

Initial Study & Negative Declaration

FOR THE

BA ACQUISITIONS I-5/SULLIVAN ROAD GAS STATION PROJECT

*Conditional Use Permit Application No. CUP22-005 / Site Plan
and Design Review No. SPR20-004*

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SECTION 1: INTRODUCTION

1.1 - Purpose

Pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines (Title 14, California Code Regulations, Sections 15000 et seq.), an Initial Study (IS) is a preliminary environmental analysis that is used by the Lead Agency as a basis for determining whether an Environmental Impact Report (EIR), a Mitigated Negative Declaration (MND), or a Negative Declaration (ND) is required for a project. The CEQA Guidelines require that an IS contains a project description, description of environmental setting, an identification of environmental effects by checklist or other similar form, an explanation of environmental effects, a discussion of mitigation for significant environmental effects, an evaluation of the project's consistency with existing applicable land use controls, and the names of persons who prepared the study.

The purpose of this IS is to identify the potential environmental impacts associated with the proposed BA Acquisitions Gas Station and Convenience Store Project (Project), also known as Conditional Use Permit Application No. CUP22-005 and Site Plan and Design Review No. SPR20-004, located in the Gustine area of Merced County, California and to describe measures that would avoid or mitigate significant impacts. This IS includes information to substantiate the conclusions made regarding the potential of the proposed project to result in significant environmental effects and provides the basis for input from public agencies, organizations, and interested members of the public. Pursuant to Section 15367 of the California Environmental Quality Act (CEQA) Guidelines, Merced County is the Lead Agency for the proposed project, and as such, has primary responsibility for project approval or denial.

1.2 - Project Location

The project site consists of an approximately 5.97-acre parcel located on the southeast corner of Sullivan Road (State Highway 140 West) and Interstate-5 in the Gustine area of Merced County (see *Figure 1*). The project site is located approximately 3.9 miles west of the City of Gustine and approximately 1,000 feet east of the Merced-Stanislaus County line. The property is identified as Assessor's Parcel Number 069-260-011, located within the Township 8 South, Range 8 East, Mount Diablo Base and Meridian.

1.3 – Existing Conditions & Surrounding Land Uses

The project site is designated General Commercial land use in the 2030 Merced County General Plan and zoned H-I-C (Highway Interchange Center). The project site is bounded by Highway 140 (Hwy 140) to the north, and an off-ramp for Interstate-5 (I-5) and California Department of Transportation (CalTrans) right-of-way to the west.

The project site is currently vacant; however, approximately 1.59-acres located on the northeastern portion of the site has been disturbed. This area was previously improved with a gas station which was demolished in 2018. Existing infrastructure from the previous development still exist including an existing water well and two improved private driveways and one shared driveway on Sullivan Road/Hwy 140.

The surrounding area is characterized by a mix of natural landscape and agricultural operations (orchards). The land uses immediately adjacent to the project site include highway-oriented commercial land uses. The

interchange between Hwy 140 and I-5, as well as two-lane Sullivan Road/Hwy 140, provide regional access to the surrounding areas.

