

May 21, 2021  
**Revised June 3, 2021**

Heather Allen, AICP  
Planning Manager  
Community and Economic Development Department  
303 W. Commonwealth Avenue  
Fullerton, California 92832

**VIA EMAIL**  
**Heather.Allen@cityoffullerton.com**

Subject: **Revised** Greenhouse Gas Emissions Analysis for the Street Lights Fullerton Project in the City of Fullerton, California

Dear Ms. Allen:

This Letter Report presents the results of the greenhouse gas (GHG) emissions analysis for the proposed Street Lights Fullerton Project located at 223, 225, and 229 East Orangethorpe Avenue and 1101 and 1111 South Lemon Street, in the City of Fullerton, California (hereinafter referred to as the “Project”). This analysis addresses the potential GHG impacts associated with the Project in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code §21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, §15000 et seq.).

## **PROJECT SETTING AND DESCRIPTION**

The Project Applicant, Street Lights Residential, proposes to develop a 4.47-acre site with in-fill mixed-use multi-family residential and neighborhood commercial development, which includes 329 multi-family residential units and 5,995 square feet (sf) of retail uses in a 380,123-sf, 5-story structure. The Project involves demolition and removal of the existing structures and associated improvements, including surface parking lots, to accommodate the proposed development. A total of 550 parking spaces would be provided within a 6-story parking structure. The Project site is currently developed with two single-story multi-tenant commercial buildings, associated asphalt concrete paved surface parking, and two restaurants abutting Lemon Street. The commercial spaces are mostly vacant, and all existing uses on the Project site are slated for demolition to accommodate development of the proposed Project. Please refer to Exhibit 1, Regional Location and Local Vicinity.

## **GREENHOUSE GAS EMISSIONS ANALYSIS**

Climate change refers to any significant change in measures of climate (e.g., average temperature, precipitation, or wind patterns) over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth’s surface; this is attributed to an accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth’s surface temperature. Some GHGs occur naturally and are emitted to the

225 South Lake Avenue  
Suite 1000  
Pasadena, CA 91101

Tel 626.351.2000  
Fax 626.351.2030  
[www.Psomas.com](http://www.Psomas.com)

Heather Allen  
June 3, 2021  
Page 2

atmosphere through natural processes, while others are created and emitted solely through human activities. The emissions of GHGs through fossil fuel combustion in conjunction with other human activities are associated with global warming.

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). General discussions on climate change often include water vapor, atmospheric ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as the California Air Resources Board (CARB), or climate change groups, such as the California Climate Action Registry, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, atmospheric ozone, or aerosols is provided.

### ***Regulatory Background***

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05, which calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

The principal overall State plan and policy adopted for the purpose of reducing GHG emissions is Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 recognizes that California is the source of substantial amounts of GHG emissions. The statute states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to avert these consequences, AB 32 establishes a State goal of reducing GHG emissions to 1990 levels by the year 2020, codifying the goal of EO S-3-05.

CARB approved a Climate Change Scoping Plan as required by AB 32 in 2008; this plan is required to be updated every five years. The Climate Change Scoping Plan proposes a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (CARB 2008). The Climate Change Scoping Plan has a range of GHG-reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation regulation to fund the program. On February 10, 2014, CARB released the Draft Proposed First Update to the Climate Change Scoping Plan (CARB 2014). The board approved the final First Update to the Climate Change Scoping Plan on May 22, 2014. The first update describes California's progress towards AB 32 goals, stating that "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). The latest update occurred in January 2017 and incorporates the 40 percent reduction to 1990 emissions levels by 2030.

Heather Allen

June 3, 2021

Page 3

The Sustainable Communities and Climate Protection Act of 2008, Senate Bill (SB) 375, established a process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 required the Southern California Association of Governments (SCAG) to incorporate a “sustainable communities strategy” (SCS) into its regional transportation plans (RTPs) that will achieve GHG emission reduction targets through several measures, including land use decisions. SCAG’s SCS is included in the SCAG 2020–2045 RTP/SCS (SCAG 2020). The goals and policies of the RTP/SCS that reduce vehicle miles traveled (VMT) focus on transportation and land use planning that include building infill projects; locating residents closer to where they work and play; and designing communities so there is access to high quality transit service.

On April 29, 2015, Governor Brown signed EO B-30-15, which ordered an interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. Five key goals for reducing GHG emissions through 2030 include (1) increasing renewable electricity to 50 percent; (2) doubling the energy efficiency savings achieved in existing buildings and making heating fuels cleaner; (3) reducing petroleum use in cars and trucks by up to 50 percent; (4) reducing emissions of short-lived climate pollutants; and (5) managing farms, rangelands, forests and wetlands to increasingly store carbon. EO B-30-15 also directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

On September 8, 2016, the Governor signed Senate Bill 32 (SB 32) to codify the GHG reduction goals of EO B-30-15, requiring the State to reduce GHG emissions by 40 percent below 1990 levels by 2030 (Health and Safety Code Section 38566). As stated above, this goal is expected to keep the State on track to meeting the goal set by EO S-3-05 of reducing GHG emissions by 80 percent below 1990 levels by 2050.

AB 197 was signed at the same time to ensure that the SB 32 goals are met by requiring CARB to provide annual reports of GHGs, criteria pollutants, and TACs by facility, City and sub-county level, and sector for stationary sources and at the County level for mobile sources. It also requires the CARB to prioritize specified emission reduction rules and regulations and to identify specified information for emission reduction measures (e.g., alternative compliance mechanism, market-based compliance mechanism, and potential monetary and nonmonetary incentive) when updating the Scoping Plan.

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of EO B-30-15. The objectives of SB 350 are as follows:

1. To increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources
2. To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation

The text of SB 350 sets a December 31, 2030, target for 50 percent of electricity to be generated from renewable sources. SB 350 also requires the State to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. Additionally, SB 350 sets requirements for large utilities to develop and submit integrated resources plans (IRPs), which detail how utilities would meet their customers’ resource needs, reduce GHG emissions, and integrate clean energy resources (CEC 2020a).

On September 10, 2018, Governor Brown signed SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 requires renewable energy and zero-carbon resources to supply 100 percent of electric retail sales to

Heather Allen

June 3, 2021

Page 4

end-use customers and 100 percent of electricity procured to serve state agencies by December 31, 2045. This policy requires the transition to zero-carbon electric systems that do not cause contributions to increase of GHG emissions elsewhere in the western electricity grid (CEC 2020b). SB 100 also creates new standards for the Renewable Portfolio Standard (RPS) goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly owned utilities from 50 percent to 60 percent by 2030.

Further, on September 10, 2018, Governor Brown also signed California EO B-55-18, which sets a new statewide goal of carbon neutrality as soon as possible, and no later than 2045 and achieve net negative emissions thereafter. EO B-55-18 was added to the existing Statewide targets of reducing GHG emissions, including the targets previously established by Governor Brown of reducing emissions to 40 percent below 1990 levels by 2030 (EO B-30-15 and SB 32), and by Governor Schwarzenegger of reducing emissions to 80 percent below 1990 levels by 2040 (EO S-3-05).

The Fullerton Plan Climate Action Plan (CAP) provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate (City of Fullerton 2012a). The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California, including AB 32, and presents strategies for each category of GHG emissions (e.g., transportation, emergency consumption, water consumption and waste disposal) that will make it possible for the City to meet the recommended targets.

The CAP also suggests best practices for implementation and makes recommendations for measuring progress. The Fullerton Plan CAP states the following (City of Fullerton 2012a):

One of the primary uses for a CAP is to establish significance thresholds for reviewing projects under CEQA. CEQA requires the City to identify the significant environmental impacts of its discretionary actions and to avoid or mitigate those impacts if feasible. The CEQA Guidelines, as updated pursuant to SB 97, acknowledges that climate change is an environmental issue that requires analysis under CEQA and encourages the use of a plan consistency threshold for cumulative impacts on climate change. Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the CAP would have a less than significant impact on climate change.

When the City undertakes a discretionary action, such as approval of a proposed development project, plan, policy, or code change, the City will evaluate whether that action would result in a significant climate change impact.

Project consistency with the CAP is discussed under Question GHG-2 below. It is accepted as very unlikely that any individual development project such as the size and character of the proposed project would have GHG emissions of a magnitude to directly impact global climate change; therefore, any impact would be considered on a cumulative basis.

### ***Thresholds of Significance***

Because the City has a CAP, which demonstrates how it will meet AB 32 requirements, the determination of whether a project would generate GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions can be made by determining the consistency of that project with the CAP. However, the City's CAP does not address recent requirements established by SB 32 to reduce GHG emissions by 40 percent below 1990 levels by 2030. Therefore, in addition to establishing the Project's consistency with the CAP, the determination as to whether the proposed Project would generate GHG emissions that may

Heather Allen  
 June 3, 2021  
 Page 5

have a significant impact on the environment is also determined by comparing the Project’s emissions to the suggested South Coast Air Quality Management District (SCAQMD) threshold for all land use projects, discussed below.

On December 5, 2008, the SCAQMD Governing Board presented the staff proposal for a tiered threshold approach wherein Tier 1 determines if a project qualifies for an applicable CEQA exemption, Tier 2 determines consistency with GHG reduction plans, and Tier 3 proposes a numerical screening value as a threshold. At their September 28, 2010, meeting, the Working Group suggested a Tier 3 threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) per year for all land use types (SCAQMD 2010). Tier 4 determines if the project meets performance standards. Tier 4 has three options: Option 1—percent emission reduction target; Option 2—early implementation of applicable measures, and Option 3—sector-based standard. Tier 5 determines mitigation for CEQA offsets.

