

# **Fontana Sierra Business Center Project**

## **Final Environmental Impact Report**

SCH No. 2020100256

**Prepared for:**

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## Section 1.0 Introduction

### 1.1 INTRODUCTION

The Final Environmental Impact Report (Final EIR) for the Fontana Sierra Business Center Project has been prepared in accordance with the California Environmental Quality Act (CEQA), and CEQA Guidelines. CEQA Guidelines Section 15132 indicates that the contents of a Final EIR shall consist of:

- (a) Environmental Impact Reports shall contain the information outlined in this article, but the format of the document may be varied. Each element must be covered, and when these elements are not separated into distinct sections, the document shall state where in the document each element is discussed.
- (b) The EIR may be prepared as a separate document, as part of a general plan, or as part of a project report. If prepared as a part of the project report, it must still contain one separate and distinguishable section providing either analysis of all the subjects required in an EIR or, as a minimum, a table showing where each of the subjects is discussed. When the Lead Agency is a state agency, the EIR shall be included as part of the regular project report if such a report is used in the agency's existing review and budgetary process.
- (c) Draft EIRs shall contain the information required by Sections 15122 through 15131. Final EIRs shall contain the same information and the subjects described in Section 15132.
- (d) No document prepared pursuant to this article that is available for public examination shall include a "trade secret" as defined in Section 6254.7 of the Government Code, information about the location of archaeological sites and sacred lands, or any other information that is subject to the disclosure restrictions of Section 6254 of the Government Code.

The Final EIR includes all of these required components.

In accordance with § 15088 of the State CEQA Guidelines, the City of Fontana, as the lead agency for the proposed Project, evaluated comments received on the Draft EIR (State Clearinghouse No. 2020100256) and has prepared responses to the comments received. The preceding Table of Contents provides a list of all persons, organizations, and public agencies commenting on the Draft EIR. Section 2.0 includes the Responses to Comments received by the City of Fontana on the Draft EIR. It should be noted that responses to comments also resulted in various editorial clarifications and corrections to the original Draft EIR text. Added or modified text is shown in Section 3.0, Errata, by underlining (example) while deleted text is shown by striking (~~example~~). The additional information, corrections, and clarifications are not considered to substantively affect the conclusions within the EIR. This Response to Comments document is part of the Final EIR, which includes the EIR pursuant to § 15132 of the State CEQA Guidelines.

Responses to comments will be sent to all commenting agencies and individuals. This satisfies the requirement of Section 21092.5 of CEQA to send responses to the public agency comments received on

the Draft EIR at least 10 days prior to Project approval. This document includes responses to all written comments received on the Draft EIR.

## 1.2 ORGANIZATION OF EIR

This Final EIR provides the requisite information required under CEQA and is organized as follows:

- **Section 1.0 Introduction.** This section provides an introduction to the Final EIR, including the requirements under CEQA, the organization of the document, as well as brief summary of the CEQA process activities to date.
- **Section 2.0 Comments and Responses to Draft EIR.** This section provides a list of public agencies, organizations, and individuals commenting on the Draft EIR, provides a copy of each written comment received, and any response required under CEQA.
- **Section 3.0 Errata to the Draft EIR.** This section details changes to the Draft EIR.

## 1.3 CEQA PROCESS SUMMARY

The Draft Environmental Impact Report (Draft EIR) is an informational document intended to inform the public and decision-makers about the environmental consequences of the proposed Fontana Sierra Business Center Project (proposed Project). The Project involves the development of an approximately 705,735-square foot warehouse building within an approximately 32-net acre site, with associated facilities and improvements including approximately 4,500 square feet of 1<sup>st</sup> floor office space, vehicle parking, loading dock doors, trailer parking, on-site landscaping, and related on-site and off-site improvements. The expected building height is approximately 49' 6" and the Project's proposed building will have a maximum Floor Area Ratio (FAR) of approximately .50.

The Project site will provide landscaping on approximately 19.0 percent (133,069-square-feet) of Project site. Project construction is anticipated to take occur in one phase, starting the second half of 2021 and culminating the second half of 2022.

Pursuant to CEQA Guidelines § 15082, the City circulated a Notice of Preparation (NOP) advising public agencies, special districts, and members of the public who had requested such notice that an EIR for the proposed Project was being prepared. The NOP was distributed on October 8, 2020 and October 9, 2020 with a 30-day public review period ending on November 9, 2020. The NOP and comment letters received are provided in Appendix A, Notice of Preparation and Scoping Meeting Notice of the Draft EIR.

After receiving public comments on the NOP, the proposed Project was analyzed for its potential to result in environmental impacts. Impacts were evaluated in accordance with the significance criteria developed by the City that are based on criteria presented in Appendix G, "Environmental Checklist Form," of the CEQA Guidelines. The criteria in the Environmental Checklist (checklist), was used to determine if the proposed Project would result in, "no impact," "less than significant impact," "less than significant impact with mitigation measures," or potentially significant impact" to a particular environmental resource.

The Draft EIR describes the existing environmental resources on the Project site and in the vicinity of the Project site, analyzes potential impacts on those resources that would or could occur upon initiation of the proposed Project, and identifies mitigation measures that could avoid or reduce the magnitude of those impacts determined to be significant. The environmental impacts evaluated in the Draft EIR concern several subject areas, including aesthetics, air quality, biological resources, cultural resources, energy/energy conservation, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation, tribal cultural resources, utilities and service systems, and wildfire. As noted in the preceding paragraph, public comments were received during the NOP process and included written letters provided to the City during public meetings. A copy of the letters with the NOP is provided in Appendix A to the Draft EIR. The comments were used, as intended, to help inform the discussion of the Draft EIR and help determine the scope and framework of certain topical discussions.

When the Draft EIR was completed, it was circulated for public review pursuant to CEQA Guidelines § 15087. The 45-day public review for the Draft Environmental Impact Report began on May 7, 2021 and ended on June 21, 2021. All comment letters received during the 45-day public review period previously mentioned are included in this Final EIR. Additionally, a public meeting with the Fontana Planning Commission was held for the proposed Project on May 18, 2021 at 6:00 p.m. A total of 40 speakers commented on the Project at the Planning Commission hearing.

As set forth in more detail in the Responses to Comments and Errata, none of the clarifications or amplifications set forth herein change the significance conclusions presented in the Draft EIR or substantially alters the analysis presented for public review. Furthermore, the Draft EIR circulated for public review was fully adequate under CEQA such that meaningful public review was not precluded. Thus, the clarifications provided in the Responses to Comments and Errata do not constitute significant new information that might trigger recirculation.

## **1.4 CHANGES TO THE DRAFT EIR**

Section 3.0, Errata to the Draft EIR details the changes to the Draft EIR. Most of the changes to the Draft EIR represent clarifications to the existing content. Added or modified text is shown in Section 3.0, Errata, by underlining (example) while deleted text is shown by striking (~~example~~).

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## Section 2.0 Comments and Responses to Draft EIR

### 2.1 INTRODUCTION TO COMMENTS AND RESPONSES

Table 2.0-1 below provides a list of those parties that provided written comments on the Draft EIR during the public review period. In addition, one comment letter was received after the close of the public review period. Each comment document has been assigned a letter as indicated in the table.

A copy of the written comments are provided in this section, and have been annotated with the assigned letter along with a number for each comment. Each comment document is followed by a written response which corresponds to the comments provided.

**Table 2.0-1: Comments from Public Agencies, Organizations and Individuals**

Letter	Date Received	Organization/Name
<b>Agencies</b>		
A	June 15, 2021	California Air Resources Board (CARB) <i>Robert Krieger, Branch Chief, Risk Reduction Branch</i>
B	May 20, 2021	California Department of Transportation (Caltrans) <i>Jacob Mathew, District 8 Planning</i>
C	May 6, 2021	California Department of Justice <i>Rob Swanson, Deputy Attorney General, Environment Section</i>
D	May 20, 2021	Fontana Unified School District <i>Timothy DeLand, Director of Facilities Planning, Design &amp; Construction</i>
<b>Organizations</b>		
E	June 17, 2021	Blum Collins, LP, Attorney at Law, <i>Gary Ho</i> <i>On behalf of: Golden State Environmental Justice Alliance (GSEJA)</i>
<b>Public/Individuals</b>		
F	May 18, 2021	Yuliana Ceballos
G	May 18, 2021	Otilia Manon
H	May 18, 2021	Veronica Perez

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**Comment Letter A - California Air Resources Board (CARB)**

*Robert Krieger, Branch Chief, Risk Reduction Branch*



Comment Letter: A

Gavin Newsom, Governor  
Jared Blumenfeld, CalEPA Secretary  
Liane M. Randolph, Chair

June 15, 2021

Paul Gonzales  
Senior Planner  
City of Fontana Community Development  
8353 Sierra Avenue  
Fontana, California 92335  
[pgonzales@fontana.org](mailto:pgonzales@fontana.org)

Dear Paul Gonzales:

Thank you for providing the California Air Resources Board (CARB) with the opportunity to comment on the Fontana Sierra Business Center (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2020100256. The Project would allow for the construction and operation of a 705,735 square foot warehouse building. Once in operation, the Project would introduce an additional 4,454 daily vehicle trips, including 400 daily heavy-duty truck trips, along local roadways. The Project is located within the City of Fontana (City), California, which is the lead agency for California Environmental Quality Act (CEQA) purposes.

Industrial development, such as those proposed under the Project, can result in high daily volumes of heavy-duty diesel truck traffic and operation of on-site equipment (e.g., forklifts and yard tractors) that emit toxic diesel emissions, and contribute to regional air pollution and global climate change.<sup>1</sup> Due to the Project's proximity to residences already disproportionately burdened by multiple sources of pollution, CARB's comments expressed concerns with the potential cumulative air quality impacts associated with the construction and operation of the Project.

**The Project Would Increase Exposure to Air Pollution in Disadvantaged Communities**

The Project, if approved, will expose nearby communities to elevated levels of air pollution. There Project-site is surround by residential homes, with the closes residences located within 60 feet of the Project's eastern and southern boundary. In addition to residences, Citrus High School, Jurupa Hills High School, Truman Middle School, Cypress Elementary School and Leaps and Bounds Preschool and Daycare are all located within one mile of the Project-site. The community is near existing toxic diesel particulate matter (diesel PM) emission sources, which include existing industrial uses and vehicular traffic along Interstate 10 (I-10). Due to the Project's proximity to residences, schools and daycares already burdened by multiple

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1. With regard to greenhouse gas emissions from this project, CARB has been clear that local governments and project proponents have a responsibility to properly mitigate these impacts. CARB's guidance, set out in detail in the Scoping Plan issued in 2017, makes clear that in CARB's expert view, local mitigation is critical to achieving climate goals and reducing greenhouse gases below levels of significance.

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sources of air pollution, CARB is concerned with the potential cumulative health impacts associated with the construction and operation of the Project.

The State of California has placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those in which the Project is located. Diesel PM emissions generated during the construction and operation of the Project would negatively impact the community, which is already impacted by air pollution from existing industrial uses and vehicular traffic along I-10

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### **The DEIR Does Not Evaluate Air Quality and Health Risks Impacts from On-Site Transport Refrigeration Units.**

The unmitigated air quality and cancer risk impacts presented in the DEIR were evaluated under the assumption that transport refrigeration units (TRU) would not operate within the Project-site. TRUs on trucks and trailers can emit large quantities of diesel exhaust while operating within the Project-site. Residences and other sensitive receptors (e.g., daycare facilities, senior care facilities, and schools) located near where these TRUs could be operating would be exposed to diesel exhaust emissions that could result in significant cancer risk.

3

The DEIR includes Mitigation Measure AQ-2 that would prohibit the proposed warehouse building to be used for cold storage. The Project's unmitigated cancer risk impacts were estimated under the assumption that Mitigation Measure AQ-2 would be implemented. The Health Risk Analysis (HRA) prepared for the Project and presented in Appendix H (Health Risk Assessment) of the DEIR, concluded that residences near the Project site would be exposed to unmitigated diesel PM emissions that would result in cancer risks of 4.82 chances per million during Project operation. Since the Project's cancer risks were found to be below the South Coast Air Quality Management District's (SCAQMD) 10 chances per million significance threshold, the DEIR concluded that the Project would result in a less than significant impact on public health.

4

Since it is clear in the DEIR that the City does not wish for the proposed warehouse building to be used for cold storage, CARB urges the City to include one of the following measures in the Project's final design:

- A Project design measure requiring contractual language in tenant lease agreements that prohibits tenants from operating TRUs within the Project-site; or
- A condition requiring a restrictive covenant over the parcel that prohibits the applicant's use of TRUs on the property unless the applicant seeks and receives an amendment to its conditional use permit allowing such use.

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If the City does allow TRUs within the Project-site, CARB urges the City to model air pollutant emissions from on-site TRUs, as well as include potential cancer risks from on-site and off-site TRUs in the Project's HRA. The revised HRA should account for all potential health risks from

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Project-related diesel PM emission sources such as backup generators, TRUs, heavy-duty truck traffic, and include all the air pollutant reduction measures listed below.

- Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with TRU or auxiliary power units. This requirement will substantially decrease the amount of time that a TRU powered by a fossil-fueled internal combustion engine can operate at the Project-site. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration are encouraged and can also be included in lease agreements.<sup>2</sup>
- Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable.

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### **The DEIR Did Not Account for Air Pollutant Emissions from Heavy Duty Trucks During On Site Grading**

The DEIR did not account for mobile source air pollutant emissions from grading operations during the Project's construction phase. Based on CARB's review of the California Emissions Estimator Model (CalEEMod) outputs found in Appendix B (Air Quality Studies) of the DEIR, the City and applicant assumed that no heavy duty truck trips would be required to import or export soil during the on-site grading. Furthermore, the DEIR does not explicitly state the quantity of soil needed to grade the Project site that would support this assumption. If the Project site cannot be graded using existing on site soil, the soil will need to be imported into the Project site. If that is the case, a large number of heavy-duty truck trips may be required to transport soil.

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CARB urges the City and applicant to remodel the Project's construction air pollutant emissions using accurate heavy duty truck trip estimates. Residences and other sensitive receptors (e.g., daycare facilities, senior care facilities, and schools) located near construction haul routes could be exposed to diesel exhaust emissions that were not evaluated in the DEIR. The DEIR should clearly state the total number of heavy duty truck trips expected during Project construction so the public can fully understand the potential environmental effects of the Project on their communities.

### **The Final EIR Used Inappropriate Vehicle Fleet Mixes to Evaluate the Project's Air Quality Impacts from Mobile Sources.**

The Project's operational mobile source air pollutant emissions may have been underestimated in the DEIR by using inappropriate vehicle fleet mixes. The Project's operational air pollutant emissions and cancer risks were estimated assuming 8.8 percent of the Project's 4,454 daily vehicle trips would consist of heavy-duty trucks. The City obtained this fleet mix from the High-Cube Warehouse Vehicle Trip Generation Analysis prepared by

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<sup>2</sup> CARB's Technology Assessment for Transport Refrigerators provides information on the current and projected development of TRUs, including current and anticipated costs. The assessment is available at: [https://www.arb.ca.gov/msprog/tech/techreport/tru\\_07292015.pdf](https://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf).

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the South Coast Air Quality Management District.<sup>3</sup> According to this study, the weighted average fleet mix for a fulfillment center is 91.2 percent vehicles and 8.8 percent trucks.

The Project's description states that the "applicant is pursuing the proposed Project on a speculative basis and the future occupant(s) of the Project are unknown at this time." Since the proposed warehouse building may not be used as a fulfillment center, CARB believes it would be more appropriate to base the air quality and health risk impact analysis on the fleet mix from the Fontana Truck Trip Generation Study.<sup>4</sup> According to this study, 20.4 percent of the total daily vehicle trips from a warehouse greater than 100,000 square feet (heavy warehouse) would consist of trucks. This study is based on traffic counts from warehouses located within Fontana, California, where the Project is located. CARB recommends that the City conservatively reevaluate the Project's air quality and cancer risk impacts assuming 20.4 percent of the Project's total average daily traffic would consist of heavy-duty trucks.

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### **The Final EIR Should Include More Mitigation Measures to Further Reduce the Project's Significant and Unavoidable Impact on Air Quality.**

The DEIR includes four mitigation measures (MM AQ-1 through MM AQ-4) to reduce the Project's significant impact on air quality. These mitigation measures include: preparing a Transportation Demand Management program listing strategies to reduce air pollutant emissions from single-occupant vehicles, restricting the proposed warehouse building from being used for cold storage, requiring truck drives to turn off engines when not in use, limiting truck idling time to 5 minutes and making tenants aware of the Carl Moyer Program. Although these mitigation measures would reduce the Project's air pollutant emissions, the DEIR concludes that the Project's impact on air quality would remain significant after mitigation. Even where impacts will remain significant and unavoidable after mitigation, CEQA requires that all feasible mitigation measures be incorporated (see California Public Resources Code § 21081; 14 CCR § 15126.2(b)). To meet this requirement, CARB urges the City and applicant to add the emission reduction measures listed below in the FEIR.

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- In construction contracts, include language that requires all off-road diesel powered equipment used during Project construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits that achieve emission reductions that equal or exceed that of a Tier 4 engine.
- In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered.

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<sup>3</sup> South Coast Air Quality Management District, High-Cube Warehouse Vehicle Trip Generation Analysis. October 2016. Accessible at:

<https://www.ite.org/pub/?id=a3e6679a%2De3a8%2Dbf38%2D7f29%2D2961becdd498>

<sup>4</sup> City of Fontana. Truck Trip Generation Study. August 2003. Accessible at:

<https://tampabayfreight.com/pdfs/Freight%20Library/Fontana%20Truck%20Generation%20Study.pdf>



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- In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB’s lowest optional low-NO<sub>x</sub> standard starting in the year 2022.<sup>5</sup>
- Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the Project site to be model year 2014 or later, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030.
- Including language in tenant lease agreements, requiring the installing of vegetative walls<sup>6</sup> or other effective barriers that separate loading docks and people living or working nearby.

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### Conclusion

CARB is concerned about the potential public health impacts should the City approve the Project. The FEIR should include a design measure restricting the operation of TRUs within the Project site. Should the City allow the proposed warehouse building to be used for cold storage, the City should update the Project’s air quality analysis and HRA to account for the increase in air pollution and cancer risks resulting from trucks and trailers with TRUs visiting the Project site. If the heavy-duty trucks are required to import or export soil from the site during Project construct, the Project’s air quality analysis and HRA should be updated to reflect such activities. The City should conservatively reevaluate the Project’s air quality and cancer risk impacts in the FEIR assuming 20.4 percent of the Project’s total average daily traffic would consist of heavy-duty trucks. Lastly, to reduce the Project’s impact on public health, CARB urges the City to implement the mitigation measures listed in the fifth section of this letter.

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Given the breadth and scope of projects subject to CEQA review throughout California that have air quality and greenhouse gas impacts, coupled with CARB’s limited staff resources to substantively respond to all issues associated with a project, CARB must prioritize its substantive comments here based on staff time, resources, and its assessment of impacts. CARB’s deliberate decision to substantively comment on some issues does not constitute an admission or concession that it substantively agrees with the lead agency’s findings and conclusions on any issues on which CARB does not substantively submit comments.

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CARB appreciates the opportunity to comment on the DEIR for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed.

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<sup>5</sup> In 2013, CARB adopted optional low-NO<sub>x</sub> emission standards for on-road heavy-duty engines. CARB encourages engine manufacturers to introduce new technologies to reduce NO<sub>x</sub> emissions below the current mandatory on-road heavy-duty diesel engine emission standards for model-year 2010 and later. CARB’s optional low-NO<sub>x</sub> emission standard is available at: <https://ww2.arb.ca.gov/our-work/programs/optional-reduced-nox-standards>

<sup>6</sup> Effectiveness of Sound Wall-Vegetation Combination Barriers as Near-Roadway Pollutant Mitigation Strategies (2017) is available at: <https://ww2.arb.ca.gov/sites/default/files/classic/research/apr/past/13-306.pdf>.

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Please include CARB on your State Clearinghouse list of selected State agencies that will receive the DEIR as part of the comment period. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist via email at [stanley.armstrong@arb.ca.gov](mailto:stanley.armstrong@arb.ca.gov).

Sincerely,



Robert Krieger, Branch Chief, Risk Reduction Branch

cc: State Clearinghouse  
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Stanley Armstrong, Air Pollution Specialist, Risk Reduction Branch

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**Responses to Comment Letter A – CARB, Robert Krieger**

**A1** This comment is introductory in nature. The comment restates the project description and identifies CARB’s concern regarding air quality of nearby residents. The introductory comment does not raise a specific issue with the adequacy of the DEIR or raise any other CEQA issue. Therefore, no further response is necessary.

**A2** The HRA prepared for the project notes that SCAQMD does not establish separate cumulative thresholds and does not require combining impacts from cumulative projects. SCAQMD considers projects that do not exceed the project-specific thresholds to generally not be cumulatively significant. Appendix D of the SCAQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific SCAQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The HRA prepared for the project determined that emissions from construction and operation of the project would not exceed carcinogenic and non-carcinogenic hazard thresholds, therefore, cumulative impacts are less than significant. The HRA prepared for the DEIR acknowledges SCAQMD’s MATESIV Study, which estimates an average excess carcinogenic risk of 400 in one million, and the SCAQMD’s MATES IV mapping tool identifies an estimated risk of 815.80 for the geographic grid that includes the Project site to which the Project’s air pollutant emissions and the pollutant emissions from other cumulative projects would be added.

AB 617 emphasizes protecting communities from the harmful effects of air pollution from sources other than vehicles. AB 617 requires a statewide strategy with focused actions for communities heavily impacted by air pollution. These actions include developing community air monitoring plans (CAMPs) and/or community emissions reduction plans (CERPs) to reduce emissions of toxic air contaminants (TACs) and criteria pollutants. The San Bernardino/Muscoy area was among three communities chosen for the program and is the closest CERP to the project site. The project site is approximately seven miles west of the CERP’s boundary and approximately six miles west of the emissions study area boundary. The CERP does not include project-specific requirements but would allow the SCAQMD and CARB to implement emissions reducing measures. The CERPs required under AB 617 are intended to reduce exposure in communities most impacted by air pollution and allow State and local air districts to address the cumulative and environmental justice effects to burdened communities. The project is not within a CERP boundary and is not inconsistent or in conflict with AB 617.

**A3** This comment is incorrect in stating that the project analysis was conducted under the assumption that TRUs would not operate within the project site. The HRA was conservatively modeled to include emissions from TRUs (Appendix H, page 191). However, since **MM AQ-2**, to which the Project will be subject, prohibits the project from including any form of cold storage, trucks accessing the site likely would not include TRUs.

**A4** This comment acknowledges that **MM AQ-2** prohibits the proposed project from being used for cold storage and that unmitigated diesel PM emissions would result in cancer risks 4.82 chances per million, which is below SCAQMD’s 10 chances per million significance threshold. This

comment does not raise a specific issue with the adequacy of the analysis. Therefore, no further response is necessary.

- A5** This comment states that, in addition to **MM AQ-2**, the project description should include additional language that prohibits the operation of TRUs on the project site and requires a restrict covenant over the parcel to prohibit the applicant’s use of TRUs. The additional restrictive language is not required since **MM AQ-2** prohibits cold storage, is legally enforceable under CEQA.
- A6** As discussed under **Response A3** and **Response A5** the HRA did include emissions from TRUs and the results of the emissions calculations were still below SCAQMD thresholds.
- A7** This comment states that DEIR does not account for mobile emissions from the grading phase of construction related to trips for the import of soil by heavy-duty trucks. However, as detailed in the DEIR at page 3.0-3, any structures on the site were demolished and leveled prior to the preparation of technical studies and prior to the analysis baseline. The Project’s Conceptual Grading Plan, which was included as part of the Design Review (DR) package submitted to the City, determined that the site earthwork would balance and no soil will need to be imported or exported. Therefore, truck trips associated with hauling soil were, appropriately, not included in the air quality model.
- A8** The commenter suggests the DEIR used an inappropriate vehicle fleet mix to evaluate mobile emissions. The air quality assessment, greenhouse gas assessment, and health risk assessment all use the fleet mix included in the traffic study. The traffic study used Institute of Transportation Engineers (ITE) trip generation rates for a Fulfillment Center – Sort land use (ITE land use code 155b). The fleet mix is based on the SCAQMD Warehouse Truck Trip Study Data Results and Usage (July 17, 2014), which specifies a normalized truck mix of approximately 16.7% of the trucks being 2-axle, 20.7% 3-axle, and 62.5% 4+-axle. The total trip generation is considered conservative and applying truck percentages from the 2003 Fontana Truck Trip Generation Study to the ITE 155b trip generation would overestimate the truck volumes. The 2003 Fontana Truck Trip Generation Study has a higher percentage of trucks based on traffic counts from warehouses located in Fontana. However, the types of warehouses where counts were collected in the Study were smaller warehouses and do not represent the Fulfillment Center – Sort warehouse building type of the Project. As such, the Fontana Study does not accurately represent the project or the shipping practices associated with this type of use. To address this issue, the SCAQMD formed the Warehouse Stakeholder Working Group, and developed the Warehouse Truck Trip Study Data Results and Usage (2014), and the High Cube Warehouse Vehicle Trip Generation Analysis (2016).

Applying the Fontana Truck Trip Study truck percentages to the ITE land use Code 155b would combine data from two different studies that evaluate two different types of land uses. This hybrid between two (2) data sources would not represent the project, and would result in inaccurate, and therefore inappropriate, information. A more appropriate approach would be to use the Fontana Truck Trip Generation Study truck percentage of 20.4 with ITE High-Cube Warehouse (ITE 152)<sup>1</sup> trip rate of 1.68

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<sup>1</sup> Note that this is a conservative approach. ITE 152 was eliminated in ITE’s 10<sup>th</sup> Edition Trip Generation Manual, and the next closest applicable land use is ITE 154 (High Cube Transload and Short-Term Storage), which has a daily trip generation of 1.40 trips per thousand square feet.

trips per thousand square feet. Using this method, the proposed 705,735 square foot project would generate a total of 1,186 total daily trips and 242 total daily truck trips (assuming 20.4 percent trucks). Therefore, the fleet mix identified in the 2014 SCAQMD study and utilized in the DEIR estimates a greater number of trucks (400 daily truck trips versus 242 daily truck trips) than what would be estimated using the Fontana Truck Trip Generation Study.

**A9** The comment requests additional mitigation in order to ensure that all feasible mitigation is incorporated. The following table provides an evaluation of the requested measures and applicability to the project.

Suggested Mitigation	Response
<ul style="list-style-type: none"> <li>In construction contracts, include language that requires all off-road diesel powered equipment used during Project construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits that achieve emission reductions that equal or exceed that of a Tier 4 engine.</li> </ul>	<p>Construction emissions for the Project are below SCAQMD thresholds. Therefore, there is no nexus for such mitigation. Additionally, CalEEMod/OFFROAD emissions rates incorporate equipment turnover, which results in incrementally cleaner fleets (i.e., more Tier 4 equipment) in future years. Finally, please reference the added MDAQ-6, related to requirements pertaining to construction equipment, which states:</p> <p>All construction equipment shall be maintained in good operation condition so as to reduce emissions. The construction contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer’s specification. Maintenance records shall be available at the construction site for City of Fontana verification. The following additional measures, as determined applicable by the City Engineer, shall be included as conditions of the Grading Permit issuance:</p> <ul style="list-style-type: none"> <li>Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.</li> <li>Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.</li> <li>Reroute construction trucks away from congested streets or sensitive receptor areas.</li> <li>Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.</li> <li>Improve traffic flow by signal synchronization and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers’ specifications</li> <li>Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). If the City of Fontana determines that 2010 model year or newer diesel trucks cannot be obtained, the Project shall use trucks that meet EPA 2007 model year NOx and PM emissions requirements.</li> <li>During Project construction, all internal combustion engines/construction equipment operating on the Project site shall meet EPA-certified Tier 3 emissions standards, or higher according to the following:</li> <li>All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standard, where available. In addition, all construction equipment shall be outfitted with BACT devices certified</li> </ul>

Suggested Mitigation	Response
	<p>by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for similarly sized engines as defined by CARB regulations.</p> <ul style="list-style-type: none"> <li>A copy of each unit’s certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be made available if requested at the time of mobilization of each applicable unit of equipment.</li> </ul>
<ul style="list-style-type: none"> <li>In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered.</li> </ul>	<p>Construction emissions for the Project are below SCAQMD thresholds. Therefore, mitigation requiring battery powered construction equipment is not required. However, please reference the added MMAQ-6 (shown above) for the inclusion of more stringent requirements pertaining to construction equipment.</p>
<ul style="list-style-type: none"> <li>In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB’s lowest optional low-NOx standard starting in the year 2022.</li> </ul>	<p>Construction emissions are below SCAQMD thresholds. Site earthwork would be balanced, and soil hauling would not be required. Therefore, this measure is not applicable. However, please reference the added MM AQ-6 (shown above) for the inclusion of more stringent requirements pertaining to construction equipment.</p>
<ul style="list-style-type: none"> <li>Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the Project site to be model year 2014 or later, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030.</li> </ul>	<p>The project is a speculative warehouse and the end user’s fleet is currently unknown. Non-zero emissions vehicles are currently legal, and as such, the City has no means to enforce and/or require that only zero-emissions vehicles could access the Project site. Therefore, this requirement is not feasible. This measure is not feasible because the project applicant has no means of controlling the privately-owned vehicles used by the independent trucking companies that will eventually operate to/from the facility.</p> <p>Additionally, trucks with a gross vehicle weight rating greater than 14,000 pounds accessing the site must meet or exceed 2010 model-year emissions equivalent engine standards by January 1, 2023 (CARB Truck and Bus Regulation, 13 California Code of Regulations Section 2025).</p> <p>The CARB Advanced Clean Trucks Rule requires electric truck sales starting in 2024, with the goal of every new truck sold in California to be zero-emission by 2045.</p> <p>Furthermore, SCAQMD Rule 2305, Warehouse Indirect Source Rule (ISR) (adopted on May 7, 2021), which requires the Project operator to directly reduce NO<sub>x</sub> and particulate matter emissions or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. Alternatively, warehouse operators can choose to pay a mitigation fee. Funds from the mitigation fee will be used to incentivize the purchase of cleaner trucks and charging/fueling infrastructure in communities nearby.</p>
<ul style="list-style-type: none"> <li>Including language in tenant lease agreements, requiring the installing of vegetative walls or other effective barriers that separate loading docks and people living or working nearby.</li> </ul>	<p>The Project’s health risks and localized operational emissions do not exceed SCAQMD thresholds; therefore, mitigation in the form of vegetative walls or other barriers is not required. However, it should be noted that Mitigation Measure AQ-31 requires that prior to issuance of Certificate of Occupancy, the Project shall be required to include the construction of a 14’ concrete screen wall along the Project’s easterly property line adjacent to the Project’s easterly truck court.</p>



Please also reference the added mitigation measures **MMAQ-5** through **MM AQ-29**, which were included to become part of the Project in order to mitigate air quality impacts to the fullest extent possible.

