

Air Quality & Greenhouse Gas Assessment

Ridgeview High School Project

Paradise, California

Prepared For:

Paradise Unified School District
6696 Clark Road
Paradise, CA 95969

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Attachment A – CalEEMod Output File for Air Quality Emissions

Attachment B – CalEEMod Output File for Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

1992 CO Plan	SCAQMD 1992 Federal Attainment Plan for Carbon Monoxide
AB	Assembly Bill
BCAQMD	Butte County Air Quality Management District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CH ₄	Methane
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalents
DPM	Diesel particulate matter
EO	Executive Order
GHG	Greenhouse gas emissions
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
LOS	Level of service
µg/m ³	Micrograms per cubic meter
N ₂ O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen dioxide
NO _x	Nitrous oxides

LIST OF ACRONYMS AND ABBREVIATIONS

O ₃	Ozone
parts per million	ppm
PM ₁₀	Coarse particulate matter
PM _{2.5}	Fine particulate matter
ppb	Parts per billion
Project	Ridgeview High School Project
ROG	Reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SVAB	Sacramento Valley Air Basin
SVAQEPP	Sacramento Valley Air Quality Engineering and Enforcement Professionals
TACs	Toxic air contaminants
Town	Town of Paradise
USEPA	U.S. Environment Protection Agency

1.0 INTRODUCTION

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Ridgeview High School Project (Project), which includes the construction of a new high school in the Town of Paradise (Town), California. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the Butte County Air Quality Management District (BCAQMD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

The Project is located on the east side of Maxwell Drive in the Town of Paradise, across from Paradise High School (PHS) and north of Pleasant Lane (Figure 1. Project Location). The site corresponds to a portion of Section 14, Township 22 North, and Range 3 East of the "Paradise East, California" 7.5-minute quadrangle (North American Datum [NAD]27) (U.S. Geological Survey [USGS] 1994). The approximate center of the Project is located at latitude 39.762264° (North American Datum [NAD]83) and longitude 121.611785° (NAD83).

The Project includes relocating the existing Ridgeview High School (a continuation high school that accommodates up to 150 students) to the Maxwell Drive site from its current location in Magalia, approximately seven miles north of the Project site. An increase in student enrollment within the school district is not expected as a result of the relocation. Since Ridgeview High School is a continuation school, students who attend the school are already enrolled in the school district and would otherwise attend PHS if they were not attending Ridgeview High School.

The Project site has a Town of Paradise zoning classification of Community Facilities (C-F). The C-F zone is intended for land areas that are planned to or already provide for public and public institutional land uses, such as public schools, or private land uses which serve a community purpose or benefit the community.



Map Date: 12/15/2020

Figure 1. Project Location

2020-122 Ridgeview High School

2.0 AIR QUALITY

2.1 Air Quality Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the Northern Sacramento Valley Air Basin (NSVAB), which encompasses the Project site, pursuant to the regulatory authority of the BCAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project area.

2.1.1 Northern Sacramento Valley Air Basin

The proposed Project is located within the NSVAB. The NSVAB consists of seven counties: Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta. The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern end of the Cascade Mountain Range and the northern end of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above mean sea level, with individual peaks rising much higher. The mountains form a substantial physical barrier to locally created pollution as well as to pollution transported northward on prevailing winds from the Sacramento metropolitan area (SVAQEEP 2018).

The environmental conditions of Butte County are conducive to potentially adverse air quality conditions. The basin area traps pollutants between two mountain ranges to the east and the west. This problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are generally from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Butte County have also contributed to an increase in emissions.

2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O₃), coarse particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO ₂	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O ₃	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N ₂ O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM ₁₀ & PM _{2.5}	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO ₂	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

Carbon Monoxide

CO, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances (i.e., up to 600 feet or 185 meters) of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases

susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x , such as NO and NO_2 , attribute to the formation of O_3 and $\text{PM}_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROG and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

Particulate matter includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and small than or equal to 2.5 microns in diameter ($\text{PM}_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $\text{PM}_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x , sulfur oxides (SO_x) and VOCs. $\text{PM}_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $\text{PM}_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $\text{PM}_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and

PM_{2.5}. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's PM_{2.5} air quality problems. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

2.1.4 Ambient Air Quality

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. The California Air Resources Board (CARB) maintains more than 60 monitoring stations throughout California. The Paradise – 4405 Airport Road air quality monitoring station, located approximately 3.5 miles south of the Project site, monitors concentrations of O₃. The Chico - East Avenue air quality monitoring station (989 East Avenue, Chico), located approximately 12 miles west of the Project site, monitors concentrations of PM₁₀ and PM_{2.5}. These monitoring stations monitor the pollutants in nonattainment of air quality standards in the Project region. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the development area.

Table 2-2 summarizes the published data concerning O₃ from the Paradise – 4405 Airport Road air quality monitoring station and PM₁₀ and PM_{2.5} from the Chico - East Avenue air quality monitoring station between 2017 and 2019 for each year that the monitoring data is provided. O₃, PM₁₀ and PM_{2.5} are the pollutant species most potently affecting the Project region.

Table 2-2. Summary of Ambient Air Quality Data			
Pollutant Standards	2017	2018	2019
O₃ – Paradise – 4405 Airport Road Station Monitoring Station			
Max 1-hour concentration (ppm)	0.091	0.108	0.075
Max 8-hour concentration (ppm) (state/federal)	0.081 / 0.080	0.098 / 0.098	0.070 / 0.069
Number of days above 1-hour standard (state/federal)	0 / 0	2 / 0	0 / 0
Number of days above 8-hour standard (state/federal)	17 / 17	22 / 20	0 / 0
PM₁₀ – Chico – East Avenue Monitoring Station			
Max 24-hour concentration (µg/m ³) (state/federal)	101.4 / 101.3	478.7 / 454.0	55.7 / 54.4
Number of days above 24-hour standard (state/federal)	* / 0	41.5 / 9.0	* / 0
PM_{2.5} – Chico – East Avenue Monitoring Station			
Max 24-hour concentration (µg/m ³) (state/federal)	47.0 / 45.2	417.0 / 411.7	34.6 / 34.6
Number of days above federal 24-hour standard	2.3	18.8	0.0

Source: CARB 2020a

µg/m³ = micrograms per cubic meter; ppm = parts per million

* = Insufficient data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in “attainment” or “nonattainment” for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O₃, PM₁₀, and PM_{2.5} are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the Butte County portion of the NSVAB is included in Table 2-3.

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O₃ standards and is also a nonattainment area for the state standards for O₃, PM₁₀, and PM_{2.5} (CARB 2019).

Table 2-3. Attainment Status of Criteria Pollutants in the Butte County Portion of the NSVAB

Pollutant	State Designation	Federal Designation
O ₃	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Unclassified
PM _{2.5}	Nonattainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO ₂	Attainment	Unclassified/Attainment
SO ₂	Attainment	Unclassified/Attainment

Source: CARB 2019

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive land uses to the Project site includes PHS when in session. As previously described, PHS is located across Maxwell Drive from the Project site.

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide (CO₂) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO₂.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an

area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the Butte County portion of the NSVAB for the criteria pollutants.

2.2.2 State

California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The California Clean Air Act (CCAA) allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The *NSVAB Air Quality Attainment Plan* constitutes the current SIP for the Butte County portion of the NSVAB. The plan is updated on a triennial basis and was last updated in 2018. It presents comprehensive strategies to reduce the O₃ precursor pollutants (ROG and NO_x) from stationary, area, mobile, and indirect sources.

2.2.3 Local

Butte County Air Quality Management District

The BCAQMD is the air pollution control agency for Butte County, including the Project site. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the Butte County portion of the NSVAB. The BCAQMD, along with other air districts in the NSVAB, has committed to jointly prepare and implement the *NSVAB Air Quality Attainment Plan* for the purpose of achieving and maintaining healthful air quality throughout the air basin. The BCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

- 1) Conflict with or obstruct implementation of any applicable air quality plan.
- 2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- 3) Expose sensitive receptors to substantial pollutant concentrations.
- 4) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

BCAQMD Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (BCAQMD) may be relied upon to make the above determinations. According to the BCAQMD, an air quality impact is considered significant if the proposed Project contributes substantially to an existing or projected air quality violation or exposes sensitive receptors to substantial pollutant concentrations. The BCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2-4.