In the absence of adopted thresholds, the Tier 3 standard of 3,000 MTCO<sub>2e</sub> per year is used for this analysis. The development of project-level thresholds in accordance with CEQA is an ongoing effort at the State, Regional, and County levels, and significance thresholds may differ for future projects based on new or additional data and information that may be available at that time for consideration. The City of Fullerton has not officially adopted any GHG CEQA significance threshold. The City defers to assessment methods and significance thresholds developed by the SCAQMD. This impact analysis evaluates consistency with regulatory programs designed to reduce GHG emissions and that contribute to the achievement of AB 32’s and SB 32’s goals as the primary significance criterion. In addition, this impact analysis also evaluates the Project’s estimated emissions compared to the Tier 3 threshold for impacts related to GHG emissions proposed by staff of the SCAQMD, but not adopted by the SCAQMD Board.

***Regulatory Requirements***

- RR GHG-1** The Project must be designed in accordance with the applicable Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations [CCR], Title 24, Part 6). These standards are updated, nominally every three years, to incorporate improved energy efficiency technologies and methods.
- RR GHG-2** The Project is subject to the California Green Building Standards Code (CALGreen) (CCR, Title 24, Part 11). These standards are updated, nominally every three years, to incorporate improved energy efficiency technologies and methods.

**GREENHOUSE GAS EMISSIONS IMPACT FINDINGS**

The following questions correspond to the questions in the GHG Emissions section of the Initial Study Checklist in Appendix G of the State CEQA Guidelines.

**Question GHG-1 Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

**Less than Significant Impact.** Project GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 computer program (CAPCOA 2017). CalEEMod is designed to model construction and operational emissions for land development projects and allows for the input of project- and county-specific information. For modeling purposes, construction of the project was based on the project’s construction assumptions and default assumptions derived from CalEEMod. The input for operational emissions was based on the vehicle trip generation rates provided in the

Heather Allen  
 June 3, 2021  
 Page 6

transportation impact analysis and the proposed building area. Additional input details are included in Attachment A.

The estimated construction GHG emissions for the proposed Project would be 1,472 MTCO<sub>2e</sub>, as shown in Table 1, Estimated Greenhouse Gas Emissions from Construction.

**TABLE 1  
 ESTIMATED GREENHOUSE GAS  
 EMISSIONS FROM CONSTRUCTION**

Year	Emissions (MTCO <sub>2e</sub> )
2021	161
2022	629
2023	683
<b>Total</b>	<b>1,472</b>
MTCO <sub>2e</sub> : metric tons of carbon dioxide equivalent Notes: <ul style="list-style-type: none"> <li>Totals may not add due to rounding variances.</li> <li>Detailed calculations in Attachment A, Greenhouse Gas Emissions Modeling Data.</li> </ul>	

Operational GHG emissions would come primarily from vehicle trips; other sources include electricity and water consumption; natural gas for space and water heating; and gasoline-powered landscaping and maintenance equipment. Table 2, Estimated Annual Greenhouse Gas Emissions from Project Operation, shows the annual GHG emissions from proposed Project’s operations. It should be noted that the emissions provided in Table 2 do not deduct existing GHG emissions from current on-site uses. There would be less trips with implementation of the Project than its current existing uses, and as such, there would be a net reduction of 222 trips at the Project site (Psomas 2021). As a result, net emissions would be much lower than what is shown in Table 2. However, for the purposes of a conservative analysis, the Project’s operational emissions are shown in Table 2 without existing development net reductions.

**TABLE 2  
 ESTIMATED ANNUAL GREENHOUSE GAS  
 EMISSIONS FROM PROJECT OPERATION**

Source	Emissions (MTCO <sub>2e</sub> /yr)
Area	6
Energy	520
Mobile	2,095
Waste	80
Water	110
<b>Total Operational Emissions</b>	<b>2,811</b>
MTCO <sub>2e</sub> /yr: metric tons of carbon dioxide equivalent per year Notes: <ul style="list-style-type: none"> <li>Totals may not add due to rounding variances.</li> <li>Detailed calculations in Attachment A, CalEEMod Data.</li> </ul>	

Because impacts from construction activities occur over a relatively short period of time, they contribute a relatively small portion of the overall lifetime Project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. The SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime so that GHG reduction measures address construction GHG emissions as part of the operational GHG reduction strategies (SCAQMD 2008). Therefore, construction and operational emissions are combined by amortizing the construction and operations over an assumed 30-year Project lifetime. This combination is shown in Table 3, Estimated Total Project Annual Greenhouse Gas Emissions, using the proposed Project’s amortized construction and operational emissions.

**TABLE 3  
 ESTIMATED TOTAL PROJECT ANNUAL  
 GREENHOUSE GAS EMISSIONS**

Source	Emissions (MTCO <sub>2</sub> e/yr <sup>a</sup> )
Construction (Amortized)	49 <sup>a</sup>
Operations (Table 2)	2,811
<b>Total<sup>b</sup></b>	<b>2,860</b>
<b>SCAQMD-Recommended Threshold (Tier 3)</b>	<b>3,000</b>
<b>Exceeds Threshold?</b>	<b>No</b>
MTCO <sub>2</sub> e/yr: metric tons of carbon dioxide equivalent per year	
<sup>a</sup> Total derived by dividing construction emissions (see Table 1) by 30.	
<sup>b</sup> Total annual emissions are the sum of amortized construction emissions and operational emissions.	

As discussed above, there are no established applicable quantitative federal, State, regional, or local CEQA significance criteria for GHG emissions for non-industrial projects in the SoCAB. The SCAQMD has proposed, but not adopted, a threshold of 3,000 MTCO<sub>2</sub>e per year for non-industrial land use projects. As shown, the estimated GHG emissions from the Project, without taking credit for the GHG emissions from existing uses that would be removed with Project implementation, would be less than this suggested threshold. The impact would be less than significant, and no mitigation is required.

**Question GHG-2 Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less than Significant Impact.** As identified in the City’s CAP, when determining whether a proposed project is consistent with the CAP, the following should be considered:

**Step 1:** Consider the consistency of the discretionary project (magnitude and location of growth) with The Fullerton Plan’s year 2030 growth projections, which are the basis of the GHG emissions inventory projects. If the project is consistent with The Fullerton Plan projections, the project is consistent with the CAP.

The CAP then states, “If the discretionary project is not consistent with The Fullerton Plan’s year 2030 growth projections, the project is not necessarily inconsistent with the CAP” and prescribes Steps 2, 3, and 4 to be addressed. The following analyzes the Project’s consistency in accordance with Step 1.

The proposed Project would be located in the Fullerton Town Center (FTC) Focus Area D-Harbor Gateway in The Fullerton Plan and is consistent with the growth projections for this Focus Area. As indicated in Table 3-4, Projected Land Use Change—Focus Areas, of The Fullerton Plan EIR, the land

Heather Allen  
June 3, 2021  
Page 8

use buildout assumptions for this Focus Area forecast over 2,549 dwelling units of additional residential uses, and over 1,438,580 sf of additional non-residential uses (City of Fullerton 2012b). As indicated in Table 5.2-10, Forecast Employment Growth – Focus Area, of The Fullerton Plan, the City anticipated 4,022 new employees in the Harbor Gateway Focus Area (16.7 percent of the total employment growth in the City) (City of Fullerton 2012c). The proposed Project would create employment opportunities during construction and long-term operations in the Harbor Gateway Focus Area. The Project's 5,995 sf of non-residential (retail) uses would generate approximately 18 employees, which is based on the average space utilization of 324.3 square feet of retail/wholesale space per employee (NAIOP 2009) and 6 employees for management of the multi-family residential uses. This is 0.6 percent of the anticipated employment growth in the Harbor Gateway Focus Area. The Project would result in 329 dwelling units, which is 13 percent of the City's projections for the Harbor Gateway Focus Area. However, it should be noted that this is not a new development project on a previously-undeveloped site. This is a redevelopment project, and therefore, existing development would be removed to accommodate this Project. The proposed Project would result in development and employment that has been envisioned by the City for the Harbor Gateway Focus Area. The Project's employment and dwelling units would not exceed and would be consistent with The Fullerton Plan's year 2030 employment and population growth projections. The Project is consistent with the CAP based on the Step 1 analysis. Therefore, the employment and population growth resulting from the Project would be consistent with the CAP, resulting in a less than significant impact related to GHG emissions.

Section 15183.5 (b) (2) states, "An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project."

The Fullerton CAP includes four strategies:

1. *Transportation and Mobility Strategy* - Promote a balanced transportation system that promotes the use of public transportation and bicycles, reduces congestion, and helps encourage residents to engage in healthy and active lifestyles.
2. *Energy Use and Conservation Strategy* - Reduce the carbon footprint of municipal operations to serve as a leader for the community and support the construction of buildings that are energy efficient and incorporate clean, renewable energy sources.
3. *Water Use and Efficiency Strategy* - Conserve and protect water resources and promote efficiency through public education.
4. *Solid Waste Reduction and Recycling Strategy* - Manage solid waste generation and diversion in order to achieve a zero-waste future.

The City has identified specific GHG reduction measures for these strategies, along with implementation actions for each measure. The implementation actions are City efforts that do not directly relate to development projects. However, the Project would comply with pertinent programs and regulations that have been or will be developed as part of these implementation actions and would support City efforts.

Table 4 lists the City of Fullerton's CAP strategies and related GHG reduction measures and provides a general discussion of Project features and regulations that support the CAP.