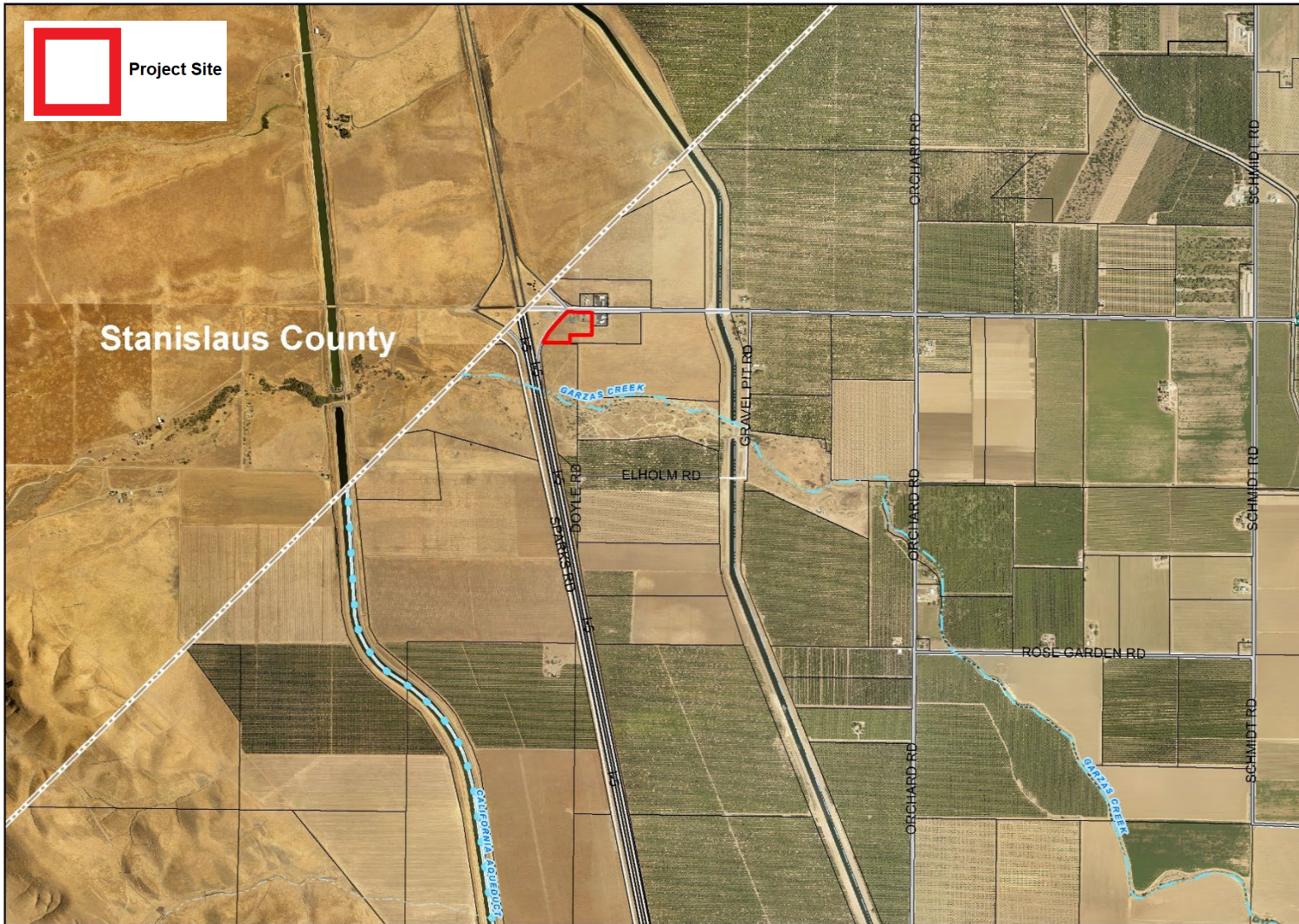
Table 1, seen on the following page, summarizes the existing conditions of the project site and surrounding area. An aerial image of the project site and immediate surrounding area can be seen in *Figures 1 and 2*.

Table 1: Surrounding Land Uses

	General Plan	Zoning	Current Land Use
On-Site:	Agricultural / General Commercial	H-I-C (Highway Interchange Center)	Vacant
North:	General Commercial	H-I-C (Highway Interchange Center)	Auto Repair Shop
South:	Agricultural	H-I-C (Highway Interchange Center)	Vacant
East:	General Commercial	H-I-C (Highway Interchange Center)	Gas Station
West:	Agricultural	H-I-C (Highway Interchange Center)	Interstate 5 (I-5)

Figure 1: Vicinity Map

Vicinity of Project Site



*Data displayed subject to change.

Figure 2: Aerial



Project Site Aerial



*Data displayed subject to change.

1.4 – Project Description

The project proposes to construct a gas station with traditional gasoline fuel, hydrogen fuel, and EV charging dispensers, and a convenience store on an approximately 5.97-acre parcel. The convenience store would be approximately 4,900 square feet, and would sell food, beverages, and beer and wine for off-site consumption.

The canopy for the gasoline fueling stations would cover approximately 4,395 square feet and consist of 8 fuel pumps. Fuel would be stored in underground. In addition to traditional gasoline fuel, the project would provide an EV charging area for approximately 16 EV vehicles and one hydrogen fuel pump with an above-ground hydrogen fuel tank for approximately 2 hydrogen fueled vehicles.

Site Plan (see Figure 3): The proposed site plan shows the location of the convenience store, all parking spaces, landscaping, fueling stations, and the required leach field and retention basin areas.

Parking: The proposed site plan includes 34 standard (9 feet by 20 feet) spaces, two accessible spaces, 16 standard-sized EV charging station spaces, and 10 recreational vehicle (RV) (15 feet by 30 feet) spaces. Additional parking is provided for motorcycle, bicycles, and loading.

Circulation: Vehicular access would be provided by three (3) existing driveways (a single 38-foot-wide shared driveway and two private 26-foot-wide driveways) that front onto Sullivan Road/Hwy 140.

Landscaping: All plants used in the landscaping of the project site (see Figure 3.2) would be drought-tolerant with the exception of the Autumn Gold Ginkgo (*Ginkgo biloba* 'Saratoga'), which would require medium water. Landscaping would be in compliance with the Merced County Zoning Code (MCZC) Section 18.36.050 which requires 90 percent of plants used in landscaping to be drought resistant.

Lighting: Any proposed lighting fixtures shall be in compliance with MCZC Section 18.41.060, which requires exterior lighting be designed and maintained in a manner so that glare and reflections are contained within the boundaries of the parcel. Lighting fixtures shall be hooded, directed downward and away from adjoining properties and public rights-of-way. Any additional lighting required as a result of this project would be required to be in compliance with this Section of the Merced County Code.

