

# **SMALL PROJECT ANALYSIS LEVEL ASSESSMENT**

**Greenfield Unified School District Offices SPAL  
Bakersfield, CA**

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# 1. EXECUTIVE SUMMARY

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## 1.1 Executive Summary

Trinity Consultants has completed a limited air quality assessment for the new location of the Greenfield Unified School District Offices to be located on Fairview Road east of Monitor Street in Bakersfield, CA. The Project includes the construction of 50,000 square feet of offices.

This limited air quality assessment uses the San Joaquin Valley Air Pollution Control District's (SJVAPCD) screening tool, Small Project Analysis Level (SPAL) (SJVAPCD 2020). This SPAL assessment was prepared pursuant to the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD 2015), the California Environmental Quality Act (CEQA) (Public Resources Code 21000 to 21189) and the CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

## 1.2 Statement of Finding

Based on the SPAL established by the SJVAPCD's GAMAQI, the emissions estimates prepared pursuant to this SPAL assessment do not exceed the SJVAPCD's established emissions thresholds and significance thresholds for all CEQA air quality determinations; this Project would therefore not pose a significant impact to the San Joaquin Valley Air Basin and would have a less than significant air quality impact.

## 2. PROJECT INFORMATION

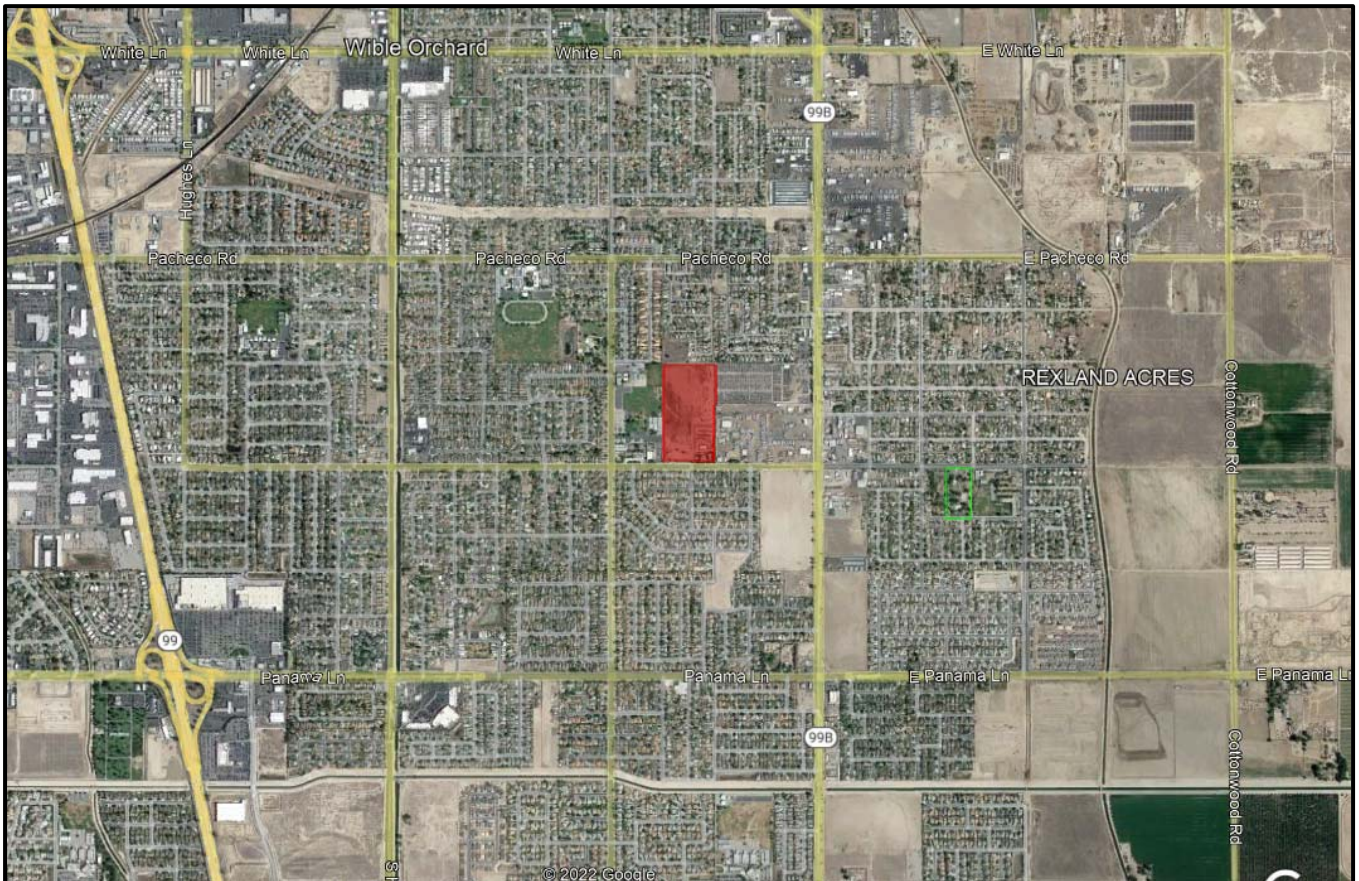
### 2.1 Introduction

The Project site is located in the City of Bakersfield on Fairview Road east of Monitor Street. The Project includes the construction of 50,000 square feet of offices. The Project was assessed as if it would be developed in one phase. This assessment examines the projected gross impacts to air quality posed by this Project to the San Joaquin Valley Air Basin to determine whether or not the Project remains below established air quality thresholds of significance.

### 2.2 Project Location

The Project is located in the City of Bakersfield, California on Fairview Road east of Monitor Street. **Figure 2-1** depicts the Project location within the City of Bakersfield.

**Figure 2-1. Project Location**



### 3. SMALL PROJECT ANALYSIS LEVEL QUALIFICATION

This assessment was prepared pursuant to the SJVAPCD’s GAMAQI (SJVAPCD 2015), the CEQA (Public Resources Code 21000 to 21189) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387). The SJVAPCD created the SPAL screening tool to streamline air quality assessments of commonly encountered projects. According to GAMAQI, the SJVAPCD “pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding the emissions thresholds”<sup>1</sup>.

The SJVAPCD SPAL process established review parameters to determine whether a project qualifies as a “small project.” A project that is found to be “less than” the established parameters has “no possibility of exceeding criteria pollutant emissions thresholds”. **Table 3-1** presents the SPAL size parameters for commercial projects.