**TABLE 4**  
**THE FULLERTON PLAN CLIMATE ACTION PLAN**  
**GHG REDUCTION MEASURES**

MEASURE	PROJECT SUPPORT
<b>Transportation and Mobility Strategy</b>	
<p><b>T-1: Reduction of Single Occupant Vehicle Trips</b>                      Support regional and sub-regional efforts to increase alternatives to and infrastructure supporting a reduction of single occupant vehicle trips.</p>	<p>The Project is a mixed-used development within the Fullerton Town Center Harbor Gateway, which consists of residential and retail uses proximate to other retail, office, and related uses. The vision of The Fullerton Plan for the Harbor Gateway Focus Area is high density development, which would consist of residential, commercial, and mixed-uses with convenient access to regional transportation. The placement of residential uses proximate to commercial, office, and related uses would reduce use of single occupant vehicle trips. Additionally, the Project would provide 70 secure bicycle storage spaces for future residents and visitors at the Project site, which would also support regional and sub-regional efforts to increase alternatives to and infrastructure supporting a reduction of single occupant vehicle trips.</p>
<p><b>T-2: Inter-Jurisdiction Connections</b>                      Support efforts to maintain, expand and create new connections between the Fullerton bicycle network and the bicycle networks of adjacent cities, Orange County, and the region.</p>	<p>There is no existing bikeway in Fullerton proximate to the Project site. There is a proposed Class II Bike Lane on Orangethorpe Avenue to the south of the site and a proposed Class III Bike Route on Lemon Street, east of the site (City of Fullerton 2012). The Project would not preclude the future development of these bike lanes and routes.</p>
<p><b>T-3: Bicycle Transportation Plan</b>                      Support projects, programs, and policies to maintain and update as necessary a Bicycle Transportation Plan prepared and approved pursuant to the California Streets and Highways Code to maintain eligibility for funding for State Bicycle Transportation Account funds.</p>	<p>There is no existing bikeway in Fullerton proximate to the Project site. There is a proposed Class II Bike Lane on Orangethorpe Avenue to the south of the site and a proposed Class III Bike Route on Lemon Street, east of the site. The Project would not preclude the future development of these bike lanes and routes. The Property Owner/Developer would provide 70 secure bicycle storage spaces for future residents and visitors at the Project site.</p>
<p><b>T-4: Bicycle Use on All Streets</b>                      Support projects, programs, policies and regulations to recognize that every street in Fullerton is a street that a bicyclist can use.</p>	<p>The Project would not preclude the future development of the City's proposed bicycle lanes, discussed above. The Property Owner/Developer would provide 70 secure bicycle storage spaces for future residents and visitors at the Project site.</p>
<p><b>T-5: Bicycling Safety and Convenience</b>                      Support projects, programs, policies, and regulations that make bicycling safer and more convenient for all types of bicyclists.</p>	<p>The Project is a mixed-used development within the Fullerton Town Center Harbor Gateway, which consists of residential and retail uses proximate to other retail, office, and related uses. The Project would promote pedestrian and bicycle activity and provide secure bicycle storage and parking at the site for convenience.</p>
<p><b>T-6: Circulation Between Cities</b>                      Support regional and sub-regional efforts to implement programs that coordinate the multi-modal transportation needs and requirements across jurisdictions, including but not limited to the Master Plan of Arterial Highways, the Commuter Bikeways Strategic Plan, the Signal Synchronization Master Plan, the Orange County Congestion Management Plan, and the Growth Management Plan.</p>	<p>The Project would not conflict with the Commuter Bikeways Strategic Plan since no bikeways are existing or proposed along the site boundaries. Also, no conflict with the Master Plan of Arterial Highways (MPAH) would occur since the needed street improvements would not change the roadway configurations. The Project would result in less trips than existing uses and would therefore not significantly impact Congestion Management Plan (CMP) intersections based on CMP thresholds of significance. No conflict with the Growth Management Plan is anticipated since employment growth from the Project would be within The Fullerton Plan and SCAG forecasts.</p>

**TABLE 4  
 THE FULLERTON PLAN CLIMATE ACTION PLAN  
 GHG REDUCTION MEASURES**

MEASURE	PROJECT SUPPORT
<p><b>T-7: Infrastructure for Low and Zero Emission Vehicles</b>                      Support projects, programs, policies, and regulations to encourage the development of private and/or public infrastructure facilitating the use of alternative fuel vehicles.</p>	<p>The Property Owner/Developer would meet CALGreen requirements (RR GHG-2) and provide electric vehicle charging parking spaces at the Project site for light-duty vehicles and infrastructure to facilitate future electric charging.</p>
<p><b>T-8: Rail and Rapid Transit</b>                      Participate in the planning efforts for regional and inter-state rail and rapid transit projects to represent the interests of the City.</p>	<p>The Project would not preclude planning efforts for regional and inter-state rail and rapid transit projects.</p>
<p><b>T-9: Car Sharing Pilot Program</b>                      Explore the potential for a car sharing pilot program to be implemented in one or more of the City's Focus Areas.</p>	<p>The Property Owner/Developer would meet CALGreen requirements (RR GHG-2) and provide electric vehicle charging parking spaces at the Project site for light-duty vehicles and infrastructure to facilitate future electric charging.</p>
<p><b>Energy Use and Conservation Strategy</b></p>	
<p><b>E-1: GHG Emissions from Electrical Generation</b>                      Support regional and sub-regional efforts to reduce greenhouse gas emissions associated with electrical generation through energy conservation strategies and alternative/renewable energy programs.</p>	<p>The Project would comply with pertinent requirements in the 2019 California Building Code (CBC) (or latest applicable code), including the Title 24 Energy Efficiency Standards (RR GHG-1) and the CALGreen Code (RR GHG-2). Additionally, residential uses are required to have updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); ventilation requirements; and lighting requirements, via RR GHG-1.</p>
<p><b>E-2: Energy- and Resource-Efficient Design</b>                      Support projects, programs, policies and regulations to encourage energy and resource efficient practices in site and building design for private and public projects.</p>	<p>The Project would comply with Title 24 Energy Efficiency Standards (RR GHG-1) and the CALGreen Code (RR GHG-2). These RRs would lead to the planning and design of the Project with considerations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.</p>
<p><b>E-3: Energy Efficient Retrofits</b>                      Prepare guidance to homeowners on energy efficient retrofits of existing dwellings.</p>	<p>This measure is not applicable to the Project because it would be a new development.</p>
<p><b>E-4: Efficient Use of Energy Resources in Residential Development</b>                      The City shall encourage housing developers to maximize energy conservation through proactive site, building and building systems design, materials, and equipment. The City's goal is to provide the development community the opportunity to exceed the provisions of Title 24 of the California Building Code. The City shall continue to support energy conservation through encouraging the use of Energy Star-rated appliances, other energy-saving technologies and conservation. To enhance the efficient use of energy resources, the City shall review the potential of offering incentives or other strategies that encourage energy conservation.</p>	<p>The Project would comply with pertinent requirements in the 2019 California Building Code (CBC) (or latest applicable code), including the Title 24 Energy Efficiency Standards (RR GHG-1) and the CALGreen Code (RR GHG-2). Additionally, the Project is a mixed-use development which places residents and retail uses proximate to other commercial and retail uses, which reduces energy consumption from vehicles.</p>

**TABLE 4**  
**THE FULLERTON PLAN CLIMATE ACTION PLAN**  
**GHG REDUCTION MEASURES**

MEASURE	PROJECT SUPPORT
<p><b>E-5: Sustainable Regional Revitalization Efforts</b>                      Support regional and sub-regional efforts pertaining to community revitalization that are rooted in sustainable development principles.</p>	<p>The proposed Project involves redevelopment of a formerly developed site. The Project would also incorporate sustainable practices, as required under the CALGreen Code (RR GHG-2).</p>
<p><b>Water Use and Efficiency Strategy</b></p>	
<p><b>W-1: Conservation Efforts</b>                      Support regional and subregional efforts to promote water efficiency and conservation.</p>	<p>The Project would comply with Title 24 Energy Efficiency Standards (RR GHG-1) and the CALGreen Code (RR GHG-2). The Project would also participate in the City's water conservation programs and comply with existing water conservation regulations.</p>
<p><b>W-2: Sustainable Water Practices in New Development</b>                      Support projects, programs, policies, and regulations to encourage water efficient practices in site and building design for private and public projects.</p>	<p>The Project would comply with the water conservation measures in the CALGreen Code (RR GHG-2) and with the City's existing water conservation regulations (e.g., Water Supply Shortage Conservation Plan and Landscape Ordinance). The City's Landscape Ordinance, as contained in Section 15.50 of the Fullerton Municipal Code, require the use of water efficient irrigation systems. Specifically, the Project would be designed to reduce the water consumption through efficient irrigation systems and the use of water-efficient fixtures, such as low flush toilets and aerators on sinks and showerheads within individual buildings.</p>
<p><b>W-3: GHG Emissions from Water Conveyance</b>                      Support regional and subregional efforts to reduce greenhouse gas emissions associated with water conveyance through water conservation strategies and alternative supply programs.</p>	<p>The City does not receive recycled water from the Orange County Sanitation District and there is no recycled water infrastructure near the site. However, the City has several water conservation programs and supports recycled water projects by indirectly providing treated water for the Orange County Groundwater Replenishment System.</p>
<p><b>Waste Reduction and Recycling Strategy</b></p>	
<p><b>SW-1: Regional Waste Management</b>                      Support regional and sub-regional efforts on recycling, waste reduction, and product reuse.</p>	<p>The Project would comply with the CALGreen Code on the recycling and/or salvage for reuse of a minimum of 50 percent of the nonhazardous construction and demolition debris and the mandates of SB 341 for the provision of on-site recycling containers.</p>
<p><b>SW-2: Waste Reduction and Diversion</b>                      Support projects, programs, policies, and regulations to promote practices to reduce the amount of waste disposed in landfills.</p>	<p>The Project would comply with the CALGreen Code on the recycling and/or salvage for reuse of a minimum of 50 percent of the nonhazardous construction and demolition debris and the mandates of SB 341 for the provision of on-site recycling containers.</p>
<p><b>SW-3: Waste Stream Separation and Recycling</b>                      Support projects, programs, policies and regulations to expand source separation and recycling opportunities to all households (including multi-family housing), businesses, and City operations.</p>	<p>The Project would comply with the CALGreen Code on the recycling and/or salvage for reuse of a minimum of 50 percent of the nonhazardous construction and demolition debris and the mandates of SB 341 for the provision of on-site recycling containers.</p>
<p><b>SW-4: Food-Waste Processing Facility</b>                      Explore the feasibility of a food-waste processing facility to serve the City's food-service and food-processing businesses and large institutions.</p>	<p>The Project does not propose a food waste processing facility or other waste treatment and disposal facility.</p>

**TABLE 4  
 THE FULLERTON PLAN CLIMATE ACTION PLAN  
 GHG REDUCTION MEASURES**

MEASURE	PROJECT SUPPORT
<b>SW-5: GHG Emissions from Waste</b> Support projects, programs, policies, and regulations to reduce greenhouse gas emissions from waste through improved management of waste handling and reductions in waste generation.	The Project would comply with waste reduction measures in the CALGreen Code and the mandates of SB 341 for on-site recycling containers.
Source: City of Fullerton 2012a.	

