783	0.6295	0.0157	126.6610
Government (Civic Center)	318.014 / 243.64	1,798.8558	10.4294	0.2599	2,098.4378
Single Family Housing	470.777 / 370.993	2,691.9910	15.4405	0.3850	3,135.5858
Strip Mall	75.9391 / 58.1792	429.5515	2.4905	0.0621	501.0892



Total		8,984.4027	52.9718	1.3188	10,505.6256
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6,030.0191	356.3639	0.0000	13,513.6614
Unmitigated	6,030.0191	356.3639	0.0000	13,513.6614

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5550.82	1,126.7663	66.5900	0.0000	2,525.1559
General Light Industry	687.08	139.4710	8.2425	0.0000	312.5636
General Office Building	125.55	25.4855	1.5062	0.0000	57.1147
Government (Civic Center)	11405.7	2,315.2540	136.8276	0.0000	5,188.6335
Single Family Housing	10591.1	2,149.9017	127.0556	0.0000	4,818.0681

Strip Mall	1345.58	273.1406	16.1422	0.0000	612.1256
Total		6,030.0191	356.3639	0.0000	13,513.6614

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5550.82	1,126.7663	66.5900	0.0000	2,525.1559
General Light Industry	687.08	139.4710	8.2425	0.0000	312.5636
General Office Building	125.55	25.4855	1.5062	0.0000	57.1147
Government (Civic Center)	11405.7	2,315.2540	136.8276	0.0000	5,188.6335
Single Family Housing	10591.1	2,149.9017	127.0556	0.0000	4,818.0681
Strip Mall	1345.58	273.1406	16.1422	0.0000	612.1256
Total		6,030.0191	356.3639	0.0000	13,513.6614

9.0 Operational Offroad

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