**Table 3-1. Small Project Analysis Level for Commercial**

Land Use Type	Project Size (square feet)*	ADT One-Way for all Fleet Types (except HHDT)	ADT One-Way for HHDT Trips Only
General Office Building	200,000	1,000	15
Office Park	190,000		
Government (Civic Center)	92,000		
Government Office Building	40,000		
Medical Office Building	68,000		
Research & Development	256,000		
Hospital	130,400	1,600	25
Bank (with Drive-Through)	19,600		
Pharmacy/Drugstore w/o Drive Thru	24,800		
Pharmacy/Drugstore with Drive Thru	23,200	719	N/A**
Proposed Project	50,000		
<small>*Project size based on SPAL Table 2, as posted on SJVAPCD webpage:  <a href="http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF">http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF</a>  **The proposed Project is a school district office and is not expected to generate any HHDT trips.</small>			

As shown in **Table 3-1**, the proposed Project would not exceed the established SPAL limits for an “General Office Building” commercial project. The Project would construct 50,000 square feet of offices compared to the allowable project size for a “General Office Building” project which is 200,000 square feet. Based on the above information, this Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

<sup>1</sup> SJVAPCD GAMAQI, Section 8.3.4, Page 85.

## 4. AIR QUALITY IMPACTS THRESHOLDS AND EVALUATION METHODOLOGY

Significance thresholds are based on the CEQA Appendix G Environmental Checklist Form (not included herein) and SJVAPCD air quality thresholds (SJVAPCD 2015). A potentially significant impact to air quality, as defined by the CEQA Checklist, would occur if the project caused one or more of the following to occur:

- ▶ Conflict with or obstruct implementation of the applicable air quality plan;
- ▶ Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- ▶ Expose sensitive receptors to substantial pollutant concentrations; and/or
- ▶ Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SJVAPCD has identified quantitative emission thresholds to determine whether the potential air quality impacts of a project require analysis in the form of an Environmental Impact Report. The SJVAPCD air quality thresholds from the GAMAQI are presented in **Table 4-1** (SJVAPCD 2015). The SJVAPCD separates construction emissions from operational emissions, and further separates permitted operational emissions from non-permitted operational emissions, for determining significance thresholds for air pollutant emissions.

**Table 4-1. SJVAPCD Air Quality Thresholds of Significance - Criteria Pollutants**

Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO <sub>x</sub>	10	10	10
ROG	10	10	10
SO <sub>x</sub>	27	27	27
PM <sub>10</sub>	15	15	15
PM <sub>2.5</sub>	15	15	15

Source: SJVAPCD 2015

Criteria pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 (California Air Pollution Control Officers Association (CAPCOA) 2020). This project would generate short-term construction emissions and long-term operational emissions.

An air quality evaluation also considers: 1) exposure of sensitive receptors to substantial pollutant concentrations; and 2) the creation of other emissions (such as those leading to odors) adversely affecting a substantial number of people. The criteria for this evaluation are based on the Lead Agency’s determination of the proximity of the proposed Project to sensitive receptors. A sensitive receptor is a location where human populations, especially children, senior citizens, and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e., the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors.



## 5. PROJECT-RELATED EMISSIONS

This document was prepared pursuant to the SJVAPCD’s GAMAQI and SPAL guidelines and provides a cursory review of the Project emissions to demonstrate that it would not exceed established air quality emissions thresholds.

### 5.1 Short-Term Emissions

**Table 5-1** shows the construction emission levels using default CalEEMod factors for construction of 50,000 square feet of offices (see Attachment A) except for the following:

- ▶ Project site acres was changed from the default to the actual acreage of the Project site.

Construction emission estimates also included the following SJVAPCD’s required measures for all projects:

- ▶ Water exposed area 3 times per day; and
- ▶ Reduce vehicle speed to less than 15 miles per hour.

Based on these anticipated activity levels, the Project construction activities would not exceed construction thresholds (**Table 4-1**). Therefore, construction emissions were found to be less than significant, and no further evaluation is required.

**Table 5-1. Construction Emissions**

Emissions Source	Pollutant					
	ROG	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
	(tons/year)					
2022 Construction Emissions	0.18	1.76	1.54	0.003	0.34	0.19
2023 Construction Emissions	0.53	1.64	1.90	0.003	0.10	0.08
<i>Max Construction Emissions</i>	<i>0.53</i>	<i>1.76</i>	<i>1.90</i>	<i>0.003</i>	<i>0.34</i>	<i>0.19</i>
SJVAPCD Construction Emissions Thresholds	10	10	100	27	15	15
Is Threshold Exceeded?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

### 5.2 Long-Term Emissions

**Table 5-2** presents the Project’s long-term operations emissions generated from mobile, energy, and area sources as well as from water use and waste generation emissions. Most of these emissions impacts are from mobile sources traveling to and from the Project area. Operational emission estimates were below significance levels, therefore, no mitigation measures were selected for this analysis.

**Table 5-2. Total Project Operational Emissions**

Emissions Source	Pollutant					
	ROG	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
(tons/year)						
<b>Unmitigated</b>						
Operational Emissions	0.49	0.52	2.32	0.01	0.47	0.13
SJVAPCD Operational Emissions Thresholds	10	10	100	27	15	15
Is Threshold Exceeded Before Mitigation?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

As calculated (see **Appendix A**), the long-term operational emissions associated with the proposed Project would be less than SJVAPCD significance threshold levels and would, therefore, not pose a significant impact to criteria air pollutants. This finding is consistent with the SPAL screening thresholds.

### 5.3 Greenhouse Gas Emissions

The Project’s greenhouse gas (GHG) emissions are primarily from mobile source activities. Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified as carbon dioxide equivalents (CO<sub>2</sub>e) (see **Appendix A**). The proposed Project’s operational CO<sub>2</sub>e emissions were estimated using CalEEMod. These emissions are summarized in **Table 5-3**.

**Table 5-3. Estimated Annual Greenhouse Gas Emissions**

	CO <sub>2</sub> Emissions metric tons	CH <sub>4</sub> Emissions metric tons	N <sub>2</sub> O Emissions metric tons	CO <sub>2</sub> e Emissions metric tons
2023 Project Operations	586.66	0.88	0.04	620.51
2005 BAU	2,544.82	2.58	0.25	2,684.30
<b>BAU less Project emissions</b>				<b>76.9%</b>

The current inventory and forecast for GHG emissions in the California Air Resources Board’s 2008 Climate Change Scoping Plan supports the 2011 IPPC estimates. The 2008 Climate Change Scoping Plan also indicates that GHG emissions will increase to 596.41 million metric tons of CO<sub>2</sub>e by 2020. It is widely understood that climate change is a “global” issue and, as such, GHG emissions are a cumulative problem and can only be evaluated as such.

The amount of CO<sub>2</sub> that would be generated by the Project is so small in relation to the California CO<sub>2</sub> equivalent estimates for 2020 (596 million metric tons CO<sub>2</sub>e) that it’s not possible for the contribution of the project to be cumulatively considerable. Additionally, the Project’s GHG emissions are less than the 2005 business as usual emissions for the Project by 2,063.79 metric tons CO<sub>2</sub>e, which is a 76.9% reduction. Therefore, the Project would not generate a cumulatively considerable GHG impact, nor would it conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. The Project will also not conflict with any elements of the California Air Resources Board’s 2008 Climate Change Scoping Plan. Therefore, this potential impact is less than significant.