The City of Fullerton is implementing its CAP and is realizing GHG reductions as a result of this implementation. As discussed above, the Project would include features or would comply with regulations that would support the CAP strategies and GHG reductions measures listed in the City of Fullerton’s CAP and, thus, would reduce GHG emissions when compared with projects that would not have these features. Project design and compliance with regulatory requirements would reduce vehicle trips, energy and water consumption, and solid waste disposal and, in turn, reduce GHG emissions. Thus, the Project would support the CAP’s strategies and related GHG reduction measures, and would be consistent with the City’s CAP. Since the Project is consistent with the policies and goals of The Fullerton Plan and the City’s CAP, which in turn, were adopted in compliance with AB 32 and included in the growth projections used in the SCAG RTP/SCS, the Project would not conflict with the GHG reduction goals of these regulations and plans.

On a statewide level, the State policy and standards adopted for the purpose of reducing GHG emissions that are applicable to the proposed Project are EO S-3-05, AB 32, the California Global Warming Solutions Act of 2006, and SB 32. The quantitative goal of these regulations is to reduce GHG emissions to 1990 levels by 2020 to 80 percent below 1990 levels by 2050, and for SB 32, to 40 percent below 1990 levels by 2030. Statewide plans and regulations (such as GHG emissions standards for vehicles, the Low Carbon Fuel Standard, Cap-and-Trade, and renewable energy) are being implemented at the statewide level, and compliance at a project level is not addressed.

Overall, the Project is an infill development project. There would be less trips with implementation of the Project than its current existing uses, and there would be a net reduction of 222 trips at the Project site (Psomas 2021). The Project’s uses would result in trip reductions due to the Project site’s proximity to nearby commercial uses, which are within walking distance of the Project site. Therefore, the Project would promote pedestrian activity in an area with complementary uses, which would reduce reliance on single-passenger vehicles. The proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. The impact would be less than significant, and no mitigation is required.

Heather Allen  
June 3, 2021  
Page 13

**CONCLUSION**

The Project was analyzed for potential GHG emissions from both the construction and operational phases. GHG emissions would be less than the SCAQMD-recommended threshold of 3,000 MTCO<sub>2</sub>e per year for all (non-industrial) land use projects. The Project would have less than significant impacts regarding generation of GHG emissions that may have a significant impact on the environment. Additionally, the Project would have less than significant impacts regarding conflict with an applicable plan, policy, or regulation adopted from the purpose of reducing the emissions of GHGs. In conclusion, the Project would have less than significant impacts for all Project-related GHG emissions.

Thank you for the opportunity to assist on this Project. If you have any questions or comments, please contact me at 626.351.2000.

Sincerely,

**P S O M A S**



Tin Cheung  
Director of Air Quality, Climate Change,  
and Noise Services



Daria Sarraf  
Project Manager

Attachments: Exhibit 1 – Regional Location and Local Vicinity  
Attachment A – CalEEMod Data

Heather Allen  
 June 3, 2021  
 Page 14

**REFERENCES**

California Department of Finance (DOF). 2021 (May) E-5 Population Estimates for Cities, Counties, and the State, January 2011-2020, with 2010 Benchmark. Sacramento, CA: DOF.  
<http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>

Fullerton, City of. 2012a (February). The Fullerton Plan—Climate Action Plan. Fullerton, CA: City of Fullerton. <https://www.cityoffullerton.com/civicax/filebank/blobdload.aspx?blobid=8991>.

———. 2012b (May). Final Program EIR—The Fullerton Plan. Fullerton, CA: City of Fullerton. CA.

———. 2012c (May). *The Fullerton Plan 2030*. Fullerton, CA: the City.

California Air Resources Board (CARB). 2014 (February). Proposed First Update to the Climate Change Scoping Plan: Building on the Framework. Sacramento, CA: CARB.  
[http://www.arb.ca.gov/cc/scopingplan/2013\\_update/draft\\_proposed\\_first\\_update.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/draft_proposed_first_update.pdf).

———. 2008 (December). Climate Change Scoping Plan—Pursuant to AB 32. Sacramento, CA: CARB.  
[https://ww3.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](https://ww3.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf).

California Energy Commission (CEC). 2020a (June 1, last accessed). Clean Energy and Pollution Reduction Act—SB 350. Sacramento, CA: CEC. <https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350>.

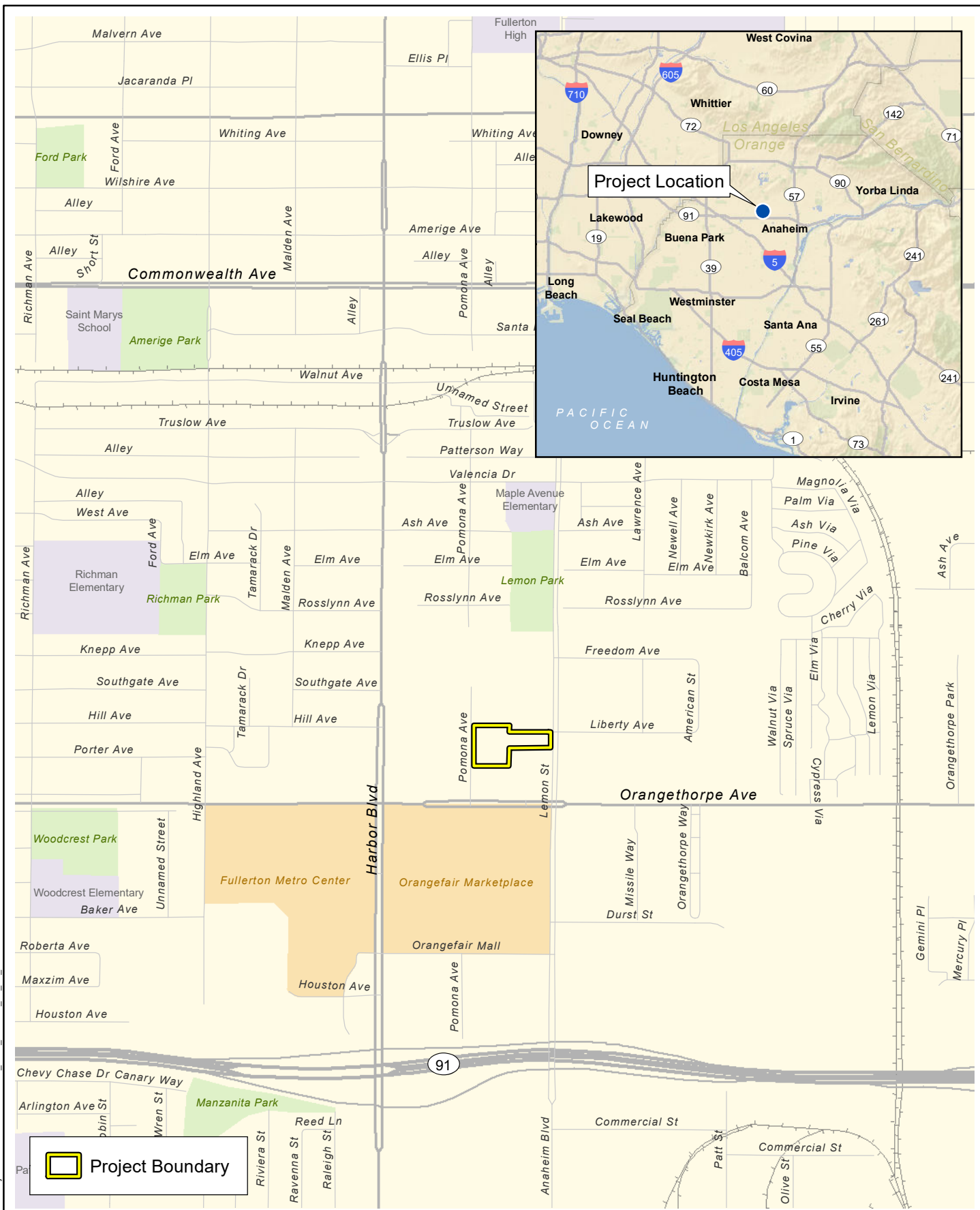
———. 2020b (June 1, last accessed). SB 100 Joint Agency Report. Sacramento, CA: CEC.  
<https://www.energy.ca.gov/sb100>.

NAIOP Research Foundation. 2009 (September). Assessing Changing Employment Trends Driving Commercial Real Estate Development. Greensboro, NC: NAIOP.

South Coast Air Quality Management District (SCAQMD). 2010 (September 28). Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group Meeting #15 (slide presentation). Diamond Bar, CA: SCAQMD. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2).

———. 2008 (December 5). PROPOSAL: Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. Diamond Bar, CA: SCAQMD.  
<http://www.aqmd.gov/hb/2008/December/081231a.htm>.

Southern California Association of Governments (SCAG). 2016 (April). The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and a High Quality of Life. Los Angeles, CA: SCAG.  
<http://scagtrtpscs.net/Pages/FINAL2016RTPSCS.aspx>.



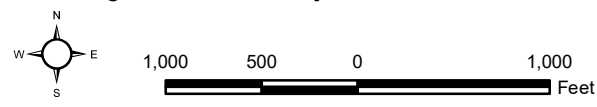
D:\Projects\3FUL02010\1\WXD\AG\_GHG\_Noise\ex\_LV\_RL\_20210520.mxd

 Project Boundary

## Regional Location and Local Vicinity

## Exhibit 1

Street Lights Fullerton Project



**ATTACHMENT A**

**CALEEMOD DATA**

Attached is the output data from the CalEEMod criteria air pollutant emissions model.