- A10** This comment summarizes CARB’s concerns discussed in the comment letter. These concerns have been addressed in the previous responses.

**Response A3** notes that TRUs were conservatively included in the HRA and identifies the page number in the HRA. **Response A7** states that hauling trips were not included in the air quality and HRA modeling because the grading plan showed that the site was balanced, and no soil would need to be imported or exported. **Response A8** explains that the truck trips evaluated in the DEIR are more conservative using SCAQMD rates and percentages than using the Fontana Truck Trip Generation Study. **Response A9** shows that suggested mitigation measures were considered but are either not required under CEQA or not feasible.

- A11** This comment states that CARBs review of the project and ability to provide substantive comments is limited based on staff time, resources, and its assessment of impacts. The comment does not raise a specific issue with the adequacy of the DEIR or raise any other CEQA issue. No further response is required.

- A12** The comment provides closing remarks and requests that CARB be included in the State Clearinghouse list of selected State agencies that will receive the DEIR as part of the comment period. The City will comply with all requirements imposed by Public Resources Code Section 21092.5, including providing CARB with a copy of **Responses A1** through **A12**. The comment does not state any specific concern or question regarding the adequacy of the DEIR. No further response is required.

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## Comment Letter B - California Department of Transportation (Caltrans)

### *Jacob Mathew, District 8 Planning*

Comment Letter: B

**From:** MATHEW, JACOB K@DOT <[Jacob.MATHEW@dot.ca.gov](mailto:Jacob.MATHEW@dot.ca.gov)>  
**Sent:** Thursday, May 20, 2021 10:44 AM  
**To:** Paul Gonzales <[pgonzales@fontana.org](mailto:pgonzales@fontana.org)>  
**Subject:** Sierra Business Center

**CAUTION - EXTERNAL SENDER - THIS EMAIL ORIGINATED OUTSIDE OF THE CITY'S EMAIL SYSTEM Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Hi,  
Thank you for providing the California Department of Transportation (Caltrans) the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the Sierra Business Center (Project), located south of the Interstate 10 Freeway, north of Slover Avenue, west of Juniper Avenue, and east of Cypress Avenue in the City of Fontana within the San Bernardino County. However, we are still waiting for the Traffic Impact Analysis and Hydrology Report for our review, as we requested on October 27, 2020.

Please provide us the requested documents to evaluate the potential impacts of the project to the operational characteristics of the existing State facilities by the project area. Do not hesitate to contact us if you need further assistance with this request.

Thanks,  
Jacob Mathew  
D-8, Planning

**From:** MATHEW, JACOB K@DOT  
**Sent:** Tuesday, October 27, 2020 2:40 PM  
**To:** [pgonzales@fontana.org](mailto:pgonzales@fontana.org)  
**Cc:** Clark, Rosa F@DOT <[rosa.f.clark@dot.ca.gov](mailto:rosa.f.clark@dot.ca.gov)>  
**Subject:** Sierra Business Center

Hi Paul,  
Thank you for providing the California Department of Transportation (Caltrans) the opportunity to review and comment on the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the Sierra Business Center (Project), located south of the Interstate 10 Freeway, north of Slover Avenue, west of Juniper Avenue, and east of Cypress Avenue in the City of Fontana within the San Bernardino County. The project proposes to develop an approximately 705,735-square foot warehouse building within an approximately 32-net acre site (45 parcels), with associated facilities and improvements that include approximately 4,500 square feet of 1st-floor office space, vehicle parking, loading dock doors, trailer parking, onsite landscaping, and related onsite and off-site improvements.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when a proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Fontana, due to the project's potential impact to the State facilities, including Interstate 10, it is also subject to the policies and regulations that govern the SHS.

In the preceding DEIR, we recommend a Traffic Impact Analysis (TIA) be prepared to accurately evaluate the extent of potential impacts of the project to the operational characteristics of the existing State facilities by the project area. We recommend the TIA be submitted prior to the circulation of the DEIR to ensure

timely review of the submitted materials to address any potential issues. We offer the following comments:

1. **Submit copies of all TIA documents for review.** The data used in the TIA should not be more than 2 years old, and shall be based on the Southern California Association of Governments 2016 Regional Transportation Plan Model. Use the Highway Capacity Manual 6 methodology for all traffic analyses.
2. Also, please provide one copy of the Hydrology/Drainage Report for our review.

cont'd  
4

Caltrans is committed to providing a safe transportation system for all users. We encourage the City to embark a safe, sustainable, integrated and efficient transportation system and complete street to enhance California's economy and livability. A pedestrian/bike-friendly environment served by multimodal transportation would reduce traffic congestion prevalent in the surrounding areas. (See *Complete Street Implementation Action Plan 2.0* at [http://www.dot.ca.gov/hq/tpp/offices/ocp/docs/CSIAP2\\_rpt.pdf](http://www.dot.ca.gov/hq/tpp/offices/ocp/docs/CSIAP2_rpt.pdf)).

3. Design the local streets to serve vehicular and pedestrian circulation equally, and for safe pedestrian friendly environment. Consider both Americans with Disability Act and California Highway Design Manual standards and requirements to provide transportation routes for all users and modes, including pedestrian and bicyclists. Provide a continuous multi-modal circulation system throughout the City, specifically for pedestrians, allowing current/future residents, employees, and guests to access the attraction places.
4. Relegate the parking spaces to the back of the buildings and locate preferential parking for vanpools and carpools, along with, secure, visible, and convenient bicycle parking/racks accessible to retail and office locations. Consider installing electric vehicle charging stations, and locate parking space for low-emitting, fuel-efficient, alternative-fueled vehicle visitor parking in commercial and office uses.

5

These recommendations are preliminary and summarize our review of materials provided for our evaluation. If you have any questions regarding this email, please contact me.

Thanks,  
Jacob Mathew  
D-8, Planning

**Response to Comment Letter B – Caltrans, Jacob Mathew**

**B1** The comment requests that the Traffic Impact Analysis and associated appendices be sent to Caltrans for review. The Traffic Impact Analysis and associated appendices were sent to Caltrans for review on May 7, 2021 (confirmed to be received via FedEx delivery methods), and again on May 20, 2021. Additionally, the Traffic Impact Analysis was also publicly available on the City's website since May 7, 2021, at the following URL:  
<https://www.fontana.org/DocumentCenter/View/34987/FSBC-Appendix-L---Traffic>.

As such, all requested documents have been sent to Caltrans for review.

**B2** Comment noted. This comment summarizes the proposed Project.

**B3** Comment noted. The comment summarizes Caltrans obligations as a responsible agency under CEQA.

**B4** A Traffic Impact Analysis was prepared for the Project and is located in Appendix L of the Draft EIR. As previously discussed in **Response B1**, above, the Traffic Impact Analysis was made available to Caltrans on May 7, 2021, and again on May 20, 2021. Additionally, the Hydrology Report was provided to Caltrans on May 7, 2021, and is identified as Appendix I in the Draft EIR.

**B5** Comment noted. As discussed on page 4.13-8 of the Draft EIR, the Project would provide continuous sidewalks along its frontages with Slover Avenue and Juniper Avenue. This would eliminate the discontinuous sidewalks along westbound Slover Avenue and provide a continuous networking connecting to the existing sidewalks to the east. Paved pedestrian paths would be provided connecting the proposed sidewalks to the Project site. The Project would also provide bicycle parking spaces. The outside perimeter of the Project site would be landscaped. Finally, as part of the proposed Project, the intersection of Slover Avenue and Juniper Avenue will be signalized and improved with controlled crossings for pedestrians in accordance with current City standards to maximize safety and accessibility (see DEIR Page 3.0-5, Off-site Improvements: Juniper Avenue). As demonstrated in Table 4.13-1 of the Draft EIR, the Project's circulation elements will be consistent with the City of Fontana General Plan and City of Fontana Active Transportation Plan (ATP) elements pertaining to the circulation system, including transit, bicycle and pedestrian facilities, resulting in a less than significant impact.

Per City Municipal Code, the Project would require 164 auto parking spaces and 142 trailer parking stalls. However, the Project would provide 330 auto parking spaces and 179 trailer stalls. Of the 330 auto parking spaces provided:

- 272 are standard
- 4 are standard accessible
- 4 are van accessible
- 1 is van-accessible EV
- 1 is standard accessible EV
- 20 are standard EV
- 28 are clean air/vanpool

Refer to Chapter 4.13, *Transportation and Traffic*, for additional information.

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## Comment Letter C - California Department of Justice

**Rob Swanson, Deputy Attorney General, Environment Section**

Comment Letter: C

---

**From:** Robert Swanson  
**Sent:** Thursday, May 6, 2021 4:12 PM  
**To:** 'pgonzales@fontana.org' <pgonzales@fontana.org>  
**Subject:** Sierra Business Center Project (SCH #2020100256)

Hi Paul,

I'm not sure we've crossed paths before—I'm a Deputy Attorney General with the California Department of Justice. I've interacted with other planners in your office before, mostly DiTanyon Johnson. I saw the DEIR for the Sierra Business Center project and I was wondering if you could help answer a few questions I have. If you would prefer, we could set up a time to discuss on the phone.

- When was the zoning/land use designation at and near this project site changed to general industrial/light industrial? Are the residences on the project site and nearby parcels non-conforming uses? My memory is that this general area was originally going to be part of the Slover Overlay, a specific plan that would have changed the zoning and land use designation to industrial but that never was approved.
- Why does the DEIR not include a substantial number of mitigation measures applicable to warehouses that are required by the Fontana General Plan? This was previously an issue with the Fontana Foothills Commerce Center and Sierra Avenue and Casa Grande Avenue projects—DiTanyon could likely provide more background on this issue, and I would also be happy to explain further. Thankfully in those other projects we were able to resolve the issue, but I am a bit surprised that this issue has come up again.
- Do you have a sense of the schedule for the project's consideration by the planning commission and city council?

Lastly, I wanted to make sure you were aware of the Warehouse CEQA Best Practices and Mitigation Measures document that my office released in March. I believe it was circulated to your elected officials when it was published, and I also sent it to DiTanyon. In case you haven't seen it, the document is available [here](#). Our hope is that the document assists lead agencies in achieving CEQA compliance in warehouse projects.

Thank you,

**Rob Swanson**  
Deputy Attorney General | Environment Section  
California Department of Justice  
1300 I Street, 15th Floor | Sacramento, CA 95814  
Tel.: 916-210-7808

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**City Council**

**Acquanetta Warren**  
*Mayor*

**Jesse Armendarez**  
*Mayor Pro Tem*

**John B. Roberts**  
*Council Member*

**Jesus "Jesse" Sandoval**  
*Council Member*

**Phillip W. Cothran**  
*Council Member*

June 23, 2020

State of California Department of Justice  
Meredith J. Hankins, Deputy Attorney General  
Robert Swanson, Deputy Attorney General  
300 South Springs Street, Suite 1702  
Los Angeles, CA 90013

Re: Item C.4- Department of Justice Comments on the Final Environmental Impact Report for the I-15 Logistics Project (SCH # 2018011008)

Dear Ms. Hankins and Mr. Swanson:

The City of Fontana (City) appreciates and values your comments on the Final Environmental Impact Report (Final EIR) for the I-15 Logistics Project (Project). It is the City's understanding that the Department of Justice (commenter or DOJ) has requested further environmental analysis pursuant to CEQA to ensure the Project's environmental impacts are understood, disclosed, and mitigated to the maximum feasible extent. As a result, the City offers the following responses to your comment letter dated June 19, 2020.

First, the City would like to confirm that the issues presented in the commenter's September 27, 2019 letter were addressed in the Project's Final EIR dated May 14, 2020. Refer to Section 2, Response 7 of the Final EIR.

The City would also like to confirm that the DOJ's comments previously submitted to the City Planning Commission were provided to the Planning Commissioners prior to the June 2, 2020 public hearing. As summarized on Slide 17, "Environmental and Public Comments During the 45-day Public Review," of the City's presentation on the Project given during the June 2, 2020 public hearing, responses to commenters on the Final EIR were provided to the Planning Commissioners and were incorporated into the public record in this regard.<sup>1</sup>

<sup>1</sup> A video recording of the City's presentation on the Project is available on the City of Fontana website at: <https://fontanaca.swagit.com/play/06032020-523>.

CITY OF FONTANA 8353 SIERRA AVENUE, FONTANA, CALIFORNIA 92335  
[www.Fontana.org](http://www.Fontana.org)



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Response to DOJ Comment Letter dated June 19, 2020

June 23, 2020

Concerns regarding the project objectives were addressed in the Project's Final EIR dated May 14, 2020. As discussed in Section 2, Response 7-9, of the Final EIR, CEQA Guidelines Section 15124(b) requires a project description to include "a statement of the objectives sought by the Proposed Project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits." As a result, Section 3.3, *Project Objectives*, of the Draft EIR includes seven objectives intended to describe the Project's underlying purpose (i.e., development of an industrial logistics facility). It is not required under CEQA to include project objectives which allow for alternative land uses on the Project site.

Concerns regarding inclusion of General Plan mitigation measures were addressed in the Project's Final EIR dated May 14, 2020. As discussed in Section 2, Response 7-7, of the Final EIR, the Draft EIR includes several of General Plan-recommended mitigation measures related to air quality. For example, consistent with recommended MM-AQ-14 of the Final EIR for the City's General Plan, Draft EIR Mitigation Measure AQ-1 would implement dust control techniques (i.e., daily watering), limitations on construction hours, and adherence to South Coast Air Quality Management District (SCAQMD) Rules 402 and 403 (which require watering of inactive and perimeter areas, track-out requirements, etc.) to reduce PM10 and PM2.5 concentrations. Consistent with recommended MM-AQ-5 of the Final EIR for the City's General Plan, Draft EIR Mitigation Measure AQ-3 would ensure the Project applicant makes all Logistics Facility tenants aware of funding opportunities, such as the Carl Moyer Memorial Air Quality Standards Attainment Program and other similar funding opportunities, by providing applicable literature on such funding opportunities as available from the California Air Resources Board.

Nonetheless, the City and the Project Applicant have agreed to incorporate the following General Plan mitigation measures into the Project's Mitigation Monitoring and Reporting Program:

AQ-5: All on-site forklifts shall be non-diesel and shall be powered by electricity, compressed natural gas, or propane if technically feasible.

AQ-6: All construction equipment shall be maintained in good operating condition so as to reduce emissions. The construction contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer's specification. Maintenance records shall be available at the construction site for City of Fontana verification. The following additional measures, as determined applicable by the City Engineer, shall be included as conditions of the Grading Permit issuance:

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.

- Improve traffic flow by signal synchronization and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers' specifications.
- Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). If the City of Fontana determines that 2010 model year or newer diesel trucks cannot be obtained the project shall use trucks that meet EPA 2007 model year NOx and PM emissions requirements.
- During Project construction, all internal combustion engines/construction equipment operating on the project site shall meet EPA-Certified Tier 3 emissions standards, or higher according to the following:
  - All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for similarly sized engine as defined by CARB regulations.
  - A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be made available if requested at the time of mobilization of each applicable unit of equipment.

AQ-7: Prior to the issuance of any grading permits, the Applicant shall submit construction plans to the City of Fontana denoting the proposed schedule and projected equipment use. Construction contractors shall provide evidence that low emission mobile construction equipment will be utilized, or that their use was investigated and found to be infeasible for the project. Contractors shall also conform to any construction measures imposed by the SCAQMD as well as City Planning Staff.

AQ-8: All paints and coatings shall meet or exceed performance standards noted in SCAQMD Rule 1113. Specifically, the following measures shall be implemented, as feasible:

- Use coatings and solvents with a VOC content lower than that required under AQMD Rule 1113.
- Construct or build with materials that do not require painting.
- Require the-use of pre-painted construction materials.

AQ-9: The Project shall be required to apply paints either by hand or high volume, low pressure (HVLP) spray. These measures may reduce volatile organic compounds (VOC) associated with the application of paints and coatings by an estimated 60 to 75 percent. In addition, the contractor shall specify the use of low volatility paints and coatings. Several of currently available primers have VOC contents of less than 0.85 pounds per gallon (e.g., Dulux professional exterior primer 100 percent acrylic). Top coats can be less than 0.07 pounds per gallon (8 grams per liter) (e.g., Lifemaster 2000-series). This latter measure would reduce these VOC emissions by more than 70 percent.

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Response to DOJ Comment Letter dated June 19, 2020

June 23, 2020

AQ-10: The Project shall designate preferential parking for vanpools.

AQ-11: The Project shall be required to post both bus and MetroLink schedules in conspicuous areas.

AQ-12: The Project shall be requested to configure its operating schedule around the MetroLink schedule to the extent reasonably feasible.

AQ-13: The Project shall be required to incorporate light colored roofing materials.

It is noted that the equity concerns identified by the commenter are not specifically related to the Draft EIR's environmental analysis. Therefore, no further response is warranted pursuant to CEQA Guidelines Section 15088(a).

The DOJ's position that the City Council should withhold approval of the Project until the abovementioned issues are resolved has been communicated to City Councilmembers prior to the June 23, 2020 hearing, and the City Council will consider these concerns during Project deliberations. If you require any additional information or have any questions, please do not hesitate to contact me at (909) 350-7625 or via e-mail at [ZAbubakar@fontana.org](mailto:ZAbubakar@fontana.org).

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT  
Planning Division



Zai AbuBakar  
Director of Community Development

cc: Mayor and City Council Members  
Mark Denny, City Manager  
Ruben Duran, City Attorney  
Orlando Hernandez, Planning Manager  
DiTanyon Johnson, Senior Planner

Enclosure: Department of Justice Comment Letter, dated June 19, 2020

**Response to Comment Letter C - California Department of Justice, Rob Swanson**

- C1** Comment noted. This comment is introductory in nature.
- C2** The zoning for the parcels within the Project boundaries and the surrounding areas have been Light and General Industrial or General Commercial since April of 1989. As such, the residences previously located on the Project site and the surrounding uses are considered non-conforming uses.

The proposed Project is consistent with the City’s General Plan Land Use Designations and the Zoning Designations. The Project site’s industrial land use category designations are I-G: General Industrial and I-L: Light Industrial. I-G: General Industrial and I-L: Light Industrial (0.1 to 0.6 FAR) allow for uses such as manufacturing, warehousing, fabrication, assembly, processing, trucking, equipment, and automobile and truck sales and services.

General uses permitted (either by right, minor use permit, or conditional use permit) under the industrial zoning districts (Light Industrial [M-1] and General Industrial [M-2]) include manufacturing, food processing, service and repair, storage and open yards, warehousing uses, retail sales, restaurants and bars, administrative and professional offices, educational, and miscellaneous uses.

- C3** The additional air quality and greenhouse gas emissions mitigation measures from the City’s General Plan EIR have been added to the Project EIR. Refer to Section 3.0, Errata to the Draft EIR, for the additional mitigation measures.
- C4** While this is just an estimate, the Project will likely go before Planning Commission for approval in the Winter of 2021.
- C5** The City is aware of the Warehouse Best Management Practices and Mitigation Measures document released by the Attorney General’s Office in March 2021 and has incorporated all of the proposed mitigation measures, to the extent feasible and applicable to the project. Some of the best practices listed within the AG Best Practices Document were unable to be included as mitigation measures because they do not allow for proper enforceability by the City/applicable jurisdiction in accordance with current CEQA requirements. All of the feasible mitigation measures from the Warehouse Best Management Practices and Mitigation Measures document are described in the below **Table 2.0-2, Feasible Mitigation Measures**, along with the method in which they were incorporated into the Project.

**Table 2.0-2: Feasible Mitigation Measures**

Mitigation Measure	Method of Project Incorporation
<b><u>Siting &amp; Design:</u></b>	
AG BEST PRACTICE: Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.	See <b><u>MM AQ-14</u></b>

Mitigation Measure	Method of Project Incorporation
<b><u>AQ &amp; GHG Impacts from Construction:</u></b>	
AG BEST PRACTICE: Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.	See <b><u>MM AQ-6</u></b>
The Project's contractors shall prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day. The Project's general contractor shall designate an officer to monitor the construction equipment operators on-site for compliance.	<b><u>MM AQ-15</u></b>
AG BEST PRACTICE: Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.	See <b><u>MM AQ-6</u></b>
The Project's contractors shall be prohibited from grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the Project area.	<b><u>MM AQ-16</u></b>
The Project's contractors shall be prohibited from idling heavy equipment for more than five minutes. The Project's general contractor shall designate an officer to monitor the construction equipment operators on-site for compliance.	<b><u>MM AQ-17</u></b>
AG BEST PRACTICE: Keeping on-site and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.	See <b><u>MM AQ-6</u></b>
The Project's contractors shall conduct an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts. Documentation verifying said inspection occurred shall be available on-site at any time during construction for the City's inspection.	<b><u>MM AQ-18</u></b>
The Project shall be required to use paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L. All specifications, plans, and or details necessary to verify	<b><u>MM AQ-19</u></b>

Mitigation Measure	Method of Project Incorporation
compliance shall be included in the Project's applicable construction drawings.	
The Project Applicant shall be required to provide information on transit and ridesharing programs to construction employees, which shall be made available in the construction trailer at all times.	<b><u>MM AQ-20</u></b>
<b><u>AQ &amp; GHG Impacts from Operation:</u></b>	
AG BEST PRACTICE: Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.	See <b><u>MM AQ-5</u></b>
The Project's Operators shall require trucks on-site to be limited to five (5) minutes of idle time, and turned off when not in use. The Operator shall designate an officer to monitor trucks on-site for compliance.	<b><u>MM AQ-21</u></b>
Prior to issuance of Certificate of Occupancy, the Project shall be required to post both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to (1) CARB, (2) SCAQMD, and (3) the building manager, to the City's reasonable satisfaction.	<b><u>MM AQ-22</u></b>
Prior to issuance of Certificate of Occupancy, the Project shall be required to construct all ninety-eight (98) dock doors as "EV ready" through installation of the required conduit and junction boxes.	<b><u>MM AQ-23</u></b>
Prior to issuance of Certificate of Occupancy, the Project shall be required to construct twenty-five (25%) of all vehicle parking stalls on-site as "EV ready" through installation of the required conduit and related infrastructure.	<b><u>MM AQ-24</u></b>
Prior to issuance of Certificate of Occupancy, the Project shall be required to install a 225 kW DC solar photovoltaic system (i.e., sufficient to power the anticipated initial improvements for a 705,735 square foot warehouse).	<b><u>MM AQ-25</u></b>
AG BEST PRACTICE: Posting signs at every truck exit driveway providing directional information to the truck route.	See <b><u>MM AQ-14</u></b>
AG BEST PRACTICE: Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.	See <b><u>MM AQ-4</u></b>

Mitigation Measure	Method of Project Incorporation
<b><u>Traffic Impacts:</u></b>	
AG BEST PRACTICE: Installing signs in residential areas noting that truck and employee parking is prohibited.	See <b><u>MM AQ-14</u></b>
AG BEST PRACTICE: Constructing new or improved transit stops, sidewalks, bicycle lanes, and crosswalks, with special attention to ensuring safe routes to schools.	See DEIR Page 3.0-5 and 3.0-6.
AG BEST PRACTICE: Designating areas for employee pickup and drop-off.	See <b><u>MM AQ-1</u></b>
AG BEST PRACTICE: Implementing traffic control and safety measures, such as speed bumps, speed limits, or new traffic signs or signals	See DEIR Page 3.0-5 and 3.0-6.
AG BEST PRACTICE: The Project shall be required to construct roadway improvements to improve traffic flow.	See DEIR Page 3.0-5 and 3.0-6.
<b><u>Miscellaneous:</u></b>	
The Project Applicant or Operator shall appoint a compliance officer who is responsible for implementing all mitigation measures, and providing contact information for the compliance officer to the City, to be updated annually.	<b><u>MM AQ-26</u></b>
The Project's contractors shall be required to sweep the surrounding streets on a daily basis during construction to remove any construction-related debris and dirt.	<b><u>MM AQ-27</u></b>
Prior to issuance of Certificate of Occupancy, the Project shall be required to construct cool pavement and/or portland cement concrete (PCC) for site paving in order to reduce heat island effects.	<b><u>MM AQ-28</u></b>
Prior to issuance of Certificate of Occupancy, the Project shall be required to install air filtration in the warehouse facility, with a minimum of 1 air change per hour, in order to promote worker well-being.	<b><u>MM AQ-29</u></b>

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Comment Letter D - Fontana Unified School District

*Timothy DeLand, Director of Facilities Planning, Design & Construction*

Comment Letter: D



# Fontana Unified School District

Every Student Successful | Engaging Schools | Empowered Communities

9680 Citrus Avenue • P. O. Box 5090 • Fontana • California 92334-5090 • (909) 357-5000 • www.fusd.net

May 20, 2021

City of Fontana  
Community Development, Planning Division  
Paul Gonzales, Senior Planner (via pgonzales@fontana.org)  
8353 Sierra Avenue  
Fontana, CA 92335

**Project:** Proposed Sierra Business Center Project, NE corner Cypress Ave. and Slover Ave.  
705,735 sq.ft. building (MCN 20-054) – 32 net acres

This comment letter is in response to the Notice of Public Hearing and Notice of Availability of a Draft Environmental Impact Report (DEIR) for the proposed warehouse project located at the northeast corner of Cypress Avenue and Slover Avenue. The warehouse building is approximately 705,735 square feet with approximately 4,500 square feet of office space, vehicle and trailer parking, loading docks and on-site and off-site improvements.

The project is located less than 0.5 mile north of Citrus Continuation and Jurupa Hills High Schools. The proximity to these schools requires further scrutiny of the project's potential negative impacts – specifically with regards to the potential risk to students and/or if the project is within a close enough proximity that it may create health or safety conditions for students. Citrus Continuation High School and Jurupa Hills High School are located approximately 0.43 miles from the proposed warehouse. Due to the proximity of this sizeable warehouse project, it is important that the District and the City continue to work together to ensure the safety and well-being of Fontana students in the area.

With regards to the DEIR, the sections of interest include Noise, Traffic, Air Quality, Health Risk, Public Resources (schools) and the overall impact the warehouse may have on Fontana students. The aforementioned sections, with the exception of the traffic analysis and air quality assessment, concludes no mitigation required/less than significant impacts. The Air Quality Assessment, Appendix B, lists mitigation plans to reduce potential impacts exceeding air quality thresholds; however, some areas contributing to hazardous air emissions would remain significant and unavoidable which according to the study is beyond the project applicant or City's jurisdiction. The Traffic Impact Assessment, Appendix L, lists mitigation plans to reduce traffic congestion and levels of service to less than significant. According to the traffic study, plans to install traffic signals and re-optimize signal timing at intersections are suggested to reduce unacceptable levels of service to acceptable levels.

The District understands federal, state, and local regulations must be met as a component of the planning process, department oversight and review for individual project approvals. The District's concern regarding the project is its proximity to the high schools and the additional truck traffic that will be generated from this and all future planned

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**BOARD OF EDUCATION**

Joe Armendarez  
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**SUPERINTENDENT**

Randal S. Bassett

Telecommunications Device for the Deaf (909) 357-5018

City of Fontana, Planning Division  
Proposed Sierra Business Center Project  
May 20, 2021  
Page 2

warehouse projects along Slover Avenue. It is the District's view that future industrial growth surrounding the two high schools will impact students' learning environment. The volume of truck traffic is only expected to increase in the area, which will create unsafe and unhealthy conditions for students walking and attending these high schools. Major intersections in the traffic analysis include Citrus at Slover, Juniper at Slover and Cypress at Slover Avenues. These are all major student corridors.

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The District is concerned not only with rapid development of industrial warehouse buildings around school sites, but the issue of cumulative and existing conditions vs. individual projects that are approved concurrently that may have a significant impact on Fontana students, since concurrent projects are not acknowledged in the individual project studies themselves, and are not considered in the baselines when determining measurable impacts. As the District has stated before in previous comment letters, future warehouses along Slover Avenue increase the potential risk to students traveling to and from school. Therefore, the District requests that the City continually monitor the potential traffic impacts at the major intersections and nearby corridors that the Fontana students utilize.

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Thank you for the opportunity to comment. Please contact me at (909) 357-7528 extension 29456 if you require further clarification in this matter.

Sincerely,



Timothy DeLand  
Director, Facilities Planning, Design & Construction

**Response to Comment Letter D - Fontana Unified School District, Timothy DeLand**

**D1** Comment noted. This comment is introductory in nature. With respect to the statement regarding the Project’s potential to “create health or safety conditions for students.” While the comment does not point to any substantial evidence of a significant impact please note the added air quality **MM AQ-5** through **AQ-41** included within the Final EIR (“Section 3.2 - Changes to the Draft EIR” within Section 3.0– Errata to the Draft EIR) that have been added to the EIR. The majority of these added mitigation measures would address health and safety conditions for students from an air quality and transportation safety perspective. Further, as part of the Project, the Applicant will signalize the intersection of Slover Avenue & Juniper Avenue. The signalization of this intersection will include improvements for controlled crossings for pedestrians (including students) in accordance with current City standards to maximize safety and accessibility (see DEIR Page 3.0-5, Off-site Improvements: Juniper Avenue).

**D2** The comment summarizes the mitigation measures and impact determinations for Air Quality and Traffic/Transportation. The comment does not identify any deficiencies or concerns with the determinations. Potential health and safety impacts, including health risks associated with emissions and traffic safety issues, were fully analyzed in the Draft EIR. The Draft EIR concluded that implementation of the proposed Project would result in significant and unavoidable impacts despite mitigation in Air Quality (Impact 4.2-1, Impact 4.2-2, and Cumulative Impacts), Greenhouse Gas Emissions (Impact 4.7-1, Impact 4.7-2, and Cumulative Impacts), and Transportation and Traffic (Impact 4.13-2). Refer to Chapter 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, and Chapter 4.13, *Transportation and Traffic* for additional information.

**D3** Comment noted. The Traffic Impact Analysis (refer to Appendix L, Traffic Impact Analysis of the Draft EIR) fully analyzes potential traffic generated by the proposed Project and its impact on all surrounding intersections. As noted in Chapter 4.13, *Transportation and Traffic*, the Project would result in a significant and unavoidable impact as it pertains to conflict or inconsistency with CEQA Guidelines Section 15064.3, subdivision (b) (Impact 4.13-2). However, as documented in the Draft EIR, all other transportation-related impacts would be reduced to a level of less than significant. Furthermore, the Project would not cause a cumulatively considerable transportation impact. Refer to page 4.13-23 of the Draft EIR for additional information.