Table 2-4. BCAQMD Regional Significance Thresholds

Air Pollutant	Construction Activities		Operations Pound per Day
	Pounds per Day	Tons per Year	
Reactive Organic Gas	137 lbs	4.5 tons	25
Carbon Monoxide	-	-	-
Nitrogen Oxide	137 lbs	4.5 tons	25
Sulfur Oxide	-	-	-
Coarse Particulate Matter	80 lbs	-	80
Fine Particulate Matter	-	-	-

Source: BCAQMD 2014

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the BCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Butte County. According to Headway Transportation (2020), the new school would not result in new students or trips within the school district but would instead shift existing trips to the proposed new location. Nonetheless, in order to provide a conservative analysis, operational air pollutant emissions are calculated based on the estimated traffic trip generation rates attributable to the students already enrolled at the existing Ridgeview High School facility in Magalia.

2.3.3 Impact Analysis

Project Construction-Generated Criteria Air Quality Emissions

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., tractors, forklifts, pavers), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities.

Construction-generated emissions associated the proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted maximum daily construction-generated emissions for the proposed Project are summarized in Table 2-5. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BCAQMD's thresholds of significance.

Table 2-5. Construction-Related Emissions			
Construction Year	ROG	NO_x	PM₁₀
Pounds per Day			
Year 2021	7.94	20.25	7.56
Year 2022	2.02	15.83	1.01
<i>BCAQMD Daily Significance Threshold</i>	137	137	82
Exceed BCAQMD Daily Threshold?	No	No	No
Tons per Year			
Year 2021	0.21	1.40	0.11
Year 2022	0.07	0.59	0.03
<i>BCAQMD Annual Significance Threshold</i>	4.5	4.5	N/A
Exceed BCAQMD Annual Threshold?	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

As shown in Table 2-5, emissions generated during Project construction would not exceed the BCAQMD's thresholds of significance. Therefore, criteria pollutant emissions generated during Project construction

would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

Project Operations Criteria Air Quality Emissions

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM₁₀ and O₃ precursors such as ROG and NO_x. Operational-generated emissions associated with the proposed Project were calculated using CalEEMod. Predicted maximum annual operational-generated emissions of criteria air pollutants for the proposed Project are summarized in Table 2-6.

Table 2-6. Operational-Related Emissions			
Emission Source	Pollutant (pounds per day)		
	ROG	NO_x	PM₁₀
Summer Emissions			
Area	0.07	0.00	0.00
Energy	0.00	0.01	0.00
Mobile	0.95	5.77	2.01
Total	1.02	5.78	2.01
BCAQMD Significance Threshold	25	25	80
Exceed BCAQMD Threshold?	No	No	No
Winter Emissions			
Area	0.07	0.00	0.00
Energy	0.00	0.01	0.00
Mobile	0.73	6.04	2.01
Total	0.80	6.05	2.01
BCAQMD Significance Threshold	25	25	80
Exceed BCAQMD Threshold?	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emission projections are predominately based on CalEEMod model defaults for Butte County. Mobile source emission data used in CalEEMod is based on estimated traffic trip generation rates identified by Headway Transportation (2020).

As shown in Table 2-6, daily emissions associated with Project operations would not exceed the BCAQMD significance thresholds.

Conflict with the 2018 Air Quality Attainment Plan

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for

areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The *2018 Air Quality Attainment Plan* constitutes the current SIP for the Butte County portion of the NSVAB and is the most recent air quality planning document covering Butte County. Air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. State law makes CARB the lead agency for all purposes related to the *Air Quality Attainment Plan*. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The *2018 Air Quality Attainment Plan* includes forecast ROG and NO_x emissions (O₃ precursors) for the entire NSVAB through the year 2020. The plan also includes control strategies necessary to attain the California O₃ standard at the earliest practicable date, as well as developed emissions inventories and associated emissions projections for the region showing a downtrend for both ROG and NO_x.

The consistency of the Project with the *2018 Air Quality Attainment Plan* is determined by Project-induced development's consistency with air pollutant emission projections in the plan. The *2018 Air Quality Attainment Plan* is based on information derived from projected growth in Butte County in order to project future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Butte County and the incorporated cities in the county, including the Town of Paradise. As such, projects that propose development consistent with the growth anticipated by the respective general plan and zoning classification of the jurisdiction in which the proposed development is located would be consistent with the *2018 Air Quality Attainment Plan*. In the event that a project would propose a development that is less dense than that associated with the general plan and zoning code, the project would likewise be consistent with the *Air Quality Attainment Plan*. If a project, however, proposes a development that is denser than that assumed in the general plan and zoning code, the project may be in conflict with the *Air Quality Attainment Plan* and could therefore result in a significant impact on air quality.

Implementation of the Project would result in a new high school. As previously stated, the new school would not result in new students or trips within the school district but would instead shift existing trips to the proposed new location. Thus, it would not be a substantial source of new air pollutant emissions. Further, the Project site has a Town of Paradise zoning classification of C-F. The C-F zone is intended for land areas that are planned to or already provide for public and public institutional land uses, such as public schools. The Project's proposed uses would be consistent with this land use classification and therefore would not exceed the population or job growth projections used by the BCAQMD to develop the *2018 Air Quality Attainment Plan*. Thus, the Project would be consistent with the BCAQMD's emission-reduction goals and air quality planning.

Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly,

and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive land uses to the Project site includes PHS when in session. As previously described, PHS is located across Maxwell Drive from the Project site.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of DPM, ROG, NO_x, PM₁₀ and PM_{2.5} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the NSVAB which encompasses the Project area is designated as a nonattainment area for federal O₃ and standards and is also a nonattainment area for the state standards for O₃, PM₁₀, and PM_{2.5} (CARB 2019). Thus, existing O₃, PM₁₀, and PM_{2.5} levels in the Butte County portion of the NSVAB are at unhealthy levels during certain periods. However, as shown in Table 2-5, the Project would not exceed the BCAQMD significance thresholds for emissions.

The health effects associated with O₃ are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O₃ precursor emissions (ROG or NO_x) in excess of the BCAQMD thresholds, the Project is not anticipated to substantially contribute to regional O₃ concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of any significance thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM₁₀ and PM_{2.5}) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the TAC of concern. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{2.5}, considered a surrogate for DPM, would be 0.84 pounds per day during construction (see Attachment A). PM_{2.5} exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., PM_{2.5}). Most PM_{2.5} derives from combustion, such as use of gasoline and diesel fuels by motor vehicles. As with O₃ and NO_x, the Project would not generate emissions of PM₁₀ or PM_{2.5} that would exceed thresholds. Accordingly, the Project's PM₁₀ and PM_{2.5} emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the Project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Operation of the proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract additional heavy-duty trucks that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. The maximum operation-related emissions of exhaust PM_{2.5}, considered a surrogate for DPM, would be 0.02 pounds per day. The majority of these emissions would be generated offsite. Therefore, the Project would not be a source of TACs and there would be no impact as a result of the Project during operations. The Project would not have a high carcinogenic or non-carcinogenic risk during operation.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the NSVAB is designated as in attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La

Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO “hot spot” analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD), the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The Project is anticipated to generate approximately 304 average daily trips. Additionally, the new school would not result in new students or trips within the school district but would instead shift existing trips to the proposed new location. The Project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, or even 44,000 vehicles per day. There is no likelihood of the Project traffic exceeding CO values.

Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or

recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Construction

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

Operations

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any uses considered to be associated with odors.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂ (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Greenhouse Gases	
Greenhouse Gas	Description
CO ₂	Carbon dioxide is a colorless, odorless gas. CO ₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹
CH ₄	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH ₄ to the atmosphere. Natural sources of CH ₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH ₄ is about 12 years. ²
N ₂ O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N ₂ O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N ₂ O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. ³

Sources: ¹US EPA 2016a, ²USEPA 2016b, ³USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2020, CARB released the 2020 edition of the California GHG inventory covering calendar year 2018 emissions. In 2018, California emitted 425.3 million gross metric tons of CO₂e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for approximately 30 percent of total GHG emissions in the state. This sector was followed by the industrial sector (21 percent) and the electric power sector including both in-state and out-of-state sources (15 percent) (CARB 2020b). Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

3.2 Regulatory Framework

3.2.1 State

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlines measures to meet the 2020 GHG reduction goals. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by the end of 2020.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and

establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

3.2.2 Local

Butte County Association of Governments 2016 Regional Transportation Plan / Sustainable Communities Strategy

The Butte County Association of Governments (BCAG) region, which encompasses the Project site, must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 6 percent and a 7 percent per capita reduction from mobile sources by the end of 2020 and 2035, respectively (CARB 2018). The BCAG 2016 Transportation Plan/Sustainable Communities Strategy (RTP/SCS) charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably (the 2020 RTP/SCS has been drafted by BCAG at the time of this analysis yet had not been adopted). The 2016 RTP/SCS contains projects, policies, and strategies to achieve environmental sustainability and integrated planning. The Plan includes strategies to generally improve air quality, improve health, and reduce GHG emissions consistent with state requirements. The RTP/SCS achieves its overall objectives by combining transportation investment and policies with integrated land use strategies that reduce per capita vehicle miles traveled (VMT) and emissions.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

- 1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or

- 2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the Town of Paradise nor the BCAQMD promulgate GHG emission thresholds. Therefore, Project GHG emissions are quantified and compared to the thresholds issued by the California Air Pollution Control Officers Association (CAPCOA), which is an association of the air pollution control officers from all 35 local air quality agencies throughout California, including the BCAQMD. CAPCOA recommends a significance threshold of 900 metric tons annually. This threshold is based on a capture rate of 90 percent of land use development projects, which in turn translates into a 90 percent capture rate of all GHG emissions. The 900 metric ton threshold, the lowest promulgated in any region in the state, is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Env'tl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Env'tl. L. J. 203, 221, 227.)

As previously described, the 900 metric tons of CO₂e per year threshold represents a 90 percent capture rate (i.e., this threshold captures projects that represent approximately 90 percent of GHG emissions from new sources). The 900 metric tons of CO₂e per year value is typically used in defining small projects that are considered less than significant because it represents less than one percent of future 2050 statewide GHG emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. Land use projects above the 900 metric tons of CO₂e per year level would fall within the percentage of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources (Crockett 2011). As noted in the academic study, the fact that small projects below a numeric bright line threshold are not subject to

CEQA-based mitigation, does not mean such small projects do not help the state achieve its climate change goals because even small projects participate in or comply with non-CEQA-based GHG reduction programs, such as constructing development in accordance with statewide GHG-reducing energy efficiency building standards, called Cal Green or Title 24 energy-efficiency building standards (Crockett 2011), which among many goals seek to reduce GHG emissions from construction projects.

The Project is also evaluated for consistency with the BCAG's 2016 RTP/SCS.

Methodology

Where GHG emission quantification was required, emissions were modeled using CalEEMod, version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Butte County. According to Headway Transportation (2020), the new school would not result in new students or trips within the school district but would instead shift existing trips to the proposed new location. Nonetheless, in order to provide a conservative analysis, operational air pollutant emissions are calculated based on the estimated traffic trip generation rates attributable to the students already enrolled at the existing Ridgeview High School facility in Magalia.

3.3.2 Impact Analysis

Contribution of Greenhouse Gas Emissions

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., backhoes, pavers, forklifts). Table 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project.

Table 3-2. Construction-Related Greenhouse Gas Emissions	
Emissions Source	CO₂e (Metric Tons/ Year)
Construction in 2021	208
Construction in 2022	97
Project Construction Total	305
<i>CAPCOA Threshold</i>	<i>900</i>
Exceed Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment B for Model Data Outputs.

As shown in Table 3-2, Project construction would result in the generation of approximately 305 metric tons of CO₂e over the course of construction. Annual emissions would be generated at levels below the

CAPCOA significance threshold. Once construction is complete, the generation of these GHG emissions would cease.

Furthermore, GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wisconsin, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, the California Energy Commission recently released the 2019 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code). The 2019 updates to the Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions, and alterations to existing buildings. For instance, effective January 1, 2017, owners/builders of construction projects have been required to divert (recycle) 65 percent of construction waste materials generated during the project construction phase. This requirement greatly reduces the generation of GHG emissions by reducing decomposition at landfills, which is a source of CH₄, and reducing demand for natural resources.

Operations

Long-term operational GHG emissions attributable to the Project are identified in Table 3-3.

Table 3-3. Operational-Related Greenhouse Gas Emissions	
Emissions Source	CO₂e (Metric Tons/ Year)
Area Source Emissions	0
Energy Source Emissions	11
Mobile Source Emissions	377
Solid Waste Emissions	14
Water Emissions	4
Total Emissions	406
<i>CAPCOA Threshold</i>	<i>900</i>
Exceed Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment B for Model Data Outputs.

Notes: Emission projections are predominately based on CalEEMod model defaults for Butte County. Mobile source emission data used in CalEEMod is based on estimated traffic trip generation rates identified by Headway Transportation (2020).

As shown in Table 3-3 Project operations would result in the generation of 406 metric tons of CO₂e per year and would not exceed CAPCOA's significance threshold of 900 metric tons annually.

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

BCAG adopted the 2016 RTP/SCS. The RTP/ SCS sets the GHG reduction goal of 6 percent and a 7 percent per capita reduction below 2005 levels by the end of 2020 and 2035, respectively (CARB 2018). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably (the 2020 RTP/SCS has been drafted by BCAG at the time of this analysis yet had not been adopted). The proposed Project is consistent with the Town of Paradise General Plan designation and zoning classification at the site. Land use information is generally utilized to inform long-range planning documents, including the RTP/SCS. If a given project is consistent with the land use designation, the project is generally consistent with the RTP/SCS GHG emission projections and would not increase emissions beyond what is anticipated in the RTP/SCS or inhibit the County from reaching its reduction targets. Thus, while the proposed Project would generate GHG emissions, the development would not obstruct the achievement of the RTP/SCS emission reduction targets. Since the development is consistent with BCAG's currently RTP/SCS, the Project would not result in an increase in the severity of operational GHG emission-related impacts.

4.0 REFERENCES

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<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=300055PV.TXT>.

LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Air Quality Emissions

Attachment B – CalEEMod Output File for Greenhouse Gas Emissions

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutants

Ridgeview High School - Butte County, Summer

Ridgeview High School

Butte County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	150.00	Student	1.10	1,700.00	0
Parking Lot	135.00	Space	1.21	54,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - High school = 17,000 sf; Site = 2.31 acres

Construction Phase -

Vehicle Trips - Trip generation per Headway Transportation

Ridgeview High School - Butte County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	12/27/2021	5/13/2021
tblConstructionPhase	PhaseEndDate	11/29/2021	4/15/2022
tblConstructionPhase	PhaseEndDate	1/25/2021	6/11/2021
tblConstructionPhase	PhaseEndDate	12/13/2021	4/29/2021
tblConstructionPhase	PhaseEndDate	1/15/2021	6/3/2021
tblConstructionPhase	PhaseStartDate	12/14/2021	4/30/2021
tblConstructionPhase	PhaseStartDate	1/26/2021	6/12/2021
tblConstructionPhase	PhaseStartDate	1/16/2021	6/4/2021
tblConstructionPhase	PhaseStartDate	11/30/2021	4/16/2021
tblConstructionPhase	PhaseStartDate	1/13/2021	6/1/2021
tblLandUse	LandUseSquareFeet	19,899.15	1,700.00
tblLandUse	LotAcreage	0.46	1.10
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	WD_TR	1.71	2.02

2.0 Emissions Summary

Ridgeview High School - Butte 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	7.9442	20.2561	15.9853	0.0308	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,883.3976	2,883.3976	0.7710	0.0000	2,895.6183
2022	2.0242	15.8368	15.6451	0.0307	0.3071	0.7075	1.0147	0.0835	0.6781	0.7616	0.0000	2,872.8683	2,872.8683	0.4781	0.0000	2,884.8203
Maximum	7.9442	20.2561	15.9853	0.0308	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,883.3976	2,883.3976	0.7710	0.0000	2,895.6183