Street Lights Fullerton - Orange County, Annual

**Street Lights Fullerton  
Orange County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	187.00	1000sqft	4.29	187,000.00	0
Apartments Mid Rise	329.00	Dwelling Unit	8.66	375,000.00	941
Strip Mall	6.50	1000sqft	0.15	6,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	30
<b>Climate Zone</b>	8			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	399.04	<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**

Project Characteristics - SCE intensity factor: <https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf>

Land Use - .

Construction Phase - .

Off-road Equipment -

Off-road Equipment - .

Off-road Equipment - 2 saws, 2 excavators, 2 generators, 2 backhoes.

Off-road Equipment - 2 excavators, 1 rubber tired dozer, 2 backhoes, 1 plate compactor

Off-road Equipment - .

Trips and VMT - .

Demolition - .

Grading - .

Energy Use -

Construction Off-road Equipment Mitigation - gas powered saws

Woodstoves - 2 natural gas fireplaces outdoors

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstructionPhase	NumDays	20.00	313.00
tblConstructionPhase	NumDays	300.00	469.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	30.00	102.00
tblConstructionPhase	NumDays	20.00	129.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	279.65	2.00
tblFireplaces	NumberWood	16.45	0.00
tblFleetMix	HHD	0.02	0.01
tblFleetMix	LDA	0.56	0.67
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.21	0.17
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.7840e-003	5.9930e-003
tblFleetMix	MCY	4.9410e-003	4.9940e-003

tblFleetMix	MDV	0.11	0.06
tblFleetMix	MH	9.0400e-004	1.0760e-003
tblFleetMix	MHD	0.03	0.01
tblFleetMix	OBUS	1.7750e-003	1.6920e-003
tblFleetMix	SBUS	5.9800e-004	6.0300e-004
tblFleetMix	UBUS	1.5240e-003	1.6880e-003
tblGrading	MaterialExported	0.00	8,000.00
tblLandUse	LandUseSquareFeet	329,000.00	375,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	399.04
tblTripsAndVMT	HaulingTripNumber	494.00	500.00
tblTripsAndVMT	VendorTripNumber	67.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	ST_TR	6.39	5.23
tblVehicleTrips	ST_TR	42.04	35.81
tblVehicleTrips	SU_TR	5.86	4.79
tblVehicleTrips	SU_TR	20.43	17.40

tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0912	0.8267	1.0036	1.8200e-003	0.0580	0.0420	0.1000	0.0102	0.0407	0.0509	0.0000	160.2826	160.2826	0.0240	0.0000	160.8822
2022	0.5335	2.0110	2.8311	7.0100e-003	0.7284	0.0921	0.8205	0.2799	0.0859	0.3657	0.0000	626.6094	626.6094	0.0823	0.0000	628.6658
2023	1.3590	1.6176	2.9255	7.6500e-003	0.5562	0.0746	0.6307	0.1479	0.0700	0.2179	0.0000	680.8720	680.8720	0.0695	0.0000	682.6098
<b>Maximum</b>	<b>1.3590</b>	<b>2.0110</b>	<b>2.9255</b>	<b>7.6500e-003</b>	<b>0.7284</b>	<b>0.0921</b>	<b>0.8205</b>	<b>0.2799</b>	<b>0.0859</b>	<b>0.3657</b>	<b>0.0000</b>	<b>680.8720</b>	<b>680.8720</b>	<b>0.0823</b>	<b>0.0000</b>	<b>682.6098</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0912	0.8267	1.0036	1.8200e-003	0.0302	0.0420	0.0722	6.0000e-003	0.0407	0.0467	0.0000	160.2824	160.2824	0.0240	0.0000	160.8821
2022	0.5335	2.0110	2.8311	7.0100e-003	0.5360	0.0921	0.6280	0.1761	0.0859	0.2620	0.0000	626.6091	626.6091	0.0823	0.0000	628.6655
2023	1.3590	1.6176	2.9255	7.6500e-003	0.5562	0.0746	0.6307	0.1479	0.0700	0.2179	0.0000	680.8717	680.8717	0.0695	0.0000	682.6095

Maximum	1.3590	2.0110	2.9255	7.6500e-003	0.5562	0.0921	0.6307	0.1761	0.0859	0.2620	0.0000	680.8717	680.8717	0.0823	0.0000	682.6095
---------	--------	--------	--------	-------------	--------	--------	--------	--------	--------	--------	--------	----------	----------	--------	--------	----------

	ROG	NOx	CO	SO2	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	16.41	0.00	14.20	24.65	0.00	17.02	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-6-2021	1-5-2022	0.9590	0.9590
2	1-6-2022	4-5-2022	0.7811	0.7811
3	4-6-2022	7-5-2022	0.5824	0.5824
4	7-6-2022	10-5-2022	0.3344	0.3344
5	10-6-2022	1-5-2023	0.8610	0.8610
6	1-6-2023	4-5-2023	1.2000	1.2000
7	4-6-2023	7-5-2023	0.8287	0.8287
8	7-6-2023	9-30-2023	0.6562	0.6562
		Highest	1.2000	1.2000

## 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	1.6161	0.0396	3.3963	1.8000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	6.0273	6.0273	5.3500e-003	1.0000e-005	6.1637
Energy	0.0203	0.1739	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	517.1722	517.1722	0.0268	8.4400e-003	520.3577
Mobile	0.4384	1.3062	6.0265	0.0228	2.4185	0.0174	2.4359	0.6462	0.0161	0.6623	0.0000	2,092.9787	2,092.9787	0.0830	0.0000	2,095.0536
Waste						0.0000	0.0000		0.0000	0.0000	32.1071	0.0000	32.1071	1.8975	0.0000	79.5439
Water						0.0000	0.0000		0.0000	0.0000	6.9533	79.4234	86.3767	0.7199	0.0181	109.7564

<b>Total</b>	<b>2.0749</b>	<b>1.5197</b>	<b>9.4970</b>	<b>0.0241</b>	<b>2.4185</b>	<b>0.0502</b>	<b>2.4688</b>	<b>0.6462</b>	<b>0.0490</b>	<b>0.6952</b>	<b>39.0604</b>	<b>2,695.6017</b>	<b>2,734.6620</b>	<b>2.7326</b>	<b>0.0265</b>	<b>2,810.8753</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	1.6161	0.0396	3.3963	1.8000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	6.0273	6.0273	5.3500e-003	1.0000e-005	6.1637
Energy	0.0203	0.1739	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	517.1722	517.1722	0.0268	8.4400e-003	520.3577
Mobile	0.4384	1.3062	6.0265	0.0228	2.4185	0.0174	2.4359	0.6462	0.0161	0.6623	0.0000	2,092.9787	2,092.9787	0.0830	0.0000	2,095.0536
Waste						0.0000	0.0000		0.0000	0.0000	32.1071	0.0000	32.1071	1.8975	0.0000	79.5439
Water						0.0000	0.0000		0.0000	0.0000	6.9533	79.4234	86.3767	0.7199	0.0181	109.7564
<b>Total</b>	<b>2.0749</b>	<b>1.5197</b>	<b>9.4970</b>	<b>0.0241</b>	<b>2.4185</b>	<b>0.0502</b>	<b>2.4688</b>	<b>0.6462</b>	<b>0.0490</b>	<b>0.6952</b>	<b>39.0604</b>	<b>2,695.6017</b>	<b>2,734.6620</b>	<b>2.7326</b>	<b>0.0265</b>	<b>2,810.8753</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>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### **3.0 Construction Detail**

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/6/2021	1/15/2022	6	88	
2	Grading-Excavation	Grading	1/16/2022	5/15/2022	6	102	
3	Building Construction	Building Construction	5/1/2022	10/30/2023	6	469	
4	Architectural Coating	Architectural Coating	11/1/2022	10/31/2023	6	313	
5	Paving	Paving	12/1/2022	4/30/2023	6	129	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 4.29**

**Residential Indoor: 759,375; Residential Outdoor: 253,125; Non-Residential Indoor: 9,750; Non-Residential Outdoor: 3,250; Striped**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Generator Sets	2	8.00	84	0.74
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading-Excavation	Excavators	2	8.00	158	0.38
Grading-Excavation	Graders	0	8.00	187	0.41
Grading-Excavation	Plate Compactors	1	8.00	8	0.43
Grading-Excavation	Rubber Tired Dozers	1	8.00	247	0.40
Grading-Excavation	Scrapers	0	8.00	367	0.48
Grading-Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Plate Compactors	1	8.00	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Excavators	1	8.00	158	0.38
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38

Paving	Rubber Tired Dozers	1	8.00	247	0.40
--------	---------------------	---	------	-----	------

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	20.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading-Excavation	6	15.00	0.00	1,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	318.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	64.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0456	0.0000	0.0456	6.9000e-003	0.0000	6.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0869	0.7690	0.9668	1.5800e-003		0.0418	0.0418		0.0405	0.0405	0.0000	137.2202	137.2202	0.0221	0.0000	137.7735
<b>Total</b>	<b>0.0869</b>	<b>0.7690</b>	<b>0.9668</b>	<b>1.5800e-003</b>	<b>0.0456</b>	<b>0.0418</b>	<b>0.0874</b>	<b>6.9000e-003</b>	<b>0.0405</b>	<b>0.0474</b>	<b>0.0000</b>	<b>137.2202</b>	<b>137.2202</b>	<b>0.0221</b>	<b>0.0000</b>	<b>137.7735</b>