Future development facilitated by the Project, in conjunction with cumulative development in the cumulative development sites, would increase development in previously developed areas and could result in transportation impacts. The proposed Project is consistent with the City’s General Plan land use designation and zoning designation, and as such, was analyzed as part of the City’s General Plan EIR, including cumulative impacts of the Project. Additionally, since the Project is consistent with the General Plan, the Project’s payment of Development Impact Fees (DIF) would mitigate cumulative traffic impacts. The determination of project fees for traffic impacts is based on the need to mitigate project-related impacts, and the need to mitigate cumulative project impacts through the implementation of the General Plan Traffic and Circulation Element. The

proposed Project is required to pay all DIF fees required by the City, and as such, this would include cumulative traffic impacts.

- D4** Refer to **Response D3**, above for a discussion of cumulative traffic impacts. Additionally, the City is committed to monitoring traffic impacts near major intersections and nearby paths of travel that students would utilize.

**Comment Letter E - Blum Collins, LP, Attorney at Law, Gary Ho**

***On behalf of: Golden State Environmental Justice Alliance (GSEJA)***

Comment Letter: E

**BLUM COLLINS, LLP**  
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June 17, 2021

Paul Gonzales  
Senior Planner  
City of Fontana  
8353 Sierra Avenue  
Fontana, CA 92335

Re: *Fontana Sierra Business Center Project (SCH No. 2020100256)*

Dear Mr. Gonzales:

On behalf of the Golden State Environmental Justice Alliance (“GSEJA”), we hereby submit comments under the California Environmental Quality Act (“CEQA”) on the Draft Environmental Impact Report (“DEIR”) for the Fontana Sierra Business Center Project (“Project”).

GSEJA believes that the Project’s air quality, health risk, and greenhouse gas impacts are not adequately evaluated by the DEIR. See the comments of Soil Water Air Protection Enterprise (“SWAPE”) which we are submitting herewith and incorporating by reference.

For the foregoing reasons, GSEJA believes the DEIR is flawed and an amended DEIR must be prepared for the proposed project and recirculated for public review. GSEJA requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance, P.O. Box 79222, Corona, CA 92877.

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Sincerely,



Gary Ho  
Blum|Collins, LLP



Technical Consultation, Data Analysis and  
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June 17, 2021

Gary Ho  
Blum Collins LLP  
707 Wilshire Blvd, Ste. 4880  
Los Angeles, CA 90017

**Subject: Comments on Fontana Sierra Business Center Project (SCH No. 2020100256)**

Dear Mr. Ho,

We have reviewed the May 2021 Draft Environmental Impact Report (“DEIR”) for the Fontana Sierra Business Center Project (“Project”) located in the City of Fontana (“City”). The Project proposes to construct a 705,735-SF warehouse building, including 4,500-SF of office space, loading dock doors, landscaping, on-site improvements, and off-site improvements, as well as 330 parking stalls and 179 trailer stalls, on the 32-acre Project site.

Our review concludes that the DEIR fails to adequately evaluate the Project’s air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment.

### Air Quality

#### Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR’s air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. 4.2-11).<sup>1</sup> CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (“CEQA”) requires that such changes

<sup>1</sup> CAPCOA (November 2017) CalEEMod User’s Guide, [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4).

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be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

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When reviewing the Project's CalEEMod output files, provided in the Air Quality Studies ("AQ Study") as Appendix B to the DEIR, we found that several model inputs were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. As a result, an updated EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

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*Unsubstantiated Changes to Individual Construction Phase Lengths*

Review of the CalEEMod output files demonstrates that the "Sierra Business Center - HC Sort Facility" model includes several changes to the default individual construction phase lengths (see excerpt below) (Appendix B, pp. 40, 115).

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	45.00	23.00
tblConstructionPhase	NumDays	500.00	150.00
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	35.00	47.00

As a result, the model includes a construction schedule as follows (Appendix B, pp. 91, 166):

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Site Preparation	Site Preparation	9/1/2021	9/6/2021	5	4
2	Grading	Grading	9/7/2021	10/7/2021	5	23
3	Building Construction	Building Construction	10/8/2021	5/5/2022	5	150
4	Paving	Paving	5/6/2022	5/25/2022	5	14
5	Architectural Coating	Architectural Coating	5/26/2022	7/30/2022	5	47

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As you can see in the excerpts above, the site preparation phase was decreased by 80%, from the default value of 20 to 4 days; the grading phase was decreased by approximately 49%, from the default value of 45 to 23 days; the building construction phase was decreased by 70%, from the default value of 500 to 150 days; the paving phase was decreased by 60%, from the default value of 35 to 14 days; and the architectural coating phase was increased by approximately 34%, from the default value of 35 to 47 days. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be



justified.<sup>2</sup> According to the “User Entered Comments and Non-Default Data” table, the justification provided for these changes is: “Construction Schedule” (Appendix B, pp. 39, 114). Furthermore, regarding the Project’s anticipated construction schedule, the DEIR states:

“The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a duration of approximately 12 months, commencing in the second half of 2021; the facility would be operational in the second half of 2022” (p. 3.0-5).

However, these changes remain unsupported. While the DEIR indicates the overall length of the construction period would be approximately 12 months, the DEIR fails to mention or provide the revised *individual construction phase lengths*.

These unsubstantiated changes present an issue, as they disproportionately spread out construction emissions over a longer period of time for some phases, but not others. According to the CalEEMod User’s Guide, each construction phase is associated with different emissions activities (see excerpt below).<sup>3</sup>

*Demolition* involves removing buildings or structures.

*Site Preparation* involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.

*Grading* involves the cut and fill of land to ensure that the proper base and slope is created for the foundation.

*Building Construction* involves the construction of the foundation, structures and buildings.

*Architectural Coating* involves the application of coatings to both the interior and exterior of buildings or structures, the painting of parking lot or parking garage striping, associated signage and curbs, and the painting of the walls or other components such as stair railings inside parking structures.

*Paving* involves the laying of concrete or asphalt such as in parking lots, roads, driveways, or sidewalks.

As such, by disproportionately altering individual construction phase lengths without proper justification, the model’s calculations are altered and underestimate emissions. Thus, by including unsubstantiated changes to the default individual construction phase lengths, the model may underestimate the Project’s construction-related emissions and should not be relied upon to determine Project significance.

#### *Unsubstantiated Reductions to Architectural Coating Emission Factors*

Review of the CalEEMod output files demonstrates that the “Sierra Business Center - HC Sort Facility” model includes several reductions to the default architectural coating emission factors (see excerpt below) (Appendix B, pp. 39, 114).

<sup>2</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

<sup>3</sup> “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 31.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00

As you can see in the excerpt above, the nonresidential exterior and interior, as well as parking, architectural coating emission factors were each reduced from the default value of 100- to 50-grams per liter (“g/L”). As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>4</sup> According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is: “RULE 1113” (Appendix B, pp. 39, 114). Furthermore, the DEIR describes Rule 1113, stating:

“This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories” (p. 4.2-9).

However, these changes remain unsupported for two reasons.

First, the DEIR fails to specify the reactive organic gas/volatile organic compound (“ROG”/“VOC”) content limits that would be required. As a result, we cannot verify the revised architectural coating emission factors.

Second, we cannot verify the accuracy of the revised architectural coating emission factors based on SCAQMD Rule 1113 alone. The SCAQMD Rule 1113 Table of Standards provides the required VOC limits (grams of VOC per liter of coating) for 57 different coating categories (e.g., Floor coatings, Faux Finishing Coatings, Fire-Proofing Coatings, Cement Coatings, Multi-Color Coatings, Primers, Sealers, Recycled Coatings, Shellac, Stains, Traffic Coatings, Waterproofing Sealers, Wood Coatings, etc.).<sup>5</sup> The VOC limits for each coating varies from a minimum value of 50 g/L to a maximum value of 730 g/L. As such, we cannot verify that SCAQMD Rule 1113 substantiates a reduction to the default coating values without more information regarding what category of coating will be used. Absent additional information regarding which categories of coating would be used for Project construction, we cannot compare the revised emission factors with the SCAQMD Rule 1113 requirements for those categories. The DEIR and associated documents fail to mention what type of coating will be used, and as such, we are unable to verify the revised emission factors assumed in the model.

These unsubstantiated reductions present an issue, as CalEEMod uses the architectural coating emission factors to calculate the Project’s ROG/VOC emissions associated with application rates and coating content.<sup>6</sup> Thus, by including unsubstantiated reductions to the default architectural coating emission

<sup>4</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

<sup>5</sup> SCAQMD Rule 1113 Advisory Notice.” SCAQMD, February 2016, available at: <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=24>, p. 1113-14, Table of Standards 1.

<sup>6</sup> CalEEMod User Guide, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 35, 40.

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factors, the model may underestimate the Project’s ROG/VOC emissions and should not be relied upon to determine Project significance.

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*Unsubstantiated Changes to Operational Vehicle Emission Factors*

Review of the CalEEMod output files demonstrates that the “Sierra Business Center - HC Sort Facility” model includes several changes to the default operational vehicle emission factors (Appendix B, pp. 41-86, 116-161). As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>7</sup> According to the “User Entered Comments and Non-Default Data” table, the justification provided for these changes is: “EMFAC2017 - with safe rule” (Appendix B, pp. 39, 114). Furthermore, regarding the operational vehicle emission factors, the DEIR states:

“Vehicle DPM emissions were estimated using emission factors for coarse particulate matter less than 10 microns in diameter (PM10) generated with the EMFAC developed by CARB” (p. 4.2-23).

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However, the revised operational vehicle emission factors remain unsupported, as EMFAC refers to an *entire database*, not a specific set of vehicle emission factors.<sup>8</sup> Thus, the DEIR and associated documents should have specified which input parameters were used to obtain the vehicle emission factors inputted in the model or provided the revised vehicle emission factors themselves. Absent additional information regarding the specific input parameters used to obtain the revised emission factors, we cannot verify the changes.

These unsubstantiated changes present an issue, as CalEEMod uses vehicle emission factors to calculate the Project’s operational emissions associated with on-road vehicles.<sup>9</sup> Thus, by including several unsubstantiated changes to the default operational vehicle emission factors, the model may underestimate the Project’s mobile-source operational emissions and should not be relied upon to determine Project significance.

*Unsubstantiated Change to Operational Off-Road Equipment Fuel Type*

Review of the Project’s CalEEMod output files demonstrates that the “Sierra Business Center - HC Sort Facility” model assumes that the Project’s operational off-road equipment fuel type will be compressed natural gas (“CNG”), as opposed to the default diesel fuel type (see excerpt below) (Appendix B, pp. 41, 116).

Table Name	Column Name	Default Value	New Value
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical

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As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>10</sup> According to the User Entered Comments and Non-Default Data table, the justification

<sup>7</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9  
<sup>8</sup> “EMFAC2017 Web Database.” CARB, available at: <https://arb.ca.gov/emfac/2017/>.  
<sup>9</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 35.  
<sup>10</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9



provided for this change is: “anticipated equipment” (Appendix B, pp. 39, 114). Furthermore, the DEIR states:

“Because the Project is a speculative warehouse development and the final end user is not known, to be conservative it was assumed that the Project would operate four electric-powered forklifts for eight hours per day” (p. 4.2-15).

However, the assumption that the Project’s operational off-road equipment fuel type would be CNG as opposed to the default diesel fuel type is not conservative, as the DEIR suggests. As the DEIR and associated documents fail to provide an adequate source or explanation for the assumption that the Project’s operational off-road equipment fuel type would be CNG as opposed to the default diesel fuel type, we cannot verify this change. By including an unsubstantiated change to the default operational off-road construction equipment fuel type, the model may underestimate the Project’s off-road operational emissions and should not be relied upon to determine Project significance.

*Underestimated Number of Operational Forklifts*

The SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results estimates that high cube warehouses require an average of 0.12 forklifts per 1,000-SF of building area.<sup>11</sup> As such, the DEIR should have included 85 forklifts to account for the Project’s operational off-road equipment.<sup>12</sup> However, review of the CalEEMod output files demonstrates that the “Sierra Business Center - HC Sort Facility” model includes only 4 forklifts (see excerpt below) (Appendix B, pp. 112, 187).

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	4	8.00	260	80	0.20	Electrical

As you can see in the excerpt above, the number of operational forklifts is underestimated 81 pieces in the model. As such, the model fails to include the total number of anticipated forklifts required for Project operation.

These underestimations present an issue, as CalEEMod uses operational off-road equipment to calculate the emissions associated with the Project’s area-source operational emissions.<sup>13</sup> Thus, by including an underestimated number of forklifts, the model underestimates the Project’s area-source operational emissions and should not be relied upon to determine Project significance.

*Incorrect Application of Construction-Related Mitigation Measures*

Review of the CalEEMod output files demonstrates that the “Sierra Business Center - HC Sort Facility” model includes the following construction-related mitigation measures (see excerpt below) (Appendix B, pp. 93, 168):

<sup>11</sup> “SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results.” SCAQMD, June 2014, available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/business-survey-summary.pdf>, p. 9.

<sup>12</sup> Calculated: 705.735 TSF \* 0.12 forklifts per TSF = 84.7 forklifts.

<sup>13</sup> “CalEEMod User Guide.” CAPCOA, November 2017, available at: <http://www.caleemod.com/>, p. 42.

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### 3.1 Mitigation Measures Construction

Water Exposed Area  
 Water Unpaved Roads  
 Reduce Vehicle Speed on Unpaved Roads  
 Clean Paved Roads

cont'd  
 14

Furthermore, the model includes a 9% clean paved road reduction, an unpaved road moisture content of 12%, and a reduced vehicle speed of 15 miles per hour (“MPH”) (see excerpt below) (Appendix B, pp. 39, 114).

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>14</sup> According to the “User Entered Comments and Non-Default Data” table, the justification provided for the inclusion of construction-related mitigation measures is: “Rule 403” (Appendix B, pp. 39, 114). Furthermore, the DEIR describes Rule 403, stating:

“This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM10 suppression techniques are summarized below.

- a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface” (p. 4.2-9).

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<sup>14</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

However, inclusion of the above-mentioned construction-related mitigation measures remain unsupported for three reasons.

First, as demonstrated by the DEIR, SCAQMD Rule 403 does not require a 9% clean paved road reduction, an unpaved road moisture content of 12%, or a reduced vehicle speed of 15 MPH, as assumed by the model.

Second, the inclusion of the construction-related mitigation measures, based on the Project's compliance with SCAQMD Rule 403, is unsupported. According to the Association of Environmental Professionals ("AEP") *CEQA Portal Topic Paper* on mitigation measures:

*"By definition, mitigation measures are not part of the original project design. Rather, mitigation measures are actions taken by the lead agency to reduce impacts to the environment resulting from the original project design. Mitigation measures are identified by the lead agency after the project has undergone environmental review and are above-and-beyond existing laws, regulations, and requirements that would reduce environmental impacts" (emphasis added).<sup>15</sup>*

As you can see in the excerpt above, mitigation measures "are not part of the original project design" and are intended to go "above-and-beyond" existing regulatory requirements. As such, the inclusion of these measures, based solely on SCAQMD Rule 403, is unsubstantiated.

Third, according to the above-mentioned AEP report:

*"While not "mitigation", a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact" (emphasis added).<sup>16</sup>*

As you can see in the excerpts above, project design features that are not formally included as mitigation measures may be eliminated from the Project's design altogether. Thus, as the above-mentioned construction-related mitigation measures are formally included as mitigation measures, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site. By including several construction-related mitigation measures without properly committing to their implementation, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

<sup>15</sup> "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, available at: <https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 5.

<sup>16</sup> "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, available at: <https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 6.



*Incorrect Application of Operational Mitigation Measures*

Review of CalEEMod output files demonstrates that the “Sierra Business Center - HC Sort Facility” model includes the following mobile-, energy-, and water-related operational mitigation measures (see excerpt below) (Appendix B, pp. 105, 107, 111, 180, 182, 186).

Mobile-Related:

**4.1 Mitigation Measures Mobile**

Implement Trip Reduction Program

**Transit Subsidy**

Market Commute Trip Reduction Option

Employee Vanpool/Shuttle

Provide Ride Sharing Program

16

Energy-Related:

**5.1 Mitigation Measures Energy**

**Exceed Title 24**

17

Water-Related:

**7.1 Mitigation Measures Water**

**Install Low Flow Bathroom Faucet**

**Install Low Flow Kitchen Faucet**

**Install Low Flow Toilet**

**Install Low Flow Shower**

**Use Water Efficient Irrigation System**

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As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>17</sup> According to the “User Entered Comments and Non-Default Data” table, the justifications provided for the inclusion of the energy- and water-related mitigation measures are:

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<sup>17</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

- “CEC - 2019 standards will reduce nonresidential energy use by 30% over 2016 standard, due mainly to lighting upgrades”; and
- “comply with current building code” (Appendix B, pp. 39, 114).

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However, no justification was provided by the “User Entered Comments and Non-Default Data” table for the inclusion of the mobile-related operational mitigation measures. Furthermore, the DEIR includes mitigation measure (“MM”) AQ-1, which states:

“Prior to issuance of occupancy permits, the Project operator shall prepare and submit a Transportation Demand Management (TDM) program detailing strategies that would reduce the use of single-occupant vehicles by employees by increasing the number of trips by walking, bicycle, carpool, vanpool and transit. The TDM shall include, but is not limited to the following:

- Provide a transportation information center and on-site TDM coordinator to educate residents, employers, employees, and visitors of surrounding transportation options;
- Promote bicycling and walking through design features such as showers for employees, self-service bicycle repair area, etc. around the project site.
- Provide on-site car share amenities for employees who make only occasional use of a vehicle, as well as others who would like occasional access to a vehicle of a different type than they use day-to-day;
- Promote and support carpool/vanpool/rideshare use through parking incentives and administrative support, such as ride-matching service; and
- Incorporate incentives for using alternative travel modes, such as preferential load/unload areas or convenient designated parking spaces for carpool/vanpool users” (p. 1.0-8).

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However, these changes remain unsupported for two reasons.

First, MM AQ-1 fails to require the Project to provide a transit subsidy. As a result, the inclusion of the “Transit Subsidy” mitigation measure in the Project’s modeling is unsupported.

Second, the inclusion of the above-mentioned energy- and water-related operational mitigation measures, based on the Project’s purported compliance with current building codes and standards, is unsupported because these design features are not formally included as mitigation measures. As previously discussed, according to AEP guidance:

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“While not “mitigation”, a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project



that could eliminate one or more of the design features without understanding the resulting environmental impact" (emphasis added).<sup>18</sup>

As you can see in the excerpts above, design features that are not formally included as mitigation measures may be eliminated from the Project's design altogether. Thus, as the above-mentioned energy- and water-related operational measures are not formally included as mitigation measures, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site. As a result, the inclusion of the above-mentioned operational mitigation measures in the model is incorrect. By including several operational mitigation measures without properly committing to their implementation, the model may underestimate the Project's operational emissions and should not be relied upon to determine Project significance.

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### Failure to Implement All Feasible Mitigation to Reduce Emissions

As discussed above, the DEIR's air quality analysis relies upon an incorrect and unsubstantiated air model to determine the significance of the Project's criteria air pollutant emissions. Despite relying upon an incorrect and unsubstantiated air model, the DEIR concludes that the Project's operational NO<sub>x</sub> emissions would be significant-and-unavoidable (p. 4.2-16). However, while we agree that the Project would result in significant operational criteria air pollutant emissions, the DEIR's conclusion that these impacts are "significant and unavoidable" is incorrect. According to CEQA Guidelines § 15096(g)(2):

"When an EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment."

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As you can see, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Here, while the DEIR includes Mitigation Measure ("MM") AQ-1 through MM-AQ-4, the DEIR fails to implement all feasible mitigation (p. 1.0-8 – 1.0-9). Therefore, the DEIR's conclusion that the Project's air quality impacts are significant and unavoidable is unsubstantiated. To reduce the Project's air quality impacts to the maximum extent possible, additional feasible mitigation measures should be incorporated, such as those suggested in the section of this letter titled "Feasible Mitigation Measures Available to Reduce Emissions." Thus, the Project should not be approved until an updated EIR is prepared, including updated, accurate air modeling, as well as incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

### Updated Analysis Indicates a Potentially Significant Air Quality Impact

In an effort to more accurately estimate the Project's construction-related and operational emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the DEIR. In our updated model, we omitted the unsubstantiated changes to the individual construction phase lengths, architectural coating emission factors, operational vehicle emission factors, and operational off-

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<sup>18</sup> "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, available at: <https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 6.

road equipment fuel type; included the full number of potential forklifts; and excluded the unsubstantiated construction-related and operational mitigation measures.

Our updated analysis estimates that the Project’s construction-related ROG emissions exceed the applicable SCAQMD threshold of 75 pounds per day (“lbs/day”) (see table below).<sup>19</sup>

Model	ROG
DEIR Construction	71.96
SWAPE Construction	478.77
% Increase	565%
<b>SCAQMD Regional Threshold (lbs/day)</b>	<b>75</b>
<b>Threshold Exceeded?</b>	<b>Yes</b>

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As you can see in the excerpt above, the Project’s construction-related ROG emissions, as estimated by SWAPE, increase by approximately 565% and exceed the applicable SCAQMD significance threshold. Thus, our model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the DEIR. As a result, an updated EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the surrounding environment.

#### Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The DEIR concludes that the proposed Project would result in a less-than-significant health risk impact based on quantified construction-related and mobile-source health risk assessments (“HRA(s)”) (p. 4.2-22 - 4.2-24). Specifically, the DEIR estimates that the Project would result in construction-related and mobile-source operational cancer risks of 8.32- and 4.82-in one million, respectively, each of which would not exceed the SCAQMD threshold of 10 in one million (see excerpts below) (p. 4.2-22, Table 4.2-12; p. 4.2-24, Table 4.2-13).

**Table 4.2-12: Construction Risk Assessment Results**

Exposure Scenario	Pollutant Concentration (µg/m³)	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Construction	0.044	8.32	0.009	0.063
Threshold	N/A	10	1.0	1.0
Exceed SCAQMD Threshold?	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Appendix B for model data.

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<sup>19</sup> “South Coast AQMD Air Quality Significance Thresholds.” SCAQMD, April 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

**Table 4.2-13: Operational Risk Assessment Results**

Exposure Scenario	Pollutant Concentration (µg/m <sup>3</sup> )	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Operations	0.00601	4.82	0.0012	0.064
Threshold	N/A	10	1.0	1.0
Exceed SCAQMD Threshold?	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Appendix B for model data.

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However, the DEIR’s evaluation of the Project’s potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for two reasons.

First, the DEIR’s construction HRA is incorrect, as it relies upon exhaust PM<sub>10</sub> emissions estimates from a flawed air model (Appendix H, p. 16). As previously discussed, when we reviewed the Project’s CalEEMod output files, provided in the AQ Study as Appendix B to the DEIR, we found that several of the values inputted into the model are not consistent with information disclosed in the DEIR and associated documents. As a result, the HRA utilizes an underestimated DPM concentration to calculate the health risk associated with Project construction. As such, the DEIR’s construction HRA underestimates the Project’s construction-related cancer risk and should not be relied upon to determine Project significance.

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Second, the State of California Department of Justice recommends the preparation of a quantitative HRA pursuant to the Office of Environmental Health Hazard Assessment (“OEHHA”), the organization responsible for providing guidance on conducting HRAs in California, as well as local air district guidelines.<sup>20</sup> OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015. According to OEHHA guidance, “the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location”.<sup>21</sup> However, while the DEIR includes an HRA evaluating the health risk impacts to nearby, existing receptors as a result of Project construction, the HRA fails to evaluate the cumulative lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together. Thus, the DEIR’s HRA fails to sum each age bin to evaluate the total cancer risk over the course of the Project’s total construction and operation. This recommendation reflects the most recent state health risk policies, and as such, we recommend that an updated analysis be prepared to quantify the entirety of the Project’s construction and operational health risks and then sum them to compare to the SCAQMD threshold of 10 in one million.<sup>22</sup>

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<sup>20</sup> “Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act.” State of California Department of Justice, available at: <https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf>, p. 6.

<sup>21</sup> “Guidance Manual for preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf> p. 8-4

<sup>22</sup> “South Coast AQMD Air Quality Significance Thresholds.” SCAQMD, April 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.



### Failure to Identify a Potentially Significant Health Risk Impact

As previously described, the DEIR estimates that the Project would result in construction-related and mobile-source operational cancer risks of 8.32- and 4.82-in one million, respectively, each of which would not exceed the SCAQMD threshold of 10 in one million when evaluated in isolation (p. 4.2-22, 4.2-24). However, as previously discussed, the DEIR should have evaluated the *cumulative* construction-related and operational cancer risk resulting from the Project. In order to correctly evaluate the Project’s health risk impact, we summed the DEIR’s construction-related and operational cancer risk estimates and found that the resulting cancer risk exceeds the SCAQMD threshold of 10 in one million (see table below).

DEIR Cumulative Cancer Risk	
HRA	Cancer Risk (in one million)
Construction	8.32
Mobile-Source Operations	4.82
<b>Total</b>	<b>13.14</b>
Threshold	10
<b>Exceed?</b>	<b>Yes</b>

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As demonstrated in the table above, the resulting cumulative cancer risk estimate exceeds the SCAQMD threshold of 10 in one million, thus indicating a potentially significant health risk impact not previously identified or addressed by the DEIR. As such, the DEIR is required under CEQA to implement all feasible mitigation to reduce impacts to a less-than-significant level. According to CEQA Guidelines § 15096(g)(2):

“When an EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment.”

As you can see, the proposed Project should not be approved until all feasible mitigation has been considered and incorporated where feasible, such as those suggested in the section of this letter titled “Feasible Mitigation Measures Available to Reduce Emissions.” As such, the DEIR fails to identify and adequately mitigate the Project’s significant health risk impact, and the less-than-significant impact conclusion should not be relied upon.

### Greenhouse Gas

#### Failure to Adequately Evaluate Greenhouse Gas Emissions

The DEIR concludes that the Project would result in net annual unmitigated and mitigated greenhouse gas (“GHG”) emissions of 15,307.54- and 14,472.01-metric tons of carbon dioxide equivalents per year (“MT CO<sub>2</sub>e/year”), respectively (p. 4.7-16, Table 4.7-3). As a result, the DEIR concludes that the Project’s GHG emissions would exceed the City’s significance threshold of 3,000 MT CO<sub>2</sub>e/year (see excerpt below) (p. 4.7-16, Table 4.7-3).

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**Table 4.7-3: Project Greenhouse Gas Emissions**

Emissions Source	MTCO <sub>2</sub> e per Year	
	Unmitigated	Mitigated
Construction Amortized Over 30 Years	37.47	37.47
Area Source	0.03	0.03
Energy	516.17	474.25 <sup>1</sup>
Mobile	13,621.77	13,138.89 <sup>2</sup>
Off-road	70.40	70.40
Waste	333.76	166.88 <sup>3</sup>
Water and Wastewater	727.94	584.08 <sup>4</sup>
<b>Total</b>	<b>15,307.54</b>	<b>14,472.01</b>
<i>City of Fontana Project Threshold</i>	<i>3,000</i>	<i>3,000</i>
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>

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After the implementation of MM AQ-1 through MM AQ-4, the DEIR concludes that the Project’s GHG emissions would be significant-and-unavoidable, stating:

“[A]lthough implementation of these mitigation measures would reduce GHG emissions to 14,472.01 MTCO<sub>2</sub>e per year, the resulting emissions are still expected to exceed the City’s GHG threshold. Table 4.7-3 shows that approximately 91 percent of the project’s mitigated GHG emissions are from mobile sources. Emissions of motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. As discussed above, MM AQ-1 through AQ-4 (refer to Section 4.2, Air Quality) have been identified to reduce the Project’s mobile source emissions. Implementation of operational MMs AQ-1 through MM AQ-4 would reduce GHG emissions by reducing the number of employee vehicles on-site and reducing the amount of time trucks spend idling. However, impacts would not be reduced to a less than significant level. Since the majority (91 percent) of mitigated emissions are from mobile sources and neither the Project Applicant nor the City have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce the Project’s impacts with respect to operational emissions to less than significant levels. While the Project has some control over GHG emissions (refer to Mitigation Measures AQ-1 through AQ-4), the majority of emissions are beyond the Project’s control. No additional feasible mitigation beyond AQ-1 through AQ-4 are available to further reduce emissions. Therefore, this impact would remain significant and unavoidable” (p. 4.7-17).

However, the DEIR’s GHG analysis, as well as the subsequent significant-and-unavoidable impact conclusion, is incorrect for two reasons.

- (1) The DEIR’s GHG analysis relies upon an incorrect and unsubstantiated air model; and
- (2) The DEIR fails to implement all feasible mitigation.

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*1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions*

As previously stated, the DEIR concludes that the Project would result in net annual unmitigated and mitigated GHG emissions of 15,307.54- and 14,472.01-MT CO<sub>2</sub>e/year, respectively (p. 4.7-16, Table 4.7-3). However, the DEIR's quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the AQ Study as Appendix B to the DEIR, we found that several of the values inputted into the model are not consistent with information disclosed in the DEIR. As a result, the model underestimates the Project's emissions, and the DEIR's quantitative GHG analysis should not be relied upon to determine Project significance. An updated EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the surrounding environment.

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*2) Failure to Implement All Feasible Mitigation to Reduce GHG Emissions*

As discussed above, the DEIR's GHG analysis relies upon an incorrect and unsubstantiated air model to determine the significance of the Project's GHG emissions. However, despite the DEIR's flawed air model, the DEIR's GHG emissions estimates indicate a significant GHG impact. As a result, the DEIR concludes that the proposed Project's GHG emissions would be significant and unavoidable (p. 4.7-17). However, while we agree that the Project's GHG emissions would be significant, the DEIR's conclusion that these impacts are "significant and unavoidable" is incorrect. As previously stated, according to CEQA Guidelines § 15096(g)(2):

"When an EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment."

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As you can see, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Here, while the DEIR includes MM AQ-1 through MM-AQ-4, the DEIR fails to implement all feasible mitigation (p. 1.0-8 – 1.0-9). As a result, the DEIR's conclusion that the Project's GHG impact is significant and unavoidable is unsubstantiated. To reduce the Project's GHG emissions to the maximum extent possible, additional feasible mitigation measures should be incorporated, such as those suggested in the section of this letter titled "Feasible Mitigation Measures Available to Reduce Emissions." Thus, the Project should not be approved until an updated EIR is prepared, including updated, accurate air modeling, as well as incorporating all feasible mitigation to reduce the Project's GHG emissions to less-than-significant levels.

*Feasible Mitigation Measures Available to Reduce Emissions*

Our analysis demonstrates that the Project's criteria air pollutant, TAC, and GHG emissions would result in potentially significant impacts and should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in the Department of Justice Warehouse Project Best

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Practices document.<sup>23</sup> Therefore, to reduce the Project’s emissions, consideration of the following measures should be made:

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.
- Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
- Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Forbidding idling of heavy equipment for more than two minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.
- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Requiring that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.

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<sup>23</sup> “Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act.” State of California Department of Justice, *available at*: <https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf>.

- Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.
- Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the air district, and the building manager.
- Installing and maintaining, at the manufacturer’s recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.
- Installing and maintaining, at the manufacturer’s recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Constructing electric truck charging stations proportional to the number of dock doors at the project.
- Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
- Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building’s projected energy needs.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Achieving certification of compliance with LEED green building standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency’s SmartWay program, and requiring tenants to use carriers that are SmartWay carriers.

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- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An updated EIR should be prepared to include all feasible mitigation measures, as well as include an updated health risk and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The updated EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project’s significant emissions are reduced to the maximum extent possible.

cont'd  
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#### Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

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Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A: SWAPE Project CalEEMod Modeling  
Attachment B: Paul Rosenfeld CV  
Attachment C: Matt Hagemann CV

Attachment A

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**Sierra Business Center - HC Sort Facility**  
**San Bernardino-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	4.50	1000sqft	0.10	4,500.00	0
Unrefrigerated Warehouse-No Rail	701.24	1000sqft	16.10	701,235.00	0
Parking Lot	538.99	1000sqft	12.37	538,987.00	0
City Park	3.62	Acre	3.62	157,813.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	510.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

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Project Characteristics - Consistent with DEIR's model.

Land Use - Consistent with DEIR's model.

Construction Phase - See SWAPE comment about individual construction phase lengths. Individual construction phase lengths proportionally reduced to match 12-month construction duration.

Architectural Coating - See SWAPE comment about architectural coating emission factors.

Vehicle Trips - Consistent with DEIR's model.

Vehicle Emission Factors - See SWAPE comment about operational vehicle emission factors.

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix - Consistent with DEIR's model.

Operational Off-Road Equipment - See SWAPE comment about number of forklifts.

Construction Off-road Equipment Mitigation - See SWAPE comment about construction-related mitigation measures.

Mobile Land Use Mitigation -

Mobile Commute Mitigation - See SWAPE comment about "Transit Subsidy" mitigation measure.

Energy Mitigation - See SWAPE comment about energy-related operational mitigation measure.

Water Mitigation - See SWAPE comment about water-related operational mitigation measures.

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	500.00	206.00
tblConstructionPhase	NumDays	45.00	18.00
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	PhaseEndDate	2/6/2024	8/30/2022
tblConstructionPhase	PhaseEndDate	10/31/2023	7/21/2022
tblConstructionPhase	PhaseEndDate	11/30/2021	10/6/2021
tblConstructionPhase	PhaseEndDate	12/19/2023	8/10/2022

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tblConstructionPhase	PhaseEndDate	9/28/2021	9/10/2021
tblConstructionPhase	PhaseStartDate	12/20/2023	8/11/2022
tblConstructionPhase	PhaseStartDate	12/1/2021	10/7/2021
tblConstructionPhase	PhaseStartDate	9/29/2021	9/11/2021
tblConstructionPhase	PhaseStartDate	11/1/2023	7/22/2022
tblFleetMix	HHD	0.06	0.00
tblFleetMix	HHD	0.06	0.63
tblFleetMix	LDA	0.55	0.50
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.50
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1010e-003	0.00
tblFleetMix	LHD2	5.1010e-003	0.17
tblFleetMix	MCY	5.9030e-003	0.00
tblFleetMix	MCY	5.9030e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.21
tblFleetMix	OBUS	1.3570e-003	0.00
tblFleetMix	OBUS	1.3570e-003	0.00

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tblFleetMix	SBUS	8.0800e-004	0.00
tblFleetMix	SBUS	8.0800e-004	0.00
tblFleetMix	UBUS	1.5650e-003	0.00
tblFleetMix	UBUS	1.5650e-003	0.00
tblLandUse	LandUseSquareFeet	701,240.00	701,235.00
tblLandUse	LandUseSquareFeet	538,990.00	538,987.00
tblLandUse	LandUseSquareFeet	157,687.20	157,813.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	65.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TL	6.90	9.30
tblVehicleTrips	CNW_TL	6.90	25.00
tblVehicleTrips	CNW_TTP	19.00	50.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	33.00	50.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	921.11
tblVehicleTrips	ST_TR	1.68	0.57
tblVehicleTrips	SU_TR	16.74	0.00

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tb/VehicleTrips	SU_TR	1.05	921.11
tb/VehicleTrips	SU_TR	1.68	0.57
tb/VehicleTrips	WD_TR	1.89	0.00
tb/VehicleTrips	WD_TR	11.03	921.11
tb/VehicleTrips	WD_TR	1.68	0.57

**2.0 Emissions Summary**

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**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	0.2163	1.8781	1.6771	5.3000e-003	0.3982	0.0583	0.4565	0.1390	0.0543	0.1932	0.0000	483.7348	483.7348	0.0544	0.0000	485.0955
2022	3.7217	2.8734	3.0126	0.0107	0.5796	0.0681	0.6477	0.1563	0.0640	0.2204	0.0000	979.9184	979.9184	0.0819	0.0000	981.9656
Maximum	3.7217	2.8734	3.0126	0.0107	0.5796	0.0681	0.6477	0.1563	0.0640	0.2204	0.0000	979.9184	979.9184	0.0819	0.0000	981.9656

**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	0.2163	1.8780	1.6771	5.3000e-003	0.3982	0.0583	0.4565	0.1390	0.0543	0.1932	0.0000	483.7347	483.7347	0.0544	0.0000	485.0953
2022	3.7217	2.8734	3.0126	0.0107	0.5796	0.0681	0.6477	0.1563	0.0640	0.2204	0.0000	979.9182	979.9182	0.0819	0.0000	981.9654
Maximum	3.7217	2.8734	3.0126	0.0107	0.5796	0.0681	0.6477	0.1563	0.0640	0.2204	0.0000	979.9182	979.9182	0.0819	0.0000	981.9654

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

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	11-30-2021	1.5507	1.5507
2	12-1-2021	2-28-2022	1.4302	1.4302
3	3-1-2022	5-31-2022	1.4238	1.4238
4	6-1-2022	8-31-2022	4.3269	4.3269
		Highest	4.3269	4.3269

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	2.9226	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0310	0.0310	8.0000e-005	0.0000	0.0330
Energy	7.7600e-003	0.0706	0.0593	4.2000e-004		5.3600e-003	5.3600e-003		5.3600e-003	5.3600e-003	0.0000	513.5584	513.5584	0.0263	6.5400e-003	516.1651
Mobile	2.2792	37.4822	29.6293	0.1464	9.3342	0.2217	9.5559	2.5745	0.2111	2.7856	0.0000	13,861.9303	13,861.9303	0.3921	0.0000	13,871.7324
Offroad	1.2615	11.7149	12.8126	0.0170		0.7760	0.7760		0.7140	0.7140	0.0000	1,491.3386	1,491.3386	0.4823	0.0000	1,503.3968
Waste						0.0000	0.0000		0.0000	0.0000	134.7190	0.0000	134.7190	7.9617	0.0000	333.7607
Water						0.0000	0.0000		0.0000	0.0000	51.7002	503.6480	555.3482	5.3387	0.1313	727.9446
<b>Total</b>	<b>6.4711</b>	<b>49.2678</b>	<b>36.5172</b>	<b>0.1638</b>	<b>9.3342</b>	<b>1.0031</b>	<b>10.3373</b>	<b>2.5745</b>	<b>0.9305</b>	<b>3.5049</b>	<b>186.4192</b>	<b>16,170.5063</b>	<b>16,356.9255</b>	<b>14.2012</b>	<b>0.1378</b>	<b>16,753.0325</b>



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**2.2 Overall Operational**

**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	2.9226	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0310	0.0310	8.0000e-005	0.0000	0.0330
Energy	7.7600e-003	0.0706	0.0593	4.2000e-004		5.3600e-003	5.3600e-003		5.3600e-003	5.3600e-003	0.0000	513.5584	513.5584	0.0263	6.5400e-003	516.1651
Mobile	2.2792	37.4822	23.6293	0.1464	9.3342	0.2217	9.5559	2.5745	0.2111	2.7856	0.0000	13,661.9303	13,661.9303	0.3921	0.0000	13,671.7324
Offroad	1.2615	11.7149	12.8126	0.0170		0.7760	0.7760		0.7140	0.7140	0.0000	1,491.3386	1,491.3386	0.4823	0.0000	1,503.3968
Waste						0.0000	0.0000		0.0000	0.0000	134.7190	0.0000	134.7190	7.9617	0.0000	333.7607
Water						0.0000	0.0000		0.0000	0.0000	51.7002	503.6480	555.3482	5.3387	0.1313	727.9446
<b>Total</b>	<b>6.4711</b>	<b>49.2678</b>	<b>36.5172</b>	<b>0.1638</b>	<b>9.3342</b>	<b>1.0031</b>	<b>10.3373</b>	<b>2.5745</b>	<b>0.9305</b>	<b>3.5049</b>	<b>186.4192</b>	<b>16,170.5063</b>	<b>16,356.9255</b>	<b>14.2012</b>	<b>0.1378</b>	<b>16,753.0325</b>

  

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

**3.0 Construction Detail**

**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2021	9/10/2021	5	8	
2	Grading	Grading	9/11/2021	10/6/2021	5	18	
3	Building Construction	Building Construction	10/7/2021	7/21/2022	5	206	
4	Paving	Paving	7/22/2022	8/10/2022	5	14	
5	Architectural Coating	Architectural Coating	8/11/2022	8/30/2022	5	14	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 45

Acres of Paving: 12.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,058,603; Non-Residential Outdoor: 352,868; Striped Parking Area: 32,339 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.56
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

**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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	589.00	230.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	118.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

3.2 Site Preparation - 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					0.0723	0.0000	0.0723	0.0397	0.0000	0.0397	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0156	0.1620	0.0846	1.5000e-004		8.1800e-003	8.1800e-003		7.5200e-003	7.5200e-003	0.0000	13.3743	13.3743	4.3300e-003	0.0000	13.4824
<b>Total</b>	<b>0.0156</b>	<b>0.1620</b>	<b>0.0846</b>	<b>1.5000e-004</b>	<b>0.0723</b>	<b>8.1800e-003</b>	<b>0.0805</b>	<b>0.0397</b>	<b>7.5200e-003</b>	<b>0.0472</b>	<b>0.0000</b>	<b>13.3743</b>	<b>13.3743</b>	<b>4.3300e-003</b>	<b>0.0000</b>	<b>13.4824</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	0.0000	0.0000	0.0000	0.0000	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	3.3000e-004	2.5000e-004	2.5700e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6551	0.6551	2.0000e-005	0.0000	0.6556
<b>Total</b>	<b>3.3000e-004</b>	<b>2.5000e-004</b>	<b>2.5700e-003</b>	<b>1.0000e-005</b>	<b>7.9000e-004</b>	<b>1.0000e-005</b>	<b>7.9000e-004</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.6551</b>	<b>0.6551</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6556</b>

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**3.2 Site Preparation - 2021**

**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					0.0723	0.0000	0.0723	0.0397	0.0000	0.0397	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0156	0.1620	0.0846	1.5000e-004		8.1800e-003	8.1800e-003		7.5200e-003	7.5200e-003	0.0000	13.3743	13.3743	4.3300e-003	0.0000	13.4824
<b>Total</b>	<b>0.0156</b>	<b>0.1620</b>	<b>0.0846</b>	<b>1.5000e-004</b>	<b>0.0723</b>	<b>8.1800e-003</b>	<b>0.0805</b>	<b>0.0397</b>	<b>7.5200e-003</b>	<b>0.0472</b>	<b>0.0000</b>	<b>13.3743</b>	<b>13.3743</b>	<b>4.3300e-003</b>	<b>0.0000</b>	<b>13.4824</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	0.0000	0.0000	0.0000	0.0000	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	3.3000e-004	2.5000e-004	2.5700e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6551	0.6551	2.0000e-005	0.0000	0.6556
<b>Total</b>	<b>3.3000e-004</b>	<b>2.5000e-004</b>	<b>2.5700e-003</b>	<b>1.0000e-005</b>	<b>7.9000e-004</b>	<b>1.0000e-005</b>	<b>7.9000e-004</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.6551</b>	<b>0.6551</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6556</b>

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3.3 Grading - 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					0.0781	0.0000	0.0781	0.0324	0.0000	0.0324	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0377	0.4176	0.2779	5.6000e-004		0.0179	0.0179		0.0164	0.0164	0.0000	49.0455	49.0455	0.0159	0.0000	49.4420
<b>Total</b>	<b>0.0377</b>	<b>0.4176</b>	<b>0.2779</b>	<b>5.6000e-004</b>	<b>0.0781</b>	<b>0.0179</b>	<b>0.0959</b>	<b>0.0324</b>	<b>0.0164</b>	<b>0.0488</b>	<b>0.0000</b>	<b>49.0455</b>	<b>49.0455</b>	<b>0.0159</b>	<b>0.0000</b>	<b>49.4420</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	0.0000	0.0000	0.0000	0.0000	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	8.3000e-004	6.3000e-004	6.4100e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6378	1.6378	5.0000e-005	0.0000	1.6390
<b>Total</b>	<b>8.3000e-004</b>	<b>6.3000e-004</b>	<b>6.4100e-003</b>	<b>2.0000e-005</b>	<b>1.9700e-003</b>	<b>1.0000e-005</b>	<b>1.9900e-003</b>	<b>5.2000e-004</b>	<b>1.0000e-005</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>1.6378</b>	<b>1.6378</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.6390</b>



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3.3 Grading - 2021

**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					0.0781	0.0000	0.0781	0.0324	0.0000	0.0324	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0377	0.4176	0.2779	5.6000e-004		0.0179	0.0179		0.0164	0.0164	0.0000	49.0454	49.0454	0.0159	0.0000	49.4420
<b>Total</b>	<b>0.0377</b>	<b>0.4176</b>	<b>0.2779</b>	<b>5.6000e-004</b>	<b>0.0781</b>	<b>0.0179</b>	<b>0.0959</b>	<b>0.0324</b>	<b>0.0164</b>	<b>0.0488</b>	<b>0.0000</b>	<b>49.0454</b>	<b>49.0454</b>	<b>0.0159</b>	<b>0.0000</b>	<b>49.4420</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	0.0000	0.0000	0.0000	0.0000	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	8.3000e-004	6.3000e-004	6.4100e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6378	1.6378	5.0000e-005	0.0000	1.6390
<b>Total</b>	<b>8.3000e-004</b>	<b>6.3000e-004</b>	<b>6.4100e-003</b>	<b>2.0000e-005</b>	<b>1.9700e-003</b>	<b>1.0000e-005</b>	<b>1.9900e-003</b>	<b>5.2000e-004</b>	<b>1.0000e-005</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>1.6378</b>	<b>1.6378</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.6390</b>

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**3.4 Building Construction - 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					
Off-Road	0.0589	0.5404	0.5138	8.3000e-004		0.0297	0.0297		0.0279	0.0279	0.0000	71.8076	71.8076	0.0173	0.0000	72.2407
<b>Total</b>	<b>0.0589</b>	<b>0.5404</b>	<b>0.5138</b>	<b>8.3000e-004</b>		<b>0.0297</b>	<b>0.0297</b>		<b>0.0279</b>	<b>0.0279</b>	<b>0.0000</b>	<b>71.8076</b>	<b>71.8076</b>	<b>0.0173</b>	<b>0.0000</b>	<b>72.2407</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	0.0189	0.6937	0.1411	1.8900e-003	0.0450	1.1900e-003	0.0462	0.0130	1.1400e-003	0.0141	0.0000	181.0758	181.0758	0.0122	0.0000	181.3808
Worker	0.0840	0.0635	0.6506	1.8400e-003	0.2002	1.3100e-003	0.2015	0.0532	1.2000e-003	0.0544	0.0000	166.1387	166.1387	4.8500e-003	0.0000	166.2550
<b>Total</b>	<b>0.1029</b>	<b>0.7572</b>	<b>0.7917</b>	<b>3.7300e-003</b>	<b>0.2452</b>	<b>2.5000e-003</b>	<b>0.2477</b>	<b>0.0661</b>	<b>2.3400e-003</b>	<b>0.0685</b>	<b>0.0000</b>	<b>347.2146</b>	<b>347.2146</b>	<b>0.0169</b>	<b>0.0000</b>	<b>347.6358</b>

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**3.4 Building Construction - 2021**

**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	0.0589	0.5404	0.5138	8.3000e-004		0.0297	0.0297		0.0279	0.0279	0.0000	71.8075	71.8075	0.0173	0.0000	72.2406
<b>Total</b>	<b>0.0589</b>	<b>0.5404</b>	<b>0.5138</b>	<b>8.3000e-004</b>		<b>0.0297</b>	<b>0.0297</b>		<b>0.0279</b>	<b>0.0279</b>	<b>0.0000</b>	<b>71.8075</b>	<b>71.8075</b>	<b>0.0173</b>	<b>0.0000</b>	<b>72.2406</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	0.0189	0.6937	0.1411	1.8900e-003	0.0450	1.1900e-003	0.0462	0.0130	1.1400e-003	0.0141	0.0000	181.0758	181.0758	0.0122	0.0000	181.3808
Worker	0.0840	0.0635	0.6506	1.8400e-003	0.2002	1.3100e-003	0.2015	0.0532	1.2000e-003	0.0544	0.0000	166.1387	166.1387	4.6500e-003	0.0000	166.2550
<b>Total</b>	<b>0.1029</b>	<b>0.7572</b>	<b>0.7917</b>	<b>3.7300e-003</b>	<b>0.2452</b>	<b>2.5000e-003</b>	<b>0.2477</b>	<b>0.0661</b>	<b>2.3400e-003</b>	<b>0.0685</b>	<b>0.0000</b>	<b>347.2146</b>	<b>347.2146</b>	<b>0.0169</b>	<b>0.0000</b>	<b>347.6358</b>

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**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	0.1229	1.1243	1.1782	1.9400e-003		0.0583	0.0583		0.0548	0.0548	0.0000	166.8422	166.8422	0.0400	0.0000	167.8414
<b>Total</b>	<b>0.1229</b>	<b>1.1243</b>	<b>1.1782</b>	<b>1.9400e-003</b>		<b>0.0583</b>	<b>0.0583</b>		<b>0.0548</b>	<b>0.0548</b>	<b>0.0000</b>	<b>166.8422</b>	<b>166.8422</b>	<b>0.0400</b>	<b>0.0000</b>	<b>167.8414</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	0.0409	1.5258	0.3035	4.3600e-003	0.1044	2.3300e-003	0.1067	0.0301	2.2300e-003	0.0324	0.0000	417.1372	417.1372	0.0274	0.0000	417.8214
Worker	0.1825	0.1326	1.3857	4.1100e-003	0.4650	2.9400e-003	0.4679	0.1235	2.7100e-003	0.1262	0.0000	371.9665	371.9665	9.6900e-003	0.0000	372.2087
<b>Total</b>	<b>0.2234</b>	<b>1.6585</b>	<b>1.6892</b>	<b>8.4700e-003</b>	<b>0.5694</b>	<b>5.2700e-003</b>	<b>0.5747</b>	<b>0.1536</b>	<b>4.9400e-003</b>	<b>0.1586</b>	<b>0.0000</b>	<b>789.1037</b>	<b>789.1037</b>	<b>0.0371</b>	<b>0.0000</b>	<b>790.0301</b>

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**3.4 Building Construction - 2022**

**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	0.1229	1.1243	1.1782	1.9400e-003		0.0583	0.0583		0.0548	0.0548	0.0000	166.8420	166.8420	0.0400	0.0000	167.8412
<b>Total</b>	<b>0.1229</b>	<b>1.1243</b>	<b>1.1782</b>	<b>1.9400e-003</b>		<b>0.0583</b>	<b>0.0583</b>		<b>0.0548</b>	<b>0.0548</b>	<b>0.0000</b>	<b>166.8420</b>	<b>166.8420</b>	<b>0.0400</b>	<b>0.0000</b>	<b>167.8412</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	0.0409	1.5258	0.3035	4.3600e-003	0.1044	2.3300e-003	0.1067	0.0301	2.2300e-003	0.0324	0.0000	417.1372	417.1372	0.0274	0.0000	417.8214
Worker	0.1825	0.1326	1.3857	4.1100e-003	0.4650	2.9400e-003	0.4679	0.1235	2.7100e-003	0.1262	0.0000	371.9665	371.9665	9.6900e-003	0.0000	372.2087
<b>Total</b>	<b>0.2234</b>	<b>1.6585</b>	<b>1.6892</b>	<b>8.4700e-003</b>	<b>0.5694</b>	<b>5.2700e-003</b>	<b>0.5747</b>	<b>0.1536</b>	<b>4.9400e-003</b>	<b>0.1586</b>	<b>0.0000</b>	<b>789.1037</b>	<b>789.1037</b>	<b>0.0371</b>	<b>0.0000</b>	<b>790.0301</b>

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3.5 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	7.7200e-003	0.0779	0.1021	1.6000e-004	3.9800e-003	3.9800e-003	3.9800e-003	3.6600e-003	3.6600e-003	3.6600e-003	0.0000	14.0193	14.0193	4.5300e-003	0.0000	14.1326
Paving	0.0162				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>0.0239</b>	<b>0.0779</b>	<b>0.1021</b>	<b>1.6000e-004</b>	<b>3.9800e-003</b>	<b>3.9800e-003</b>	<b>3.9800e-003</b>	<b>3.6600e-003</b>	<b>3.6600e-003</b>	<b>3.6600e-003</b>	<b>0.0000</b>	<b>14.0193</b>	<b>14.0193</b>	<b>4.5300e-003</b>	<b>0.0000</b>	<b>14.1326</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	0.0000	0.0000	0.0000	0.0000	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	3.3000e-004	3.4300e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9210	0.9210	2.0000e-005	0.0000	0.9216
<b>Total</b>	<b>4.5000e-004</b>	<b>3.3000e-004</b>	<b>3.4300e-003</b>	<b>1.0000e-005</b>	<b>1.1500e-003</b>	<b>1.0000e-005</b>	<b>1.1600e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>0.9210</b>	<b>0.9210</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.9216</b>



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3.5 Paving - 2022

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	7.7200e-003	0.0779	0.1021	1.6000e-004	3.9800e-003	3.9800e-003	3.9800e-003	3.6600e-003	3.6600e-003	3.6600e-003	0.0000	14.0193	14.0193	4.5300e-003	0.0000	14.1326
Paving	0.0162				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>0.0239</b>	<b>0.0779</b>	<b>0.1021</b>	<b>1.6000e-004</b>	<b>3.9800e-003</b>	<b>3.9800e-003</b>	<b>3.9800e-003</b>	<b>3.6600e-003</b>	<b>3.6600e-003</b>	<b>3.6600e-003</b>	<b>0.0000</b>	<b>14.0193</b>	<b>14.0193</b>	<b>4.5300e-003</b>	<b>0.0000</b>	<b>14.1326</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	0.0000	0.0000	0.0000	0.0000	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	3.3000e-004	3.4300e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9210	0.9210	2.0000e-005	0.0000	0.9216
<b>Total</b>	<b>4.5000e-004</b>	<b>3.3000e-004</b>	<b>3.4300e-003</b>	<b>1.0000e-005</b>	<b>1.1500e-003</b>	<b>1.0000e-005</b>	<b>1.1600e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>0.9210</b>	<b>0.9210</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.9216</b>

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**3.6 Architectural Coating - 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					
Archit. Coating	3.3460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902
<b>Total</b>	<b>3.3475</b>	<b>9.8600e-003</b>	<b>0.0127</b>	<b>2.0000e-005</b>		<b>5.7000e-004</b>	<b>5.7000e-004</b>		<b>5.7000e-004</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>1.7873</b>	<b>1.7873</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.7902</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	0.0000	0.0000	0.0000	0.0000	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	3.5500e-003	2.5800e-003	0.0270	8.0000e-005	9.0600e-003	6.0000e-005	9.1100e-003	2.4100e-003	5.0000e-005	2.4600e-003	0.0000	7.2450	7.2450	1.9000e-004	0.0000	7.2497
<b>Total</b>	<b>3.5500e-003</b>	<b>2.5800e-003</b>	<b>0.0270</b>	<b>8.0000e-005</b>	<b>9.0600e-003</b>	<b>6.0000e-005</b>	<b>9.1100e-003</b>	<b>2.4100e-003</b>	<b>5.0000e-005</b>	<b>2.4600e-003</b>	<b>0.0000</b>	<b>7.2450</b>	<b>7.2450</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.2497</b>

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**3.6 Architectural Coating - 2022**

**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	3.3460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902
<b>Total</b>	<b>3.3475</b>	<b>9.8600e-003</b>	<b>0.0127</b>	<b>2.0000e-005</b>		<b>5.7000e-004</b>	<b>5.7000e-004</b>		<b>5.7000e-004</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>1.7873</b>	<b>1.7873</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.7902</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	0.0000	0.0000	0.0000	0.0000	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	3.5500e-003	2.5800e-003	0.0270	8.0000e-005	9.0600e-003	6.0000e-005	9.1100e-003	2.4100e-003	5.0000e-005	2.4600e-003	0.0000	7.2450	7.2450	1.9000e-004	0.0000	7.2497
<b>Total</b>	<b>3.5500e-003</b>	<b>2.5800e-003</b>	<b>0.0270</b>	<b>8.0000e-005</b>	<b>9.0600e-003</b>	<b>6.0000e-005</b>	<b>9.1100e-003</b>	<b>2.4100e-003</b>	<b>5.0000e-005</b>	<b>2.4600e-003</b>	<b>0.0000</b>	<b>7.2450</b>	<b>7.2450</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.2497</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

- Implement Trip Reduction Program
- Market Commute Trip Reduction Option
- Employee Vanpool/Shuttle
- Provide Ride Sharing Program

	ROG	NOx	CO	SO2	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	2.2792	37.4822	23.6293	0.1464	9.3342	0.2217	9.5559	2.5745	0.2111	2.7856	0.0000	13,661.9303	13,661.9303	0.3921	0.0000	13,671.7324
Unmitigated	2.2792	37.4822	23.6293	0.1464	9.3342	0.2217	9.5559	2.5745	0.2111	2.7856	0.0000	13,661.9303	13,661.9303	0.3921	0.0000	13,671.7324

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	4,145.00	4,145.00	4,145.00	19,538,677	19,538,677
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	399.71	399.71	399.71	3,637,332	3,637,332
<b>Total</b>	<b>4,544.70</b>	<b>4,544.70</b>	<b>4,544.70</b>	<b>23,176,009</b>	<b>23,176,009</b>

**4.3 Trip Type Information**

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	9.30	50.00	0.00	50.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	25.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
General Office Building	0.500000	0.000000	0.000000	0.000000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.167045	0.208818	0.626136	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	436.7614	436.7614	0.0248	5.1300e-003	438.9117
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	436.7614	436.7614	0.0248	5.1300e-003	438.9117
NaturalGas Mitigated	7.7600e-003	0.0706	0.0593	4.2000e-004		5.3600e-003	5.3600e-003		5.3600e-003	5.3600e-003	0.0000	76.7970	76.7970	1.4700e-003	1.4100e-003	77.2534
NaturalGas Unmitigated	7.7600e-003	0.0706	0.0593	4.2000e-004		5.3600e-003	5.3600e-003		5.3600e-003	5.3600e-003	0.0000	76.7970	76.7970	1.4700e-003	1.4100e-003	77.2534

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	15615	8.0000e-005	7.7000e-004	6.4000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8333	0.8333	2.0000e-005	2.0000e-005	0.8382
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.42351e+005	7.6800e-003	0.0698	0.0586	4.2000e-004		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	75.9638	75.9638	1.4600e-003	1.3900e-003	76.4152
<b>Total</b>		<b>7.7600e-003</b>	<b>0.0706</b>	<b>0.0593</b>	<b>4.2000e-004</b>		<b>5.3600e-003</b>	<b>5.3600e-003</b>		<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>76.7970</b>	<b>76.7970</b>	<b>1.4800e-003</b>	<b>1.4100e-003</b>	<b>77.2534</b>

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	15615	8.0000e-005	7.7000e-004	6.4000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8333	0.8333	2.0000e-005	2.0000e-005	0.8382
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.42351e+005	7.6800e-003	0.0698	0.0586	4.2000e-004		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	75.9638	75.9638	1.4600e-003	1.3900e-003	76.4152
<b>Total</b>		<b>7.7600e-003</b>	<b>0.0706</b>	<b>0.0593</b>	<b>4.2000e-004</b>		<b>5.3600e-003</b>	<b>5.3600e-003</b>		<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>76.7970</b>	<b>76.7970</b>	<b>1.4800e-003</b>	<b>1.4100e-003</b>	<b>77.2534</b>



**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	42840	9.9188	5.6000e-004	1.2000e-004	9.9677
Parking Lot	188645	43.6774	2.4800e-003	5.1000e-004	43.8824
Unrefrigerated Warehouse-No Rail	1.65491e+005	383.1652	0.0218	4.5000e-003	385.0516
<b>Total</b>		<b>436.7614</b>	<b>0.0248</b>	<b>5.1300e-003</b>	<b>438.9117</b>

**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	42840	9.9188	5.6000e-004	1.2000e-004	9.9677
Parking Lot	188645	43.6774	2.4800e-003	5.1000e-004	43.8824
Unrefrigerated Warehouse-No Rail	1.65491e+005	383.1652	0.0218	4.5000e-003	385.0516
<b>Total</b>		<b>436.7614</b>	<b>0.0248</b>	<b>5.1300e-003</b>	<b>438.9117</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	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	2.9226	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0310	0.0310	8.0000e-005	0.0000	0.0330
Unmitigated	2.9226	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0310	0.0310	8.0000e-005	0.0000	0.0330

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	0.3346					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4800e-003	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0310	0.0310	8.0000e-005	0.0000	0.0330
<b>Total</b>	<b>2.9226</b>	<b>1.5000e-004</b>	<b>0.0160</b>	<b>0.0000</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>0.0310</b>	<b>0.0310</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.0330</b>

**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.3346					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4800e-003	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0310	0.0310	8.0000e-005	0.0000	0.0330	
<b>Total</b>	<b>2.9226</b>	<b>1.5000e-004</b>	<b>0.0160</b>	<b>0.0000</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>0.0310</b>	<b>0.0310</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.0330</b>	

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	555.3482	5.3387	0.1313	727.9446
Unmitigated	555.3482	5.3387	0.1313	727.9446

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 4.31316	11.0948	6.3000e-004	1.3000e-004	11.1494
General Office Building	0.799802 / 0.490201	3.9259	0.0263	6.6000e-004	4.7789
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	162.162 / 0	540.3275	5.3118	0.1305	712.0162
<b>Total</b>		<b>555.3482</b>	<b>5.3387</b>	<b>0.1313</b>	<b>727.9446</b>

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 4.31316	11.0948	6.3000e-004	1.3000e-004	11.1494
General Office Building	0.799802 / 0.490201	3.9259	0.0263	6.6000e-004	4.7789
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	162.162 / 0	540.3275	5.3118	0.1305	712.0162
<b>Total</b>		<b>555.3462</b>	<b>5.3387</b>	<b>0.1313</b>	<b>727.9446</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	134.7190	7.9617	0.0000	333.7607
Unmitigated	134.7190	7.9617	0.0000	333.7607

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.31	0.0629	3.7200e-003	0.0000	0.1559
General Office Building	4.19	0.8505	0.0503	0.0000	2.1072
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	659.17	133.8056	7.9077	0.0000	331.4976
<b>Total</b>		<b>134.7190</b>	<b>7.9617</b>	<b>0.0000</b>	<b>333.7607</b>



**8.2 Waste by Land Use**

**Mitigated**

Land Use	Waste Disposed tons	Total CO2 MT/yr	CH4 MT/yr	N2O MT/yr	CO2e MT/yr
City Park	0.31	0.0629	3.7200e-003	0.0000	0.1559
General Office Building	4.19	0.8505	0.0503	0.0000	2.1072
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	659.17	133.8056	7.9077	0.0000	331.4976
<b>Total</b>		<b>134.7190</b>	<b>7.9617</b>	<b>0.0000</b>	<b>333.7607</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	85	8.00	260	89	0.20	Diesel

**UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Forklifts	1.2615	11.7149	12.8126	0.0170		0.7760	0.7760		0.7140	0.7140	0.0000	1,491.3386	1,491.3386	0.4823	0.0000	1,503.3968
<b>Total</b>	<b>1.2615</b>	<b>11.7149</b>	<b>12.8126</b>	<b>0.0170</b>		<b>0.7760</b>	<b>0.7760</b>		<b>0.7140</b>	<b>0.7140</b>	<b>0.0000</b>	<b>1,491.3386</b>	<b>1,491.3386</b>	<b>0.4823</b>	<b>0.0000</b>	<b>1,503.3968</b>

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

**Sierra Business Center - HC Sort Facility**  
**San Bernardino-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	4.50	1000sqft	0.10	4,500.00	0
Unrefrigerated Warehouse-No Rail	701.24	1000sqft	16.10	701,235.00	0
Parking Lot	538.99	1000sqft	12.37	538,987.00	0
City Park	3.62	Acre	3.62	157,813.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	510.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

Project Characteristics - Consistent with DEIR's model.