Utilities and Services: Fire Protection would be provided by the Merced County Fire Department. Police services would be provided by the Merced County Sheriff. Water would be supplied by an existing on-site well, wastewater would be managed by a new on-site septic system, and storm water would be managed by a new 49,000 square foot retention basin.

Permit History: Property Line Adjustment No. PLA22-003 adjusted the property lines for the project site. A previously abandoned gas station on the site was demolished in 2018, authorized by Demolition Permits No. BP2018-0984 & BP2018-0989.

Required Discretionary Actions: Based on past permit history, Staff has determined that a Conditional Use Permit Application and Initial Study are required for the proposed development to properly address potential impacts to the site and surrounding area.

Figure 3.1: Site Plan

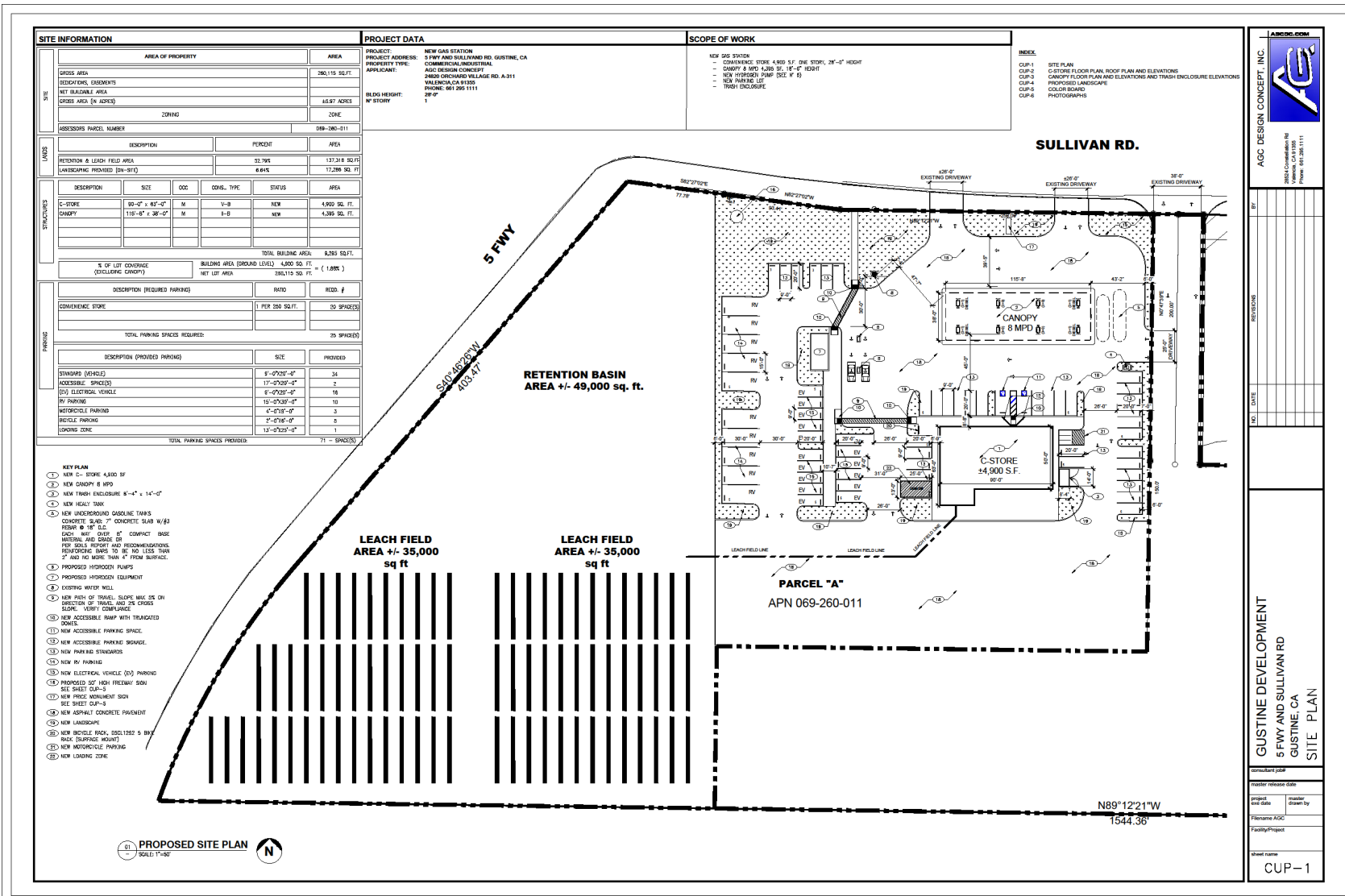
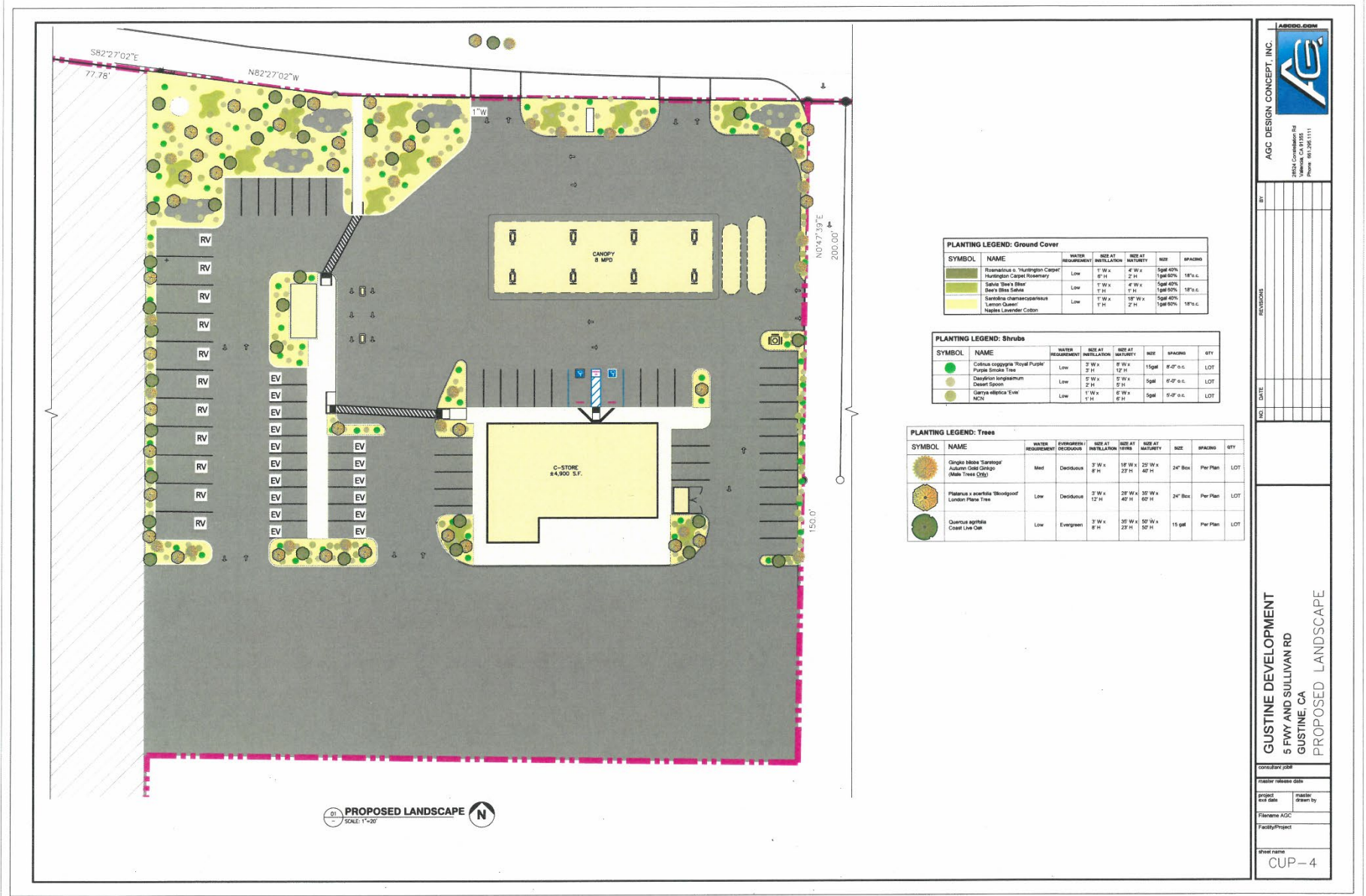