**Unmitigated Construction Off-Site**



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5500e-003	0.0559	0.0152	1.6000e-004	4.1300e-003	1.7000e-004	4.3000e-003	1.1200e-003	1.6000e-004	1.2800e-003	0.0000	16.1835	16.1835	1.7000e-003	0.0000	16.2261
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	1.8500e-003	0.0216	8.0000e-005	8.2300e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.8789	6.8789	1.5000e-004	0.0000	6.8826
<b>Total</b>	<b>4.3000e-003</b>	<b>0.0577</b>	<b>0.0368</b>	<b>2.4000e-004</b>	<b>0.0124</b>	<b>2.2000e-004</b>	<b>0.0126</b>	<b>3.3100e-003</b>	<b>2.1000e-004</b>	<b>3.5200e-003</b>	<b>0.0000</b>	<b>23.0624</b>	<b>23.0624</b>	<b>1.8500e-003</b>	<b>0.0000</b>	<b>23.1087</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0178	0.0000	0.0178	2.6900e-003	0.0000	2.6900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0869	0.7690	0.9668	1.5800e-003		0.0418	0.0418		0.0405	0.0405	0.0000	137.2200	137.2200	0.0221	0.0000	137.7733
<b>Total</b>	<b>0.0869</b>	<b>0.7690</b>	<b>0.9668</b>	<b>1.5800e-003</b>	<b>0.0178</b>	<b>0.0418</b>	<b>0.0596</b>	<b>2.6900e-003</b>	<b>0.0405</b>	<b>0.0432</b>	<b>0.0000</b>	<b>137.2200</b>	<b>137.2200</b>	<b>0.0221</b>	<b>0.0000</b>	<b>137.7733</b>

**Mitigated Construction Off-Site**

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

Hauling	1.5500e-003	0.0559	0.0152	1.6000e-004	4.1300e-003	1.7000e-004	4.3000e-003	1.1200e-003	1.6000e-004	1.2800e-003	0.0000	16.1835	16.1835	1.7000e-003	0.0000	16.2261
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	1.8500e-003	0.0216	8.0000e-005	8.2300e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.8789	6.8789	1.5000e-004	0.0000	6.8826
<b>Total</b>	<b>4.3000e-003</b>	<b>0.0577</b>	<b>0.0368</b>	<b>2.4000e-004</b>	<b>0.0124</b>	<b>2.2000e-004</b>	<b>0.0126</b>	<b>3.3100e-003</b>	<b>2.1000e-004</b>	<b>3.5200e-003</b>	<b>0.0000</b>	<b>23.0624</b>	<b>23.0624</b>	<b>1.8500e-003</b>	<b>0.0000</b>	<b>23.1087</b>

### 3.2 Demolition - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.9000e-003	0.0000	7.9000e-003	1.2000e-003	0.0000	1.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0137	0.1194	0.1668	2.7000e-004		6.1500e-003	6.1500e-003		5.9700e-003	5.9700e-003	0.0000	23.7867	23.7867	3.7900e-003	0.0000	23.8814
<b>Total</b>	<b>0.0137</b>	<b>0.1194</b>	<b>0.1668</b>	<b>2.7000e-004</b>	<b>7.9000e-003</b>	<b>6.1500e-003</b>	<b>0.0141</b>	<b>1.2000e-003</b>	<b>5.9700e-003</b>	<b>7.1700e-003</b>	<b>0.0000</b>	<b>23.7867</b>	<b>23.7867</b>	<b>3.7900e-003</b>	<b>0.0000</b>	<b>23.8814</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	8.8900e-003	2.6500e-003	3.0000e-005	3.3900e-003	3.0000e-005	3.4200e-003	8.5000e-004	2.0000e-005	8.8000e-004	0.0000	2.7681	2.7681	2.9000e-004	0.0000	2.7754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	2.9000e-004	3.4800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1482	1.1482	2.0000e-005	0.0000	1.1488
<b>Total</b>	<b>7.1000e-004</b>	<b>9.1800e-003</b>	<b>6.1300e-003</b>	<b>4.0000e-005</b>	<b>4.8200e-003</b>	<b>4.0000e-005</b>	<b>4.8600e-003</b>	<b>1.2300e-003</b>	<b>3.0000e-005</b>	<b>1.2700e-003</b>	<b>0.0000</b>	<b>3.9163</b>	<b>3.9163</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>3.9242</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0800e-003	0.0000	3.0800e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0137	0.1194	0.1668	2.7000e-004		6.1500e-003	6.1500e-003		5.9700e-003	5.9700e-003	0.0000	23.7867	23.7867	3.7900e-003	0.0000	23.8814
<b>Total</b>	<b>0.0137</b>	<b>0.1194</b>	<b>0.1668</b>	<b>2.7000e-004</b>	<b>3.0800e-003</b>	<b>6.1500e-003</b>	<b>9.2300e-003</b>	<b>4.7000e-004</b>	<b>5.9700e-003</b>	<b>6.4400e-003</b>	<b>0.0000</b>	<b>23.7867</b>	<b>23.7867</b>	<b>3.7900e-003</b>	<b>0.0000</b>	<b>23.8814</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	8.8900e-003	2.6500e-003	3.0000e-005	3.3900e-003	3.0000e-005	3.4200e-003	8.5000e-004	2.0000e-005	8.8000e-004	0.0000	2.7681	2.7681	2.9000e-004	0.0000	2.7754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	2.9000e-004	3.4800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1482	1.1482	2.0000e-005	0.0000	1.1488
<b>Total</b>	<b>7.1000e-004</b>	<b>9.1800e-003</b>	<b>6.1300e-003</b>	<b>4.0000e-005</b>	<b>4.8200e-003</b>	<b>4.0000e-005</b>	<b>4.8600e-003</b>	<b>1.2300e-003</b>	<b>3.0000e-005</b>	<b>1.2700e-003</b>	<b>0.0000</b>	<b>3.9163</b>	<b>3.9163</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>3.9242</b>

### **3.3 Grading-Excavation - 2022**

#### Unmitigated Construction On-Site



Off-Road	0.0822	0.8135	0.7537	1.3000e-003		0.0397	0.0397		0.0366	0.0366	0.0000	114.0014	114.0014	0.0365	0.0000	114.9144
<b>Total</b>	<b>0.0822</b>	<b>0.8135</b>	<b>0.7537</b>	<b>1.3000e-003</b>	<b>0.1200</b>	<b>0.0397</b>	<b>0.1597</b>	<b>0.0659</b>	<b>0.0366</b>	<b>0.1025</b>	<b>0.0000</b>	<b>114.0014</b>	<b>114.0014</b>	<b>0.0365</b>	<b>0.0000</b>	<b>114.9144</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4500e-003	0.1203	0.0358	3.7000e-004	8.5700e-003	3.5000e-004	8.9200e-003	2.3500e-003	3.3000e-004	2.6800e-003	0.0000	37.4755	37.4755	3.9500e-003	0.0000	37.5743
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	1.7100e-003	0.0205	7.0000e-005	8.4000e-003	5.0000e-005	8.4500e-003	2.2300e-003	5.0000e-005	2.2800e-003	0.0000	6.7567	6.7567	1.4000e-004	0.0000	6.7601
<b>Total</b>	<b>6.1000e-003</b>	<b>0.1220</b>	<b>0.0563</b>	<b>4.4000e-004</b>	<b>0.0170</b>	<b>4.0000e-004</b>	<b>0.0174</b>	<b>4.5800e-003</b>	<b>3.8000e-004</b>	<b>4.9600e-003</b>	<b>0.0000</b>	<b>44.2323</b>	<b>44.2323</b>	<b>4.0900e-003</b>	<b>0.0000</b>	<b>44.3344</b>

### 3.4 Building Construction - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0744	0.5775	0.6774	9.7000e-004		0.0319	0.0319		0.0299	0.0299	0.0000	79.9430	79.9430	0.0211	0.0000	80.4707
<b>Total</b>	<b>0.0744</b>	<b>0.5775</b>	<b>0.6774</b>	<b>9.7000e-004</b>		<b>0.0319</b>	<b>0.0319</b>		<b>0.0299</b>	<b>0.0299</b>	<b>0.0000</b>	<b>79.9430</b>	<b>79.9430</b>	<b>0.0211</b>	<b>0.0000</b>	<b>80.4707</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6200e-003	0.0567	0.0162	1.5000e-004	3.9700e-003	1.1000e-004	4.0700e-003	1.1400e-003	1.0000e-004	1.2500e-003	0.0000	15.0538	15.0538	1.1900e-003	0.0000	15.0836
Worker	0.1158	0.0745	0.8942	3.2600e-003	0.3666	2.3700e-003	0.3689	0.0973	2.1800e-003	0.0995	0.0000	294.9116	294.9116	5.9500e-003	0.0000	295.0604
<b>Total</b>	<b>0.1174</b>	<b>0.1312</b>	<b>0.9104</b>	<b>3.4100e-003</b>	<b>0.3705</b>	<b>2.4800e-003</b>	<b>0.3730</b>	<b>0.0985</b>	<b>2.2800e-003</b>	<b>0.1008</b>	<b>0.0000</b>	<b>309.9654</b>	<b>309.9654</b>	<b>7.1400e-003</b>	<b>0.0000</b>	<b>310.1440</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0744	0.5775	0.6774	9.7000e-004		0.0319	0.0319		0.0299	0.0299	0.0000	79.9429	79.9429	0.0211	0.0000	80.4706
<b>Total</b>	<b>0.0744</b>	<b>0.5775</b>	<b>0.6774</b>	<b>9.7000e-004</b>		<b>0.0319</b>	<b>0.0319</b>		<b>0.0299</b>	<b>0.0299</b>	<b>0.0000</b>	<b>79.9429</b>	<b>79.9429</b>	<b>0.0211</b>	<b>0.0000</b>	<b>80.4706</b>

**Mitigated Construction Off-Site**

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6200e-003	0.0567	0.0162	1.5000e-004	3.9700e-003	1.1000e-004	4.0700e-003	1.1400e-003	1.0000e-004	1.2500e-003	0.0000	15.0538	15.0538	1.1900e-003	0.0000	15.0836
Worker	0.1158	0.0745	0.8942	3.2600e-003	0.3666	2.3700e-003	0.3689	0.0973	2.1800e-003	0.0995	0.0000	294.9116	294.9116	5.9500e-003	0.0000	295.0604
<b>Total</b>	<b>0.1174</b>	<b>0.1312</b>	<b>0.9104</b>	<b>3.4100e-003</b>	<b>0.3705</b>	<b>2.4800e-003</b>	<b>0.3730</b>	<b>0.0985</b>	<b>2.2800e-003</b>	<b>0.1008</b>	<b>0.0000</b>	<b>309.9654</b>	<b>309.9654</b>	<b>7.1400e-003</b>	<b>0.0000</b>	<b>310.1440</b>