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	7.9442	20.2561	15.9853	0.0308	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,883.3976	2,883.3976	0.7710	0.0000	2,895.6183
2022	2.0242	15.8368	15.6451	0.0307	0.3071	0.7075	1.0147	0.0835	0.6781	0.7616	0.0000	2,872.8683	2,872.8683	0.4781	0.0000	2,884.8203
Maximum	7.9442	20.2561	15.9853	0.0308	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,883.3976	2,883.3976	0.7710	0.0000	2,895.6183

[illegible]

Ridgeview High School - Butte 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	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Energy	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
Mobile	0.9453	5.7735	9.5234	0.0309	1.9855	0.0303	2.0158	0.5326	0.0286	0.5611		3,138.290 4	3,138.290 4	0.2391		3,144.267 1
Total	1.0259	5.7852	9.5621	0.0309	1.9855	0.0313	2.0167	0.5326	0.0295	0.5621		3,152.111 7	3,152.111 7	0.2395	2.5000e-004	3,158.174 2

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	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Energy	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
Mobile	0.9453	5.7735	9.5234	0.0309	1.9855	0.0303	2.0158	0.5326	0.0286	0.5611		3,138.290 4	3,138.290 4	0.2391		3,144.267 1
Total	1.0259	5.7852	9.5621	0.0309	1.9855	0.0313	2.0167	0.5326	0.0295	0.5621		3,152.111 7	3,152.111 7	0.2395	2.5000e-004	3,158.174 2

Ridgeview High School - Butte 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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2021	6/3/2021	5	3	
2	Grading	Grading	6/4/2021	6/11/2021	5	6	
3	Building Construction	Building Construction	6/12/2021	4/15/2022	5	220	
4	Paving	Paving	4/16/2021	4/29/2021	5	10	
5	Architectural Coating	Architectural Coating	4/30/2021	5/13/2021	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,550; Non-Residential Outdoor: 850; Striped Parking Area: 3,240 (Architectural Coating – sqft)

OffRoad Equipment

Ridgeview High School - Butte County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	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	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	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	3	8.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	9.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT

Ridgeview High School - Butte 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.883 2	2,372.883 2	0.7674		2,392.069 2
Total	1.5463	18.2862	10.7496	0.0245	1.5908	0.7019	2.2926	0.1718	0.6457	0.8175		2,372.883 2	2,372.883 2	0.7674		2,392.069 2

Ridgeview High School - Butte County, Summer

3.2 Site Preparation - 2021**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	0.0499	0.0340	0.4180	8.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		79.3423	79.3423	3.6000e-003		79.4324
Total	0.0499	0.0340	0.4180	8.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		79.3423	79.3423	3.6000e-003		79.4324

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457	0.0000	2,372.883 2	2,372.883 2	0.7674		2,392.069 2
Total	1.5463	18.2862	10.7496	0.0245	1.5908	0.7019	2.2926	0.1718	0.6457	0.8175	0.0000	2,372.883 2	2,372.883 2	0.7674		2,392.069 2

Ridgeview High School - Butte County, Summer

3.2 Site Preparation - 2021**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	0.0499	0.0340	0.4180	8.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		79.3423	79.3423	3.6000e-003		79.4324
Total	0.0499	0.0340	0.4180	8.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		79.3423	79.3423	3.6000e-003		79.4324

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	6.5523	0.9158	7.4681	3.3675	0.8425	4.2100		1,995.6114	1,995.6114	0.6454		2,011.7470

Ridgeview High School - Butte County, Summer

3.3 Grading - 2021**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	0.0624	0.0426	0.5225	1.0000e-003	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		99.1778	99.1778	4.5100e-003		99.2905
Total	0.0624	0.0426	0.5225	1.0000e-003	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		99.1778	99.1778	4.5100e-003		99.2905

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	6.5523	0.9158	7.4681	3.3675	0.8425	4.2100	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470

Ridgeview High School - Butte County, Summer

3.3 Grading - 2021**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	0.0624	0.0426	0.5225	1.0000e-003	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		99.1778	99.1778	4.5100e-003		99.2905
Total	0.0624	0.0426	0.5225	1.0000e-003	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		99.1778	99.1778	4.5100e-003		99.2905

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935

Ridgeview High School - Butte County, Summer

3.4 Building Construction - 2021**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	0.0385	1.2178	0.2206	3.5000e-003	0.0878	4.3000e-003	0.0921	0.0253	4.1100e-003	0.0294		366.3530	366.3530	0.0282		367.0566
Worker	0.1435	0.0979	1.2018	2.3000e-003	0.2193	1.6600e-003	0.2210	0.0582	1.5400e-003	0.0597		228.1090	228.1090	0.0104		228.3681
Total	0.1820	1.3157	1.4224	5.8000e-003	0.3071	5.9600e-003	0.3131	0.0835	5.6500e-003	0.0891		594.4620	594.4620	0.0385		595.4247

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935

Ridgeview High School - Butte County, Summer

3.4 Building Construction - 2021**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	0.0385	1.2178	0.2206	3.5000e-003	0.0878	4.3000e-003	0.0921	0.0253	4.1100e-003	0.0294		366.3530	366.3530	0.0282		367.0566
Worker	0.1435	0.0979	1.2018	2.3000e-003	0.2193	1.6600e-003	0.2210	0.0582	1.5400e-003	0.0597		228.1090	228.1090	0.0104		228.3681
Total	0.1820	1.3157	1.4224	5.8000e-003	0.3071	5.9600e-003	0.3131	0.0835	5.6500e-003	0.0891		594.4620	594.4620	0.0385		595.4247

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230

Ridgeview High School - Butte County, Summer

3.4 Building Construction - 2022**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	0.0356	1.1451	0.2013	3.4700e-003	0.0878	3.7300e-003	0.0915	0.0253	3.5700e-003	0.0288		363.3930	363.3930	0.0272		364.0726
Worker	0.1331	0.0877	1.0906	2.2200e-003	0.2193	1.6000e-003	0.2209	0.0582	1.4700e-003	0.0597		220.1941	220.1941	9.2300e-003		220.4247
Total	0.1687	1.2328	1.2919	5.6900e-003	0.3071	5.3300e-003	0.3125	0.0835	5.0400e-003	0.0885		583.5870	583.5870	0.0364		584.4973

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230

Ridgeview High School - Butte County, Summer

3.4 Building Construction - 2022**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	0.0356	1.1451	0.2013	3.4700e-003	0.0878	3.7300e-003	0.0915	0.0253	3.5700e-003	0.0288		363.3930	363.3930	0.0272		364.0726
Worker	0.1331	0.0877	1.0906	2.2200e-003	0.2193	1.6000e-003	0.2209	0.0582	1.4700e-003	0.0597		220.1941	220.1941	9.2300e-003		220.4247
Total	0.1687	1.2328	1.2919	5.6900e-003	0.3071	5.3300e-003	0.3125	0.0835	5.0400e-003	0.0885		583.5870	583.5870	0.0364		584.4973

3.5 Paving - 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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3803	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524

Ridgeview High School - Butte County, Summer

3.5 Paving - 2021**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	0.0936	0.0638	0.7838	1.5000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		148.7668	148.7668	6.7600e-003		148.9357
Total	0.0936	0.0638	0.7838	1.5000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		148.7668	148.7668	6.7600e-003		148.9357

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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3803	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524

Ridgeview High School - Butte County, Summer

3.5 Paving - 2021**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	0.0936	0.0638	0.7838	1.5000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		148.7668	148.7668	6.7600e-003		148.9357
Total	0.0936	0.0638	0.7838	1.5000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		148.7668	148.7668	6.7600e-003		148.9357

3.6 Architectural Coating - 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					
Archit. Coating	7.6941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	7.9130	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Ridgeview High School - Butte County, Summer