Land Use - Consistent with DEIR's model.

Construction Phase - See SWAPE comment about individual construction phase lengths. Individual construction phase lengths proportionally reduced to match 12-month construction duration.

Architectural Coating - See SWAPE comment about architectural coating emission factors.

Vehicle Trips - Consistent with DEIR's model.

Vehicle Emission Factors - See SWAPE comment about operational vehicle emission factors.

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix - Consistent with DEIR's model.

Operational Off-Road Equipment - See SWAPE comment about number of forklifts.

Construction Off-road Equipment Mitigation - See SWAPE comment about construction-related mitigation measures.

Mobile Land Use Mitigation -

Mobile Commute Mitigation - See SWAPE comment about "Transit Subsidy" mitigation measure.

Energy Mitigation - See SWAPE comment about energy-related operational mitigation measure.

Water Mitigation - See SWAPE comment about water-related operational mitigation measures.

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	500.00	206.00
tblConstructionPhase	NumDays	45.00	18.00
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	PhaseEndDate	2/6/2024	8/30/2022
tblConstructionPhase	PhaseEndDate	10/31/2023	7/21/2022
tblConstructionPhase	PhaseEndDate	11/30/2021	10/6/2021
tblConstructionPhase	PhaseEndDate	12/19/2023	8/10/2022

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

tblConstructionPhase	PhaseEndDate	9/28/2021	9/10/2021
tblConstructionPhase	PhaseStartDate	12/20/2023	8/11/2022
tblConstructionPhase	PhaseStartDate	12/1/2021	10/7/2021
tblConstructionPhase	PhaseStartDate	9/29/2021	9/11/2021
tblConstructionPhase	PhaseStartDate	11/1/2023	7/22/2022
tblFleetMix	HHD	0.06	0.00
tblFleetMix	HHD	0.06	0.63
tblFleetMix	LDA	0.55	0.50
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.50
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1010e-003	0.00
tblFleetMix	LHD2	5.1010e-003	0.17
tblFleetMix	MCY	5.9030e-003	0.00
tblFleetMix	MCY	5.9030e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.21
tblFleetMix	OBUS	1.3570e-003	0.00
tblFleetMix	OBUS	1.3570e-003	0.00

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

tblFleetMix	SBUS	8.0800e-004	0.00
tblFleetMix	SBUS	8.0800e-004	0.00
tblFleetMix	UBUS	1.5650e-003	0.00
tblFleetMix	UBUS	1.5650e-003	0.00
tblLandUse	LandUseSquareFeet	701,240.00	701,235.00
tblLandUse	LandUseSquareFeet	538,990.00	538,987.00
tblLandUse	LandUseSquareFeet	157,687.20	157,813.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	65.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TL	6.90	9.30
tblVehicleTrips	CNW_TL	6.90	25.00
tblVehicleTrips	CNW_TTP	19.00	50.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	33.00	50.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	921.11
tblVehicleTrips	ST_TR	1.68	0.57
tblVehicleTrips	SU_TR	16.74	0.00

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Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

tb/VehicleTrips	SU_TR	1.05	921.11
tb/VehicleTrips	SU_TR	1.68	0.57
tb/VehicleTrips	WD_TR	1.89	0.00
tb/VehicleTrips	WD_TR	11.03	921.11
tb/VehicleTrips	WD_TR	1.68	0.57

**2.0 Emissions Summary**

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Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4888	46.4626	45.1325	0.1537	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	15,543.05 22	15,543.05 22	1.9490	0.0000	15,573.37 90
2022	478.7687	38.3151	42.6222	0.1508	8.0567	0.8818	8.9385	2.1702	0.8293	2.9995	0.0000	15,259.01 62	15,259.01 62	1.1758	0.0000	15,288.41 09
Maximum	478.7687	46.4626	45.1325	0.1537	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	15,543.05 22	15,543.05 22	1.9490	0.0000	15,573.37 90

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4888	46.4626	45.1325	0.1537	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	15,543.05 22	15,543.05 22	1.9490	0.0000	15,573.37 90
2022	478.7687	38.3151	42.6222	0.1508	8.0567	0.8818	8.9385	2.1702	0.8293	2.9995	0.0000	15,259.01 62	15,259.01 62	1.1758	0.0000	15,288.41 09
Maximum	478.7687	46.4626	45.1325	0.1537	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	15,543.05 22	15,543.05 22	1.9490	0.0000	15,573.37 90

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

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
Energy	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153
Mobile	13.1164	195.5822	136.6697	0.8215	52.2094	1.2186	53.4280	14.3720	1.1603	15.5323		84,472.1464	84,472.1464	2.3825		84,531.7088
Offroad	9.7041	90.1147	98.5588	0.1305		5.9695	5.9695		5.4919	5.4919		12,645.5337	12,645.5337	4.0898		12,747.7792
<b>Total</b>	<b>38.8809</b>	<b>286.0846</b>	<b>235.6808</b>	<b>0.9543</b>	<b>52.2094</b>	<b>7.2179</b>	<b>59.4274</b>	<b>14.3720</b>	<b>6.6821</b>	<b>21.0541</b>		<b>97,581.8121</b>	<b>97,581.8121</b>	<b>6.4819</b>	<b>8.5000e-003</b>	<b>97,746.3946</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
Energy	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153
Mobile	13.1164	195.5822	136.6697	0.8215	52.2094	1.2186	53.4280	14.3720	1.1603	15.5323		84,472.1464	84,472.1464	2.3825		84,531.7088
Offroad	9.7041	90.1147	98.5588	0.1305		5.9695	5.9695		5.4919	5.4919		12,645.5337	12,645.5337	4.0898		12,747.7792
<b>Total</b>	<b>38.8809</b>	<b>286.0846</b>	<b>235.6808</b>	<b>0.9543</b>	<b>52.2094</b>	<b>7.2179</b>	<b>59.4274</b>	<b>14.3720</b>	<b>6.6821</b>	<b>21.0541</b>		<b>97,581.8121</b>	<b>97,581.8121</b>	<b>6.4819</b>	<b>8.5000e-003</b>	<b>97,746.3946</b>

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

**3.0 Construction Detail**

**Construction Phase**

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2021	9/10/2021	5	8	
2	Grading	Grading	9/11/2021	10/6/2021	5	18	
3	Building Construction	Building Construction	10/7/2021	7/21/2022	5	206	
4	Paving	Paving	7/22/2022	8/10/2022	5	14	
5	Architectural Coating	Architectural Coating	8/11/2022	8/30/2022	5	14	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 45

Acres of Paving: 12.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,058,603; Non-Residential Outdoor: 352,868; Striped Parking Area: 32,339 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

**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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	589.00	230.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	118.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.0445</b>	<b>20.1107</b>	<b>9.9307</b>	<b>1.8809</b>	<b>11.8116</b>		<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746
<b>Total</b>	<b>0.0915</b>	<b>0.0565</b>	<b>0.7452</b>	<b>1.9800e-003</b>	<b>0.2012</b>	<b>1.2900e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.1900e-003</b>	<b>0.0545</b>		<b>196.9345</b>	<b>196.9345</b>	<b>5.6000e-003</b>		<b>197.0746</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.2 Site Preparation - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.0445</b>	<b>20.1107</b>	<b>9.9307</b>	<b>1.8809</b>	<b>11.8116</b>	<b>0.0000</b>	<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746
<b>Total</b>	<b>0.0915</b>	<b>0.0565</b>	<b>0.7452</b>	<b>1.9800e-003</b>	<b>0.2012</b>	<b>1.2900e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.1900e-003</b>	<b>0.0545</b>		<b>196.9345</b>	<b>196.9345</b>	<b>5.6000e-003</b>		<b>197.0746</b>



Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>8.6733</b>	<b>1.9853</b>	<b>10.6587</b>	<b>3.5965</b>	<b>1.8265</b>	<b>5.4230</b>		<b>6,007.0434</b>	<b>6,007.0434</b>	<b>1.9428</b>		<b>6,055.6134</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1016	0.0628	0.8280	2.2000e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		218.8161	218.8161	6.2300e-003		218.9718
<b>Total</b>	<b>0.1016</b>	<b>0.0628</b>	<b>0.8280</b>	<b>2.2000e-003</b>	<b>0.2236</b>	<b>1.4300e-003</b>	<b>0.2250</b>	<b>0.0593</b>	<b>1.3200e-003</b>	<b>0.0606</b>		<b>218.8161</b>	<b>218.8161</b>	<b>6.2300e-003</b>		<b>218.9718</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>8.6733</b>	<b>1.9853</b>	<b>10.6587</b>	<b>3.5965</b>	<b>1.8265</b>	<b>5.4230</b>	<b>0.0000</b>	<b>6,007.0434</b>	<b>6,007.0434</b>	<b>1.9428</b>		<b>6,055.6134</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1016	0.0628	0.8280	2.2000e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		218.8161	218.8161	6.2300e-003		218.9718
<b>Total</b>	<b>0.1016</b>	<b>0.0628</b>	<b>0.8280</b>	<b>2.2000e-003</b>	<b>0.2236</b>	<b>1.4300e-003</b>	<b>0.2250</b>	<b>0.0593</b>	<b>1.3200e-003</b>	<b>0.0606</b>		<b>218.8161</b>	<b>218.8161</b>	<b>6.2300e-003</b>		<b>218.9718</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.4 Building Construction - 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	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5952	22.1806	4.1737	0.0621	1.4731	0.0380	1.5111	0.4242	0.0364	0.4605		6,545.5541	6,545.5541	0.4137		6,555.8953
Worker	2.9927	1.8498	24.3836	0.0647	6.5836	0.0421	6.6257	1.7480	0.0388	1.7868		6,444.1343	6,444.1343	0.1834		6,448.7195
<b>Total</b>	<b>3.5879</b>	<b>24.0304</b>	<b>28.5573</b>	<b>0.1268</b>	<b>8.0567</b>	<b>0.0801</b>	<b>8.1369</b>	<b>2.1702</b>	<b>0.0752</b>	<b>2.2453</b>		<b>12,989.6883</b>	<b>12,989.6883</b>	<b>0.5971</b>		<b>13,004.6147</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.4 Building Construction - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5952	22.1806	4.1737	0.0621	1.4731	0.0380	1.5111	0.4242	0.0364	0.4605		6,545.5541	6,545.5541	0.4137		6,555.8953
Worker	2.9927	1.8498	24.3836	0.0647	6.5836	0.0421	6.6257	1.7480	0.0388	1.7868		6,444.1343	6,444.1343	0.1834		6,448.7195
<b>Total</b>	<b>3.5879</b>	<b>24.0304</b>	<b>28.5573</b>	<b>0.1268</b>	<b>8.0567</b>	<b>0.0801</b>	<b>8.1369</b>	<b>2.1702</b>	<b>0.0752</b>	<b>2.2453</b>		<b>12,989.6883</b>	<b>12,989.6883</b>	<b>0.5971</b>		<b>13,004.6147</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**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	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5545	21.0363	3.8588	0.0615	1.4731	0.0319	1.5050	0.4241	0.0306	0.4547		6,493.0744	6,493.0744	0.3993		6,503.0577
Worker	2.7948	1.6632	22.4000	0.0624	6.5836	0.0408	6.6245	1.7480	0.0376	1.7857		6,211.6083	6,211.6083	0.1645		6,215.7210
<b>Total</b>	<b>3.3492</b>	<b>22.6995</b>	<b>26.2588</b>	<b>0.1239</b>	<b>8.0567</b>	<b>0.0728</b>	<b>8.1295</b>	<b>2.1702</b>	<b>0.0682</b>	<b>2.2383</b>		<b>12,704.6827</b>	<b>12,704.6827</b>	<b>0.5638</b>		<b>12,718.7787</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.4 Building Construction - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5545	21.0363	3.8588	0.0615	1.4731	0.0319	1.5050	0.4241	0.0306	0.4547		6,493.0744	6,493.0744	0.3993		6,503.0577
Worker	2.7948	1.6632	22.4000	0.0624	6.5836	0.0408	6.6245	1.7480	0.0376	1.7857		6,211.6083	6,211.6083	0.1645		6,215.7210
<b>Total</b>	<b>3.3492</b>	<b>22.6995</b>	<b>26.2588</b>	<b>0.1239</b>	<b>8.0567</b>	<b>0.0728</b>	<b>8.1295</b>	<b>2.1702</b>	<b>0.0682</b>	<b>2.2383</b>		<b>12,704.6827</b>	<b>12,704.6827</b>	<b>0.5638</b>		<b>12,718.7787</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.5 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	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	2.3150					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>3.4178</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>		<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0712	0.0424	0.5705	1.5900e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		158.1904	158.1904	4.1900e-003		158.2951
<b>Total</b>	<b>0.0712</b>	<b>0.0424</b>	<b>0.5705</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.0400e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.6000e-004</b>	<b>0.0454</b>		<b>158.1904</b>	<b>158.1904</b>	<b>4.1900e-003</b>		<b>158.2951</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.5 Paving - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	2.3150					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>3.4178</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>	<b>0.0000</b>	<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0712	0.0424	0.5705	1.5900e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		158.1904	158.1904	4.1900e-003		158.2951
<b>Total</b>	<b>0.0712</b>	<b>0.0424</b>	<b>0.5705</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.0400e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.6000e-004</b>	<b>0.0454</b>		<b>158.1904</b>	<b>158.1904</b>	<b>4.1900e-003</b>		<b>158.2951</b>



Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.6 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	478.0042					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>478.2088</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5599	0.3332	4.4876	0.0125	1.3190	8.1900e-003	1.3272	0.3498	7.5400e-003	0.3573		1,244.4309	1,244.4309	0.0330		1,245.2548
<b>Total</b>	<b>0.5599</b>	<b>0.3332</b>	<b>4.4876</b>	<b>0.0125</b>	<b>1.3190</b>	<b>8.1900e-003</b>	<b>1.3272</b>	<b>0.3498</b>	<b>7.5400e-003</b>	<b>0.3573</b>		<b>1,244.4309</b>	<b>1,244.4309</b>	<b>0.0330</b>		<b>1,245.2548</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**3.6 Architectural Coating - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	478.0042					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>478.2088</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5599	0.3332	4.4876	0.0125	1.3190	8.1900e-003	1.3272	0.3498	7.5400e-003	0.3573		1,244.4309	1,244.4309	0.0330		1,245.2548
<b>Total</b>	<b>0.5599</b>	<b>0.3332</b>	<b>4.4876</b>	<b>0.0125</b>	<b>1.3190</b>	<b>8.1900e-003</b>	<b>1.3272</b>	<b>0.3498</b>	<b>7.5400e-003</b>	<b>0.3573</b>		<b>1,244.4309</b>	<b>1,244.4309</b>	<b>0.0330</b>		<b>1,245.2548</b>

**4.0 Operational Detail - Mobile**

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

**4.1 Mitigation Measures Mobile**

- Implement Trip Reduction Program
- Market Commute Trip Reduction Option
- Employee Vanpool/Shuttle
- Provide Ride Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.1164	195.5822	136.6697	0.8215	52.2094	1.2186	53.4280	14.3720	1.1603	15.5323	84,472.14	84,472.14	84,472.14	2.3825		84,531.70
Unmitigated	13.1164	195.5822	136.6697	0.8215	52.2094	1.2186	53.4280	14.3720	1.1603	15.5323	84,472.14	84,472.14	84,472.14	2.3825		84,531.70

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
City Park	0.00	0.00	0.00		
General Office Building	4,145.00	4,145.00	4,145.00	19,538,677	19,538,677
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	399.71	399.71	399.71	3,637,332	3,637,332
<b>Total</b>	<b>4,544.70</b>	<b>4,544.70</b>	<b>4,544.70</b>	<b>23,176,009</b>	<b>23,176,009</b>

**4.3 Trip Type Information**

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	9.30	50.00	0.00	50.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	25.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
General Office Building	0.500000	0.000000	0.000000	0.000000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.167045	0.208818	0.626136	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153
NaturalGas Unmitigated	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153

**5.2 Energy by Land Use - NaturalGas**  
**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	42.7808	4.6000e-004	4.1900e-003	3.5200e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004		5.0330	5.0330	1.0000e-004	9.0000e-005	5.0630
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3900.02	0.0421	0.3824	0.3212	2.2900e-003		0.0291	0.0291		0.0291	0.0291		458.8258	458.8258	8.7900e-003	8.4100e-003	461.5524
<b>Total</b>		<b>0.0425</b>	<b>0.3865</b>	<b>0.3247</b>	<b>2.3200e-003</b>		<b>0.0294</b>	<b>0.0294</b>		<b>0.0294</b>	<b>0.0294</b>		<b>463.8588</b>	<b>463.8588</b>	<b>8.8900e-003</b>	<b>8.5000e-003</b>	<b>466.6153</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.0427808	4.6000e-004	4.1900e-003	3.5200e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004		5.0330	5.0330	1.0000e-004	9.0000e-005	5.0630
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.90002	0.0421	0.3824	0.3212	2.2900e-003		0.0291	0.0291		0.0291	0.0291		458.8258	458.8258	8.7900e-003	8.4100e-003	461.5524
<b>Total</b>		<b>0.0425</b>	<b>0.3865</b>	<b>0.3247</b>	<b>2.3200e-003</b>		<b>0.0294</b>	<b>0.0294</b>		<b>0.0294</b>	<b>0.0294</b>		<b>463.8588</b>	<b>463.8588</b>	<b>8.8900e-003</b>	<b>8.5000e-003</b>	<b>466.6153</b>

6.0 Area Detail

6.1 Mitigation Measures Area

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
Unmitigated	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8334					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1726					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0119	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
<b>Total</b>	<b>16.0179</b>	<b>1.1700e-003</b>	<b>0.1277</b>	<b>1.0000e-005</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>0.2732</b>	<b>0.2732</b>	<b>7.2000e-004</b>		<b>0.2912</b>

**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	1.8334					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	14.1726					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	0.0119	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004			0.2732	0.2732	7.2000e-004		0.2912
<b>Total</b>	<b>16.0179</b>	<b>1.1700e-003</b>	<b>0.1277</b>	<b>1.0000e-005</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>			<b>0.2732</b>	<b>0.2732</b>	<b>7.2000e-004</b>		<b>0.2912</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	85	8.00	260	89	0.20	Diesel



**UnMitigated/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
Equipment Type	lb/day										lb/day					
Forklifts	9.7041	90.1147	98.5588	0.1305		5.9695	5.9695		5.4919	5.4919		12,645.5337	12,645.5337	4.0898		12,747.7792
<b>Total</b>	<b>9.7041</b>	<b>90.1147</b>	<b>98.5588</b>	<b>0.1305</b>		<b>5.9695</b>	<b>5.9695</b>		<b>5.4919</b>	<b>5.4919</b>		<b>12,645.5337</b>	<b>12,645.5337</b>	<b>4.0898</b>		<b>12,747.7792</b>

**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
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**User Defined Equipment**

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

**11.0 Vegetation**

**Sierra Business Center - HC Sort Facility**  
 San Bernardino-South Coast County, Winter

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	4.50	1000sqft	0.10	4,500.00	0
Unrefrigerated Warehouse-No Rail	701.24	1000sqft	16.10	701,235.00	0
Parking Lot	538.99	1000sqft	12.37	538,987.00	0
City Park	3.62	Acre	3.62	157,813.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	510.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

Project Characteristics - Consistent with DEIR's model.

Land Use - Consistent with DEIR's model.

Construction Phase - See SWAPE comment about individual construction phase lengths. Individual construction phase lengths proportionally reduced to match 12-month construction duration.

Architectural Coating - See SWAPE comment about architectural coating emission factors.

Vehicle Trips - Consistent with DEIR's model.

Vehicle Emission Factors - See SWAPE comment about operational vehicle emission factors.

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix - Consistent with DEIR's model.

Operational Off-Road Equipment - See SWAPE comment about number of forklifts.

Construction Off-road Equipment Mitigation - See SWAPE comment about construction-related mitigation measures.

Mobile Land Use Mitigation -

Mobile Commute Mitigation - See SWAPE comment about "Transit Subsidy" mitigation measure.

Energy Mitigation - See SWAPE comment about energy-related operational mitigation measure.

Water Mitigation - See SWAPE comment about water-related operational mitigation measures.

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	500.00	206.00
tblConstructionPhase	NumDays	45.00	18.00
tblConstructionPhase	NumDays	35.00	14.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	PhaseEndDate	2/6/2024	8/30/2022
tblConstructionPhase	PhaseEndDate	10/31/2023	7/21/2022
tblConstructionPhase	PhaseEndDate	11/30/2021	10/6/2021
tblConstructionPhase	PhaseEndDate	12/19/2023	8/10/2022

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

tblConstructionPhase	PhaseEndDate	9/28/2021	9/10/2021
tblConstructionPhase	PhaseStartDate	12/20/2023	8/11/2022
tblConstructionPhase	PhaseStartDate	12/1/2021	10/7/2021
tblConstructionPhase	PhaseStartDate	9/29/2021	9/11/2021
tblConstructionPhase	PhaseStartDate	11/1/2023	7/22/2022
tblFleetMix	HHD	0.06	0.00
tblFleetMix	HHD	0.06	0.63
tblFleetMix	LDA	0.55	0.50
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.50
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1010e-003	0.00
tblFleetMix	LHD2	5.1010e-003	0.17
tblFleetMix	MCY	5.9030e-003	0.00
tblFleetMix	MCY	5.9030e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.21
tblFleetMix	OBUS	1.3570e-003	0.00
tblFleetMix	OBUS	1.3570e-003	0.00

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

tblFleetMix	SBUS	8.0800e-004	0.00
tblFleetMix	SBUS	8.0800e-004	0.00
tblFleetMix	UBUS	1.5650e-003	0.00
tblFleetMix	UBUS	1.5650e-003	0.00
tblLandUse	LandUseSquareFeet	701,240.00	701,235.00
tblLandUse	LandUseSquareFeet	538,990.00	538,987.00
tblLandUse	LandUseSquareFeet	157,687.20	157,813.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	65.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TL	6.90	9.30
tblVehicleTrips	CNW_TL	6.90	25.00
tblVehicleTrips	CNW_TTP	19.00	50.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	33.00	50.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	921.11
tblVehicleTrips	ST_TR	1.68	0.57
tblVehicleTrips	SU_TR	16.74	0.00

CalEEMod Version: CalEEMod.2016.3.2

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Date: 6/15/2021 12:12 PM

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

tb/VehicleTrips	SU_TR	1.05	921.11
tb/VehicleTrips	SU_TR	1.68	0.57
tb/VehicleTrips	WD_TR	1.89	0.00
tb/VehicleTrips	WD_TR	11.03	921.11
tb/VehicleTrips	WD_TR	1.68	0.57

**2.0 Emissions Summary**

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Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.5316	46.4659	41.4572	0.1446	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	14,625.6932	14,625.6932	1.9483	0.0000	14,656.5786
2022	478.7714	38.1531	39.2382	0.1420	8.0567	0.8828	8.9395	2.1702	0.8302	3.0004	0.0000	14,366.0273	14,366.0273	1.1997	0.0000	14,396.0188
Maximum	478.7714	46.4659	41.4572	0.1446	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	14,625.6932	14,625.6932	1.9483	0.0000	14,656.5786

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.5316	46.4659	41.4572	0.1446	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	14,625.6932	14,625.6932	1.9483	0.0000	14,656.5786
2022	478.7714	38.1531	39.2382	0.1420	8.0567	0.8828	8.9395	2.1702	0.8302	3.0004	0.0000	14,366.0273	14,366.0273	1.1997	0.0000	14,396.0188
Maximum	478.7714	46.4659	41.4572	0.1446	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	14,625.6932	14,625.6932	1.9483	0.0000	14,656.5786

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

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Area	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004			0.2912
Energy	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003		466.6153
Mobile	12.7984	202.5205	128.6617	0.7988	52.2094	1.2206	53.4300	14.3720	1.1623	15.5342		82,197.4689	82,197.4689	2.4241			82,258.0721
Offroad	9.7041	90.1147	98.5588	0.1305		5.9695	5.9695		5.4919	5.4919		12,645.5337	12,645.5337	4.0898			12,747.7792
<b>Total</b>	<b>38.5629</b>	<b>293.0229</b>	<b>227.6728</b>	<b>0.9317</b>	<b>52.2094</b>	<b>7.2199</b>	<b>59.4294</b>	<b>14.3720</b>	<b>6.6840</b>	<b>21.0560</b>		<b>95,307.1347</b>	<b>95,307.1347</b>	<b>6.5236</b>	<b>8.5000e-003</b>		<b>95,472.7579</b>



Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
Energy	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153
Mobile	12.7984	202.5205	128.6617	0.7988	52.2094	1.2206	53.4300	14.3720	1.1623	15.5342		82,197.4689	82,197.4689	2.4241		82,258.0721
Offroad	9.7041	90.1147	98.5588	0.1305		5.9695	5.9695		5.4919	5.4919		12,645.5337	12,645.5337	4.0898		12,747.7792
<b>Total</b>	<b>38.5629</b>	<b>293.0229</b>	<b>227.6728</b>	<b>0.9317</b>	<b>52.2094</b>	<b>7.2199</b>	<b>59.4294</b>	<b>14.3720</b>	<b>6.6840</b>	<b>21.0560</b>		<b>95,307.1347</b>	<b>95,307.1347</b>	<b>6.5236</b>	<b>8.5000e-003</b>	<b>95,472.7579</b>
<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**

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2021	9/10/2021	5	8	
2	Grading	Grading	9/11/2021	10/6/2021	5	18	
3	Building Construction	Building Construction	10/7/2021	7/21/2022	5	206	
4	Paving	Paving	7/22/2022	8/10/2022	5	14	
5	Architectural Coating	Architectural Coating	8/11/2022	8/30/2022	5	14	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 45

Acres of Paving: 12.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,058,603; Non-Residential Outdoor: 352,868; Striped Parking Area: 32,339 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.56
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

**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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	589.00	230.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	118.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.0445</b>	<b>20.1107</b>	<b>9.9307</b>	<b>1.8809</b>	<b>11.8116</b>		<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0917	0.0595	0.6112	1.7700e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		176.6696	176.6696	4.9200e-003		176.7925
<b>Total</b>	<b>0.0917</b>	<b>0.0595</b>	<b>0.6112</b>	<b>1.7700e-003</b>	<b>0.2012</b>	<b>1.2900e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.1900e-003</b>	<b>0.0545</b>		<b>176.6696</b>	<b>176.6696</b>	<b>4.9200e-003</b>		<b>176.7925</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

3.2 Site Preparation - 2021

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.0445</b>	<b>20.1107</b>	<b>9.9307</b>	<b>1.8809</b>	<b>11.8116</b>	<b>0.0000</b>	<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0917	0.0595	0.6112	1.7700e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		176.6696	176.6696	4.9200e-003		176.7925
<b>Total</b>	<b>0.0917</b>	<b>0.0595</b>	<b>0.6112</b>	<b>1.7700e-003</b>	<b>0.2012</b>	<b>1.2900e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.1900e-003</b>	<b>0.0545</b>		<b>176.6696</b>	<b>176.6696</b>	<b>4.9200e-003</b>		<b>176.7925</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>8.6733</b>	<b>1.9853</b>	<b>10.6587</b>	<b>3.5965</b>	<b>1.8265</b>	<b>5.4230</b>		<b>6,007.0434</b>	<b>6,007.0434</b>	<b>1.9428</b>		<b>6,055.6134</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0661	0.6791	1.9700e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		196.2995	196.2995	5.4600e-003		196.4361
<b>Total</b>	<b>0.1018</b>	<b>0.0661</b>	<b>0.6791</b>	<b>1.9700e-003</b>	<b>0.2236</b>	<b>1.4300e-003</b>	<b>0.2250</b>	<b>0.0593</b>	<b>1.3200e-003</b>	<b>0.0606</b>		<b>196.2995</b>	<b>196.2995</b>	<b>5.4600e-003</b>		<b>196.4361</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>8.6733</b>	<b>1.9853</b>	<b>10.6587</b>	<b>3.5965</b>	<b>1.8265</b>	<b>5.4230</b>	<b>0.0000</b>	<b>6,007.0434</b>	<b>6,007.0434</b>	<b>1.9428</b>		<b>6,055.6134</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0661	0.6791	1.9700e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		196.2995	196.2995	5.4600e-003		196.4361
<b>Total</b>	<b>0.1018</b>	<b>0.0661</b>	<b>0.6791</b>	<b>1.9700e-003</b>	<b>0.2236</b>	<b>1.4300e-003</b>	<b>0.2250</b>	<b>0.0593</b>	<b>1.3200e-003</b>	<b>0.0606</b>		<b>196.2995</b>	<b>196.2995</b>	<b>5.4600e-003</b>		<b>196.4361</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**3.4 Building Construction - 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	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6313	21.9445	4.8820	0.0597	1.4731	0.0391	1.5122	0.4242	0.0374	0.4615		6,291.3080	6,291.3080	0.4585		6,302.7702
Worker	2.9993	1.9456	20.0000	0.0580	6.5836	0.0421	6.6257	1.7480	0.0388	1.7868		5,781.0213	5,781.0213	0.1609		5,785.0442
<b>Total</b>	<b>3.6306</b>	<b>23.8901</b>	<b>24.8820</b>	<b>0.1177</b>	<b>8.0567</b>	<b>0.0812</b>	<b>8.1379</b>	<b>2.1702</b>	<b>0.0762</b>	<b>2.2463</b>		<b>12,072.3293</b>	<b>12,072.3293</b>	<b>0.6194</b>		<b>12,087.8144</b>



Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**3.4 Building Construction - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6313	21.9445	4.8820	0.0597	1.4731	0.0391	1.5122	0.4242	0.0374	0.4615		6,291.3080	6,291.3080	0.4585		6,302.7702
Worker	2.9993	1.9456	20.0000	0.0580	6.5836	0.0421	6.6257	1.7480	0.0388	1.7868		5,781.0213	5,781.0213	0.1609		5,785.0442
<b>Total</b>	<b>3.6306</b>	<b>23.8901</b>	<b>24.8820</b>	<b>0.1177</b>	<b>8.0567</b>	<b>0.0812</b>	<b>8.1379</b>	<b>2.1702</b>	<b>0.0762</b>	<b>2.2463</b>		<b>12,072.3293</b>	<b>12,072.3293</b>	<b>0.6194</b>		<b>12,087.8144</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**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	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5889	20.7889	4.5322	0.0591	1.4731	0.0329	1.5060	0.4241	0.0315	0.4556		6,238.8938	6,238.8938	0.4433		6,249.9761
Worker	2.8981	17.7486	18.3426	0.0559	6.5836	0.0408	6.6245	1.7480	0.0376	1.7857		5,572.7989	5,572.7989	0.1444		5,576.4105
<b>Total</b>	<b>3.3970</b>	<b>22.5375</b>	<b>22.8748</b>	<b>0.1151</b>	<b>8.0567</b>	<b>0.0738</b>	<b>8.1305</b>	<b>2.1702</b>	<b>0.0691</b>	<b>2.2392</b>		<b>11,811.6937</b>	<b>11,811.6937</b>	<b>0.5877</b>		<b>11,826.3866</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**3.4 Building Construction - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5889	20.7889	4.5322	0.0591	1.4731	0.0329	1.5060	0.4241	0.0315	0.4556		6,238.8938	6,238.8938	0.4433		6,249.9761
Worker	2.8981	17.7486	18.3426	0.0559	6.5836	0.0408	6.6245	1.7480	0.0376	1.7857		5,572.7999	5,572.7999	0.1444		5,576.4105
<b>Total</b>	<b>3.3970</b>	<b>22.5375</b>	<b>22.8748</b>	<b>0.1151</b>	<b>8.0567</b>	<b>0.0738</b>	<b>8.1305</b>	<b>2.1702</b>	<b>0.0691</b>	<b>2.2392</b>		<b>11,811.6937</b>	<b>11,811.6937</b>	<b>0.5877</b>		<b>11,826.3866</b>

**3.5 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	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	2.3150					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>3.4178</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>		<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0445	0.4671	1.4200e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		141.9219	141.9219	3.6800e-003		142.0139
<b>Total</b>	<b>0.0715</b>	<b>0.0445</b>	<b>0.4671</b>	<b>1.4200e-003</b>	<b>0.1677</b>	<b>1.0400e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.6000e-004</b>	<b>0.0454</b>		<b>141.9219</b>	<b>141.9219</b>	<b>3.6800e-003</b>		<b>142.0139</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

3.5 Paving - 2022

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	2.3150					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>3.4178</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>	<b>0.0000</b>	<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0445	0.4671	1.4200e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		141.9219	141.9219	3.6800e-003		142.0139
<b>Total</b>	<b>0.0715</b>	<b>0.0445</b>	<b>0.4671</b>	<b>1.4200e-003</b>	<b>0.1677</b>	<b>1.0400e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.6000e-004</b>	<b>0.0454</b>		<b>141.9219</b>	<b>141.9219</b>	<b>3.6800e-003</b>		<b>142.0139</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**3.6 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	478.0042					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>478.2088</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5626	0.3503	3.6747	0.0112	1.3190	8.1900e-003	1.3272	0.3498	7.5400e-003	0.3573		1,116.4523	1,116.4523	0.0289		1,117.1756
<b>Total</b>	<b>0.5626</b>	<b>0.3503</b>	<b>3.6747</b>	<b>0.0112</b>	<b>1.3190</b>	<b>8.1900e-003</b>	<b>1.3272</b>	<b>0.3498</b>	<b>7.5400e-003</b>	<b>0.3573</b>		<b>1,116.4523</b>	<b>1,116.4523</b>	<b>0.0289</b>		<b>1,117.1756</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**3.6 Architectural Coating - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	478.0042					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>478.2088</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5626	0.3503	3.6747	0.0112	1.3190	8.1900e-003	1.3272	0.3498	7.5400e-003	0.3573		1,116.4523	1,116.4523	0.0289		1,117.1756
<b>Total</b>	<b>0.5626</b>	<b>0.3503</b>	<b>3.6747</b>	<b>0.0112</b>	<b>1.3190</b>	<b>8.1900e-003</b>	<b>1.3272</b>	<b>0.3498</b>	<b>7.5400e-003</b>	<b>0.3573</b>		<b>1,116.4523</b>	<b>1,116.4523</b>	<b>0.0289</b>		<b>1,117.1756</b>

**4.0 Operational Detail - Mobile**

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

**4.1 Mitigation Measures Mobile**

- Implement Trip Reduction Program
- Market Commute Trip Reduction Option
- Employee Vanpool/Shuttle
- Provide Ride Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.7984	202.5205	128.6617	0.7988	52.2094	1.2206	53.4300	14.3720	1.1623	15.5342		82,197.46 89	82,197.46 89	2.4241		82,258.07 21
Unmitigated	12.7984	202.5205	128.6617	0.7988	52.2094	1.2206	53.4300	14.3720	1.1623	15.5342		82,197.46 89	82,197.46 89	2.4241		82,258.07 21

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	4,145.00	4,145.00	4,145.00	19,538,677	19,538,677
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	399.71	399.71	399.71	3,637,332	3,637,332
<b>Total</b>	<b>4,544.70</b>	<b>4,544.70</b>	<b>4,544.70</b>	<b>23,176,009</b>	<b>23,176,009</b>

**4.3 Trip Type Information**



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Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	9.30	50.00	0.00	50.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	25.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
General Office Building	0.500000	0.000000	0.000000	0.000000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.167045	0.208818	0.626136	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153
NaturalGas Unmitigated	0.0425	0.3866	0.3247	2.3200e-003		0.0294	0.0294		0.0294	0.0294		463.8588	463.8588	8.8900e-003	8.5000e-003	466.6153

5.2 Energy by Land Use - NaturalGas  
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	42.7808	4.6000e-004	4.1900e-003	3.5200e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004		5.0330	5.0330	1.0000e-004	9.0000e-005	5.0630
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3900.02	0.0421	0.3824	0.3212	2.2900e-003		0.0291	0.0291		0.0291	0.0291		458.8258	458.8258	8.7900e-003	8.4100e-003	461.5524
<b>Total</b>		<b>0.0425</b>	<b>0.3865</b>	<b>0.3247</b>	<b>2.3200e-003</b>		<b>0.0294</b>	<b>0.0294</b>		<b>0.0294</b>	<b>0.0294</b>		<b>463.8588</b>	<b>463.8588</b>	<b>8.8900e-003</b>	<b>8.5000e-003</b>	<b>466.6153</b>

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.0427808	4.6000e-004	4.1900e-003	3.5200e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004		5.0330	5.0330	1.0000e-004	9.0000e-005	5.0630
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.90002	0.0421	0.3824	0.3212	2.2900e-003		0.0291	0.0291		0.0291	0.0291		458.8258	458.8258	8.7900e-003	8.4100e-003	461.5524
<b>Total</b>		<b>0.0425</b>	<b>0.3865</b>	<b>0.3247</b>	<b>2.3200e-003</b>		<b>0.0294</b>	<b>0.0294</b>		<b>0.0294</b>	<b>0.0294</b>		<b>463.8588</b>	<b>463.8588</b>	<b>8.8900e-003</b>	<b>8.5000e-003</b>	<b>466.6153</b>

6.0 Area Detail

6.1 Mitigation Measures Area

Sierra Business Center - HC Sort Facility - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
Unmitigated	16.0179	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8334					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1726					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0119	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2732	0.2732	7.2000e-004		0.2912
<b>Total</b>	<b>16.0179</b>	<b>1.1700e-003</b>	<b>0.1277</b>	<b>1.0000e-005</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>0.2732</b>	<b>0.2732</b>	<b>7.2000e-004</b>		<b>0.2912</b>

**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	1.8334					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	14.1726					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	0.0119	1.1700e-003	0.1277	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004			0.2732	0.2732	7.2000e-004		0.2912
<b>Total</b>	<b>16.0179</b>	<b>1.1700e-003</b>	<b>0.1277</b>	<b>1.0000e-005</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>			<b>0.2732</b>	<b>0.2732</b>	<b>7.2000e-004</b>		<b>0.2912</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	85	8.00	260	89	0.20	Diesel

**UnMitigated/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
Equipment Type	lb/day										lb/day					
Forklifts	9.7041	90.1147	98.5588	0.1305		5.9695	5.9695		5.4919	5.4919		12,645.5337	12,645.5337	4.0898		12,747.7792
<b>Total</b>	<b>9.7041</b>	<b>90.1147</b>	<b>98.5588</b>	<b>0.1305</b>		<b>5.9695</b>	<b>5.9695</b>		<b>5.4919</b>	<b>5.4919</b>		<b>12,645.5337</b>	<b>12,645.5337</b>	<b>4.0898</b>		<b>12,747.7792</b>

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

Attachment B



Technical Consultation, Data Analysis and  
Litigation Support for the Environment

SOIL WATER AIR PROTECTION ENTERPRISE  
2656 29th Street, Suite 201  
Santa Monica, California 90405  
Attn: Paul Rosenfeld, Ph.D.  
Mobil: (310) 795-2335  
Office: (310) 452-5555  
Fax: (310) 452-5550  
Email: [prosenfeld@swape.com](mailto:prosenfeld@swape.com)

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***Paul Rosenfeld, Ph.D.***

**Chemical Fate and Transport & Air Dispersion Modeling**

*Principal Environmental Chemist*

**Risk Assessment & Remediation Specialist**

**Education**

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

**Professional Experience**

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

### **Professional History:**

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner  
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)  
UCLA School of Public Health; 2003 to 2006; Adjunct Professor  
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator  
UCLA Institute of the Environment, 2001-2002; Research Associate  
Komex H<sub>2</sub>O Science, 2001 to 2003; Senior Remediation Scientist  
National Groundwater Association, 2002-2004; Lecturer  
San Diego State University, 1999-2001; Adjunct Professor  
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager  
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager  
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor  
King County, Seattle, 1996 – 1999; Scientist  
James River Corp., Washington, 1995-96; Scientist  
Big Creek Lumber, Davenport, California, 1995; Scientist  
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist  
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

### **Publications:**

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health*. 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P.**, (2015) Modeling the Effect of Refinery Emission On Residential Property Value. *Journal of Real Estate Research*. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.**, Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermol and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

**Rosenfeld, P.E.** & Feng, L. (2011). *The Risks of Hazardous Waste*. Amsterdam: Elsevier Publishing.

Cheremisnoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisnoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries*. Amsterdam: Elsevier Publishing.

Cheremisnoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution*, 123 (17), 319-327.



Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

**Rosenfeld, P.E.**, J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

**Rosenfeld, P. E.**, M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities*. Boston Massachusetts: Elsevier Publishing

**Rosenfeld, P.E.**, and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

**Rosenfeld P. E.**, J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004*. New Orleans, October 2-6, 2004.

**Rosenfeld, P.E.**, and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

**Rosenfeld, P.E.**, and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

**Rosenfeld, P. E.**, Grey, M. A., Sellow, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

**Rosenfeld, P.E.**, Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office, Publications Clearinghouse (MS-6)*, Sacramento, CA Publication #442-02-008.

**Rosenfeld, P.E.**, and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

**Rosenfeld, P.E.**, and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality*. 29, 1662-1668.

**Rosenfeld, P.E.**, C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

**Rosenfeld, P.E.**, and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

**Rosenfeld, P.E.**, and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and P. Rosenfeld. (1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

### **Presentations:**

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society*. Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; Rosenfeld, P.E. (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; Rosenfeld, P.E. (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States” Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., Rosenfeld, P. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld, P. E.** (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld P. E.** (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

**Rosenfeld P. E.** (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florida, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

**Paul Rosenfeld Ph.D.** (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

**Paul Rosenfeld Ph.D.** (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion. *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

**Paul Rosenfeld Ph.D.** (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

**Paul Rosenfeld Ph.D.** (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

**Paul Rosenfeld Ph.D.** (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

**Paul Rosenfeld Ph.D.** (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

**Paul Rosenfeld Ph.D.** (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

**Paul Rosenfeld, Ph.D.** and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

**Paul Rosenfeld, Ph.D.** (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

**Paul Rosenfeld, Ph.D.** (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association.* Lecture conducted from Radison Hotel, Sacramento, California.

**Rosenfeld, P. E.,** Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

**Paul Rosenfeld, Ph.D.** and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants.* Lecture conducted from Hyatt Regency Phoenix Arizona.

**Paul Rosenfeld, Ph.D.** (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum.* Lecture conducted from Marriott Hotel, Anaheim California.

**Paul Rosenfeld, Ph.D.** (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable.* Lecture conducted from Sacramento California.

**Rosenfeld, P.E.** and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

**Rosenfeld, P.E.** and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

**Rosenfeld, P.E.** and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association.* Lecture conducted from Vancouver Washington..

**Rosenfeld, P.E.** and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference.* Lecture conducted from Indianapolis, Maryland.

**Rosenfeld, P.E.** (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

**Rosenfeld, P.E.** (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

**Rosenfeld, P.E.** (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association.* Lecture conducted from Sacramento California.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings.* Lecture conducted from Bellevue Washington.

**Rosenfeld, P.E.,** and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America.* Lecture conducted from Salt Lake City Utah.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

**Rosenfeld, P.E.,** C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

**Rosenfeld, P.E.,** C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

### **Teaching Experience:**

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

### **Academic Grants Awarded:**

California Integrated Waste Management Board. \$41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: \$10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. \$100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. \$20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: \$10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: \$15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. \$500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

**Deposition and/or Trial Testimony:**

- In the United States District Court For The Southern District of Illinois  
Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant*.  
Case No.: 3:19-cv-00302-SMY-GCS  
Rosenfeld Deposition. 2-19-2020
- In the Circuit Court of Jackson County, Missouri  
Karen Cornwell, *Plaintiff*, vs. Marathon Petroleum, LP, *Defendant*.  
Case No.: 1716-CV10006  
Rosenfeld Deposition. 8-30-2019
- In the United States District Court For The District of New Jersey  
Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant*.  
Case No.: 2:17-cv-01624-ES-SCM  
Rosenfeld Deposition. 6-7-2019
- In the United States District Court of Southern District of Texas Galveston Division  
M/T Carla Maersk, *Plaintiffs*, vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS “Conti Perdido”  
*Defendant*.  
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237  
Rosenfeld Deposition. 5-9-2019
- In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica  
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants  
Case No.: No. BC615636  
Rosenfeld Deposition, 1-26-2019
- In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica  
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants  
Case No.: No. BC646857  
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19
- In United States District Court For The District of Colorado  
Bells et al. Plaintiff vs. The 3M Company et al., Defendants  
Case: No 1:16-cv-02531-RBJ  
Rosenfeld Deposition, 3-15-2018 and 4-3-2018
- In The District Court Of Regan County, Texas, 112<sup>th</sup> Judicial District  
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants  
Cause No 1923  
Rosenfeld Deposition, 11-17-2017
- In The Superior Court of the State of California In And For The County Of Contra Costa  
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants  
Cause No C12-01481  
Rosenfeld Deposition, 11-20-2017
- In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois  
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants  
Case No.: No. 0i9-L-2295  
Rosenfeld Deposition, 8-23-2017

- In United States District Court For The Southern District of Mississippi  
Guy Manuel vs. The BP Exploration et al., Defendants  
Case: No 1:19-cv-00315-RHW  
Rosenfeld Deposition, 4-22-2020
- In The Superior Court of the State of California, For The County of Los Angeles  
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC  
Case No.: LC102019 (c/w BC582154)  
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018
- In the Northern District Court of Mississippi, Greenville Division  
Brenda J. Cooper, et al., *Plaintiffs*, vs. Meritor Inc., et al., *Defendants*  
Case Number: 4:16-cv-52-DMB-JVM  
Rosenfeld Deposition: July 2017
- In The Superior Court of the State of Washington, County of Snohomish  
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants  
Case No.: No. 13-2-03987-5  
Rosenfeld Deposition, February 2017  
Trial, March 2017
- In The Superior Court of the State of California, County of Alameda  
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants  
Case No.: RG14711115  
Rosenfeld Deposition, September 2015
- In The Iowa District Court In And For Poweshiek County  
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants  
Case No.: LALA002187  
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County  
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants  
Law No.: LALA105144 - Division A  
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County  
Doug Pauls, et al., et al., Plaintiffs vs. Richard Warren, et al., Defendants  
Law No.: LALA105144 - Division A  
Rosenfeld Deposition, August 2015
- In The Circuit Court of Ohio County, West Virginia  
Robert Andrews, et al. v. Antero, et al.  
Civil Action N0. 14-C-30000  
Rosenfeld Deposition, June 2015
- In The Third Judicial District County of Dona Ana, New Mexico  
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward  
DeRuyter, Defendants  
Rosenfeld Deposition: July 2015
- In The Iowa District Court For Muscatine County  
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant  
Case No 4980  
Rosenfeld Deposition: May 2015



Attachment C



2656 29<sup>th</sup> Street, Suite 201  
Santa Monica, CA 90405

Matt Hagemann, P.G., C.Hg.  
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[mhagemann@swape.com](mailto:mhagemann@swape.com)

**Matthew F. Hagemann, P.G., C.Hg., QSD, QSP**

**Geologic and Hydrogeologic Characterization  
Investigation and Remediation Strategies  
Litigation Support and Testifying Expert  
Industrial Stormwater Compliance  
CEQA Review**

**Education:**

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

**Professional Certifications:**

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

**Professional Experience:**

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);



- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

**Senior Regulatory and Litigation Support Analyst:**

With SWAPE, Matt’s responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 150 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt’s duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

**Executive Director:**

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

**Hydrogeology:**

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nationwide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

**Policy:**

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, *Oxygenates in Water: Critical Information and Research Needs*.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

- principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

**Geology:**

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

**Teaching:**

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

**Invited Testimony, Reports, Papers and Presentations:**

**Hagemann, M.F.**, 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

**Hagemann, M.F.**, 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

**Hagemann, M.F.**, 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

**Hagemann, M.F.**, 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

**Hagemann, M.F.**, 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

**Hagemann, M.F.**, 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

**Hagemann, M.F.**, 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

**Hagemann, M.F.**, 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

**Hagemann, M.F.**, 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

**Hagemann, M.F.**, 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

**Hagemann, M.F.**, 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

**Hagemann, M.F.**, 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

**Hagemann, M.F.**, 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

**Hagemann, M.F.**, 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

**Hagemann, M.F.**, and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

**Hagemann, M.F.**, 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

**Hagemann, M.F.**, 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

**Hagemann, M.F.**, and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

**Hagemann, M.F.**, Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

**Hagemann, M. F.**, Fukunaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

**Hagemann, M.F.**, 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

**Hagemann, M.F.** and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

**Hagemann, M.F.**, 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

**Hagemann, M.F.**, 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

**Other Experience:**

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

**Response to Comment Letter E - Gary Ho, Blum Collins, LLP**

**E1** This comment is introductory in nature and states that Soil Water Air Protection Enterprise (SWAPE) has submitted comments on behalf of Golden State Environmental Justice Alliance (GSEJA). Responses to individual comments will be sent to the address noted pursuant to the requirements of CEQA Guidelines Section 15088. Responses to specific comments are provided below; refer to **Responses E4** through **E32**.

**E2** This comment restates the project description and provides the commenter’s allegation that the following comments will show that the DEIR did not adequately evaluate air quality, health risk, and greenhouse gas impacts. Specific environmental comments are responded to in the responses below; refer to **Responses E4** through **E32**.

**E3** This comment is introductory in nature and summarizes the CalEEMod software. The introductory comment does not raise a specific issue with the adequacy of the DEIR or raise any other CEQA issue. Responses to specific comments are provided below; refer to **Responses E4** through **E32**.

**E4** This comment states that unsubstantiated changes were made to the model without justification. This statement is incorrect, the edits made by Paul Rosenfeld and Matthew Hagemann to the model include updating outdated information, compliance with current regulations, and inputting required mitigation measures. Although the air quality analysis used the most recent version of CalEEMod (version 2016.3.2) at the time the DEIR was circulated for public review, some of CalEEMod’s baseline/default data is from 2008 or earlier. The CalEEMod *User’s Guide* (October 2017) instructs the user to consider the accuracy of the equipment and phase duration estimations and using project specific construction schedules, when available. As such, many of the defaults were out of date and not consistent with existing standards and regulations. CalEEMod was designed to allow the user to change the default to reflect site- or project-specific information when it’s available. It is standard practice to update the model’s generic default data with project-specific data from appropriate sources (site plans, construction schedules, etc.). These changes are noted in DEIR Appendix B, Section 4.2 as well as in Appendix A of the Air Quality Assessment (refer to DEIR Appendix B). These changes are also discussed further in the responses below.

This comment incorrectly states that inputs made in the model are not consistent with the information in DEIR and that the project’s construction and operational emissions are underestimated. This comment is a general statement and responses to specific comments on this subject are provided in **Responses E5** and **E12**, below.

**E5** This statement correctly notes that edits have been made to the default construction phase-lengths to reflect project-specific information to more accurately model project emissions. Default phase lengths in CalEEMod are based on SCAQMD construction surveys conducted in 2008 and 2010 (CalEEMod *Appendix A: Calculation Details for CalEEMod* and *Appendix E: Technical Source Information*). CalEEMod uses the total project acreage entered into the land use screen to estimate construction time and equipment based on survey information received. If the total acreage of a project falls between the acreage of two construction sites surveyed, the phase length for the greater acreage is used. Since the default phase lengths are based on 2010 construction equipment and building methods, these phases are extremely conservative, due to improvements over the past 10 years. Project specific construction information was provided by the applicant was entered in



model. As noted in **Response E4**, this approach is consistent with the CalEEMod *User's Guide* (October 2017) instructs the user to consider the accuracy of the equipment and phase duration estimations and using project specific construction schedules, when available.

- E6** Refer to **Response E5**, above. The commenter incorrectly states that changes to the construction schedule were not justified. CalEEMod default phase lengths are based on averages from construction surveys conducted in 2008 and 2010 and are determined by the total acreage of the site. Based on default CalEEMod values, construction of the project would take approximately 2.5 years. But Paul Rosenfeld and Matthew Hagemann who reviewed the default phase length determined that this schedule does not take into account new building methods, such as concrete tilt-up construction which dramatically reduces construction time compared to traditional methods. Concrete placement is fast and easy because panels are poured on-site and assembled using cranes. Formwork placement is faster and simpler, including block-outs for door and window openings. For this reason, project specific construction phases are more accurate than default values, which are outdated and do not represent the project. Project specific information was entered into the model and noted as "Construction Schedule" as recommended in the *CalEEMod User's Guide*.
- E7** As discussed under **Responses E5** and **E6**, changes to CalEEMod's default construction schedule were made based on project-specific information in order to accurately model project emissions. Based on CalEEMod outputs, construction emissions were condensed and not disproportionately spread out as the commenter erroneously states. The commenter is incorrectly suggesting that the construction phases were extended strictly for the purpose of reducing daily emissions. Spreading-out construction activities over a greater period of time would reduce the amount emissions generated per day. However, the duration of most construction activities were reduced when compared to CalEEMod default values, resulting in a higher concentration of pollutants per day (as the same amount of work must be done in a shorter period of time). In fact, only one phase was extended beyond the CalEEMod default values. The architectural coating phase was extended by twelve days, based on the construction schedule. All other phases were reduced. As stated previously, whenever project specific data was available it was used in place of default assumptions.
- E8** This commenter's statement is true, architectural coating emissions were reduced from the default 100 g/L to 50 g/L. as required by SCAQMD Rule 1113. Rule 1113 states that, effective January 1, 2019, all building envelope coatings are limited to 50 g/L or less<sup>2</sup>. SCAQMD regulates the manufacturers of these coatings to meet the required standards. The project is located within SCAQMD and construction is anticipated to begin in 2021, therefore the Rule 1113 applies to the project and changes made to CalEEMod are appropriate.
- E9** This comment incorrectly states that the changes made to comply with Rule 1113 were unsupported. As discussed under **Response E8**, Rule 1113 states that all building envelope coatings must be 50 g/L or less after 1/1/2019. CalEEMod is a statewide emission estimating program, therefore rules for a specific air district are not included in the model as default values. Rule 1113 is specific to SCAQMD; therefore, the change must be made manually. As the commenter stated, Rule 1113 contains various VOC limits for different coatings, however because the project is a warehouse the applicable category would be building envelope which the Rule 1113 defines as any fluid applied coatings applied to the

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<sup>2</sup> <http://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/tos>

building envelope. Therefore, any coatings, regardless of type, applied to a building must be 50 g/L or less.

- E10** The comment confuses text in the DEIR concerning the analysis of criteria pollutants with the DEIR’s analysis of toxic air contaminants (TACs) (i.e., diesel particulate matter [DPM]). The commenter states that default operation vehicle has been updated and identifies 45 pages of edits to emission factors are identified in the DEIR (Appendix B, pp 41-86, 116-161) but incorrectly states that only certain emissions were changed to underestimate mobile emissions. By default, CalEEMod version 2016.3.2 includes emission rates for all vehicles based on the EMFAC 2014 database provided by CARB. At the time the air quality analysis for this Project was prepared, 2017 Emission Factor Model (EMFAC2017) was the latest model and CARB required that an air quality analysis include the updated emission rates. This was done. As the commenter noted under “User Entered Comments and Non-Default data” the source of the edits was identified as EMFAC2017. Following the methodology described in Section 5.2 Methodology for Converting EMFAC2014 Emission Rates into CalEEMod Vehicle Emission Factors of in the *CalEEMod User’s Guide, Appendix A: Calculation Details for CalEEMod*, CalEEMod’s the default 2014 emission rates for all vehicle categories were updated to the 2017 emission rates, as required by CARB. These modifications in CalEEMod apply to criteria pollutants. However, the project’s health risk assessment evaluates DPM emissions, which occur from trucks and are discussed on DEIR page 4.2-23. Therefore, the changes to CalEEMod emission factors were applied to all vehicle categories, not to select vehicle as the comment incorrectly states.
- E11** By default, CalEEMod does not include off-road cargo moving equipment for warehouses. To be conservative four electric-powered forklifts were added to the model. These additions were not required by CalEEMod but were conservatively added to anticipate potential equipment needs. Although the commenter repeatedly refers to compressed natural gas as the off-road equipment fuel source, the model includes electric powered equipment based on industry trends. However, due to an error in the CalEEMod program itself, the CalEEMod default values incorrectly use the same emission rates for electrical equipment as diesel. As shown in the CalEEMod outputs, (Appendix B, pp 89-90, 164-165) the electric off-road equipment is shown to generate NO<sub>x</sub>, CO, SO<sub>x</sub> and PM<sub>10</sub> and PM<sub>2.5</sub> from exhaust, all of which are not possible with electric equipment. Therefore, although the intent was to include electric off-road equipment, the model has inadvertently included emissions from diesel equipment. Based on this information, the result for all uses of this model result in off-road equipment emissions that have been overestimated, however, to be conservative these emissions were included in the analysis.
- E12** The commenter is incorrect in stating that the *SCAQMD High Cube Warehouse Truck Trip Study White Paper* suggests that high cube warehouses require an average of 0.12 forklifts per 1,000-SF. The White Paper only provides the results of a business survey developed by SCAQMD. The survey was sent to approximately 400 warehouse operators and SCAQMD received 63 responses, 34 of which were operating high cube warehouses. The White Paper states that 29 of the 34 high cube responses reported how many pallet jacks and forklifts were used at their facility. The commenter does not address the fact that the average number reported includes un-powered pallet jacks as well as forklifts. Indeed, based on the survey results it is impossible to identify the explicit number of powered forklifts each warehouse would be expected to employ, since the data provided also includes pallet jacks, which employees use to manually maneuver pallets of cargo. Accordingly, the commenter’s

statement that the DEIR underestimates the number of forklifts and thus underestimate emissions is incorrect.

- E13** Project construction and operations will be subject to all applicable state and local laws, ordinances, and regulations. Compliance with existing regulations that would reduce emissions (e.g., SCAQMD Rule 402 and 403, which are subject to enforcement action under the applicable provisions of the California Health & Safety Code) are not considered mitigation as defined by CEQA. Mitigation measures are required above and beyond existing regulation to reduce or eliminate any remaining significant impacts. However, CalEEMod does not include compliance with all regulations by default and the user must incorporate standard regulations within CalEEMod’s mitigation module, even if they are mandatory City/State/SCAQMD regulations or standard permit conditions. SCAQMD recommended control measures are not mitigation under CEQA, as they are required by the Air District during construction by SCAQMD regulation. Although the mitigated output from CalEEMod show reductions from existing regulatory requirements and project design features that are termed “mitigation” within the model, those modeling components associated compliance with existing regulations are not considered mitigation under CEQA. The DEIR discusses SCAQMD Rules 402 and 403 under Standard Conditions and Requirements (Appendix B, pp 29).
- E14** Refer to **Response E13**. The changes identified are consistent with the application of dust control measures required in SCAQMD Rule 403 and are not considered mitigation under CEQA.
- E15** The commenter incorrectly states that Rule 403 is not required and that the inclusion is unsupported. Under both federal and state law, SCAQMD is under legal obligation to make and enforce air pollution regulations. Air pollution violations may result in either criminal or civil liability. SCAQMD does not criminally prosecute air pollution violations, criminal cases are referred to state, county, or city attorneys. However, SCAQMD can impose fines of \$5,000 per day to \$1,000,000 per day.
- Rule 403 requires the implementation of best available dust control measures and includes control measures and guidance<sup>3</sup>. Changes made to the model associated with Rule 403 were identified in Rule 403 Table 1: Best Available Control Measures. Since compliance with Rule 403 is required by law, the commenter’s statement that the inclusion of Rule 403 requirements is unsubstantiated is incorrect. Compliance with Rule 403 is required law and does not need to be included as a mitigation measure to make it enforceable.
- E16** The inclusion of “Transit Subsidy” under mobile mitigation measures is an error in the CalEEMod program. Transit subsidy was not included as mitigation; no employee eligible value was entered, no daily transit subsidy amount was entered, and no changes related to transit subsidy are identified in the model output files. For confirmation, a Mitigation Report was generated in CalEEMod and included in Section 3.0, *Errata*. The Mitigation Report shows that although transit subsidy is listed as a mitigation measure, the input value is 0.0 and results in a 0.0 percent reduction. Therefore, there is no emissions credit taken for transit subsidy in the emissions modeling.
- E17** As shown in the model output files, the model was run in April 2021. Therefore, as identified under “User Entered Comments & Non-Default Data” outdated energy efficiency data included in CalEEMod version (2016.3.2) was updated with the more recent 2019 Building Energy Efficiency Standards. Due

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<sup>3</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf>

to limitations in the model, any updates to energy usage are labeled as mitigation in the model output file. Kimley-Horn utilized the most recent CalEEMod version (2016.3.2). Therefore, some of CalEEMod's baseline/default data is from 2016 and therefore out of date. CalEEMod does not automatically include compliance with all regulations by default, so the user has to incorporate standard regulations within CalEEMod's mitigation module, even though they may actually be City/State/SCAQMD regulations or standard permit conditions. These adjustments are often incorporated into the model's mitigation module, even though they are not considered mitigation under CEQA. The California Energy Commission states that nonresidential buildings built using the 2019 standards will use about 30 percent less energy than those built under the 2016 standard<sup>4</sup>. CalEEMod was designed to allow the user to update outdated information and it is a standard practice to revise default values to include the best the available data, including changes to regulatory standards and requirements<sup>5</sup>.