### 5.4 Potential Impact on Sensitive Receptors

The proposed Project is located east of the northwest corner of the intersection of Panama Lane and Old River Road. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and

daycare centers are locations where sensitive receptors would likely reside. The closest sensitive receptor are at Palla Raffaello Elementay School located adjacent to the west of the proposed Project site. There are no other known hospitals or nursing homes within a one-mile radius of the Project.

Based on the predicted operational emissions and activity types, the proposed Project is not expected to affect any on-site or off-site sensitive receptors and is not expected to have any adverse impacts on any known sensitive receptor.

## 5.5 Potential Impacts to Visibility to Nearby Class 1 Areas

It should be noted that visibility impact analyses are not usually conducted for area sources. The recommended analysis methodology was initially intended for stationary sources of emissions which were subject to the Prevention of Significant Deterioration (PSD) requirements in 40 CFR Part 60. Since the Project's emissions are predicted to be significantly less than the PSD threshold levels, an impact at either the Dome Land Wilderness or the Sequoia National Park Areas (the two nearest Class 1 areas to the Project) is extremely unlikely. Therefore, based on the Project's predicted emissions, the Project is not expected to have any adverse impact to visibility at any Class 1 Area.

## 5.6 Potential Odor Impacts

The proposed Project is a school district office located near commercial and residential neighborhoods. Expected uses are not known to be a source of nuisance odors and are not listed in Table 6 of the SJVAPCD's GAMAQI. The Project is therefore not anticipated to have substantial odor impacts. The Project is therefore anticipated to have a less than significant odor impact.

## 5.7 Ambient Air Quality Impacts

As stated in the of GAMAQI (2015, p 96-97), SJVAPCD has developed screening levels for requiring an Ambient Air Quality Analysis (AAQA). The SJVAPCD recommends that an AAQA be performed for all criteria pollutants when emissions of any criteria pollutant resulting from project construction or operational activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures.

As shown above in **Table 5-1** and **5-2**, average daily emissions for construction and operational activities associated with this Project would not exceed 100 pounds per day. Therefore, an AAQA is not required for this Project.

## 5.8 Toxic Air Contaminant (TAC) Impacts

TACs, as defined by the California Health & Safety Code (CH&SC) §44321, are listed in Appendices AI and AII in AB 2588 Air Toxic "Hot Spots" and Assessment Act's Emissions Inventory Criteria and Guideline Regulation document. SJVAPCD's risk management objectives for permitting and CEQA are as follows:

- ▶ Minimize health risks from new and modified sources of air pollution.
- ▶ Health risks from new and modified sources shall not be significant relative to the background risk levels and other risk levels that are typically accepted throughout the community.
- ▶ Avoid unreasonable restrictions on permitting.

The proposed Project would result in emissions of Hazardous Air Pollutants (HAPs) during construction and would be located near existing residents and businesses; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed Project is required. To predict the potential health risk to the population attributable to emissions of HAPs from the proposed Project, ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over the construction period for construction emissions. Similarly, predicted concentrations were used to calculate non-cancer chronic and acute hazard indices (HIs), which are the ratio of expected exposure to acceptable exposure. The basis for evaluating potential health risk is the identification of sources with increased HAPs. HAP emissions from anticipated on-site construction activities were evaluated.

Health risk is determined using the Hotspots Analysis and Reporting Program (HARP2) software distributed by the CARB; HARP2 requires peak 1-hour emission rates and annual-averaged emission rates for all pollutants for each modeling source. Assumptions used to calculate the emission rates for the proposed Project are outlined below.

The most recent version of EPA's AMS/EPA Regulatory Model - AERMOD was used to predict the dispersion of emissions from the proposed Project. The analysis employed all of the regulatory default AERMOD model keyword parameters, including elevated terrain options.

Diesel combustion emissions from diesel on-site construction equipment were modeled as an area source for on-site construction activity on the property. Diesel particulate matter was calculated using CalEEMod for on-site construction equipment. A unit emission rate of 1 grams/second (g/sec) was input to AERMOD for each source. The time-of-day variable emissions rates were applied in AERMOD since construction emissions are expected to be limited to specific work hours provided by the project proponent. This scenario places the highest level of activity and impact in the closest proximity to potential receptors to determine if, at the Project's highest potential impact, it would present adverse health risks to nearby receptors. Operational emissions from the apartment community would not generate HAP emissions.

Since the Project is located in a densely populated location a fence line grid of discrete receptors were placed with three tiers with 25 meter fence line spacing. The first tier had a segment distance of 100 meters and tier spacing of 25 meters. The second tier had a segment distance of 200 meters and tier spacing of 50 meters. The third tier had a segment distance of 400 meters and tier spacing of 100 meters. A total of 1,276 discrete off-site receptors were analyzed. Elevated terrain options were employed even though there is not complex terrain in the Project area.

SJVAPCD-provided, AERMET processed meteorological datasets for the Bakersfield monitoring station, calendar years 2013 through 2017 was input to AERMOD (SJVAPCD 2018). This was the most recent available dataset available at the time the modeling was conducted. Rural dispersion parameters were used because the operation and the majority of the land surrounding the facility is considered "rural" under the Auer land use classification method (Auer 1978).

Plot files generated by AERMOD were uploaded to the Air Dispersion Modeling and Risk Assessment Tool (ADMRT v21081) program in the Hotspots Analysis and Reporting Program Version 2 (HARP 2) (CARB 2021). ADMRT post-processing was used to assess the potential for excess cancer risk and chronic and acute noncancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA). HARP2 site parameters were set for the mandatory minimum pathways of inhalation, soil ingestion, dermal, and mother's milk for residential receptors and inhalation, soil ingestion, and dermal for worker receptors. Risk reports were generated using the derived OEHHA analysis method for carcinogenic risk and non-carcinogenic chronic and acute risk. Site parameters are included in the HARP2

output files. Total cancer risk was predicted for each receptor. A hazard index was computed for chronic non-cancer health effects for each applicable endpoint and each receptor. A hazard index for acute non-cancer health effects was not computed since DPM does not have a risk exposure level for acute risk.

SJVAPCD has set the level of significance for carcinogenic risk at twenty in one million, which is understood as the possibility of causing twenty additional cancer cases in a population of one million people. The level of significance for chronic non-cancer risk is a hazard index of 1.0. All receptors were modeled with a 2-year exposure for the construction activities.

The carcinogenic risk and the health hazard index (HI) for chronic non-cancer risk at the point of maximum impact (PMI) do not exceed the significance levels of twenty in one million (20E-06) and 1.0, respectively for the proposed Project. The PMIs are identified by receptor location and risk and are provided in **Table 5-4**. The electronic AERMOD and HARP2 output files are provided in Appendix B.