### 3.4 Building Construction - 2023

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0843	0.6639	0.8300	1.1900e-003		0.0336	0.0336		0.0316	0.0316	0.0000	98.6360	98.6360	0.0258	0.0000	99.2807
<b>Total</b>	<b>0.0843</b>	<b>0.6639</b>	<b>0.8300</b>	<b>1.1900e-003</b>		<b>0.0336</b>	<b>0.0336</b>		<b>0.0316</b>	<b>0.0316</b>	<b>0.0000</b>	<b>98.6360</b>	<b>98.6360</b>	<b>0.0258</b>	<b>0.0000</b>	<b>99.2807</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0525	0.0186	1.8000e-004	4.8900e-003	6.0000e-005	4.9600e-003	1.4100e-003	6.0000e-005	1.4700e-003	0.0000	18.0054	18.0054	1.3600e-003	0.0000	18.0395
Worker	0.1354	0.0834	1.0273	3.8600e-003	0.4521	2.8700e-003	0.4550	0.1201	2.6400e-003	0.1227	0.0000	349.7540	349.7540	6.6500e-003	0.0000	349.9203
<b>Total</b>	<b>0.1369</b>	<b>0.1360</b>	<b>1.0458</b>	<b>4.0400e-003</b>	<b>0.4570</b>	<b>2.9300e-003</b>	<b>0.4599</b>	<b>0.1215</b>	<b>2.7000e-003</b>	<b>0.1242</b>	<b>0.0000</b>	<b>367.7594</b>	<b>367.7594</b>	<b>8.0100e-003</b>	<b>0.0000</b>	<b>367.9598</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0843	0.6639	0.8300	1.1900e-003		0.0336	0.0336		0.0316	0.0316	0.0000	98.6359	98.6359	0.0258	0.0000	99.2806
<b>Total</b>	<b>0.0843</b>	<b>0.6639</b>	<b>0.8300</b>	<b>1.1900e-003</b>		<b>0.0336</b>	<b>0.0336</b>		<b>0.0316</b>	<b>0.0316</b>	<b>0.0000</b>	<b>98.6359</b>	<b>98.6359</b>	<b>0.0258</b>	<b>0.0000</b>	<b>99.2806</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0525	0.0186	1.8000e-004	4.8900e-003	6.0000e-005	4.9600e-003	1.4100e-003	6.0000e-005	1.4700e-003	0.0000	18.0054	18.0054	1.3600e-003	0.0000	18.0395
Worker	0.1354	0.0834	1.0273	3.8600e-003	0.4521	2.8700e-003	0.4550	0.1201	2.6400e-003	0.1227	0.0000	349.7540	349.7540	6.6500e-003	0.0000	349.9203
<b>Total</b>	<b>0.1369</b>	<b>0.1360</b>	<b>1.0458</b>	<b>4.0400e-003</b>	<b>0.4570</b>	<b>2.9300e-003</b>	<b>0.4599</b>	<b>0.1215</b>	<b>2.7000e-003</b>	<b>0.1242</b>	<b>0.0000</b>	<b>367.7594</b>	<b>367.7594</b>	<b>8.0100e-003</b>	<b>0.0000</b>	<b>367.9598</b>

**3.5 Architectural Coating - 2022**

**Unmitigated Construction On-Site**





Off-Road	5.4200e-003	0.0373	0.0481	8.0000e-005		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	6.7661	6.7661	4.4000e-004	0.0000	6.7771
<b>Total</b>	<b>0.2136</b>	<b>0.0373</b>	<b>0.0481</b>	<b>8.0000e-005</b>		<b>2.1700e-003</b>	<b>2.1700e-003</b>		<b>2.1700e-003</b>	<b>2.1700e-003</b>	<b>0.0000</b>	<b>6.7661</b>	<b>6.7661</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.7771</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.7700e-003	1.3700e-003	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	1.0000e-004	1.0000e-005	1.0000e-004	0.0000	1.2664	1.2664	1.0000e-004	0.0000	1.2689
Worker	5.8800e-003	3.7800e-003	0.0454	1.7000e-004	0.0186	1.2000e-004	0.0187	4.9400e-003	1.1000e-004	5.0600e-003	0.0000	14.9796	14.9796	3.0000e-004	0.0000	14.9872
<b>Total</b>	<b>6.0200e-003</b>	<b>8.5500e-003</b>	<b>0.0468</b>	<b>1.8000e-004</b>	<b>0.0190</b>	<b>1.3000e-004</b>	<b>0.0191</b>	<b>5.0400e-003</b>	<b>1.2000e-004</b>	<b>5.1600e-003</b>	<b>0.0000</b>	<b>16.2461</b>	<b>16.2461</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>16.2561</b>

**3.5 Architectural Coating - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2355	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
<b>Total</b>	<b>1.0461</b>	<b>0.1694</b>	<b>0.2355</b>	<b>3.9000e-004</b>		<b>9.2100e-003</b>	<b>9.2100e-003</b>		<b>9.2100e-003</b>	<b>9.2100e-003</b>	<b>0.0000</b>	<b>33.1923</b>	<b>33.1923</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>33.2419</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0176	6.2100e-003	6.0000e-005	1.6400e-003	2.0000e-005	1.6600e-003	4.7000e-004	2.0000e-005	4.9000e-004	0.0000	6.0250	6.0250	4.6000e-004	0.0000	6.0364
Worker	0.0274	0.0169	0.2075	7.8000e-004	0.0913	5.8000e-004	0.0919	0.0243	5.3000e-004	0.0248	0.0000	70.6625	70.6625	1.3400e-003	0.0000	70.6961
<b>Total</b>	<b>0.0279</b>	<b>0.0344</b>	<b>0.2138</b>	<b>8.4000e-004</b>	<b>0.0930</b>	<b>6.0000e-004</b>	<b>0.0936</b>	<b>0.0247</b>	<b>5.5000e-004</b>	<b>0.0253</b>	<b>0.0000</b>	<b>76.6875</b>	<b>76.6875</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>76.7325</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2354	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
<b>Total</b>	<b>1.0461</b>	<b>0.1694</b>	<b>0.2354</b>	<b>3.9000e-004</b>		<b>9.2100e-003</b>	<b>9.2100e-003</b>		<b>9.2100e-003</b>	<b>9.2100e-003</b>	<b>0.0000</b>	<b>33.1923</b>	<b>33.1923</b>	<b>1.9900e-003</b>	<b>0.0000</b>	<b>33.2419</b>

**Mitigated Construction Off-Site**

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0176	6.2100e-003	6.0000e-005	1.6400e-003	2.0000e-005	1.6600e-003	4.7000e-004	2.0000e-005	4.9000e-004	0.0000	6.0250	6.0250	4.6000e-004	0.0000	6.0364
Worker	0.0274	0.0169	0.2075	7.8000e-004	0.0913	5.8000e-004	0.0919	0.0243	5.3000e-004	0.0248	0.0000	70.6625	70.6625	1.3400e-003	0.0000	70.6961
<b>Total</b>	<b>0.0279</b>	<b>0.0344</b>	<b>0.2138</b>	<b>8.4000e-004</b>	<b>0.0930</b>	<b>6.0000e-004</b>	<b>0.0936</b>	<b>0.0247</b>	<b>5.5000e-004</b>	<b>0.0253</b>	<b>0.0000</b>	<b>76.6875</b>	<b>76.6875</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>76.7325</b>

### 3.6 Paving - 2022

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1896	0.1610	2.9000e-004		9.0800e-003	9.0800e-003		8.3600e-003	8.3600e-003	0.0000	25.9145	25.9145	8.3800e-003	0.0000	26.1240
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0189</b>	<b>0.1896</b>	<b>0.1610</b>	<b>2.9000e-004</b>		<b>9.0800e-003</b>	<b>9.0800e-003</b>		<b>8.3600e-003</b>	<b>8.3600e-003</b>	<b>0.0000</b>	<b>25.9145</b>	<b>25.9145</b>	<b>8.3800e-003</b>	<b>0.0000</b>	<b>26.1240</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.4300e-003	7.0000e-004	1.0000e-005	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.6452	0.6452	5.0000e-005	0.0000	0.6464
Worker	4.7000e-004	3.0000e-004	3.6200e-003	1.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.1924	1.1924	2.0000e-005	0.0000	1.1930
<b>Total</b>	<b>5.4000e-004</b>	<b>2.7300e-003</b>	<b>4.3200e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.8375</b>	<b>1.8375</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.8394</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1896	0.1610	2.9000e-004		9.0800e-003	9.0800e-003		8.3600e-003	8.3600e-003	0.0000	25.9145	25.9145	8.3800e-003	0.0000	26.1240
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0189</b>	<b>0.1896</b>	<b>0.1610</b>	<b>2.9000e-004</b>		<b>9.0800e-003</b>	<b>9.0800e-003</b>		<b>8.3600e-003</b>	<b>8.3600e-003</b>	<b>0.0000</b>	<b>25.9145</b>	<b>25.9145</b>	<b>8.3800e-003</b>	<b>0.0000</b>	<b>26.1240</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.4300e-003	7.0000e-004	1.0000e-005	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.6452	0.6452	5.0000e-005	0.0000	0.6464
Worker	4.7000e-004	3.0000e-004	3.6200e-003	1.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.1924	1.1924	2.0000e-005	0.0000	1.1930
<b>Total</b>	<b>5.4000e-004</b>	<b>2.7300e-003</b>	<b>4.3200e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.8375</b>	<b>1.8375</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.8394</b>