3.6 Architectural Coating - 2021**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	0.0312	0.0213	0.2613	5.0000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		49.5889	49.5889	2.2500e-003		49.6452
Total	0.0312	0.0213	0.2613	5.0000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		49.5889	49.5889	2.2500e-003		49.6452

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	7.6941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	7.9130	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

Ridgeview High School - Butte County, Summer

3.6 Architectural Coating - 2021**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	0.0312	0.0213	0.2613	5.0000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		49.5889	49.5889	2.2500e-003		49.6452
Total	0.0312	0.0213	0.2613	5.0000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		49.5889	49.5889	2.2500e-003		49.6452

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Ridgeview High School - Butte 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	0.9453	5.7735	9.5234	0.0309	1.9855	0.0303	2.0158	0.5326	0.0286	0.5611		3,138.290 4	3,138.290 4	0.2391		3,144.267 1
Unmitigated	0.9453	5.7735	9.5234	0.0309	1.9855	0.0303	2.0158	0.5326	0.0286	0.5611		3,138.290 4	3,138.290 4	0.2391		3,144.267 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	303.00	91.50	37.50	717,732	717,732
Parking Lot	0.00	0.00	0.00		
Total	303.00	91.50	37.50	717,732	717,732

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
High School	10.52	10.52	10.52	77.80	17.20	5.00	75	19	6
Parking Lot	10.52	10.52	10.52	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.526045	0.033009	0.178095	0.114753	0.031654	0.006160	0.018278	0.080848	0.001599	0.001408	0.005681	0.001241	0.001230
Parking Lot	0.526045	0.033009	0.178095	0.114753	0.031654	0.006160	0.018278	0.080848	0.001599	0.001408	0.005681	0.001241	0.001230

Ridgeview High School - Butte County, Summer

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	lb/day										lb/day					
NaturalGas Mitigated	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
NaturalGas Unmitigated	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407

Ridgeview High School - Butte County, Summer

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					
High School	116.951	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
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
Total		1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	0.116951	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
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
Total		1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407

6.0 Area Detail**6.1 Mitigation Measures Area**

Ridgeview High School - Butte 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	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Unmitigated	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665

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	0.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0555					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7100e-003	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Total	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665

Ridgeview High School - Butte County, Summer

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	0.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0555					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7100e-003	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Total	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665

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
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Ridgeview High School - Butte County, Summer

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

Ridgeview High School - Butte County, Winter

Ridgeview High School

Butte County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	150.00	Student	1.10	1,700.00	0
Parking Lot	135.00	Space	1.21	54,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - High school = 17.000 sf; Site = 2.31 acres

Construction Phase -

Vehicle Trips - Trip generation per Headway Transportation

Ridgeview High School - Butte County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	12/27/2021	5/13/2021
tblConstructionPhase	PhaseEndDate	11/29/2021	4/15/2022
tblConstructionPhase	PhaseEndDate	1/25/2021	6/11/2021
tblConstructionPhase	PhaseEndDate	12/13/2021	4/29/2021
tblConstructionPhase	PhaseEndDate	1/15/2021	6/3/2021
tblConstructionPhase	PhaseStartDate	12/14/2021	4/30/2021
tblConstructionPhase	PhaseStartDate	1/26/2021	6/12/2021
tblConstructionPhase	PhaseStartDate	1/16/2021	6/4/2021
tblConstructionPhase	PhaseStartDate	11/30/2021	4/16/2021
tblConstructionPhase	PhaseStartDate	1/13/2021	6/1/2021
tblLandUse	LandUseSquareFeet	19,899.15	1,700.00
tblLandUse	LotAcreage	0.46	1.10
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	WD_TR	1.71	2.02

2.0 Emissions Summary

Ridgeview High School - Butte 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	7.9414	20.2661	15.8274	0.0304	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,844.6598	2,844.6598	0.7705	0.0000	2,856.9370
2022	2.0143	15.8839	15.4993	0.0303	0.3071	0.7077	1.0148	0.0835	0.6783	0.7617	0.0000	2,835.1137	2,835.1137	0.4804	0.0000	2,847.1244
Maximum	7.9414	20.2661	15.8274	0.0304	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,844.6598	2,844.6598	0.7705	0.0000	2,856.9370

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	7.9414	20.2661	15.8274	0.0304	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,844.6598	2,844.6598	0.7705	0.0000	2,856.9370
2022	2.0143	15.8839	15.4993	0.0303	0.3071	0.7077	1.0148	0.0835	0.6783	0.7617	0.0000	2,835.1137	2,835.1137	0.4804	0.0000	2,847.1244
Maximum	7.9414	20.2661	15.8274	0.0304	6.6477	0.9165	7.5642	3.3928	0.8432	4.2359	0.0000	2,844.6598	2,844.6598	0.7705	0.0000	2,856.9370

[illegible]

Ridgeview High School - Butte 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	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Energy	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
Mobile	0.7225	6.0341	8.7172	0.0281	1.9855	0.0310	2.0165	0.5326	0.0292	0.5618		2,866.5610	2,866.5610	0.2520		2,872.8610
Total	0.8031	6.0458	8.7560	0.0282	1.9855	0.0319	2.0174	0.5326	0.0302	0.5627		2,880.3823	2,880.3823	0.2524	2.5000e-004	2,886.7682

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	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Energy	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
Mobile	0.7225	6.0341	8.7172	0.0281	1.9855	0.0310	2.0165	0.5326	0.0292	0.5618		2,866.5610	2,866.5610	0.2520		2,872.8610
Total	0.8031	6.0458	8.7560	0.0282	1.9855	0.0319	2.0174	0.5326	0.0302	0.5627		2,880.3823	2,880.3823	0.2524	2.5000e-004	2,886.7682

Ridgeview High School - Butte 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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2021	6/3/2021	5	3	
2	Grading	Grading	6/4/2021	6/11/2021	5	6	
3	Building Construction	Building Construction	6/12/2021	4/15/2022	5	220	
4	Paving	Paving	4/16/2021	4/29/2021	5	10	
5	Architectural Coating	Architectural Coating	4/30/2021	5/13/2021	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,550; Non-Residential Outdoor: 850; Striped Parking Area: 3,240 (Architectural Coating – sqft)

OffRoad Equipment

Ridgeview High School - Butte County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	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	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	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	3	8.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	9.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT

Ridgeview High School - Butte 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.883 2	2,372.883 2	0.7674		2,392.069 2
Total	1.5463	18.2862	10.7496	0.0245	1.5908	0.7019	2.2926	0.1718	0.6457	0.8175		2,372.883 2	2,372.883 2	0.7674		2,392.069 2

Ridgeview High School - Butte County, Winter

3.2 Site Preparation - 2021**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	0.0455	0.0421	0.3503	7.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		69.1503	69.1503	3.1000e-003		69.2278
Total	0.0455	0.0421	0.3503	7.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		69.1503	69.1503	3.1000e-003		69.2278

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457	0.0000	2,372.883 2	2,372.883 2	0.7674		2,392.069 2
Total	1.5463	18.2862	10.7496	0.0245	1.5908	0.7019	2.2926	0.1718	0.6457	0.8175	0.0000	2,372.883 2	2,372.883 2	0.7674		2,392.069 2

Ridgeview High School - Butte County, Winter

3.2 Site Preparation - 2021**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	0.0455	0.0421	0.3503	7.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		69.1503	69.1503	3.1000e-003		69.2278
Total	0.0455	0.0421	0.3503	7.0000e-004	0.0763	5.8000e-004	0.0769	0.0202	5.3000e-004	0.0208		69.1503	69.1503	3.1000e-003		69.2278

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	6.5523	0.9158	7.4681	3.3675	0.8425	4.2100		1,995.6114	1,995.6114	0.6454		2,011.7470

Ridgeview High School - Butte County, Winter

3.3 Grading - 2021**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	0.0568	0.0526	0.4379	8.7000e-004	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		86.4379	86.4379	3.8800e-003		86.5348
Total	0.0568	0.0526	0.4379	8.7000e-004	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		86.4379	86.4379	3.8800e-003		86.5348

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	1.8271	20.2135	9.7604	0.0206	6.5523	0.9158	7.4681	3.3675	0.8425	4.2100	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470