**Table 5-4. Potential Maximum Health Risk Impacts**

	<b>Value</b>	<b>UTM East</b>	<b>UTM N</b>
Excess Cancer Risk	1.80E-05	317483.34	3908495.63
Chronic Hazard Index	1.75E-02	317512.82	3908690.84

As shown above in **Table 5-4**, the maximum predicted cancer risk for the proposed Project is 1.80E-05. The maximum chronic non-cancer hazard index for the proposed Project is 1.75E-02. Since the PMI remained below the significance threshold for cancer and chronic risk, this Project would not have an adverse effect to any of the surrounding communities.

The potential health risk attributable to the proposed Project is determined to be less than significant based on the following conclusions:

1. Potential carcinogenic risk from the proposed Project is below the significance level of twenty in a million at each of the modeled receptors; and
2. The hazard index for the potential chronic non-cancer risk from the proposed Project is below the significance level of 1.0 at each of the modeled receptors.
3. The hazard index for the potential acute non-cancer risk was not calculated since there is no acute risk associated with DPM emission; therefore, the proposed Project is considered below the significance level.

Therefore, potential risk to the population attributable to emissions of HAPs from the proposed Project would be less than significant.

## **5.9 Cumulative Impacts**

Cumulative impacts were also evaluated; however, cumulative emissions were not quantified because no other tentative projects were found within a one-mile radius of the Proposed Project that provided enough project detail information to accurately estimate emissions. Owing to the inherently cumulative nature of air quality impacts, the threshold for whether a project would make a cumulatively considerable contribution to a significant cumulative impact is currently based on whether the proposed Project would exceed established project-level thresholds. As such, a qualitative evaluation of the cumulative projects supports a finding that the Project’s contribution would not be cumulatively considerable because the proposed Project’s incremental emissions increase would be less than significant.

## 6. CONCLUSIONS

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Based on the criteria established by the SJVAPCD's GAMAQI and SPAL guidelines, the proposed Project does not meet the minimum standards to require a full Air Quality Impact Analysis. Furthermore, the Project as proposed would not exceed the SJVAPCD's criteria air pollutant emission levels and would generate *less than significant air quality impacts*.

## 7. REFERENCES

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- California Environmental Quality Act (CEQA). 2021. (Public Resources Code 21000 - 21189) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).
- . 2021. CEQA, Appendix G – Environmental Checklist Form, Final Text.
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- . 2016. "Air Toxic Hot Spots" Facility Prioritization Guidelines, Revised 2016.
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 2020. Small Project Analysis Level (SPAL) Memorandum. November 13, 2020.  
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## **APPENDIX A. CALEEMOD EMISSIONS ESTIMATES OUTPUT FILES**

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Greenfield Unified School District - Kern-San Joaquin County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Greenfield Unified School District  
Kern-San Joaquin County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	50.00	1000sqft	19.35	50,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	3			<b>Operational Year</b>	2023
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

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

Project Characteristics -

Land Use - Actual Acreage

Demolition -

Vehicle Trips - Traffic Study Estimates 719 trips per day. School District is closed on the weekends.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LotAcreage	1.15	19.35
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	14.38

Greenfield Unified School District - Kern-San Joaquin County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1810	1.7580	1.5412	2.9500e-003	0.2543	0.0830	0.3372	0.1096	0.0772	0.1868	0.0000	257.6609	257.6609	0.0676	1.5700e-003	259.8175
2023	0.5290	1.6442	1.9009	3.3500e-003	0.0203	0.0786	0.0989	5.5300e-003	0.0739	0.0794	0.0000	290.5597	290.5597	0.0641	2.7200e-003	292.9743
<b>Maximum</b>	<b>0.5290</b>	<b>1.7580</b>	<b>1.9009</b>	<b>3.3500e-003</b>	<b>0.2543</b>	<b>0.0830</b>	<b>0.3372</b>	<b>0.1096</b>	<b>0.0772</b>	<b>0.1868</b>	<b>0.0000</b>	<b>290.5597</b>	<b>290.5597</b>	<b>0.0676</b>	<b>2.7200e-003</b>	<b>292.9743</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1810	1.7580	1.5412	2.9500e-003	0.1072	0.0830	0.1902	0.0449	0.0772	0.1222	0.0000	257.6606	257.6606	0.0676	1.5700e-003	259.8172
2023	0.5290	1.6442	1.9009	3.3500e-003	0.0203	0.0786	0.0989	5.5300e-003	0.0739	0.0794	0.0000	290.5594	290.5594	0.0641	2.7200e-003	292.9740
<b>Maximum</b>	<b>0.5290</b>	<b>1.7580</b>	<b>1.9009</b>	<b>3.3500e-003</b>	<b>0.1072</b>	<b>0.0830</b>	<b>0.1902</b>	<b>0.0449</b>	<b>0.0772</b>	<b>0.1222</b>	<b>0.0000</b>	<b>290.5594</b>	<b>290.5594</b>	<b>0.0676</b>	<b>2.7200e-003</b>	<b>292.9740</b>

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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
Percent Reduction	0.00	0.00	0.00	0.00	53.55	0.00	33.72	56.18	0.00	24.30	0.00	0.00	0.00	0.01	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2022	8-31-2022	1.1592	1.1592
2	9-1-2022	11-30-2022	0.5808	0.5808
3	12-1-2022	2-28-2023	0.5438	0.5438
4	3-1-2023	5-31-2023	0.5388	0.5388
5	6-1-2023	8-31-2023	0.5385	0.5385
6	9-1-2023	9-30-2023	0.1756	0.1756
		Highest	1.1592	1.1592

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Energy	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	75.3685	75.3685	7.2800e-003	1.4300e-003	75.9778
Mobile	0.2585	0.4895	2.2955	5.3200e-003	0.4656	5.1900e-003	0.4708	0.1247	4.8800e-003	0.1296	0.0000	492.8167	492.8167	0.0279	0.0311	502.7798
Waste						0.0000	0.0000		0.0000	0.0000	9.4391	0.0000	9.4391	0.5578	0.0000	23.3849
Water						0.0000	0.0000		0.0000	0.0000	2.8193	6.2129	9.0322	0.2906	6.9600e-003	18.3706
<b>Total</b>	<b>0.4921</b>	<b>0.5211</b>	<b>2.3225</b>	<b>5.5100e-003</b>	<b>0.4656</b>	<b>7.6000e-003</b>	<b>0.4732</b>	<b>0.1247</b>	<b>7.2900e-003</b>	<b>0.1320</b>	<b>12.2584</b>	<b>574.3990</b>	<b>586.6575</b>	<b>0.8836</b>	<b>0.0395</b>	<b>620.5140</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Energy	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	75.3685	75.3685	7.2800e-003	1.4300e-003	75.9778
Mobile	0.2585	0.4895	2.2955	5.3200e-003	0.4656	5.1900e-003	0.4708	0.1247	4.8800e-003	0.1296	0.0000	492.8167	492.8167	0.0279	0.0311	502.7798
Waste						0.0000	0.0000		0.0000	0.0000	9.4391	0.0000	9.4391	0.5578	0.0000	23.3849
Water						0.0000	0.0000		0.0000	0.0000	2.8193	6.2129	9.0322	0.2906	6.9600e-003	18.3706
<b>Total</b>	<b>0.4921</b>	<b>0.5211</b>	<b>2.3225</b>	<b>5.5100e-003</b>	<b>0.4656</b>	<b>7.6000e-003</b>	<b>0.4732</b>	<b>0.1247</b>	<b>7.2900e-003</b>	<b>0.1320</b>	<b>12.2584</b>	<b>574.3990</b>	<b>586.6575</b>	<b>0.8836</b>	<b>0.0395</b>	<b>620.5140</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/12/2022	5	10	
3	Grading	Grading	7/13/2022	8/23/2022	5	30	