- E18** As shown in the model output files, the model was run in April 2021. Therefore, as discussed previously, the analysis used CalEEMod version 2016.3.2 which includes 2016 standards and regulations. To be consistent with the mandatory CalGreen 2019 Code requirements, the model was updated to include low-flow plumbing fixtures and water efficient landscape irrigation. CalEEMod was designed to allow the user to update outdated information and it is a standard practice to revise default values with the best the available data, including changes to regulatory standards and requirements. However, due to limitations in the model, any updates to water conservation are labeled as mitigation measures in the model output file. These changes are noted in the model. Since these water efficiency measures are required by regulation and building code, they are not considered CEQA mitigation measures
- E19** This statement is correct; notes were added to the model (Appendix B, pp.39,114) that acknowledge that changes were made to default values based on updates to existing standards and regulations. Please refer to **Responses E17** and **E18**. No further response is required.
- E20** Due to a flaw in the model program, the CalEEMod output file does not include the notes entered under the Traffic Mitigation/Commute tab. However, the model requires the user to input an explanation for any changes to default information or the model won't run. The note entered under the Traffic Mitigation/Commute tab in the model was "Require TDM" which refers to Mitigation Measure AQ-1.
- E21** This comment is incorrect for the following reasons. As discussed under **Response E16**, listing Transit Subsidy as a mitigation measure is an error in the program. Transit subsidy was not included as a mitigation measure in CalEEMod and no edits related to transit subsidy are included in the model outputs. In addition, as discussed under **Response E17** and **Response E18**, CalEEMod does not include compliance with all regulations by default and the user has to incorporate standard regulations within CalEEMod's mitigation module, even though they may actually be City/State/SCAQMD regulations or standard permit conditions. Although the mitigated output from CalEEMod show reductions from existing regulatory requirements and project design features that are termed "mitigation" within the

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<sup>4</sup> [https://www.energy.ca.gov/sites/default/files/2020-03/Title\\_24\\_2019\\_Building\\_Standards\\_FAQ\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf)

<sup>5</sup> [http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01\\_user-39-s-guide2020-4-0.pdf](http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-s-guide2020-4-0.pdf), page 13

model, those modeling components associated with the compliance of existing regulations are required by law and cannot be eliminated from the project's design as the commenter suggests.

**E22** The commenter states that air quality impacts cannot be identified as significant and unavoidable without implementing all feasible mitigation. As explained in the DEIR, no feasible mitigation exists that can reduce the project's air quality impacts to a less than significant level. Under **Comment E31** the commenter includes suggested best practices and mitigation measures provided by the California Attorney General. As discussed on **Response E31**, these suggestions were considered during the air quality analysis process and were either included as mitigation in the DEIR, found not to be feasible, not required under CEQA, or were determined to have no impact on emissions.

**E23** The analysis in the tech studies and DEIR incorporate project-specific parameters to accurately represent construction and operational emissions. The analysis conducted by commenter SWAPE ignored the reductions in emissions resulting from legally-required codes and regulations. Commenter SWAPE also used outdated information, and incorrect assumptions to inaccurately inflate emissions. For example, SWAPE used outdated vehicle emission factors rather than using the approved updated emission factors as required by CARB. SWAPE also modified the construction schedule instead of using the project specific schedule provided and did not include regulations required by SCAQMD, Title 24, and CalGreen Building Code. SWAPE also assumed 85 diesel powered forklifts operating inside a closed warehouse. These modifications deviate from the proposed project conditions and artificially increase emissions.

Related specifically to ROG emissions, the analysis provided by SWAPE ignores SCAQMD Rule 1113 which requires non-residential buildings use coatings with 50 g/L or less of VOC. In addition, SWAPE used a shortened architectural coating phase, rather than the project specific construction phase provide, this compresses the painting activity into a shorter period to increases the amount of emissions released per day.

**E24** This statement reports that the maximum cancer risk for construction and operations are 8.32 per million and 4.82 per million, both of which are below the 10 per million thresholds. Based on this information the project's health risk impacts are less than significant. No further response is required.

**E25** This comment is incorrect states that the HRA used flawed emission estimates which underestimated DPM concentrations. As discussed under **Response E10**, CalEEMod includes outdated emission factors by default. Following the methodology described in the *CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod*, CalEEMod's default 2014 emission rates for all vehicle categories were updated with 2017 emission rates as required by CARB.

**E26** According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Additionally, the cancer risk is expressed in the SCAQMD thresholds<sup>6</sup> as "incremental cancer risk." Individual cancer and incremental cancer risk is the likelihood that a person continuously exposed to concentrations of TACs over a lifetime will contract cancer based on the use of standard risk assessment methodology. The comment incorrectly applies the SCAQMD's 10 in one million cancer risk threshold as a cumulative threshold. The SCAQMD's 10 in one million threshold is an incremental threshold and it is, therefore, inappropriate to combine construction and

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<sup>6</sup> SCAQMD, *South Coast AQMD Air Quality Significance Thresholds*, April 2019.

operational risk levels and compare to the SCAQMD's threshold as presented in the comment. The method of simply adding the construction and operational risk levels as conducted in the comment is also incorrect because both risk levels assume that the exposure duration start in the first trimester. As construction is estimated to last for approximately one year, it would be impossible to be exposed to both construction and operational emissions in the third trimester. The commenter's approach of adding the construction and operational risk levels presented in the DEIR together overestimates risk because the age sensitivity factors are double counted.

Given the short-term construction schedule of approximately one year, Project construction would not result in a long-term (e.g., 30 or 70 years) source of TAC emissions. The SCAQMD CEQA Air Quality Handbook does not recommend analysis of TACs from short-term construction activities associated with land use development projects. A construction health risk assessment is not required by SCAQMD and no guidance for health risk assessments for construction has been adopted by SCAQMD or the City. Although SCAQMD's CEQA guidance does not require a health risk assessment for short-term construction emissions, a construction health risk assessment was conservatively prepared for the Project and provided in the DEIR. As analyzed in DEIR pages 4.2-22 and 4.2-23, Project construction activities, including TACs from equipment exhaust would not expose sensitive receptors to substantial pollutant concentrations. Project-related TAC impacts during construction would be less than significant.

Although as discussed above, conducting a construction health risk assessment is not required and combining construction and operational risk is not required by the SCAQMD, a more appropriate conservative approach would be to assume an exposure duration for construction to start at the first trimester and for operational exposure to conservatively begin at age 1. It should be noted that the HRA in the DEIR conservatively included TRU emissions with the truck trips on the surrounding roads and did not apply fraction of time at home for age bins less than 16 years. This is conservative because **MM AQ-2** prohibits cold storage, thereby eliminating trucks with TRUs at this site. Additionally, the California Office of Health Hazard Assessment (OEHHA) recommends the fraction of time at home factor applied to age bins less than 16 years.

However for informational purposes, using the approach of combining construction and operations described above and incorporating fraction of time at home for age bins less than 16 years would result in a construction risk of 5.41 in one million and an operational risk of 3.17 in one million for a combined risk of 8.57 in one million, which is below the 10 in one million threshold. This risk calculations were conducted consistent with California OEHHA methodology. Therefore, even when combining construction and operational, health risks would remain below SCAQMD thresholds.

**E27** Refer to **Response E26**, above, regarding health risk impacts.

**E28** This comment states that the project would result in GHG emissions that exceed the City's significance threshold. The comment notes that **MM AQ-1** through **AQ-4** would reduce GHG impacts. However, a majority (91 percent) of the remaining mitigated emissions are from mobile sources and neither the project applicant nor the City have regulatory authority to control tailpipe emissions, therefore impacts would remain significant and unavoidable.

**E29** This comment states that the GHG analysis and significant and unavoidable impact conclusion is incorrect because the model uses unsubstantiated vehicle emissions. This comment is incorrect, as

discussed under **Responses E10** and **E11**, the default vehicle emission values in CalEEMod version 2016.3.2 are outdated and were updated with EMFAC2017 vehicle emissions as required by CARB.

- E30** The commenter states that GHG impacts cannot be identified as significant and unavoidable without implementing all feasible mitigation. As stated in the DEIR, mitigation was identified; however no feasible mitigation exists that can reduce the project's GHG impacts to less than significant. **Comment E31** includes suggested best practices and mitigation measures provided by the California Attorney General. As discussed on **Response E31**, these suggestions were considered during the GHG analysis process and were either included as mitigation in the DEIR, found not to be feasible or required under CEQA, or were determined to have no impact on emissions.
- E31** This comment states that all feasible mitigation was not included in the DEIR and includes a list of mitigation measures and best practices provided by the California Attorney General's office<sup>7</sup>. The Applicant has now included those best practices/mitigation measures contained within the Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act document that were determined to be feasible and effective at substantively reducing significant impacts, through either added mitigation measures or updated project design. Please reference **Table 2.0-2, Feasible Mitigation Measures** above, for a detailed list of all feasible best practices/mitigation measures from the Attorney General's document, as well as the method by which they have been included as part of the Project.
- E32** This comment is a disclaimer, stating that SWAPE conducted their analysis based on limited information and that no warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented in this comment letter. No further response is required.

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<sup>7</sup> <https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf>

## Comment Letter F - Yuliana Ceballos

Comment Letter: F

**From:** yuliana ceballos <yuliana.ceballos@gmail.com>  
**Sent:** Tuesday, May 18, 2021 2:33 PM  
**To:** Paul Gonzales <pgonzales@fontana.org>  
**Subject:** Public Hearing Meeting for Today 5/18/21 - Concerns regarding Sierra Business Center Project

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Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Afternoon Paul,

I am writing to you regarding the notice of the Sierra Business Center Project that will be located across my residence. My concerns are as follows:

- One of the concerns I have is the potential driveway, specifically "Project Driveway 11". How close is this "driveway 11" to my property's driveway? Will this be directly in front of my driveway?

- I DO NOT want employee vehicles and trailers coming in and out directly in front of my home. One reason the lights from trailers and cars flashing into my home at nighttime, and another main reason potential vehicle's and or trailers blocking my driveway and the front of my home can be a potential hazard in any emergency being that there is only one way in and out on Juniper not to mention the two warehouses north of me on Boyle and one literally next door to me.

- Does the city know what this building will be? What will the protocol be if this building has ammonia? Will we be notified immediately if there is an ammonia brake / leak? Or will this building have other harmful elements that can be hazardous that we as residents need to know?

- Being that this is a huge project with over 100 dock doors. How will the lighting be structured? Will it be located to where both the lighting and the noise becomes a nuisance towards my residence after the 10pm hour? It is known that these trailers are loud when running their engines, breaking to stop, and when air pressure is released. What is the city doing to prevent noise after the 10pm hour for the residence living across the street?

- Will this be a 24-hour building?

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• Will there be signage located up and down Juniper Ave? I **DO NOT** want trailers parked in front of my home, across my home, or next to my home! What is the city going to do when trailers park in front of my home? It is already bad enough that we are going to be looking at an ugly building across the street, can we have some comfort with signage to prevent this from happening? Being that there is only ONE exit on Juniper Ave. if there ever is an accident i.e. fire and if the city fails to give us signage, these trailers can block us from fleeing our home due to a big structure fire. Also, we don't know who these people are, if this is a 24-hour building I for sure 100% do not want them parked near my home at night!

5

• Is the developer going to have big trees on Juniper Ave. to block the building from our view? IF, there are going to be trees, are residents allowed to suggest what kind of trees to be planted?

6

• Will we be getting new fencing from the developer to help block the dull ugly building and to help prevent noise levels for the front of my home?

7

• Will we be forced to give up land from our front yard for future street widening? Again, keeping in mind, the other three warehouse that will be surrounding my property

8

○ Will plants be relocated, and grass re-planted on my property if this occurs?

9

I accept the fact that I cannot stop these buildings from being approved from the city and built around our home, but please give us at least some sort of comfort for the residents that are still here. I want the city to provide us with signage to prevent trailers from parking in front of our home in the AM & PM (because we are already experiencing it with the warehouse being built on Boyle). We want beautiful big landscaping to block the dull building, new fencing for my home to help prevent any accident and help with noise (again, already experiencing the noises from the trailers that are dropping off materials for the warehouses on Boyle). As well as giving residents information of what this building will be in the future and what sort of hazardous materials this building might bring, and to help prevent any noises and lighting that can be a nuisance towards our homes, especially at night.

10

I understand that tonight’s meeting is in regard to environmental purposes, but this also ties into what we as residents will be facing in the future due to the fact that we are very unhappy and against all these warehouses being built around our homes due to safety and health concerns.

11

Thank you,

Yuliana Ceballos  
10447 Juniper Ave.  
909-452-5249

**Response to Comment Letter F - Yuliana Ceballos**

**F1** This comment does not identify a specific concern with the adequacy of the DEIR or note a specific issue or comment related to the DEIR’s environmental analysis.

However, Project Driveway 11 refers to the proposed project’s southernmost driveway along Juniper Avenue. This distance from the middle of Project Driveway 11 to the middle of the commenter’s property’s driveway to the north is approximately 187’. As such, the driveway will not be directly in front of the commenter’s driveway.

As stated above, the Project Driveway 11 is located approximately 187’ south of the commenter’s property’s driveway. Therefore, (1) lights from trailers and cars flashing into adjacent properties at nighttime and (2) the potential for vehicles and trailers blocking the commenter’s driveway causing a potential hazard in an emergency is not anticipated due to the distance between the driveways.

**F2** The proposed project is speculative in nature; the end user/tenant is not known at this time.

Prior to obtaining a Certificate of Occupancy from the City, the prospective business would be required to submit a Hazardous Materials Business Plan in the California Environmental Reporting System (CERS). Within this plan, there would be an inventory of the type, quantity, location within the building, and size/volume of the potentially hazardous materials proposed for their use. Upon review and acceptance by the Hazardous Materials Division of the San Bernardino County Fire Department, a hazardous materials permit would be issued, and the site inspected once every three (3) years. The Hazardous Materials Business Plan is available to the public, upon request from the SB County Fire Dept. – Hazardous Materials Division.

For the proposed storage/treatment of extremely hazardous substances (e.g., ammonia gas or chlorine gas), more stringent requirements would need to be met. For example, if a prospective business were to require ammonia on-site above regulatory thresholds set to protect the public, the business would be subject to the California Accidental Release and Prevention Program (CalARP). This program requires (1) the preparation of a Risk Management Plan which details specific emergency protocols in the case of a release of the ammonia, which includes immediate notification to all applicable emergency responders and to call 911, and (2) a requirement to publically notice the surrounding property owners (including the commenter) via mail-outs and a published entry in the local newspaper of all hazardous substances above regulatory thresholds that are proposed within this Risk Management Plan.

For additional information regarding the protocols and notification requirements pertaining to hazardous materials of a future prospective business, or to obtain a copy of the Hazardous Materials Business Plan for the future tenant(s) (once they occupy the building), please contact the San Bernardino County Fire Dept. – Hazardous Materials Division.

It should be noted that while the proposed project is speculative in nature (end-user/tenant is unknown at this time), it is unlikely that ammonia would be utilized in the building above regulatory thresholds by any prospective business. According to the San Bernardino County Fire

Department – Hazardous Materials Division, the primary use for ammonia in industrial warehouse buildings is for the operation of refrigerated space within the building. Per air quality mitigation measure **MM AQ-2** found on Page 4.2-17 of the publicly circulated Draft EIR for the project, cold storage (i.e., refrigerated space) is not permitted: “**MM AQ-2** – Prior to the issuance of building permits, the City of Fontana Building and Safety Division shall confirm that the Project does not include storage.”

Additionally, please refer to Chapter 4.8, *Hazards and Hazardous Materials* of the Draft EIR for additional information related to storage of hazardous materials on-site. As identified on page 4.8-26 of the Draft EIR, no significant hazardous materials impacts would occur with implementation of the proposed Project.

**F3** The comment includes the following concerns: (1) the building’s lighting, (2) the truck’s/trailers’ lighting, and (3) trucks’/trailers’ noise after 10 pm.

- 1) **BUILDING LIGHTING:** Per City of Fontana Municipal Code (Section 30-544), for industrial building projects “all lights shall be directed and/or shielded to prevent the light from adversely affecting adjacent properties. No structure or lighting feature shall be permitted which creates adverse glare.” The proposed project will include lighting fixtures which direct light downward, coupled with 14’ tall solid concrete screen walls along Juniper Avenue opposite the commenter’s property.
- 2) **TRUCKS’/TRAILERS’ LIGHTING:** The proposed project will include 14’ tall solid concrete screen walls along Juniper Avenue opposite the commenter’s property, which will fully screen all trucks/trailers (including their lights) from view.
- 3) **TRUCKS’/TRAILERS’ NOISE AFTER 10 PM:** Per City of Fontana Municipal Code (Section 30-543(a)-2), “the noise level between 10 pm and 7:00 am shall not exceed 65 db(a).” For comparison, in order to understand this 65 dba maximum noise amount, please note that per Table 4.11-4: Existing Traffic Noise Levels from Page 4.11-7 of our Draft Environmental Impact Report publically circulated in May 2021, the existing traffic noise from Slover Avenue between Cypress Avenue and Sierra Avenue is between 65.8 dba to 66.2 dba.

**F4** This comment does not identify a specific concern with the adequacy of the DEIR or note a specific issue or comment related to the Draft EIR’s environmental analysis.

The proposed project is speculative in nature; the end-user/tenant is not known at this time. Therefore, the proposed hours of operations are unknown. However, to identify a worst-case scenario for impacts, the Traffic Impact Analysis included an assessment of 24-hour a day traffic, which was also used for the air quality, greenhouse gas, and noise analyses.

**F5** This comment does not identify a specific concern with the adequacy of the DEIR or note a specific issue or comment related to the DEIR’s environmental analysis.

The Applicant is willing to put any signage along Juniper Avenue deemed by the City to be necessary to prevent trucks from parking along the street. The proposed project has 179 truck

trailer parking stalls on-site within the fully screened truck courts, despite the City's requirement to provide only 142 truck trailer parking stalls. The Project proposes excess trailer parking on-site to prevent parking along Juniper Avenue.

- F6** As proposed, there will be approximately sixty five (65) new trees planted along Juniper Avenue to complement the proposed building's already-enhanced elevations. The Applicant is willing to consider residents' requested tree species, as long as they are deemed acceptable by the City.
- F7** This comment does not identify a specific concern with the adequacy of the Draft EIR or note a specific issue or comment related to the Draft EIR's environmental analysis.

The Applicant has gone through several design iterations with the City of Fontana staff to ensure the proposed building elevations will be aesthetically-pleasing (ample glass & glazing, color palette, reveal lines, vertical panel articulation, etc.), rather than a "dull ugly building." With respect to noise levels, the proposed project includes 14' tall solid concrete screen walls along Juniper Avenue which are designed to block/considerably reduce sound from within the truck court.

That being said, the Applicant is willing to construct new fencing in front of the commenter's property along Juniper Avenue, subject to compliance with City of Fontana code requirements.

- F8** This comment does not identify a specific concern with the adequacy of the Draft EIR or note a specific issue or comment related to the Draft EIR's environmental analysis.

The Project does not include improvements that would require additional private property to be acquired. The easterly limit of the proposed street widening along Juniper Avenue in front of the commenter's property stops at 16' east of the centerline (middle) of Juniper Avenue. The commenter's property boundary along Juniper Avenue starts at approximately 30' east of the centerline (middle) of Juniper Avenue. Therefore, there is a 14' wide gap (30' minus 16') between the commenter's property line and the closest construction location the Applicant will need to utilize.

- F9** This comment does not identify a specific concern with the adequacy of the DEIR or note a specific issue or comment related to the DEIR's environmental analysis.

As noted in **Response F9** above, the proposed Project will not result in the need for additional land from private property, and the Project would not damage any plants/grass on private property. That being said, in the unlikely event that plants and/or grass are damaged for some reason during construction, the Applicant would agree to promptly cause the re-planting of all plants and/or grass along any damaged private property.

- F10** This comment does not identify a specific concern with the adequacy of the Draft EIR or note a specific issue or comment related to the Draft EIR's environmental analysis.

As further stated in the responses above, the Applicant (1) will provide signage to prevent trailers parking along Juniper Avenue, (2) is already proposing ample landscaping along Juniper Avenue as part of the proposed project, (3) is willing to construct new fencing along the commenter's

property's Juniper Avenue frontage, and (4) is required to provide building lighting that is directed downward, with the lights from trucks/trailers screened from private views via 14' high solid concrete screen walls along Juniper Avenue.

With respect to the commenter's request for the nearby residents to be provided information regarding the intended use of the building/site, with a specific focus on what hazardous materials are being utilized, the Applicant will comply with all requirements set forth by the City of Fontana to this effect.

**F11** Comment noted. Refer to **Responses F1** through **F10**, above.

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**Comment Letter G – Otilia Manon**

Comment Letter: G

From: Otilia Manon <otimanon@icloud.com>  
Sent: Tuesday, May 18, 2021 4:10 PM  
To: Planning Division <planningdivision@fontana.org>  
Subject: Public hearing #D

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Hi, I have been a resident of Fontana for almost 4 years. When we moved here we noticed there were some warehouses in the nearby areas (nothing too crazy). But in the last 2 years I have seen a huge increase of warehouses in the city. I see many cool amenities in the north side, why can't we get some of those in the south side? I hope you guys reconsider building so many warehouses because that is not a place where I want to raise my 3 children. Thank you so much for your time.

1

Sincerely a concerned Southridge resident,  
Otilia Manon

Sent from my iPhone



***Response to Comment Letter G - Otilia Manon***

- G1** This comment does not identify a specific concern with the adequacy of the Draft EIR or note a specific issue or comment related to the Draft EIR's environmental analysis. However, your comment will be considered by decision-makers for the Project.

## Comment Letter H – Veronica Perez

Comment Letter: H

**From:** Veronica <[scta.veronicaperez@gmail.com](mailto:scta.veronicaperez@gmail.com)>  
**Sent:** Tuesday, May 18, 2021 5:36 PM  
**To:** Planning Division <[planningdivision@fontana.org](mailto:planningdivision@fontana.org)>  
**Subject:** Public Hearing D: Master Case No. 18-079; The Air Quality Assessment on the Fontana Sierra Business Center Project

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5/18/2021

Planning Commissioners,

I am writing to you in regards to Public Hearing D: Master Case No. 18-079; The Air Quality Assessment on the Fontana Sierra Business Center Project. Over the last few years, I have been very concerned about the implementation. Dawn Rowe shared Fontana's General Plan about 3 years ago, the vision for Fontana. It was very upsetting to see Fontana's plan was to take over Slover. Today, I am highly concerned because the draft EIR indicates that implementation of the proposed project would result in significant and unavoidable impacts related to Air quality, greenhouse gas emissions, and transportation and traffic. According to the information published: section 4.2 Air Quality: stated there will be a significant and undeniable impact to the air quality. Despite mitigation measures, it will have an impact on health and the surrounding area.

1

In addition, I am concerned for community members who live in the Southridge area and Capri Mobile Home Park. People who live in Capri Mobile Home Park will soon be surrounded by warehouses. One facing north and one east. All less than 500 feet. I did not receive a notice for this project site. There are a lot of families who live there with children and elderly people who go on walks near the neighborhood. I am the daughter of immigrant parents, and they have done so much for me to keep me safe. Now, I am here to try to keep them safe from an additional warehouse, Sierra Business Center Project. Only the project site benefits from this action.

2

Community members will be affected with additional truck and traffic issues, warehouse jobs are being offered as temporary positions, but we need positions that offer a livable wage. We need bike lanes on Slover to make it easier for community members who do need to travel for work. We need trees to provide shade, better walkways. We need additional traffic lights on Slover and Juniper. Furthermore, what we need is for the city to create alternative solutions that favor residents who live in the area.

3

As a resident, I oppose the Sierra Business Park Project, Public Hearing item D, on May 18, 2021 at the Planning Commission Meeting.

4

Sincerely, Veronica Perez

**Response to Comment Letter H - Veronica Perez**

- H1** The commenter has summarized the information presented in the Draft EIR. Refer to Chapters 4.2, *Air Quality*, 4.7, *Greenhouse Gas Emissions*, and 4.13, *Transportation and Traffic*, for additional information. The Draft EIR fully discloses any and all significant impacts associated with development of the proposed Project. Refer to page 1.0-4 through 1.0-5 of the Draft EIR. As noted on pages 1.0-4 and 1.0-5, there are unavoidable significant impacts associated with air quality, greenhouse gas emissions, and transportation and traffic.
- H2** Comment noted. The Draft EIR fully analyzes all environmental impacts associated with development of the proposed Project. Refer to **Response H1**, above, for additional information on significant impacts. As noted in Response
- H3** Transportation impacts, including those related to active/passive transportation, are fully disclosed in Chapter 4.13, *Transportation and Traffic*. As noted in **Response B5**, above, the Project would provide continuous sidewalks (including adjacent street lighting and landscaping) along its frontages with Slover Avenue and Juniper Avenue. This would eliminate the discontinuous sidewalks along westbound Slover Avenue and provide a continuous networking connecting to the existing sidewalks to the east. Paved pedestrian paths would be provided connecting the proposed sidewalks to the Project site. The Project would also provide bicycle parking spaces. The outside perimeter of the Project site would be landscaped. Additionally, as part of the proposed Project, a new traffic signal will be installed at the intersection of Slover Avenue and Juniper Avenue (top of page 4.13-23 of DEIR). As demonstrated in Table 4.13-1 of the Draft EIR, the Project's circulation elements will be consistent with the City of Fontana General Plan and City of Fontana Active Transportation Plan (ATP) elements pertaining to the circulation system, including transit, bicycle and pedestrian facilities, resulting in a less than significant impact.
- H4** Comment noted.

## Section 3.0 Errata to the Draft EIR

### 3.1 INTRODUCTION TO THE ERRATA

The Draft EIR for the Fontana Sierra Business Center Project dated May 2021, is hereby incorporated by reference as part of the Final EIR. Changes to the Draft EIR are further detailed below.

The changes to the Draft EIR do not affect the overall conclusions of the environmental document, and instead represent changes to the Draft EIR that provide clarification, amplification and/or insignificant modifications, as needed as a result of public comments on the Draft EIR, or due to additional information received during the public review period. These clarifications and corrections do not warrant Draft EIR recirculation pursuant to CEQA Guidelines Section 15088.5.

None of the changes or information provided in the comments reflect a new significant environmental impact, a substantial increase in the severity of an environmental impact for which mitigation is not proposed, or a new feasible alternative or mitigation measure that would clearly lessen significant environmental impacts but is not adopted. In addition, the changes do not reflect a fundamentally flawed or conclusory Draft EIR.

Changes to the Draft EIR are listed by Section, page, paragraph, etc. to best guide the reader to the revision. Changes are identified as follows:

- Deletions are indicated by ~~strikeout text~~.
- Additions are indicated by underlined text.