### **3.6 Paving - 2023**

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0620	0.6060	0.5854	1.1100e-003		0.0282	0.0282		0.0259	0.0259	0.0000	97.9016	97.9016	0.0317	0.0000	98.6932
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0620</b>	<b>0.6060</b>	<b>0.5854</b>	<b>1.1100e-003</b>		<b>0.0282</b>	<b>0.0282</b>		<b>0.0259</b>	<b>0.0259</b>	<b>0.0000</b>	<b>97.9016</b>	<b>97.9016</b>	<b>0.0317</b>	<b>0.0000</b>	<b>98.6932</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	6.9000e-003	2.4400e-003	2.0000e-005	6.4000e-004	1.0000e-005	6.5000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	2.3637	2.3637	1.8000e-004	0.0000	2.3681
Worker	1.6800e-003	1.0300e-003	0.0127	5.0000e-005	5.6000e-003	4.0000e-005	5.6300e-003	1.4900e-003	3.0000e-005	1.5200e-003	0.0000	4.3315	4.3315	8.0000e-005	0.0000	4.3335
<b>Total</b>	<b>1.8800e-003</b>	<b>7.9300e-003</b>	<b>0.0152</b>	<b>7.0000e-005</b>	<b>6.2400e-003</b>	<b>5.0000e-005</b>	<b>6.2800e-003</b>	<b>1.6800e-003</b>	<b>4.0000e-005</b>	<b>1.7100e-003</b>	<b>0.0000</b>	<b>6.6951</b>	<b>6.6951</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>6.7017</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0620	0.6060	0.5854	1.1100e-003		0.0282	0.0282		0.0259	0.0259	0.0000	97.9015	97.9015	0.0317	0.0000	98.6931

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0620</b>	<b>0.6060</b>	<b>0.5854</b>	<b>1.1100e-003</b>		<b>0.0282</b>	<b>0.0282</b>		<b>0.0259</b>	<b>0.0259</b>	<b>0.0000</b>	<b>97.9015</b>	<b>97.9015</b>	<b>0.0317</b>	<b>0.0000</b>	<b>98.6931</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	6.9000e-003	2.4400e-003	2.0000e-005	6.4000e-004	1.0000e-005	6.5000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	2.3637	2.3637	1.8000e-004	0.0000	2.3681
Worker	1.6800e-003	1.0300e-003	0.0127	5.0000e-005	5.6000e-003	4.0000e-005	5.6300e-003	1.4900e-003	3.0000e-005	1.5200e-003	0.0000	4.3315	4.3315	8.0000e-005	0.0000	4.3335
<b>Total</b>	<b>1.8800e-003</b>	<b>7.9300e-003</b>	<b>0.0152</b>	<b>7.0000e-005</b>	<b>6.2400e-003</b>	<b>5.0000e-005</b>	<b>6.2800e-003</b>	<b>1.6800e-003</b>	<b>4.0000e-005</b>	<b>1.7100e-003</b>	<b>0.0000</b>	<b>6.6951</b>	<b>6.6951</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>6.7017</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4384	1.3062	6.0265	0.0228	2.4185	0.0174	2.4359	0.6462	0.0161	0.6623	0.0000	2,092.9787	2,092.9787	0.0830	0.0000	2,095.0536
Unmitigated	0.4384	1.3062	6.0265	0.0228	2.4185	0.0174	2.4359	0.6462	0.0161	0.6623	0.0000	2,092.9787	2,092.9787	0.0830	0.0000	2,095.0536

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,789.76	1,720.67	1575.91	5,977,761	5,977,761
Strip Mall	245.38	232.77	113.10	427,470	427,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
<b>Total</b>	<b>2,035.14</b>	<b>1,953.44</b>	<b>1,689.01</b>	<b>6,405,230</b>	<b>6,405,230</b>

## 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.672006	0.045726	0.165417	0.062031	0.018096	0.005993	0.010339	0.010339	0.001692	0.001688	0.004994	0.000603	0.001076
Strip Mall	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Unenclosed Parking with Elevator	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	315.8501	315.8501	0.0230	4.7500e-003	317.8392
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	315.8501	315.8501	0.0230	4.7500e-003	317.8392
NaturalGas Mitigated	0.0203	0.1739	0.0743	1.1100e-003			0.0141	0.0141		0.0141	0.0141	201.3221	201.3221	3.8600e-003	3.6900e-003	202.5185
NaturalGas Unmitigated	0.0203	0.1739	0.0743	1.1100e-003			0.0141	0.0141		0.0141	0.0141	201.3221	201.3221	3.8600e-003	3.6900e-003	202.5185

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.75963e+006	0.0203	0.1732	0.0737	1.1100e-003		0.0140	0.0140		0.0140	0.0140	0.0000	200.6284	200.6284	3.8500e-003	3.6800e-003	201.8206
Strip Mall	13000	7.0000e-005	6.4000e-004	5.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6937	0.6937	1.0000e-005	1.0000e-005	0.6979
Unenclosed Parking with Electric	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0203</b>	<b>0.1739</b>	<b>0.0743</b>	<b>1.1100e-003</b>		<b>0.0141</b>	<b>0.0141</b>		<b>0.0141</b>	<b>0.0141</b>	<b>0.0000</b>	<b>201.3221</b>	<b>201.3221</b>	<b>3.8600e-003</b>	<b>3.6900e-003</b>	<b>202.5185</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					
Apartments Mid Rise	3.75963e+006	0.0203	0.1732	0.0737	1.1100e-003		0.0140	0.0140		0.0140	0.0140	0.0000	200.6284	200.6284	3.8500e-003	3.6800e-003	201.8206

Strip Mall	13000	7.0000e-005	6.4000e-004	5.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6937	0.6937	1.0000e-005	1.0000e-005	0.6979
Unenclosed Parking with Elevators	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0203</b>	<b>0.1739</b>	<b>0.0743</b>	<b>1.1100e-003</b>		<b>0.0141</b>	<b>0.0141</b>		<b>0.0141</b>	<b>0.0141</b>	<b>0.0000</b>	<b>201.3221</b>	<b>201.3221</b>	<b>3.8600e-003</b>	<b>3.6900e-003</b>	<b>202.5185</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.30787e+006	236.7271	0.0172	3.5600e-003	238.2179
Strip Mall	74360	13.4593	9.8000e-004	2.0000e-004	13.5440
Unenclosed Parking with Elevators	362780	65.6637	4.7700e-003	9.9000e-004	66.0773
<b>Total</b>		<b>315.8501</b>	<b>0.0230</b>	<b>4.7500e-003</b>	<b>317.8392</b>

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.30787e+006	236.7271	0.0172	3.5600e-003	238.2179
Strip Mall	74360	13.4593	9.8000e-004	2.0000e-004	13.5440
Unenclosed Parking with Elevators	362780	65.6637	4.7700e-003	9.9000e-004	66.0773
<b>Total</b>		<b>315.8501</b>	<b>0.0230</b>	<b>4.7500e-003</b>	<b>317.8392</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6161	0.0396	3.3963	1.8000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	6.0273	6.0273	5.3500e-003	1.0000e-005	6.1637
Unmitigated	1.6161	0.0396	3.3963	1.8000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	6.0273	6.0273	5.3500e-003	1.0000e-005	6.1637

### 6.2 Area by SubCategory

#### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3906					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.0000e-005	4.1000e-004	1.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4803	0.4803	1.0000e-005	1.0000e-005	0.4831
Landscaping	0.1025	0.0391	3.3961	1.8000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	5.5470	5.5470	5.3400e-003	0.0000	5.6805
<b>Total</b>	<b>1.6161</b>	<b>0.0396</b>	<b>3.3963</b>	<b>1.8000e-004</b>		<b>0.0188</b>	<b>0.0188</b>		<b>0.0188</b>	<b>0.0188</b>	<b>0.0000</b>	<b>6.0273</b>	<b>6.0273</b>	<b>5.3500e-003</b>	<b>1.0000e-005</b>	<b>6.1637</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3906					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.0000e-005	4.1000e-004	1.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4803	0.4803	1.0000e-005	1.0000e-005	0.4831
Landscaping	0.1025	0.0391	3.3961	1.8000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	5.5470	5.5470	5.3400e-003	0.0000	5.6805
<b>Total</b>	<b>1.6161</b>	<b>0.0396</b>	<b>3.3963</b>	<b>1.8000e-004</b>		<b>0.0188</b>	<b>0.0188</b>		<b>0.0188</b>	<b>0.0188</b>	<b>0.0000</b>	<b>6.0273</b>	<b>6.0273</b>	<b>5.3500e-003</b>	<b>1.0000e-005</b>	<b>6.1637</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	86.3767	0.7199	0.0181	109.7564
Unmitigated	86.3767	0.7199	0.0181	109.7564

**7.2 Water by Land Use**

## Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.4357 / 13.5138	84.4958	0.7041	0.0177	107.3620
Strip Mall	0.481471 / 0.295095	1.8809	0.0158	4.0000e-004	2.3944
Unenclosed Parking with Flare	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>86.3768</b>	<b>0.7199</b>	<b>0.0181</b>	<b>109.7564</b>

## Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.4357 / 13.5138	84.4958	0.7041	0.0177	107.3620
Strip Mall	0.481471 / 0.295095	1.8809	0.0158	4.0000e-004	2.3944
Unenclosed Parking with Flare	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>86.3768</b>	<b>0.7199</b>	<b>0.0181</b>	<b>109.7564</b>

## 8.0 Waste Detail

---

### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32.1071	1.8975	0.0000	79.5439
Unmitigated	32.1071	1.8975	0.0000	79.5439

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	151.34	30.7207	1.8155	0.0000	76.1091
Strip Mall	6.83	1.3864	0.0819	0.0000	3.4348
Unenclosed Parking with	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>32.1071</b>	<b>1.8975</b>	<b>0.0000</b>	<b>79.5439</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Mid Rise	151.34	30.7207	1.8155	0.0000	76.1091
Strip Mall	6.83	1.3864	0.0819	0.0000	3.4348
Unenclosed Parking with	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>32.1071</b>	<b>1.8975</b>	<b>0.0000</b>	<b>79.5439</b>

## 9.0 Operational Offroad

---

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

## 10.0 Stationary Equipment

---

### Fire Pumps and Emergency Generators

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

### Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

### User Defined Equipment

Equipment Type	Number
----------------	--------

## 11.0 Vegetation

---