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4	Building Construction	Building Construction	8/24/2022	10/17/2023	5	300
5	Paving	Paving	10/18/2023	11/14/2023	5	20
6	Architectural Coating	Architectural Coating	11/15/2023	12/12/2023	5	20

**Acres of Grading (Site Preparation Phase): 15**

**Acres of Grading (Grading Phase): 90**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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
Demolition	6	15.00	0.00	43.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	16.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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**3.2 Demolition - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7200e-003	0.0000	4.7200e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
<b>Total</b>	<b>0.0264</b>	<b>0.2572</b>	<b>0.2059</b>	<b>3.9000e-004</b>	<b>4.7200e-003</b>	<b>0.0124</b>	<b>0.0172</b>	<b>7.2000e-004</b>	<b>0.0116</b>	<b>0.0123</b>	<b>0.0000</b>	<b>33.9902</b>	<b>33.9902</b>	<b>9.5500e-003</b>	<b>0.0000</b>	<b>34.2289</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	8.0000e-005	3.2300e-003	6.4000e-004	1.0000e-005	3.7000e-004	3.0000e-005	4.0000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.2549	1.2549	1.0000e-005	2.0000e-004	1.3138
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	4.8000e-004	3.5000e-004	3.9000e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0060	1.0060	3.0000e-005	3.0000e-005	1.0158
<b>Total</b>	<b>5.6000e-004</b>	<b>3.5800e-003</b>	<b>4.5400e-003</b>	<b>2.0000e-005</b>	<b>1.5800e-003</b>	<b>4.0000e-005</b>	<b>1.6200e-003</b>	<b>4.2000e-004</b>	<b>4.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>2.2609</b>	<b>2.2609</b>	<b>4.0000e-005</b>	<b>2.3000e-004</b>	<b>2.3296</b>



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**3.2 Demolition - 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					
Fugitive Dust					1.8400e-003	0.0000	1.8400e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
<b>Total</b>	<b>0.0264</b>	<b>0.2572</b>	<b>0.2059</b>	<b>3.9000e-004</b>	<b>1.8400e-003</b>	<b>0.0124</b>	<b>0.0143</b>	<b>2.8000e-004</b>	<b>0.0116</b>	<b>0.0118</b>	<b>0.0000</b>	<b>33.9902</b>	<b>33.9902</b>	<b>9.5500e-003</b>	<b>0.0000</b>	<b>34.2289</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	8.0000e-005	3.2300e-003	6.4000e-004	1.0000e-005	3.7000e-004	3.0000e-005	4.0000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.2549	1.2549	1.0000e-005	2.0000e-004	1.3138
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	4.8000e-004	3.5000e-004	3.9000e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0060	1.0060	3.0000e-005	3.0000e-005	1.0158
<b>Total</b>	<b>5.6000e-004</b>	<b>3.5800e-003</b>	<b>4.5400e-003</b>	<b>2.0000e-005</b>	<b>1.5800e-003</b>	<b>4.0000e-005</b>	<b>1.6200e-003</b>	<b>4.2000e-004</b>	<b>4.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>2.2609</b>	<b>2.2609</b>	<b>4.0000e-005</b>	<b>2.3000e-004</b>	<b>2.3296</b>

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**3.3 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
<b>Total</b>	<b>0.0159</b>	<b>0.1654</b>	<b>0.0985</b>	<b>1.9000e-004</b>	<b>0.0983</b>	<b>8.0600e-003</b>	<b>0.1064</b>	<b>0.0505</b>	<b>7.4200e-003</b>	<b>0.0579</b>	<b>0.0000</b>	<b>16.7197</b>	<b>16.7197</b>	<b>5.4100e-003</b>	<b>0.0000</b>	<b>16.8549</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	2.9000e-004	2.1000e-004	2.3400e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6036	0.6036	2.0000e-005	2.0000e-005	0.6095
<b>Total</b>	<b>2.9000e-004</b>	<b>2.1000e-004</b>	<b>2.3400e-003</b>	<b>1.0000e-005</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>7.3000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6036</b>	<b>0.6036</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.6095</b>

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**3.3 Site Preparation - 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					
Fugitive Dust					0.0383	0.0000	0.0383	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
<b>Total</b>	<b>0.0159</b>	<b>0.1654</b>	<b>0.0985</b>	<b>1.9000e-004</b>	<b>0.0383</b>	<b>8.0600e-003</b>	<b>0.0464</b>	<b>0.0197</b>	<b>7.4200e-003</b>	<b>0.0271</b>	<b>0.0000</b>	<b>16.7197</b>	<b>16.7197</b>	<b>5.4100e-003</b>	<b>0.0000</b>	<b>16.8549</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	2.9000e-004	2.1000e-004	2.3400e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6036	0.6036	2.0000e-005	2.0000e-005	0.6095
<b>Total</b>	<b>2.9000e-004</b>	<b>2.1000e-004</b>	<b>2.3400e-003</b>	<b>1.0000e-005</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>7.3000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6036</b>	<b>0.6036</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.6095</b>