Ridgeview High School - Butte County, Winter

3.3 Grading - 2021**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	0.0568	0.0526	0.4379	8.7000e-004	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		86.4379	86.4379	3.8800e-003		86.5348
Total	0.0568	0.0526	0.4379	8.7000e-004	0.0954	7.2000e-004	0.0961	0.0253	6.7000e-004	0.0260		86.4379	86.4379	3.8800e-003		86.5348

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935

Ridgeview High School - Butte County, Winter

3.4 Building Construction - 2021**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	0.0403	1.2487	0.2573	3.4100e-003	0.0878	4.4500e-003	0.0923	0.0253	4.2600e-003	0.0295		356.9171	356.9171	0.0319		357.7134
Worker	0.1307	0.1209	1.0071	2.0000e-003	0.2193	1.6600e-003	0.2210	0.0582	1.5400e-003	0.0597		198.8071	198.8071	8.9200e-003		199.0300
Total	0.1710	1.3696	1.2644	5.4100e-003	0.3071	6.1100e-003	0.3133	0.0835	5.8000e-003	0.0892		555.7243	555.7243	0.0408		556.7435

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935

Ridgeview High School - Butte County, Winter

3.4 Building Construction - 2021**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	0.0403	1.2487	0.2573	3.4100e-003	0.0878	4.4500e-003	0.0923	0.0253	4.2600e-003	0.0295		356.9171	356.9171	0.0319		357.7134
Worker	0.1307	0.1209	1.0071	2.0000e-003	0.2193	1.6600e-003	0.2210	0.0582	1.5400e-003	0.0597		198.8071	198.8071	8.9200e-003		199.0300
Total	0.1710	1.3696	1.2644	5.4100e-003	0.3071	6.1100e-003	0.3133	0.0835	5.8000e-003	0.0892		555.7243	555.7243	0.0408		556.7435

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230

Ridgeview High School - Butte County, Winter

3.4 Building Construction - 2022**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	0.0373	1.1715	0.2355	3.3800e-003	0.0878	3.8700e-003	0.0917	0.0253	3.7000e-003	0.0290		353.9320	353.9320	0.0308		354.7029
Worker	0.1215	0.1083	0.9105	1.9300e-003	0.2193	1.6000e-003	0.2209	0.0582	1.4700e-003	0.0597		191.9004	191.9004	7.9300e-003		192.0985
Total	0.1588	1.2799	1.1460	5.3100e-003	0.3071	5.4700e-003	0.3126	0.0835	5.1700e-003	0.0886		545.8324	545.8324	0.0388		546.8014

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230

Ridgeview High School - Butte County, Winter

3.4 Building Construction - 2022**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	0.0373	1.1715	0.2355	3.3800e-003	0.0878	3.8700e-003	0.0917	0.0253	3.7000e-003	0.0290		353.9320	353.9320	0.0308		354.7029
Worker	0.1215	0.1083	0.9105	1.9300e-003	0.2193	1.6000e-003	0.2209	0.0582	1.4700e-003	0.0597		191.9004	191.9004	7.9300e-003		192.0985
Total	0.1588	1.2799	1.1460	5.3100e-003	0.3071	5.4700e-003	0.3126	0.0835	5.1700e-003	0.0886		545.8324	545.8324	0.0388		546.8014

3.5 Paving - 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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3803	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524

Ridgeview High School - Butte County, Winter

3.5 Paving - 2021**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	0.0853	0.0789	0.6568	1.3000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		129.6568	129.6568	5.8200e-003		129.8022
Total	0.0853	0.0789	0.6568	1.3000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		129.6568	129.6568	5.8200e-003		129.8022

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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3803	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524

Ridgeview High School - Butte County, Winter

3.5 Paving - 2021**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	0.0853	0.0789	0.6568	1.3000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		129.6568	129.6568	5.8200e-003		129.8022
Total	0.0853	0.0789	0.6568	1.3000e-003	0.1431	1.0900e-003	0.1441	0.0379	1.0000e-003	0.0389		129.6568	129.6568	5.8200e-003		129.8022

3.6 Architectural Coating - 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					
Archit. Coating	7.6941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	7.9130	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Ridgeview High School - Butte County, Winter

3.6 Architectural Coating - 2021**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	0.0284	0.0263	0.2189	4.3000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		43.2189	43.2189	1.9400e-003		43.2674
Total	0.0284	0.0263	0.2189	4.3000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		43.2189	43.2189	1.9400e-003		43.2674

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	7.6941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	7.9130	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

Ridgeview High School - Butte County, Winter

3.6 Architectural Coating - 2021**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	0.0284	0.0263	0.2189	4.3000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		43.2189	43.2189	1.9400e-003		43.2674
Total	0.0284	0.0263	0.2189	4.3000e-004	0.0477	3.6000e-004	0.0481	0.0127	3.3000e-004	0.0130		43.2189	43.2189	1.9400e-003		43.2674

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Ridgeview High School - Butte 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	0.7225	6.0341	8.7172	0.0281	1.9855	0.0310	2.0165	0.5326	0.0292	0.5618		2,866.5610	2,866.5610	0.2520		2,872.8610
Unmitigated	0.7225	6.0341	8.7172	0.0281	1.9855	0.0310	2.0165	0.5326	0.0292	0.5618		2,866.5610	2,866.5610	0.2520		2,872.8610

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	303.00	91.50	37.50	717,732	717,732
Parking Lot	0.00	0.00	0.00		
Total	303.00	91.50	37.50	717,732	717,732

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
High School	10.52	10.52	10.52	77.80	17.20	5.00	75	19	6
Parking Lot	10.52	10.52	10.52	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.526045	0.033009	0.178095	0.114753	0.031654	0.006160	0.018278	0.080848	0.001599	0.001408	0.005681	0.001241	0.001230
Parking Lot	0.526045	0.033009	0.178095	0.114753	0.031654	0.006160	0.018278	0.080848	0.001599	0.001408	0.005681	0.001241	0.001230

Ridgeview High School - Butte County, Winter

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	lb/day										lb/day					
NaturalGas Mitigated	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
NaturalGas Unmitigated	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407

Ridgeview High School - Butte County, Winter

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					
High School	116.951	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
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
Total		1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	0.116951	1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407
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
Total		1.2600e-003	0.0115	9.6300e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7589	13.7589	2.6000e-004	2.5000e-004	13.8407

6.0 Area Detail**6.1 Mitigation Measures Area**

Ridgeview High School - Butte 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	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Unmitigated	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665

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	0.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0555					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7100e-003	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Total	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665

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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	lb/day										lb/day					
Architectural Coating	0.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0555					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7100e-003	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665
Total	0.0793	2.7000e-004	0.0291	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0624	0.0624	1.6000e-004		0.0665

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
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Ridgeview High School - Butte County, Winter

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

CalEEMod Output Files – Greenhouse Gas Emissions

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Ridgeview High School

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	150.00	Student	1.10	1,700.00	0
Parking Lot	135.00	Space	1.21	54,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - High school = 17.000 sf; Site = 2.31 acres

Construction Phase -

Vehicle Trips - Trip generation per Headway Transportation

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	12/27/2021	5/13/2021
tblConstructionPhase	PhaseEndDate	11/29/2021	4/15/2022
tblConstructionPhase	PhaseEndDate	1/25/2021	6/11/2021
tblConstructionPhase	PhaseEndDate	12/13/2021	4/29/2021
tblConstructionPhase	PhaseEndDate	1/15/2021	6/3/2021
tblConstructionPhase	PhaseStartDate	12/14/2021	4/30/2021
tblConstructionPhase	PhaseStartDate	1/26/2021	6/12/2021
tblConstructionPhase	PhaseStartDate	1/16/2021	6/4/2021
tblConstructionPhase	PhaseStartDate	11/30/2021	4/16/2021
tblConstructionPhase	PhaseStartDate	1/13/2021	6/1/2021
tblLandUse	LandUseSquareFeet	19,899.15	1,700.00
tblLandUse	LotAcreage	0.46	1.10
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	WD_TR	1.71	2.02