Figure 3.2: Landscaping



SYMBOL	NAME	WATER REQUIREMENT	SIZE AT INSTALLATION	SIZE AT MATURITY	SIZE	SPACING
(Green circle)	Rosa multiflora 'Harrington Carpet'	Low	1' W x 8' H	4' W x 2' H	5gal 40%	18\"/>
(Green circle)	Rosa multiflora 'Harrington Carpet'	Low	1' W x 8' H	4' W x 2' H	5gal 40%	18\"/>
(Green circle)	Santolina chamaecrista	Low	1' W x 1' H	1' W x 1' H	5gal 50%	18\"/>
(Green circle)	Santolina chamaecrista	Low	1' W x 1' H	1' W x 1' H	5gal 50%	18\"/>
(Green circle)	Nappa Lavender Cotton	Low	1' W x 1' H	2' H	5gal 40%	18\"/>

SYMBOL	NAME	WATER REQUIREMENT	SIZE AT INSTALLATION	SIZE AT MATURITY	SIZE	SPACING	QTY
(Green circle)	Cornus sanguinea 'Royal Purple'	Low	3' W x 3' H	8' W x 12' H	15gal	8'0\"/>	
(Green circle)	Purple Smoke Tree	Low	3' W x 3' H	8' W x 12' H	15gal	8'0\"/>	
(Green circle)	Davidson longistamum	Low	5' W x 2' H	5' W x 5' H	5gal	6'0\"/>	
(Green circle)	Davidson longistamum	Low	5' W x 2' H	5' W x 5' H	5gal	6'0\"/>	
(Green circle)	Carya elliptica 'Eve'	Low	1' W x 1' H	6' H	5gal	5'0\"/>	
(Green circle)	NCH	Low	1' W x 1' H	6' H	5gal	5'0\"/>	

SYMBOL	NAME	WATER REQUIREMENT	EVERGREEN/DECIDUOUS	SIZE AT INSTALLATION	SIZE AT 1 YEAR	SIZE AT MATURITY	SIZE	SPACING	QTY
(Green circle)	Ginkgo biloba 'Sargent'	Med	Deciduous	3' W x 8' H	18' W x 22' H	25' W x 40' H	24' Box	Per Plan	LOT
(Green circle)	Australian Cypripedium (Male Tree Oak)	Low	Deciduous	3' W x 12' H	28' W x 40' H	30' W x 60' H	24' Box	Per Plan	LOT
(Green circle)	Platanus acerifolia 'Bloodgood'	Low	Deciduous	3' W x 12' H	28' W x 40' H	30' W x 60' H	24' Box	Per Plan	LOT
(Green circle)	Quercus agrifolia Coast Live Oak	Low	Evergreen	3' W x 8' H	18' W x 25' H	20' W x 30' H	15 gal	Per Plan	LOT

01 PROPOSED LANDSCAPE N
SCALE 1"=20'



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REV	DATE	DESCRIPTION

GUSTINE DEVELOPMENT
5 FWY AND SULLIVAN RD
GUSTINE, CA
PROPOSED LANDSCAPE

Consultant: [blank]
Project: [blank]
Client: [blank]
Date: [blank]
Drawn by: [blank]
Checked by: [blank]
Title: AGC
Facility/Project: [blank]
Sheet Name: [blank]
CUP-4

1.5 - General Plan Designation

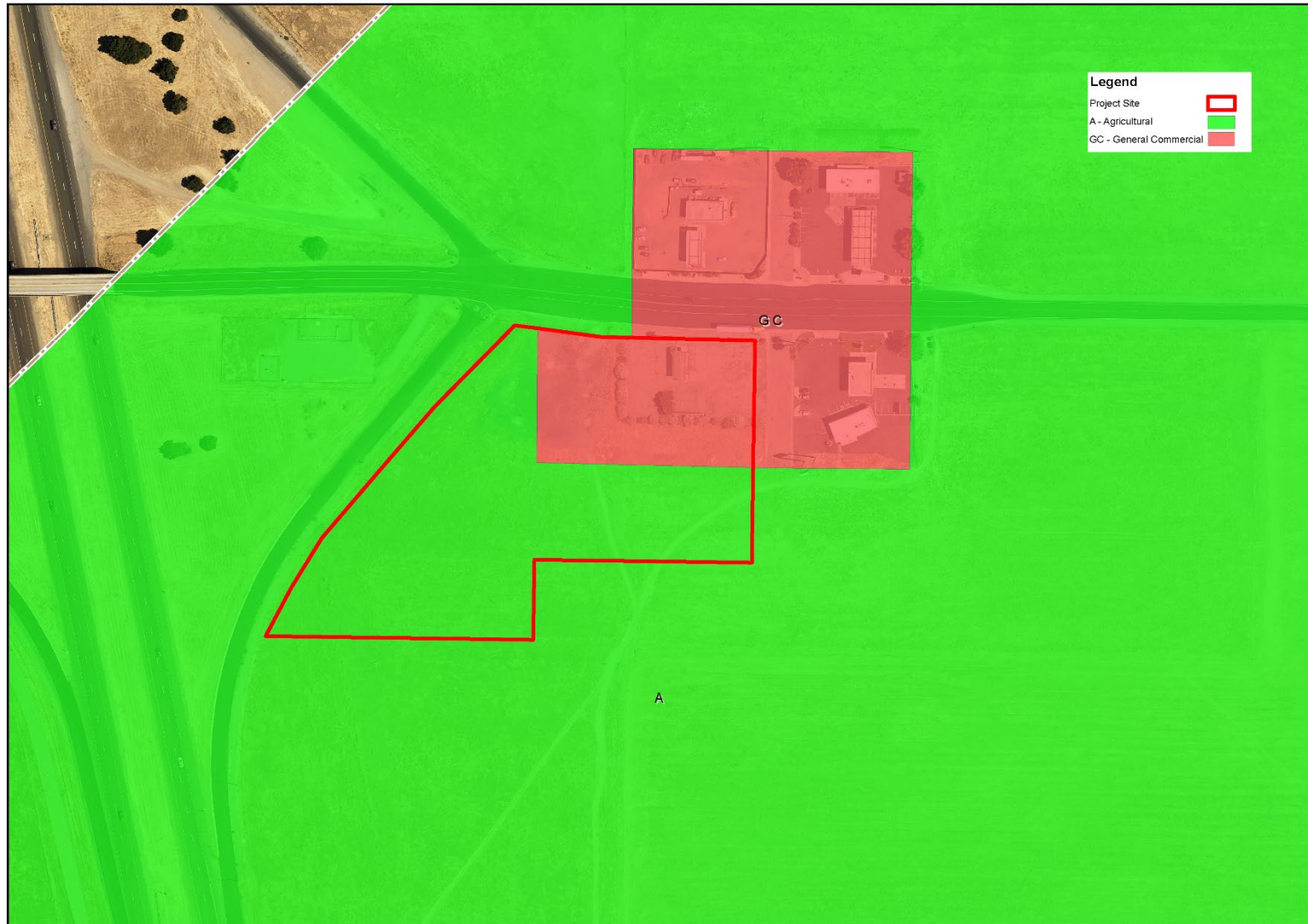
The 2030 Merced County General Plan identifies the project site as both General Commercial and Agricultural (see Figure 4). The Agricultural land use designation is described as relatively flat, with elevations approximately 115 feet above sea level, very slow to moderate water runoff potential, very limited to moderate erosion potential, moderate to excellent water availability, and deeper and more fertile topsoil. The General Commercial land use designation is described as typically being applied to “areas near the center of a community to encourage grouping of commercial activities in a central business district or core, possibly with other nonresidential uses.”