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**3.4 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633
<b>Total</b>	<b>0.0544</b>	<b>0.5827</b>	<b>0.4356</b>	<b>9.3000e-004</b>	<b>0.1381</b>	<b>0.0245</b>	<b>0.1626</b>	<b>0.0548</b>	<b>0.0226</b>	<b>0.0774</b>	<b>0.0000</b>	<b>81.8019</b>	<b>81.8019</b>	<b>0.0265</b>	<b>0.0000</b>	<b>82.4633</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	9.5000e-004	6.9000e-004	7.8100e-003	2.0000e-005	2.4200e-003	1.0000e-005	2.4300e-003	6.4000e-004	1.0000e-005	6.6000e-004	0.0000	2.0121	2.0121	7.0000e-005	6.0000e-005	2.0316
<b>Total</b>	<b>9.5000e-004</b>	<b>6.9000e-004</b>	<b>7.8100e-003</b>	<b>2.0000e-005</b>	<b>2.4200e-003</b>	<b>1.0000e-005</b>	<b>2.4300e-003</b>	<b>6.4000e-004</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>2.0121</b>	<b>2.0121</b>	<b>7.0000e-005</b>	<b>6.0000e-005</b>	<b>2.0316</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Grading - 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					
Fugitive Dust					0.0538	0.0000	0.0538	0.0214	0.0000	0.0214	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
<b>Total</b>	<b>0.0544</b>	<b>0.5827</b>	<b>0.4356</b>	<b>9.3000e-004</b>	<b>0.0538</b>	<b>0.0245</b>	<b>0.0784</b>	<b>0.0214</b>	<b>0.0226</b>	<b>0.0439</b>	<b>0.0000</b>	<b>81.8018</b>	<b>81.8018</b>	<b>0.0265</b>	<b>0.0000</b>	<b>82.4632</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	9.5000e-004	6.9000e-004	7.8100e-003	2.0000e-005	2.4200e-003	1.0000e-005	2.4300e-003	6.4000e-004	1.0000e-005	6.6000e-004	0.0000	2.0121	2.0121	7.0000e-005	6.0000e-005	2.0316
<b>Total</b>	<b>9.5000e-004</b>	<b>6.9000e-004</b>	<b>7.8100e-003</b>	<b>2.0000e-005</b>	<b>2.4200e-003</b>	<b>1.0000e-005</b>	<b>2.4300e-003</b>	<b>6.4000e-004</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>2.0121</b>	<b>2.0121</b>	<b>7.0000e-005</b>	<b>6.0000e-005</b>	<b>2.0316</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 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	0.0793	0.7261	0.7609	1.2500e-003		0.0376	0.0376		0.0354	0.0354	0.0000	107.7522	107.7522	0.0258	0.0000	108.3976
<b>Total</b>	<b>0.0793</b>	<b>0.7261</b>	<b>0.7609</b>	<b>1.2500e-003</b>		<b>0.0376</b>	<b>0.0376</b>		<b>0.0354</b>	<b>0.0354</b>	<b>0.0000</b>	<b>107.7522</b>	<b>107.7522</b>	<b>0.0258</b>	<b>0.0000</b>	<b>108.3976</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	8.3000e-004	0.0204	6.1700e-003	8.0000e-005	2.4800e-003	2.3000e-004	2.7100e-003	7.2000e-004	2.2000e-004	9.4000e-004	0.0000	7.5304	7.5304	5.0000e-005	1.1200e-003	7.8639
Worker	2.3700e-003	1.7200e-003	0.0194	5.0000e-005	6.0000e-003	3.0000e-005	6.0300e-003	1.5900e-003	3.0000e-005	1.6200e-003	0.0000	4.9899	4.9899	1.6000e-004	1.5000e-004	5.0383
<b>Total</b>	<b>3.2000e-003</b>	<b>0.0222</b>	<b>0.0255</b>	<b>1.3000e-004</b>	<b>8.4800e-003</b>	<b>2.6000e-004</b>	<b>8.7400e-003</b>	<b>2.3100e-003</b>	<b>2.5000e-004</b>	<b>2.5600e-003</b>	<b>0.0000</b>	<b>12.5203</b>	<b>12.5203</b>	<b>2.1000e-004</b>	<b>1.2700e-003</b>	<b>12.9022</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 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	0.0793	0.7261	0.7609	1.2500e-003		0.0376	0.0376		0.0354	0.0354	0.0000	107.7521	107.7521	0.0258	0.0000	108.3975
<b>Total</b>	<b>0.0793</b>	<b>0.7261</b>	<b>0.7609</b>	<b>1.2500e-003</b>		<b>0.0376</b>	<b>0.0376</b>		<b>0.0354</b>	<b>0.0354</b>	<b>0.0000</b>	<b>107.7521</b>	<b>107.7521</b>	<b>0.0258</b>	<b>0.0000</b>	<b>108.3975</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	8.3000e-004	0.0204	6.1700e-003	8.0000e-005	2.4800e-003	2.3000e-004	2.7100e-003	7.2000e-004	2.2000e-004	9.4000e-004	0.0000	7.5304	7.5304	5.0000e-005	1.1200e-003	7.8639
Worker	2.3700e-003	1.7200e-003	0.0194	5.0000e-005	6.0000e-003	3.0000e-005	6.0300e-003	1.5900e-003	3.0000e-005	1.6200e-003	0.0000	4.9899	4.9899	1.6000e-004	1.5000e-004	5.0383
<b>Total</b>	<b>3.2000e-003</b>	<b>0.0222</b>	<b>0.0255</b>	<b>1.3000e-004</b>	<b>8.4800e-003</b>	<b>2.6000e-004</b>	<b>8.7400e-003</b>	<b>2.3100e-003</b>	<b>2.5000e-004</b>	<b>2.5600e-003</b>	<b>0.0000</b>	<b>12.5203</b>	<b>12.5203</b>	<b>2.1000e-004</b>	<b>1.2700e-003</b>	<b>12.9022</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1628	1.4888	1.6813	2.7900e-003		0.0724	0.0724		0.0682	0.0682	0.0000	239.9179	239.9179	0.0571	0.0000	241.3447
<b>Total</b>	<b>0.1628</b>	<b>1.4888</b>	<b>1.6813</b>	<b>2.7900e-003</b>		<b>0.0724</b>	<b>0.0724</b>		<b>0.0682</b>	<b>0.0682</b>	<b>0.0000</b>	<b>239.9179</b>	<b>239.9179</b>	<b>0.0571</b>	<b>0.0000</b>	<b>241.3447</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	9.6000e-004	0.0367	0.0119	1.7000e-004	5.5300e-003	2.4000e-004	5.7700e-003	1.6000e-003	2.3000e-004	1.8200e-003	0.0000	16.1419	16.1419	6.0000e-005	2.3800e-003	16.8541
Worker	4.8400e-003	3.3500e-003	0.0395	1.2000e-004	0.0133	7.0000e-005	0.0134	3.5400e-003	7.0000e-005	3.6100e-003	0.0000	10.7512	10.7512	3.2000e-004	3.1000e-004	10.8503
<b>Total</b>	<b>5.8000e-003</b>	<b>0.0400</b>	<b>0.0514</b>	<b>2.9000e-004</b>	<b>0.0189</b>	<b>3.1000e-004</b>	<b>0.0192</b>	<b>5.1400e-003</b>	<b>3.0000e-004</b>	<b>5.4300e-003</b>	<b>0.0000</b>	<b>26.8931</b>	<b>26.8931</b>	<b>3.8000e-004</b>	<b>2.6900e-003</b>	<b>27.7043</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 Building Construction - 2023**