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	0.2151	1.4097	1.2656	2.4300e-003	0.0447	0.0669	0.1116	0.0165	0.0639	0.0804	0.0000	206.7306	206.7306	0.0376	0.0000	207.6697
2022	0.0752	0.5951	0.5806	1.1400e-003	0.0111	0.0265	0.0376	3.0200e-003	0.0254	0.0285	0.0000	96.8529	96.8529	0.0163	0.0000	97.2599
Maximum	0.2151	1.4097	1.2656	2.4300e-003	0.0447	0.0669	0.1116	0.0165	0.0639	0.0804	0.0000	206.7306	206.7306	0.0376	0.0000	207.6697

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	0.2151	1.4097	1.2656	2.4300e-003	0.0447	0.0669	0.1116	0.0165	0.0639	0.0804	0.0000	206.7304	206.7304	0.0376	0.0000	207.6695
2022	0.0752	0.5951	0.5806	1.1400e-003	0.0111	0.0265	0.0376	3.0200e-003	0.0254	0.0285	0.0000	96.8528	96.8528	0.0163	0.0000	97.2598
Maximum	0.2151	1.4097	1.2656	2.4300e-003	0.0447	0.0669	0.1116	0.0165	0.0639	0.0804	0.0000	206.7304	206.7304	0.0376	0.0000	207.6695

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	3-16-2021	6-15-2021	0.2210	0.2210
3	6-16-2021	9-15-2021	0.6430	0.6430
4	9-16-2021	12-15-2021	0.6372	0.6372
5	12-16-2021	3-15-2022	0.5851	0.5851
6	3-16-2022	6-15-2022	0.1980	0.1980
		Highest	0.6430	0.6430

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	0.0142	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003
Energy	2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	11.2479	11.2479	4.5000e-004	1.3000e-004	11.2966
Mobile	0.1073	0.8372	1.1914	4.0700e-003	0.2686	4.3100e-003	0.2729	0.0723	4.0600e-003	0.0764	0.0000	376.5449	376.5449	0.0308	0.0000	377.3137
Waste						0.0000	0.0000		0.0000	0.0000	5.5579	0.0000	5.5579	0.3285	0.0000	13.7694
Water						0.0000	0.0000		0.0000	0.0000	0.2096	2.7701	2.9797	0.0217	5.3000e-004	3.6803
Total	0.1218	0.8393	1.1958	4.0800e-003	0.2686	4.4800e-003	0.2730	0.0723	4.2300e-003	0.0765	5.7675	390.5679	396.3354	0.3813	6.6000e-004	406.0655

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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	0.0142	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003
Energy	2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	11.2479	11.2479	4.5000e-004	1.3000e-004	11.2966
Mobile	0.1073	0.8372	1.1914	4.0700e-003	0.2686	4.3100e-003	0.2729	0.0723	4.0600e-003	0.0764	0.0000	376.5449	376.5449	0.0308	0.0000	377.3137
Waste						0.0000	0.0000		0.0000	0.0000	5.5579	0.0000	5.5579	0.3285	0.0000	13.7694
Water						0.0000	0.0000		0.0000	0.0000	0.2096	2.7701	2.9797	0.0217	5.3000e-004	3.6803
Total	0.1218	0.8393	1.1958	4.0800e-003	0.2686	4.4800e-003	0.2730	0.0723	4.2300e-003	0.0765	5.7675	390.5679	396.3354	0.3813	6.6000e-004	406.0655

	ROG	NOx	CO	SO2	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	6/1/2021	6/3/2021	5	3	
2	Grading	Grading	6/4/2021	6/11/2021	5	6	
3	Building Construction	Building Construction	6/12/2021	4/15/2022	5	220	
4	Paving	Paving	4/16/2021	4/29/2021	5	10	
5	Architectural Coating	Architectural Coating	4/30/2021	5/13/2021	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,550; Non-Residential Outdoor: 850; Striped Parking Area: 3,240 (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
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	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	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	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	3	8.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	9.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	12.54	10.52	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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	2.3200e-003	0.0274	0.0161	4.0000e-005	2.3900e-003	1.0500e-003	3.4400e-003	2.6000e-004	9.7000e-004	1.2300e-003	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551

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3.2 Site Preparation - 2021**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	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0972	0.0972	0.0000	0.0000	0.0973
Total	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0972	0.0972	0.0000	0.0000	0.0973

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	2.3200e-003	0.0274	0.0161	4.0000e-005	2.3900e-003	1.0500e-003	3.4400e-003	2.6000e-004	9.7000e-004	1.2300e-003	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551

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3.2 Site Preparation - 2021**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	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0972	0.0972	0.0000	0.0000	0.0973
Total	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0972	0.0972	0.0000	0.0000	0.0973

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	5.4800e-003	0.0606	0.0293	6.0000e-005	0.0197	2.7500e-003	0.0224	0.0101	2.5300e-003	0.0126	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751

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3.3 Grading - 2021**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	1.6000e-004	1.4000e-004	1.3100e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2431	0.2431	1.0000e-005	0.0000	0.2433
Total	1.6000e-004	1.4000e-004	1.3100e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2431	0.2431	1.0000e-005	0.0000	0.2433

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	5.4800e-003	0.0606	0.0293	6.0000e-005	0.0197	2.7500e-003	0.0224	0.0101	2.5300e-003	0.0126	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751

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3.3 Grading - 2021**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	1.6000e-004	1.4000e-004	1.3100e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2431	0.2431	1.0000e-005	0.0000	0.2433
Total	1.6000e-004	1.4000e-004	1.3100e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2431	0.2431	1.0000e-005	0.0000	0.2433

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	0.1483	1.1620	1.0558	1.8100e-003		0.0593	0.0593		0.0568	0.0568	0.0000	150.5453	150.5453	0.0296	0.0000	151.2858
Total	0.1483	1.1620	1.0558	1.8100e-003		0.0593	0.0593		0.0568	0.0568	0.0000	150.5453	150.5453	0.0296	0.0000	151.2858

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3.4 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8300e-003	0.0903	0.0171	2.5000e-004	6.1500e-003	3.2000e-004	6.4600e-003	1.7800e-003	3.0000e-004	2.0800e-003	0.0000	23.8346	23.8346	1.9500e-003	0.0000	23.8835
Worker	8.9400e-003	7.7900e-003	0.0731	1.5000e-004	0.0152	1.2000e-004	0.0154	4.0500e-003	1.1000e-004	4.1600e-003	0.0000	13.5109	13.5109	6.0000e-004	0.0000	13.5258
Total	0.0118	0.0981	0.0902	4.0000e-004	0.0214	4.4000e-004	0.0218	5.8300e-003	4.1000e-004	6.2400e-003	0.0000	37.3455	37.3455	2.5500e-003	0.0000	37.4093

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	0.1483	1.1620	1.0558	1.8100e-003		0.0593	0.0593		0.0568	0.0568	0.0000	150.5452	150.5452	0.0296	0.0000	151.2856
Total	0.1483	1.1620	1.0558	1.8100e-003		0.0593	0.0593		0.0568	0.0568	0.0000	150.5452	150.5452	0.0296	0.0000	151.2856

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3.4 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8300e-003	0.0903	0.0171	2.5000e-004	6.1500e-003	3.2000e-004	6.4600e-003	1.7800e-003	3.0000e-004	2.0800e-003	0.0000	23.8346	23.8346	1.9500e-003	0.0000	23.8835
Worker	8.9400e-003	7.7900e-003	0.0731	1.5000e-004	0.0152	1.2000e-004	0.0154	4.0500e-003	1.1000e-004	4.1600e-003	0.0000	13.5109	13.5109	6.0000e-004	0.0000	13.5258
Total	0.0118	0.0981	0.0902	4.0000e-004	0.0214	4.4000e-004	0.0218	5.8300e-003	4.1000e-004	6.2400e-003	0.0000	37.3455	37.3455	2.5500e-003	0.0000	37.4093

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	0.0696	0.5477	0.5383	9.4000e-004		0.0263	0.0263		0.0252	0.0252	0.0000	77.8800	77.8800	0.0150	0.0000	78.2557
Total	0.0696	0.5477	0.5383	9.4000e-004		0.0263	0.0263		0.0252	0.0252	0.0000	77.8800	77.8800	0.0150	0.0000	78.2557