The project proposes to construct the gas station in the portion of the site designated General Commercial land use and utilize the remaining portion, designated Agricultural land use, as a detention basin and leach field area.

Figure 4: General Plan Designation



General Plan Designations



*Data displayed subject to change.

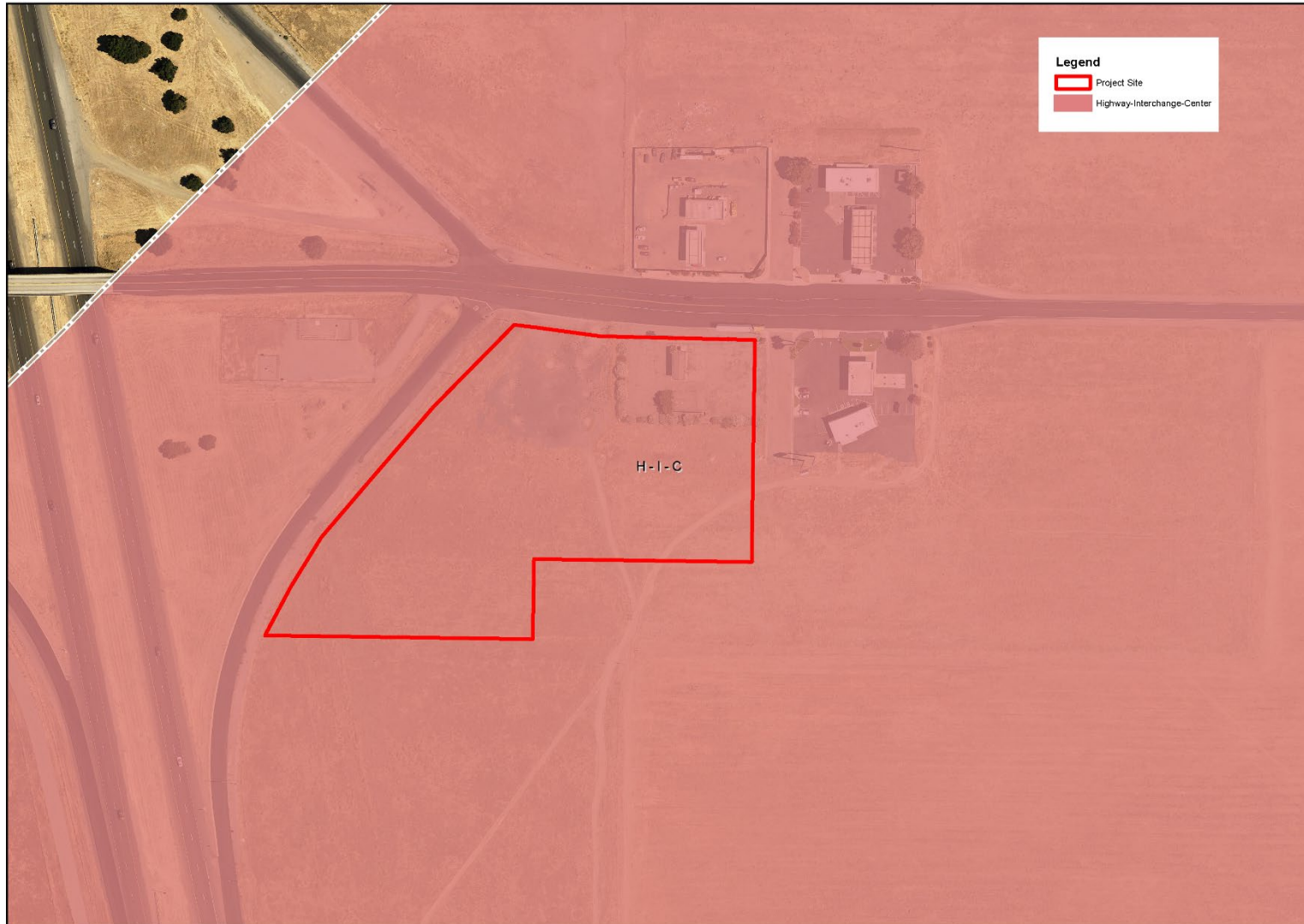
1.6 - Zoning

The project site is zoned H-I-C (Highway Interchange) (see *Figure 5*). Pursuant to Section 18.14.010 of the Merced County Code, the H-I-C (Highway Interchange) zoning designation is to provide areas for travel-serving commercial uses located adjacent to highway interchanges. Typical uses in this zone include restaurants, banks, hotels and motels, service stations, and truck stops. The proposed use of the project site is allowed in the H-I-C zone.

Figure 5: Zoning



Zoning Map



*Data displayed subject to change.

1.7 - Summary of County and Agency Approvals

The project would require the following discretionary approvals:

Merced County Community and Economic Development Department – Adoption of the Initial Study and Negative Declaration.

Merced County Community and Economic Development Department – Approval of the Conditional Use Permit Application.

Merced County Community and Economic Development Department – Approval of the Site Plan and Design Review Application.

SECTION 2: ENVIRONMENTAL CHECKLIST

2.1 - Purpose and Legal Basis for the Initial Study

As a public disclosure document, this IS provides local decision makers and the public with information regarding the environmental impacts associated with the proposed project. According to Section 15063 of the *CEQA Guidelines*, the purpose of the IS is to:

1. Provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR), or a Negative Declaration (ND);
2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;
3. Assist in preparation of an EIR, if one is required, by:
 - a. Focusing the EIR on the effect determined to be significant;
 - b. Identifying the effects determined not to be significant;
 - c. Explaining the reasons for determining that potentially significant effects would not be significant; and,
 - d. Identifying whether a program EIR, tiering, or other appropriate process can be used for analysis of the project's effects.
4. Facilitate environmental assessment early in the design of a project;
5. Provide documentation of the factual basis for the finding in a Negative Declaration that the project will not have a significant effect on the environment;
6. Eliminate unnecessary EIRs;
7. Determine whether a previously prepared EIR could be used with the project.