**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	0.1628	1.4888	1.6813	2.7900e-003		0.0724	0.0724		0.0682	0.0682	0.0000	239.9176	239.9176	0.0571	0.0000	241.3444
<b>Total</b>	<b>0.1628</b>	<b>1.4888</b>	<b>1.6813</b>	<b>2.7900e-003</b>		<b>0.0724</b>	<b>0.0724</b>		<b>0.0682</b>	<b>0.0682</b>	<b>0.0000</b>	<b>239.9176</b>	<b>239.9176</b>	<b>0.0571</b>	<b>0.0000</b>	<b>241.3444</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	9.6000e-004	0.0367	0.0119	1.7000e-004	5.5300e-003	2.4000e-004	5.7700e-003	1.6000e-003	2.3000e-004	1.8200e-003	0.0000	16.1419	16.1419	6.0000e-005	2.3800e-003	16.8541
Worker	4.8400e-003	3.3500e-003	0.0395	1.2000e-004	0.0133	7.0000e-005	0.0134	3.5400e-003	7.0000e-005	3.6100e-003	0.0000	10.7512	10.7512	3.2000e-004	3.1000e-004	10.8503
<b>Total</b>	<b>5.8000e-003</b>	<b>0.0400</b>	<b>0.0514</b>	<b>2.9000e-004</b>	<b>0.0189</b>	<b>3.1000e-004</b>	<b>0.0192</b>	<b>5.1400e-003</b>	<b>3.0000e-004</b>	<b>5.4300e-003</b>	<b>0.0000</b>	<b>26.8931</b>	<b>26.8931</b>	<b>3.8000e-004</b>	<b>2.6900e-003</b>	<b>27.7043</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.6 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0103</b>	<b>0.1019</b>	<b>0.1458</b>	<b>2.3000e-004</b>		<b>5.1000e-003</b>	<b>5.1000e-003</b>		<b>4.6900e-003</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>20.0269</b>	<b>20.0269</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1888</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	4.4000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9738	0.9738	3.0000e-005	3.0000e-005	0.9828
<b>Total</b>	<b>4.4000e-004</b>	<b>3.0000e-004</b>	<b>3.5800e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>1.0000e-005</b>	<b>1.2200e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>0.9738</b>	<b>0.9738</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9828</b>

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**3.6 Paving - 2023**

**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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0103</b>	<b>0.1019</b>	<b>0.1458</b>	<b>2.3000e-004</b>		<b>5.1000e-003</b>	<b>5.1000e-003</b>		<b>4.6900e-003</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>20.0268</b>	<b>20.0268</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1888</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	4.4000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9738	0.9738	3.0000e-005	3.0000e-005	0.9828
<b>Total</b>	<b>4.4000e-004</b>	<b>3.0000e-004</b>	<b>3.5800e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>1.0000e-005</b>	<b>1.2200e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>0.9738</b>	<b>0.9738</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9828</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.7 Architectural Coating - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
<b>Total</b>	<b>0.3496</b>	<b>0.0130</b>	<b>0.0181</b>	<b>3.0000e-005</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>2.5571</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	9.0000e-005	6.0000e-005	7.2000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1948	0.1948	1.0000e-005	1.0000e-005	0.1966
<b>Total</b>	<b>9.0000e-005</b>	<b>6.0000e-005</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.1948</b>	<b>0.1948</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.1966</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.7 Architectural Coating - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
<b>Total</b>	<b>0.3496</b>	<b>0.0130</b>	<b>0.0181</b>	<b>3.0000e-005</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>2.5571</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	9.0000e-005	6.0000e-005	7.2000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1948	0.1948	1.0000e-005	1.0000e-005	0.1966
<b>Total</b>	<b>9.0000e-005</b>	<b>6.0000e-005</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.1948</b>	<b>0.1948</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.1966</b>

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2585	0.4895	2.2955	5.3200e-003	0.4656	5.1900e-003	0.4708	0.1247	4.8800e-003	0.1296	0.0000	492.8167	492.8167	0.0279	0.0311	502.7798
Unmitigated	0.2585	0.4895	2.2955	5.3200e-003	0.4656	5.1900e-003	0.4708	0.1247	4.8800e-003	0.1296	0.0000	492.8167	492.8167	0.0279	0.0311	502.7798

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	719.00	0.00	0.00	1,227,309	1,227,309
Total	719.00	0.00	0.00	1,227,309	1,227,309

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.475755	0.052577	0.176436	0.169714	0.032065	0.009816	0.013925	0.037355	0.000591	0.000241	0.025277	0.001517	0.004732

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40.8955	40.8955	6.6200e-003	8.0000e-004	41.2999
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40.8955	40.8955	6.6200e-003	8.0000e-004	41.2999
NaturalGas Mitigated	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	34.4730	34.4730	6.6000e-004	6.3000e-004	34.6779
NaturalGas Unmitigated	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	34.4730	34.4730	6.6000e-004	6.3000e-004	34.6779

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	646000	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	34.4730	34.4730	6.6000e-004	6.3000e-004	34.6779
<b>Total</b>		<b>3.4800e-003</b>	<b>0.0317</b>	<b>0.0266</b>	<b>1.9000e-004</b>		<b>2.4100e-003</b>	<b>2.4100e-003</b>		<b>2.4100e-003</b>	<b>2.4100e-003</b>	<b>0.0000</b>	<b>34.4730</b>	<b>34.4730</b>	<b>6.6000e-004</b>	<b>6.3000e-004</b>	<b>34.6779</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	646000	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	34.4730	34.4730	6.6000e-004	6.3000e-004	34.6779
<b>Total</b>		<b>3.4800e-003</b>	<b>0.0317</b>	<b>0.0266</b>	<b>1.9000e-004</b>		<b>2.4100e-003</b>	<b>2.4100e-003</b>		<b>2.4100e-003</b>	<b>2.4100e-003</b>	<b>0.0000</b>	<b>34.4730</b>	<b>34.4730</b>	<b>6.6000e-004</b>	<b>6.3000e-004</b>	<b>34.6779</b>



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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	442000	40.8955	6.6200e-003	8.0000e-004	41.2999
<b>Total</b>		<b>40.8955</b>	<b>6.6200e-003</b>	<b>8.0000e-004</b>	<b>41.2999</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	442000	40.8955	6.6200e-003	8.0000e-004	41.2999
<b>Total</b>		<b>40.8955</b>	<b>6.6200e-003</b>	<b>8.0000e-004</b>	<b>41.2999</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	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Unmitigated	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004

**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	0.0348					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
<b>Total</b>	<b>0.2301</b>	<b>0.0000</b>	<b>4.6000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>8.9000e-004</b>	<b>8.9000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>9.5000e-004</b>

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**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	0.0348					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
<b>Total</b>	<b>0.2301</b>	<b>0.0000</b>	<b>4.6000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>8.9000e-004</b>	<b>8.9000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>9.5000e-004</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.0322	0.2906	6.9600e-003	18.3706
Unmitigated	9.0322	0.2906	6.9600e-003	18.3706

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	8.88669 / 5.44668	9.0322	0.2906	6.9600e-003	18.3706
<b>Total</b>		<b>9.0322</b>	<b>0.2906</b>	<b>6.9600e-003</b>	<b>18.3706</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	8.88669 / 5.44668	9.0322	0.2906	6.9600e-003	18.3706
<b>Total</b>		<b>9.0322</b>	<b>0.2906</b>	<b>6.9600e-003</b>	<b>18.3706</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.4391	0.5578	0.0000	23.3849
Unmitigated	9.4391	0.5578	0.0000	23.3849