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3.4 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3500e-003	0.0439	8.0900e-003	1.3000e-004	3.1800e-003	1.4000e-004	3.3200e-003	9.2000e-004	1.4000e-004	1.0600e-003	0.0000	12.2272	12.2272	9.8000e-004	0.0000	12.2516
Worker	4.3000e-003	3.6100e-003	0.0343	7.0000e-005	7.8800e-003	6.0000e-005	7.9400e-003	2.1000e-003	6.0000e-005	2.1500e-003	0.0000	6.7457	6.7457	2.8000e-004	0.0000	6.7526
Total	5.6500e-003	0.0475	0.0423	2.0000e-004	0.0111	2.0000e-004	0.0113	3.0200e-003	2.0000e-004	3.2100e-003	0.0000	18.9729	18.9729	1.2600e-003	0.0000	19.0042

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	0.0696	0.5477	0.5383	9.4000e-004		0.0263	0.0263		0.0252	0.0252	0.0000	77.8800	77.8800	0.0150	0.0000	78.2556
Total	0.0696	0.5477	0.5383	9.4000e-004		0.0263	0.0263		0.0252	0.0252	0.0000	77.8800	77.8800	0.0150	0.0000	78.2556

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3.4 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3500e-003	0.0439	8.0900e-003	1.3000e-004	3.1800e-003	1.4000e-004	3.3200e-003	9.2000e-004	1.4000e-004	1.0600e-003	0.0000	12.2272	12.2272	9.8000e-004	0.0000	12.2516
Worker	4.3000e-003	3.6100e-003	0.0343	7.0000e-005	7.8800e-003	6.0000e-005	7.9400e-003	2.1000e-003	6.0000e-005	2.1500e-003	0.0000	6.7457	6.7457	2.8000e-004	0.0000	6.7526
Total	5.6500e-003	0.0475	0.0423	2.0000e-004	0.0111	2.0000e-004	0.0113	3.0200e-003	2.0000e-004	3.2100e-003	0.0000	18.9729	18.9729	1.2600e-003	0.0000	19.0042

3.5 Paving - 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	5.3200e-003	0.0532	0.0589	9.0000e-005		2.9100e-003	2.9100e-003		2.6900e-003	2.6900e-003	0.0000	7.7524	7.7524	2.4600e-003	0.0000	7.8138
Paving	1.5900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.9100e-003	0.0532	0.0589	9.0000e-005		2.9100e-003	2.9100e-003		2.6900e-003	2.6900e-003	0.0000	7.7524	7.7524	2.4600e-003	0.0000	7.8138

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3.5 Paving - 2021**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	4.0000e-004	3.5000e-004	3.2900e-003	1.0000e-005	6.9000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.6077	0.6077	3.0000e-005	0.0000	0.6084
Total	4.0000e-004	3.5000e-004	3.2900e-003	1.0000e-005	6.9000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.6077	0.6077	3.0000e-005	0.0000	0.6084

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	5.3200e-003	0.0532	0.0589	9.0000e-005		2.9100e-003	2.9100e-003		2.6900e-003	2.6900e-003	0.0000	7.7524	7.7524	2.4600e-003	0.0000	7.8138
Paving	1.5900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.9100e-003	0.0532	0.0589	9.0000e-005		2.9100e-003	2.9100e-003		2.6900e-003	2.6900e-003	0.0000	7.7524	7.7524	2.4600e-003	0.0000	7.8138

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3.5 Paving - 2021**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	4.0000e-004	3.5000e-004	3.2900e-003	1.0000e-005	6.9000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.6077	0.6077	3.0000e-005	0.0000	0.6084
Total	4.0000e-004	3.5000e-004	3.2900e-003	1.0000e-005	6.9000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.6077	0.6077	3.0000e-005	0.0000	0.6084

3.6 Architectural Coating - 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					
Archit. Coating	0.0385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.0396	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.6 Architectural Coating - 2021**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	1.3000e-004	1.2000e-004	1.1000e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2026	0.2026	1.0000e-005	0.0000	0.2028
Total	1.3000e-004	1.2000e-004	1.1000e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2026	0.2026	1.0000e-005	0.0000	0.2028

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	0.0385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.0396	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.6 Architectural Coating - 2021**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	1.3000e-004	1.2000e-004	1.1000e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2026	0.2026	1.0000e-005	0.0000	0.2028
Total	1.3000e-004	1.2000e-004	1.1000e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2026	0.2026	1.0000e-005	0.0000	0.2028

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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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	0.1073	0.8372	1.1914	4.0700e-003	0.2686	4.3100e-003	0.2729	0.0723	4.0600e-003	0.0764	0.0000	376.5449	376.5449	0.0308	0.0000	377.3137
Unmitigated	0.1073	0.8372	1.1914	4.0700e-003	0.2686	4.3100e-003	0.2729	0.0723	4.0600e-003	0.0764	0.0000	376.5449	376.5449	0.0308	0.0000	377.3137

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	303.00	91.50	37.50	717,732	717,732
Parking Lot	0.00	0.00	0.00		
Total	303.00	91.50	37.50	717,732	717,732

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
High School	10.52	10.52	10.52	77.80	17.20	5.00	75	19	6
Parking Lot	10.52	10.52	10.52	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.526045	0.033009	0.178095	0.114753	0.031654	0.006160	0.018278	0.080848	0.001599	0.001408	0.005681	0.001241	0.001230
Parking Lot	0.526045	0.033009	0.178095	0.114753	0.031654	0.006160	0.018278	0.080848	0.001599	0.001408	0.005681	0.001241	0.001230

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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	8.9700	8.9700	4.1000e-004	8.0000e-005	9.0051
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8.9700	8.9700	4.1000e-004	8.0000e-005	9.0051
NaturalGas Mitigated	2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2779	2.2779	4.0000e-005	4.0000e-005	2.2915
NaturalGas Unmitigated	2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2779	2.2779	4.0000e-005	4.0000e-005	2.2915

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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					
High School	42687	2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2779	2.2779	4.0000e-005	4.0000e-005	2.2915
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
Total		2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2779	2.2779	4.0000e-005	4.0000e-005	2.2915

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					
High School	42687	2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2779	2.2779	4.0000e-005	4.0000e-005	2.2915
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
Total		2.3000e-004	2.0900e-003	1.7600e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2779	2.2779	4.0000e-005	4.0000e-005	2.2915

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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			
High School	11934	3.4717	1.6000e-004	3.0000e-005	3.4853
Parking Lot	18900	5.4982	2.5000e-004	5.0000e-005	5.5198
Total		8.9700	4.1000e-004	8.0000e-005	9.0051

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	11934	3.4717	1.6000e-004	3.0000e-005	3.4853
Parking Lot	18900	5.4982	2.5000e-004	5.0000e-005	5.5198
Total		8.9700	4.1000e-004	8.0000e-005	9.0051

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	0.0142	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003
Unmitigated	0.0142	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003

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	3.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4000e-004	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003
Total	0.0142	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003

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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	3.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4000e-004	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003
Total	0.0142	2.0000e-005	2.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.0900e-003	5.0900e-003	1.0000e-005	0.0000	5.4300e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.9797	0.0217	5.3000e-004	3.6803
Unmitigated	2.9797	0.0217	5.3000e-004	3.6803

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	0.660744 / 1.69906	2.9797	0.0217	5.3000e-004	3.6803
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.9797	0.0217	5.3000e-004	3.6803

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	0.660744 / 1.69906	2.9797	0.0217	5.3000e-004	3.6803
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.9797	0.0217	5.3000e-004	3.6803

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.5579	0.3285	0.0000	13.7694
Unmitigated	5.5579	0.3285	0.0000	13.7694

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	27.38	5.5579	0.3285	0.0000	13.7694
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.5579	0.3285	0.0000	13.7694

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	27.38	5.5579	0.3285	0.0000	13.7694
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.5579	0.3285	0.0000	13.7694

9.0 Operational Offroad

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