### 3.2 CHANGES TO THE DRAFT EIR

Page 1.0-9 Table 1-2

Section 4.2, Air Quality	
Significant and Unavoidable Impact	<p><b>MM AQ-1</b> Prior to issuance of occupancy permits, the Project operator shall prepare and submit a Transportation Demand Management (TDM) program detailing strategies that would reduce the use of single-occupant vehicles by employees by increasing the number of trips by walking, bicycle, carpool, vanpool and transit. The TDM shall include, but is not limited to the following:</p> <ul style="list-style-type: none"> <li>▪ Provide a transportation information center and on-site TDM coordinator to educate residents, employers, employees, and visitors of surrounding transportation options;</li> <li>▪ Promote bicycling and walking through design features such as showers for employees, self-service bicycle repair area, etc. around the project site.</li> <li>▪ Provide on-site car share amenities for employees who make only occasional use of a vehicle, as well as others who would like occasional access to a vehicle of a different type than they use day-to-day;</li> <li>▪ Promote and support carpool/vanpool/rideshare use through parking incentives and administrative support, such as ride-matching service; and</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Incorporate incentives for using alternative travel modes, such as preferential load/unload areas or convenient designated parking spaces for carpool/vanpool users.</li> </ul> <p><b>MM AQ-2</b> Prior to the issuance of building permits, the City of Fontana Building and Safety Division shall confirm that the Project does not include cold storage.</p> <p><b>MM AQ-3</b> All truck access gates and loading docks within the project site shall have a sign posted that states:</p> <ul style="list-style-type: none"> <li>▪ Truck drivers shall turn off engines when not in use</li> <li>▪ Truck drivers shall shut down the engine after five minutes of continuous idling operation once the vehicle is stopped, the transmission is set to “neutral” or “park,” and the parking brake is engaged.</li> <li>▪ Telephone numbers of the building facilities manager and CARB to report Violations</li> </ul> <p><b>MM AQ-4</b> The Project Applicant shall make its tenants aware of the funding opportunities, such as the Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program), and other similar funding opportunities, by providing applicable literature available from the California Air Resources Board (CARB). The Moyer Program On-Road Heavy-Duty Vehicles Voucher Incentive Program (VIP) provides funding to individuals seeking to purchase new or used vehicles with 2013 or later model year engines to replace an existing vehicle that is to be scrapped.</p> <p><u><b>MM AQ-5</b> All on-site forklifts shall be non-diesel and shall be powered by electricity, compressed natural gas, or propane if technically feasible.</u></p> <p><u><b>MM AQ-6</b> All construction equipment shall be maintained in good operation condition so as to reduce emissions. The construction contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer’s specification. Maintenance records shall be available at the construction site for City of Fontana verification. The following additional measures, as determined applicable by the City Engineer, shall be included as conditions of the Grading Permit issuance:</u></p> <ul style="list-style-type: none"> <li>• <u>Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.</u></li> <li>• <u>Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.</u></li> <li>• <u>Reroute construction trucks away from congested streets or sensitive receptor areas.</u></li> <li>• <u>Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.</u></li> <li>• <u>Improve traffic flow by signal synchronization and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers’ specifications.</u></li> <li>• <u>Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). If the City of Fontana determines that 2010 model year or newer diesel trucks cannot be obtained, the Project shall use trucks that meet EPA 2007 model year NOx and PM emissions requirements.</u></li> </ul>
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	<ul style="list-style-type: none"> <li>• <u>During Project construction, all internal combustion engines/construction equipment operating on the Project site shall meet EPA-certified Tier 3 emissions standards, or higher according to the following:</u> <ul style="list-style-type: none"> <li>○ <u>All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standard, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for similarly sized engines as defined by CARB regulations.</u></li> <li>○ <u>A copy of each unit’s certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be made available if requested at the time of mobilization of each applicable unit of equipment.</u></li> </ul> </li> </ul> <p><b><u>MM AQ-7</u></b> <u>Prior to the issuance of any grading permits, all Applicants shall submit construction plans to the City of Fontana denoting the proposed schedule and projected equipment use. Construction contractors shall provide evidence that low emission mobile construction equipment will be utilized, or that their use was investigated and found to be infeasible for the project. Contractors shall also conform to any construction measures imposed by the SCAQMD as well as City Planning Staff.</u></p> <p><b><u>MM AQ-8</u></b> <u>All paints and coatings shall meet or exceed performance standards noted in SCAQMD Rule 1113. Specifically, the following measures shall be implemented, as feasible: -</u></p> <ul style="list-style-type: none"> <li>• <u>Use coatings and solvents with a VOC content lower than that required under AQMD Rule 1113.</u></li> <li>• <u>Construct or build with materials that do not require painting.</u></li> <li>• <u>Require the use of pre-painted construction materials.</u></li> </ul> <p><b><u>MM AQ-9</u></b> <u>The Project shall be required to apply paints either by hand or high volume, low pressure (HVLP) spay. These measures may reduce volatile organic compounds (VOC) associated with the application of paints and coatings by an estimated 60 to 75 percent. In addition, the contractor shall specify the use of low volatility paints and coatings. Several of currently available primers have VOC contents of less than 0.85 pounds per gallon (e.g., Dulux professional exterior primer 100 percent acrylic). Top coats can be less than 0.07 pounds per gallon (8 grams per liter) (e.g., Lifemaster 2000-series). This latter measure would reduce these VOC emissions by more than 70 percent.</u></p> <p><b><u>MM AQ-10</u></b> <u>The Project shall designate preferential parking for vanpools.</u></p> <p><b><u>MM AQ-11</u></b> <u>The Project shall be required to post both bus and MetroLink schedules in conspicuous areas.</u></p> <p><b><u>MM AQ-12</u></b> <u>The Project shall be requested to configure their operating schedules around the MetroLink schedule to the extent reasonably feasible.</u></p> <p><b><u>MM AQ-13</u></b> <u>The Project shall be required to incorporate light colored roofing materials.</u></p> <p><b><u>MM AQ-14</u></b> <u>The project shall restrict the turns trucks can make entering and exiting the facility to route trucks away from sensitive receptors by posting signs at every truck exit driveway providing directional information to the truck route. Additionally, the project shall install signs along Juniper Avenue north of Slover noting that truck and employee parking is prohibited.</u></p>
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	<p><b><u>MM AQ-15</u></b> The Project's contractors shall prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day. The Project's general contractor shall designate an officer to monitor the construction equipment operators on-site for compliance.</p> <p><b><u>MM AQ-16</u></b> The Project's contractors shall be prohibited from grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the Project area.</p> <p><b><u>MM AQ-17</u></b> The Project's contractors shall be prohibited from idling heavy equipment for more than five minutes. The Project's general contractor shall designate an officer to monitor the construction equipment operators on-site for compliance.</p> <p><b><u>MM AQ-18</u></b> The Project's contractors shall conduct an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts. Documentation verifying said inspection occurred shall be available on-site at any time during construction for the City's inspection.</p> <p><b><u>MM AQ-19</u></b> The Project shall be required to use paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L. All specifications, plans, and or details necessary to verify compliance shall be included in the Project's applicable construction drawings.</p> <p><b><u>MM AQ-20</u></b> The Project Applicant shall be required to provide information on transit and ridesharing programs to construction employees, which shall be made available in the construction trailer at all times.</p> <p><b><u>MM AQ-21</u></b> The Project's Operators shall require trucks on-site to be limited to five (5) minutes of idle time and turned off when not in use. The Operator shall designate an officer to monitor trucks on-site for compliance.</p> <p><b><u>MM AQ-22</u></b> Prior to issuance of Certificate of Occupancy, the Project shall be required to post both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to (1) CARB, (2) SCAQMD, and (3) the building manager.</p> <p><b><u>MM AQ-23</u></b> Prior to issuance of Certificate of Occupancy, the Project shall be required to construct all ninety-eight (98) dock doors as "EV ready" through installation of the required conduit and junction boxes.</p> <p><b><u>MM AQ-24</u></b> Prior to issuance of Certificate of Occupancy, the Project shall be required to construct twenty-five (25%) of all vehicle parking stalls on-site as "EV ready" through installation of the required conduit and related infrastructure.</p> <p><b><u>MM AQ-25</u></b> Prior to issuance of Certificate of Occupancy, the Project shall be required to install a 225 kW DC solar photovoltaic system (i.e., sufficient to power the anticipated initial improvements for a 705,735 square foot warehouse).</p> <p><b><u>MM AQ-26</u></b> The Project Applicant or Operator shall appoint a compliance officer who is responsible for implementing all mitigation measures and providing contact information for the compliance officer to the City, to be updated annually.</p> <p><b><u>MM AQ-27</u></b> The Project's contractors shall be required to sweep the surrounding streets on a daily basis during construction to remove any construction-related debris and dirt.</p>
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	<p><b>MM AQ-28</b> <u>Prior to issuance of Certificate of Occupancy, the Project shall be required to construct cool pavement and/or portland cement concrete (PCC) for site paving in order to reduce heat island effects.</u></p> <p><b>MM AQ-29</b> <u>Prior to issuance of Certificate of Occupancy, the Project shall be required to install air filtration in the warehouse facility, with a minimum of 1 air change per hour, in order to promote worker well-being.</u></p>
<b>Section 4.7, Greenhouse Gas Emissions</b>	
Significant and Unavoidable Impact	Refer to Mitigation Measures <b>AQ-1</b> through <b>AQ-4 29</b> , from <b>Section 4.2, Air Quality</b> would be applied.
Significant and Unavoidable Impact	Refer to Mitigation Measures <b>AQ-1</b> through <b>AQ-4 29</b> , from <b>Section 4.2, Air Quality</b> would be applied.

*Page 4.1-10, First Paragraph*

~~For purposes of aesthetic resource impact analysis, cumulative impacts are considered for cumulative development according to the related projects; see **Table 4.0-1, Cumulative Projects List**. Page 4.2-13, Second Paragraph~~

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in **Table 4.2-7: Construction-Related Emissions** and **Table 4.2-8: Long-Term Operational Emissions** under Impact 4.2-2 below, the Project would not exceed the construction emission standards. However, the Project would exceed operational emission standards for NO<sub>x</sub>. Therefore, the Project would contribute to an existing air quality violation. Mitigation Measures **AQ-1** through **AQ429** would be required to reduce NO<sub>x</sub> emissions, however impacts would remain significant and unavoidable. Thus, the Project would not be consistent with the first criterion. Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG’s latest growth forecasts, and SCAG’s growth forecasts were defined in consultation with local governments and with reference to local general plans. The northern half of the Project site is designated General Industrial while the southern half of the Project site is designated as Light Industrial. The Project is consistent with the City’s General Plan Land Use Designations and the Zoning Designations and would not require a General Plan Amendment (GPA) and a Zone Change. As such, the Project is consistent with SCAG’s latest growth forecasts. Thus, the Project is consistent with the second criterion. However, as the project would exceed criteria pollutant thresholds and not be consistent with the first criterion, impacts would be significant and unavoidable.

**MITIGATION MEASURES**

Refer to Mitigation Measures **AQ-1** through **AQ-29**.

*Page 4.2-16, Second Paragraph*

**MM AQ-1** through **AQ-29** have been identified to reduce NO<sub>x</sub> emissions from Project mobile sources. **MM AQ-1** requires the implementation of a Transportation Demand Management (TDM) program to reduce single-occupant vehicle trips and encourage transit. **MM AQ-2** eliminates transport refrigeration unit (TRU) emissions and **MM AQ-3** prohibits idling when engines are not in use. Additionally, **MM AQ-4** promotes the use of alternative fuels and clean fleets. However, **Table 4.2-8: Long-Term Operational**



**Emissions** shows that despite the implementation of **MM AQ-1** through **AQ-429**, NO<sub>x</sub> emissions would remain above the SCAQMD's thresholds. Since neither the Project Applicant nor the City has regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO<sub>x</sub> emissions to levels that are less than significant. Therefore, impacts would be significant and unavoidable.

*Page 4.2-18, First New Paragraph*

**MM AQ-5** All on-site forklifts shall be non-diesel and shall be powered by electricity, compressed natural gas, or propane if technically feasible.

**MM AQ-6** All construction equipment shall be maintained in good operating condition so as to reduce emissions. The construction contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer's specification. Maintenance records shall be available at the construction site for City of Fontana verification. The following additional measures, as determined applicable by the City Engineer, shall be included as conditions of the Grading Permit issuance:

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.
- Improve traffic flow by signal synchronization and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers' specifications.
- Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). If the City of Fontana determines that 2010 model year or newer diesel trucks cannot be obtained, the Project shall use trucks that meet EPA 2007 model year NO<sub>x</sub> and PM emissions requirements.
- During Project construction, all internal combustion engines/construction equipment operating on the Project site shall meet EPA-certified Tier 3 emissions standards, or higher according to the following:
- All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standard, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for similarly sized engines as defined by CARB regulations.

- A copy of each unit’s certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be made available if requested at the time of mobilization of each applicable unit of equipment.

**MM AQ-7** Prior to the issuance of any grading permits, all Applicants shall submit construction plans to the City of Fontana denoting the proposed schedule and projected equipment use. Construction contractors shall provide evidence that low emission mobile construction equipment will be utilized, or that their use was investigated and found to be infeasible for the project. Contractors shall also conform to any construction measures imposed by the SCAQMD as well as City Planning Staff.

**MM AQ-8** All paints and coatings shall meet or exceed performance standards noted in SCAQMD Rule 1113. Specifically, the following measures shall be implemented, as feasible: :

- Use coatings and solvents with a VOC content lower than that required under AQMD Rule 1113.
- Construct or build with materials that do not require painting.
- Require the-use of pre-painted construction materials.

**MM AQ-9** The Project shall be required to apply paints either by hand or high volume, low pressure (HVLP) spray. These measures may reduce volatile organic compounds (VOC) associated with the application of paints and coatings by an estimated 60 to 75 percent. In addition, the contractor shall specify the use of low volatility paints and coatings. Several of currently available primers have VOC contents of less than 0.85 pounds per gallon (e.g., Dulux professional exterior primer 100 percent acrylic). Top coats can be less than 0.07 pounds per gallon (8 grams per liter) (e.g., Lifemaster 2000-series). This latter measure would reduce these VOC emissions by more than 70 percent.

**MM AQ-10** The Project shall designate preferential parking for vanpools.

**MM AQ-11** The Project shall be required to post both bus and MetroLink schedules in conspicuous areas.

**MM AQ-12** The Project shall be requested to configure their operating schedules around the MetroLink schedule to the extent reasonably feasible.

**MM AQ-13** The Project shall be required to incorporate light colored roofing materials.

**MM AQ-14** The project shall restrict the turns trucks can make entering and exiting the facility to route trucks away from sensitive receptors by posting signs at every truck exit driveway providing directional information to the truck route. Additionally, the project shall install signs along Juniper Avenue north of Slover noting that truck and employee parking is prohibited.

- MM AQ-15** The Project's contractors shall prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day. The Project's general contractor shall designate an officer to monitor the construction equipment operators on-site for compliance.
- MM AQ-16** The Project's contractors shall be prohibited from grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the Project area.
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- MM AQ-18** The Project's contractors shall conduct an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts. Documentation verifying said inspection occurred shall be available on-site at any time during construction for the City's inspection.
- MM AQ-19** The Project shall be required to use paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L. All specifications, plans, and or details necessary to verify compliance shall be included in the Project's applicable construction drawings.
- MM AQ-20** The Project Applicant shall be required to provide information on transit and ridesharing programs to construction employees, which shall be made available in the construction trailer at all times.
- MM AQ-21** The Project's Operators shall require trucks on-site to be limited to five (5) minutes of idle time, and turned off when not in use. The Operator shall designate an officer to monitor trucks on-site for compliance.
- MM AQ-22** Prior to issuance of Certificate of Occupancy, the Project shall be required to post both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to (1) CARB, (2) SCAQMD, and (3) the building manager.
- MM AQ-23** Prior to issuance of Certificate of Occupancy, the Project shall be required to construct all ninety-eight (98) dock doors as "EV ready", through installation of the required conduit and junction boxes.
- MM AQ-24** Prior to issuance of Certificate of Occupancy, the Project shall be required to construct twenty-five (25%) of all vehicle parking stalls on-site as "EV ready" through installation of the required conduit and related infrastructure.
- MM AQ-25** Prior to issuance of Certificate of Occupancy, the Project shall be required to install a 225 kW DC solar photovoltaic system (i.e., sufficient to power the anticipated initial improvements for a 705,735 square foot warehouse).

- MM AQ-26** The Project Applicant or Operator shall appoint a compliance officer who is responsible for implementing all mitigation measures, and providing contact information for the compliance officer to the City, to be updated annually.
- MM AQ-27** The Project's contractors shall be required to sweep the surrounding streets on a daily basis during construction to remove any construction-related debris and dirt.
- MM AQ-28** Prior to issuance of Certificate of Occupancy, the Project shall be required to construct cool pavement and/or portland cement concrete (PCC) for site paving in order to reduce heat island effects.
- MM AQ-29** Prior to issuance of Certificate of Occupancy, the Project shall be required to install air filtration in the warehouse facility, with a minimum of 1 air change per hour, in order to promote worker well-being.

*Page 4.2-26, Second Paragraph*

As shown in **Table 4.2-8: Long-Term Operational Emissions**, the Project operational emissions from mobile sources alone would exceed the SCAQMD threshold for NO<sub>x</sub> despite the implementation of mitigation. However, it should be noted that the proposed Project would only exceed regional thresholds for NO<sub>x</sub>, and not localized thresholds.<sup>1</sup> As a result, operational emissions associated with the Project would result in a cumulatively considerable contribution to significant cumulative regional air quality impacts. **Table 4.2-8** shows that approximately 96 percent of the project's NO<sub>x</sub> emissions are from mobile sources. Emissions of motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. **MM AQ-1** through **AQ-29** have been identified to reduce NO<sub>x</sub> the Project's mobile source emissions. **MM AQ-1** requires the implementation of a TDM program to reduce single-occupant vehicle trips and encourage transit. **MM AQ-2** prohibits cold storage and **MM AQ-3** prohibits idling when engines are not in use. Additionally, **MM AQ-4** promotes the use of alternative fuels and clean fleets. Implementation of operational **MM AQ-1** through **AQ-29** would reduce NO<sub>x</sub> emissions by reducing the number of employee vehicles on-site and reducing the amount of time trucks spend idling. However, impacts would not be reduced to a less than significant level. Since the majority (96 percent) of emissions are from mobile sources and neither the Project Applicant nor the City have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce the Project's impacts with respect to operational emissions to less than significant levels. While the Project has some control over NO<sub>x</sub> emissions (refer to **MM AQ-1** through **AQ-429**), the majority of emissions are beyond the Project's control. Therefore, no additional feasible mitigation measures beyond **MM AQ-1** through **AQ-429** are available to further reduce emissions, and impacts would remain significant.

*Page 4.7-16, Second Paragraph*

**Section 4.2, Air Quality**, of this EIR identifies Mitigation Measures **AQ-1** through **AQ-29** to reduce mobile source emissions. Mitigation Measure **AQ-1** requires the implementation of a Transportation Demand

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<sup>1</sup> It should be noted that while there are sensitive receptors near the Project site (approximately 60 feet east of the Project site along Juniper Avenue) those sensitive receptors are non-conforming uses, as their zoning is General Commercial (C-2). The proposed Project is consistent with zoning ((Light Industrial (M-1)) and ((General Industrial (M-2))).

Management (TDM) program to reduce single occupant vehicle trips and encourage transit. Mitigation Measure AQ-2 prohibits cold storage and Mitigation Measure **AQ-3** prohibits idling when engines are not in use. Additionally, Mitigation Measure **AQ-4** promotes the use of alternative fuels and clean fleets. These mitigation measures are incorporated in the GHG emissions shown in **Table 4.7-3: Project Greenhouse Gas Emissions** under the “Mitigated” column and would reduce GHG emissions by reducing the number of employee vehicles on-site, reducing the amount of time trucks spend idling, and replacing older trucks with newer models.

*Page 4.7-17, First and Second Paragraph*

As shown in **Table 4.7-3: Project Greenhouse Gas Emissions**, although implementation of these mitigation measures would reduce GHG emissions to 14,472.01 MTCO<sub>2</sub>e per year, the resulting emissions are still expected to exceed the City’s GHG threshold. **Table 4.7-3** shows that approximately 91 percent of the project’s mitigated GHG emissions are from mobile sources. Emissions of motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. As discussed above, **MM AQ-1** through **AQ-29** (refer to **Section 4.2, Air Quality**) have been identified to reduce the Project’s mobile source emissions. Implementation of operational **MMs AQ-1** through **AQ-29** would reduce GHG emissions by reducing the number of employee vehicles on-site and reducing the amount of time trucks spend idling. However, impacts would not be reduced to a less than significant level.

Since the majority (91 percent) of mitigated emissions are from mobile sources and neither the Project Applicant nor the City have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce the Project’s impacts with respect to operational emissions to less than significant levels. While the Project has some control over GHG emissions (refer to Mitigation Measures **AQ-1** through **AQ-29**), the majority of emissions are beyond the Project’s control. No additional feasible mitigation beyond **AQ-1** through **AQ-429** are available further reduce emissions. Therefore, this impact would remain significant and unavoidable.

*Page 4.7-17, Mitigation Measures Statement*

Refer to **MM AQ-1** through **AQ-429**.

*Page 4.7-23, Fourth and Fifth Paragraph*

The Project would not obstruct or interfere with efforts to increase ZEVs or state efforts to improve system efficiency. As discussed above, **MMs AQ-1** through **AQ-429** would reduce mobile source emissions by promoting the use of alternative fuels and clean fleets. Therefore, the Project would also benefit from implementation of these State programs and measures, which would reduce future GHG emissions from trucks.

The Project’s long-term operational GHG emissions would exceed the City’s threshold of 3,000 MTCO<sub>2</sub>e per year despite the implementation of **MM AQ-1** through **AQ-29** in **Section 4.2, Air Quality** and thus could impede California’s statewide GHG reduction goals for 2030 and 2050. Since the majority (91 percent) of mitigated emissions are from mobile sources and neither the Project Applicant nor the

City have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce the Project’s impacts with respect to operational emissions to less than significant levels. While the Project has some control over GHG emissions (refer to **MM AQ-1** through **AQ-429**), the majority of emissions are beyond the Project’s control. Therefore, no additional feasible mitigation measures beyond **MM AQ-1** through **AQ-429** are available to further reduce emissions, and impacts would remain significant. **MM AQ-1** through **AQ-429** represents all feasible mitigation measures available to reduce the Project’s emissions. A significant and unavoidable impact would occur as a result of the proposed Project.

*Page 4.7-24, Mitigation Measures Statement*

Refer to **MM AQ-1** through **AQ-429**.

*Page 4.7-24, Cumulative Impacts Paragraph*

As discussed above, the Project-related GHG emissions would exceed the City’s threshold of 3,000 MTCO<sub>2e</sub> despite implementation of **MM AQ-1** through **AQ-429** from **Section 4.2, Air Quality** and could impede statewide 2030 and 2050 GHG emission reduction targets. As such, the Project would result in a potentially significant cumulative GHG impact.

*Page 4.7-24, Significant Unavoidable Impacts, Second Paragraph*

**Cumulative GHG Emissions.** Despite implementation of **MM AQ-1** through **AQ-429**, the proposed Project would still result in net annual emissions that exceed the GHG emissions significance threshold of 3,000 MTCO<sub>2e</sub>/yr. Therefore, Project-related GHG emissions and their contribution to global climate change would be cumulatively considerable.

*Appendix B, Air Quality Analysis*

See Attachment 1- Mitigation Report

**Sierra Business Center - HC Sort Facility**  
**San Bernardino-South Coast County, Mitigation Report**

**Construction Mitigation Summary**

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**OFFROAD Equipment Mitigation**

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00



Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	4.81000E-003	3.31000E-002	4.26200E-002	7.00000E-005	1.92000E-003	1.92000E-003	0.00000E+000	6.00015E+000	6.00015E+000	3.90000E-004	0.00000E+000	6.00991E+000
Cranes	2.55400E-002	2.92340E-001	1.26600E-001	3.80000E-004	1.20200E-002	1.10600E-002	0.00000E+000	3.32672E+001	3.32672E+001	1.07600E-002	0.00000E+000	3.35362E+001
Excavators	5.27000E-003	4.95300E-002	7.52500E-002	1.20000E-004	2.40000E-003	2.21000E-003	0.00000E+000	1.04366E+001	1.04366E+001	3.38000E-003	0.00000E+000	1.05210E+001
Forklifts	2.70000E-002	2.48720E-001	2.60880E-001	3.40000E-004	1.69900E-002	1.56300E-002	0.00000E+000	3.02155E+001	3.02155E+001	9.77000E-003	0.00000E+000	3.04599E+001
Generator Sets	2.55900E-002	2.26880E-001	2.75960E-001	4.90000E-004	1.16500E-002	1.16500E-002	0.00000E+000	4.23906E+001	4.23906E+001	2.07000E-003	0.00000E+000	4.24424E+001
Graders	5.21000E-003	6.81300E-002	2.03200E-002	8.00000E-005	2.16000E-003	1.99000E-003	0.00000E+000	6.69445E+000	6.69445E+000	2.17000E-003	0.00000E+000	6.74858E+000
Pavers	2.90000E-003	2.93800E-002	4.03700E-002	7.00000E-005	1.40000E-003	1.28000E-003	0.00000E+000	5.78204E+000	5.78204E+000	1.87000E-003	0.00000E+000	5.82879E+000
Paving Equipment	2.50000E-003	2.43300E-002	3.56400E-002	6.00000E-005	1.19000E-003	1.09000E-003	0.00000E+000	5.00998E+000	5.00998E+000	1.62000E-003	0.00000E+000	5.05049E+000
Rollers	2.33000E-003	2.41600E-002	2.60400E-002	4.00000E-005	1.39000E-003	1.28000E-003	0.00000E+000	3.22727E+000	3.22727E+000	1.04000E-003	0.00000E+000	3.25336E+000
Rubber Tired Dozers	1.83100E-002	1.92000E-001	7.06600E-002	1.50000E-004	9.32000E-003	8.57000E-003	0.00000E+000	1.31348E+001	1.31348E+001	4.25000E-003	0.00000E+000	1.32410E+001
Scrapers	2.13800E-002	2.46160E-001	1.61110E-001	3.50000E-004	9.58000E-003	8.81000E-003	0.00000E+000	3.06283E+001	3.06283E+001	9.91000E-003	0.00000E+000	3.08760E+001
Tractors/Loaders/Backhoes	4.00400E-002	4.06290E-001	5.12450E-001	7.10000E-004	2.29400E-002	2.11100E-002	0.00000E+000	6.22394E+001	6.22394E+001	2.01300E-002	0.00000E+000	6.27426E+001
Welders	2.15500E-002	1.11120E-001	1.27890E-001	1.90000E-004	5.10000E-003	5.10000E-003	0.00000E+000	1.41166E+001	1.41166E+001	1.75000E-003	0.00000E+000	1.41603E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	4.81000E-003	3.31000E-002	4.26200E-002	7.00000E-005	1.92000E-003	1.92000E-003	0.00000E+000	6.00014E+000	6.00014E+000	3.90000E-004	0.00000E+000	6.00991E+000
Cranes	2.55400E-002	2.92340E-001	1.26600E-001	3.80000E-004	1.20200E-002	1.10600E-002	0.00000E+000	3.32672E+001	3.32672E+001	1.07600E-002	0.00000E+000	3.35361E+001
Excavators	5.27000E-003	4.95300E-002	7.52500E-002	1.20000E-004	2.40000E-003	2.21000E-003	0.00000E+000	1.04366E+001	1.04366E+001	3.38000E-003	0.00000E+000	1.05210E+001
Forklifts	2.70000E-002	2.48720E-001	2.60880E-001	3.40000E-004	1.69900E-002	1.56300E-002	0.00000E+000	3.02155E+001	3.02155E+001	9.77000E-003	0.00000E+000	3.04598E+001
Generator Sets	2.55900E-002	2.26870E-001	2.75960E-001	4.90000E-004	1.16500E-002	1.16500E-002	0.00000E+000	4.23905E+001	4.23905E+001	2.07000E-003	0.00000E+000	4.24424E+001
Graders	5.21000E-003	6.81300E-002	2.03200E-002	8.00000E-005	2.16000E-003	1.99000E-003	0.00000E+000	6.69444E+000	6.69444E+000	2.17000E-003	0.00000E+000	6.74857E+000
Pavers	2.90000E-003	2.93800E-002	4.03700E-002	7.00000E-005	1.40000E-003	1.28000E-003	0.00000E+000	5.78204E+000	5.78204E+000	1.87000E-003	0.00000E+000	5.82879E+000
Paving Equipment	2.50000E-003	2.43300E-002	3.56400E-002	6.00000E-005	1.19000E-003	1.09000E-003	0.00000E+000	5.00997E+000	5.00997E+000	1.62000E-003	0.00000E+000	5.05048E+000
Rollers	2.33000E-003	2.41600E-002	2.60400E-002	4.00000E-005	1.39000E-003	1.28000E-003	0.00000E+000	3.22726E+000	3.22726E+000	1.04000E-003	0.00000E+000	3.25336E+000
Rubber Tired Dozers	1.83100E-002	1.92000E-001	7.06600E-002	1.50000E-004	9.32000E-003	8.57000E-003	0.00000E+000	1.31348E+001	1.31348E+001	4.25000E-003	0.00000E+000	1.32410E+001
Scrapers	2.13800E-002	2.46160E-001	1.61110E-001	3.50000E-004	9.58000E-003	8.81000E-003	0.00000E+000	3.06283E+001	3.06283E+001	9.91000E-003	0.00000E+000	3.08760E+001
Tractors/Loaders/Balckhoes	4.00400E-002	4.06290E-001	5.12450E-001	7.10000E-004	2.29400E-002	2.11100E-002	0.00000E+000	6.22393E+001	6.22393E+001	2.01300E-002	0.00000E+000	6.27426E+001
Welders	2.15500E-002	1.11120E-001	1.27890E-001	1.90000E-004	5.10000E-003	5.10000E-003	0.00000E+000	1.41165E+001	1.41165E+001	1.75000E-003	0.00000E+000	1.41603E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.66663E-006	1.66663E-006	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20239E-006	1.20239E-006	0.00000E+000	0.00000E+000	1.19274E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.58164E-007	9.58164E-007	0.00000E+000	0.00000E+000	1.90096E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.92867E-007	9.92867E-007	0.00000E+000	0.00000E+000	9.84903E-007
Generator Sets	0.00000E+000	4.40762E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17951E-006	1.17951E-006	0.00000E+000	0.00000E+000	1.41368E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.49377E-006	1.49377E-006	0.00000E+000	0.00000E+000	1.48179E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.99602E-006	1.99602E-006	0.00000E+000	0.00000E+000	1.98001E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.09859E-006	3.09859E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	7.61335E-007	7.61335E-007	0.00000E+000	0.00000E+000	7.55229E-007
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.30598E-006	1.30598E-006	0.00000E+000	0.00000E+000	1.29551E-006
Tractors/Loaders/Balckhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12469E-006	1.12469E-006	0.00000E+000	0.00000E+000	1.11567E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.41678E-006	1.41678E-006	0.00000E+000	0.00000E+000	1.41240E-006

**Fugitive Dust Mitigation**

Yes/No Mitigation Measure Mitigation Input Mitigation Input Mitigation Input

No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00	
Yes	Water Exposed Area	PM10 Reduction	61.00	PM2.5 Reduction	61.00	Frequency (per day) 3.00

Yes	Unpaved Road Mitigation	Moisture Content %	12.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	9.00				

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.03	0.01	0.03	0.01	0.08	0.07
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.59	0.16	0.55	0.15	0.08	0.07
Grading	Fugitive Dust	0.10	0.04	0.04	0.02	0.61	0.61
Grading	Roads	0.00	0.00	0.00	0.00	0.08	0.07
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.08	0.10
Site Preparation	Fugitive Dust	0.04	0.02	0.01	0.01	0.61	0.61
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.08	0.00

**Operational Percent Reduction Summary**

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	4.35	4.31	4.29	4.35
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.29	0.46	0.63	0.58	0.45	0.45	0.00	0.56	0.56	0.16	0.00	0.56
Natural Gas	29.51	29.55	29.55	30.95	29.48	29.48	0.00	29.56	29.56	29.73	29.79	29.56
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	19.66	19.69	20.00	19.98	19.76
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Mobile Mitigation**

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.16	0.42		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
Yes	Commute	Implement Trip Reduction Program	0.00	100.00	Voluntary	
Yes	Commute	Transit Subsidy	0.00	0.00		
No	Commute	Implement Employee Parking "Cash Out"	0.00	0.00		
No	Commute	Workplace Parking Charge	0.00			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00	0.00	0.00	0.00
No	Commute	Market Commute Trip Reduction Option	0.00	100.00		
Yes	Commute	Employee Vanpool/Shuttle	0.01	100.00	2.00	
Yes	Commute	Provide Ride Sharing Program	0.00	100.00		
	Commute	Commute Subtotal	0.01			

No	School Trip	Implement School Bus Program	0.00	0.00	
		Total VMT Reduction	0.01		

### Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	50.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

### Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

**Water Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

**Solid Waste Mitigation**

Mitigation Measures	Input Value
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Institute Recycling and Composting Services Percent Reduction in Waste Disposed	
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