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	46.5	9.4391	0.5578	0.0000	23.3849
<b>Total</b>		<b>9.4391</b>	<b>0.5578</b>	<b>0.0000</b>	<b>23.3849</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	46.5	9.4391	0.5578	0.0000	23.3849
<b>Total</b>		<b>9.4391</b>	<b>0.5578</b>	<b>0.0000</b>	<b>23.3849</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**10.0 Stationary Equipment**

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**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**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Greenfield Unified School District BAU**

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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	140.00	Dwelling Unit	19.35	252,000.00	400

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	3			<b>Operational Year</b>	2005
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

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

Project Characteristics -

Land Use - Actual Acreage

Demolition -

Vehicle Trips - According to Traffic Study

Construction Off-road Equipment Mitigation -

Construction Phase - Operational Run Only

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	6/28/2022	5/31/2022
tblLandUse	LotAcreage	45.45	19.35



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tblVehicleTrips	ST_TR	9.54	9.82
tblVehicleTrips	SU_TR	8.55	9.82
tblVehicleTrips	WD_TR	9.44	9.82
tblWoodstoves	NumberCatalytic	19.35	0.00
tblWoodstoves	NumberNoncatalytic	19.35	0.00

**2.0 Emissions Summary**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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					
2022											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**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					
2022											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

		Highest	
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**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	62.3471	62.3471	3.8800e-003	1.1100e-003	62.7755
Energy											0.0000	282.8723	282.8723	0.0202	5.3200e-003	284.9608
Mobile											0.0000	2,156.9922	2,156.9922	0.2888	0.2382	2,235.1824
Waste											33.2905	0.0000	33.2905	1.9674	0.0000	82.4759
Water											2.8939	6.4289	9.3228	0.2983	7.1400e-003	18.9084
<b>Total</b>											<b>36.1844</b>	<b>2,508.6405</b>	<b>2,544.8248</b>	<b>2.5785</b>	<b>0.2517</b>	<b>2,684.3029</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											0.0000	62.3471	62.3471	3.8800e-003	1.1100e-003	62.7755
Energy											0.0000	282.8723	282.8723	0.0202	5.3200e-003	284.9608
Mobile											0.0000	2,156.9922	2,156.9922	0.2888	0.2382	2,235.1824
Waste											33.2905	0.0000	33.2905	1.9674	0.0000	82.4759
Water											2.8939	6.4289	9.3228	0.2983	7.1400e-003	18.9084
<b>Total</b>											<b>36.1844</b>	<b>2,508.6405</b>	<b>2,544.8248</b>	<b>2.5785</b>	<b>0.2517</b>	<b>2,684.3029</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	5/31/2022	5	0	

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

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	43.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads





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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	2,156.992 2	2,156.992 2	0.2888	0.2382	2,235.182 4
Unmitigated											0.0000	2,156.992 2	2,156.992 2	0.2888	0.2382	2,235.182 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,374.80	1,374.80	1,374.80	3,997,953	3,997,953
Total	1,374.80	1,374.80	1,374.80	3,997,953	3,997,953

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.448732	0.076027	0.167351	0.170247	0.047084	0.008345	0.016720	0.029607	0.000676	0.000235	0.022181	0.001151	0.011643



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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	103.2893	103.2893	0.0167	2.0300e-003	104.3107
Electricity Unmitigated											0.0000	103.2893	103.2893	0.0167	2.0300e-003	104.3107
NaturalGas Mitigated											0.0000	179.5829	179.5829	3.4400e-003	3.2900e-003	180.6501
NaturalGas Unmitigated											0.0000	179.5829	179.5829	3.4400e-003	3.2900e-003	180.6501

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**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					
Single Family Housing	3.36526e+006											0.0000	179.5829	179.5829	3.4400e-003	3.2900e-003	180.6501
<b>Total</b>												<b>0.0000</b>	<b>179.5829</b>	<b>179.5829</b>	<b>3.4400e-003</b>	<b>3.2900e-003</b>	<b>180.6501</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.36526e+006											0.0000	179.5829	179.5829	3.4400e-003	3.2900e-003	180.6501
<b>Total</b>												<b>0.0000</b>	<b>179.5829</b>	<b>179.5829</b>	<b>3.4400e-003</b>	<b>3.2900e-003</b>	<b>180.6501</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.11635e+006	103.2893	0.0167	2.0300e-003	104.3107
<b>Total</b>		<b>103.2893</b>	<b>0.0167</b>	<b>2.0300e-003</b>	<b>104.3107</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.11635e+006	103.2893	0.0167	2.0300e-003	104.3107
<b>Total</b>		<b>103.2893</b>	<b>0.0167</b>	<b>2.0300e-003</b>	<b>104.3107</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											0.0000	62.3471	62.3471	3.8800e-003	1.1100e-003	62.7755
Unmitigated											0.0000	62.3471	62.3471	3.8800e-003	1.1100e-003	62.7755

**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	60.6490	60.6490	1.1600e-003	1.1100e-003	61.0094
Landscaping											0.0000	1.6980	1.6980	2.7200e-003	0.0000	1.7660
<b>Total</b>											<b>0.0000</b>	<b>62.3471</b>	<b>62.3471</b>	<b>3.8800e-003</b>	<b>1.1100e-003</b>	<b>62.7755</b>

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**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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	60.6490	60.6490	1.1600e-003	1.1100e-003	61.0094
Landscaping											0.0000	1.6980	1.6980	2.7200e-003	0.0000	1.7660
<b>Total</b>											<b>0.0000</b>	<b>62.3471</b>	<b>62.3471</b>	<b>3.8800e-003</b>	<b>1.1100e-003</b>	<b>62.7755</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.3228	0.2983	7.1400e-003	18.9084
Unmitigated	9.3228	0.2983	7.1400e-003	18.9084

**7.2 Water by Land Use**

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	9.12156 / 5.75055	9.3228	0.2983	7.1400e-003	18.9084
<b>Total</b>		<b>9.3228</b>	<b>0.2983</b>	<b>7.1400e-003</b>	<b>18.9084</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	9.12156 / 5.75055	9.3228	0.2983	7.1400e-003	18.9084
<b>Total</b>		<b>9.3228</b>	<b>0.2983</b>	<b>7.1400e-003</b>	<b>18.9084</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	33.2905	1.9674	0.0000	82.4759
Unmitigated	33.2905	1.9674	0.0000	82.4759

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**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	164	33.2905	1.9674	0.0000	82.4759
<b>Total</b>		<b>33.2905</b>	<b>1.9674</b>	<b>0.0000</b>	<b>82.4759</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	164	33.2905	1.9674	0.0000	82.4759
<b>Total</b>		<b>33.2905</b>	<b>1.9674</b>	<b>0.0000</b>	<b>82.4759</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**10.0 Stationary Equipment**

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**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**

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## **APPENDIX B. HEALTH RISK ASSESSMENT MODELING FILES**

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(Electronic Files)