This IS evaluates the potential for the proposed project to result in environmental impacts and evaluates the significance of those impacts. The information in this IS will be used by Merced County to determine if a (Mitigated) Negative Declaration or an EIR is the appropriate level of CEQA documentation for the proposed project. This IS will also serve as a basis for soliciting comments and input from members of the public and public agencies.

2.2 - Checklist and Evaluation of Environmental Impacts

The Environmental Checklist in this Initial Study is consistent with the CEQA Environmental Checklist Form included as Appendix G of the CEQA Guidelines. A description of the environmental setting and an explanation for all checklist responses is included.

2.3 - Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology & Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Land Use & Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population & Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

1. AESTHETICS

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Except as provided in Public Resources Code Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 3

The proposed project is located in Merced County, known for its panoramic views of the Coast Range to the west and the Sierra Nevada to the east, mixed with open orchard lands and field crop areas, and seasonal contrasts of flourishing hillsides and wetlands. According to the 2030 Merced County General Plan, scenic vistas include the Coastal and Sierra Nevada mountain ranges, and the Los Banos, Merced, San Joaquin, and Bear Creek river corridors. Although, views of the Coastal Ranges are may be seen to the west of the highway. Due to the relative flatness of most of the County’s terrain, including the project site and vicinity, most scenic views are limited to the near- and medium-range as provided by viewpoints such as public recreation areas and roadways.

Portions of State Route 152 (SR-152) and Interstate 5 (I-5) are designated scenic highways; however, the project site is not located within portion of I-5 which is designated as the scenic highway.

The project site is located in an agricultural setting. Land uses in the immediate vicinity of the project site (within 0.25 miles) include grazing lands, vacant land, highway-oriented commercial uses (including gas stations and an auto repair shop).

- a. **Less Than Significant Impact.** As discussed above, lands surrounding the project site have been substantially disturbed and modified for agricultural production. As a result, the terrain is very flat, and most of the native trees and vegetation have been removed. Because of the flat terrain, views in the project vicinity are generally unobstructed surrounding the project site. There are no unique

visual features or scenic vistas obstructed by the project site. Therefore, less than significant impacts in this regard would result from project implementation.

- b. No Impact.** As mentioned above, the project site is not located on a designated scenic highway; therefore, the proposed project would have no impact on scenic resources such as rock outcroppings, trees, or historic buildings within view from a scenic highway.
- c. Less Than Significant Impact.** The project site is currently vacant and partially disturbed. Views in the project area largely consist of vacant and grazing land, the Coastal Ranges to the west of I-5, and the existing highway-oriented commercial uses adjacent to the project site. The proposed gas station would be visible from both I-5 and Sullivan Road as intended by the H-I-C zone, and would be consistent with nearby structures and uses related to highway-serving commercial operations. Implementation of the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings. The project's impact would be less than significant in this regard.
- d. Less Than Significant Impact.** Any lighting proposed with the project would be required to meet the requirements of MCZC Section 18.41.060, which requires the use of directional lighting and minimization of glare and reflections. Since similar lighting from other land uses already exist in the project vicinity, the project's contribution to existing sources of light would be minimal and impacts to existing nighttime views would be less than significant.

2. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2, 3, 4
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2, 3
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2, 3
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 4
a.	No Impact. Based on a review of maps prepared by the California Department of Conservation pursuant to the Farmland Mapping and Monitoring Program (FMMP), the parcel on which the project is located is mapped as consisting of “Vacant or Disturbed Land” and “Semi-Agricultural or Rural Commercial Land”. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project site; therefore, there would be no potential to convert said designated Farmland to non-agricultural uses and there would be no impact.				
b.	No Impact. The project site is zoned H-I-C (Highway Interchange Center) which is not intended for agricultural use. Additionally, the project site is not subject to an active Williamson Act contract. Therefore, no impact.				
c-d.	No Impact. The project site is zoned H-I-C (Highway Interchange Center) and is not zoned Timberland Production, or intended for forest land or timberland. There are no forest lands adjacent to the project site. Therefore, no impact to forest land or timberland would result from project implementation.				

- e.* **Less Than Significant Impact.** The proposed project would not involve changes in the existing environment that could result in the conversion of existing agricultural or forest land. Any potential off-site infrastructure needed to serve the project would not require the expansion of any infrastructure or roadways that could lead to the indirect conversion of agricultural or forest lands. Therefore, the proposed project would not result in conversion of Farmland to non-agricultural uses or conversion of forest land to non-forest uses.

3. AIR QUALITY

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5, 22
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5, 6, 7, 22
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5, 7, 22
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3, 22

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe to protect public health and welfare. These standards are designed to protect people most sensitive to 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. The U.S. EPA, the federal agency that administers the Federal Clean Air Act (CAA) of 1970, has established national ambient air quality standards (NAAQs) for seven air pollution constituents. As permitted by the CAA, California has adopted more stringent state ambient air quality standards (SAAQs), and expanded the number of air constituents regulated.

Merced County is located in the San Joaquin Valley Air Basin (SJVAB). Under both the federal and state CAAs, the San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in Merced County. The SJVAPCD has jurisdiction over all point and area sources of air emissions except for mobile sources (such as motor vehicles), consumer products, and pesticides. Furthermore, the SJVAPCD implements air quality management strategies and enforces its Rules and Regulations to improve the health and air quality for residents living in the SJVAB. The SJVAPCD and the California Air Resources Board (CARB) have joint responsibility for attaining and maintaining the NAAQs and SAAQs in the SJVAB.

ENVIRONMENTAL SETTING

Air Quality Assessment

The SJVAPCD’s *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) indicates that an impact resulting from construction activities would be considered significant if feasible construction control measures identified in the SJVAPCD’s CEQA Guidelines and applicable Rules and Regulations were not followed. Furthermore, the CEQA Guidelines Initial Study Land Use and Planning checklist states that conflicts with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect should be considered

during a project's environmental review. The GAMAQI has established thresholds for certain criteria pollutants to determine whether a project would have a significant air quality impact.

The proposed project would involve the construction of a gas station and convenience store. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrous oxides (NO_x), reactive organic gases (ROG), directly emitted particulate matter (PM_{2.5} and PM₁₀), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Site preparation and project construction would include the following tasks: site preparation, grading, building construction, paving, and architectural coatings. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site.

Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site. Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has established Regulation VIII measures for reducing fugitive dust emissions (PM₁₀). With the implementation of Regulation VIII measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

Emission estimates for both construction and operation of the project were calculated using the California Emissions Estimator Model (CalEEMod), a tool made available by the California Air Pollution Control Officers Association, attached as Appendix A. The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project, emissions are released in other areas of the SJVAB. For all pollutants for which Merced County is in not in attainment status (ROG, NO_x, CO, PM₁₀, and PM_{2.5}), neither construction nor operational emissions would not exceed thresholds set by SJVAPCD for determining significance of impacts.

a. Less Than Significant Impact. The proposed project is consistent with the General Commercial land use designation of the site set forth by the 2030 Merced County General Plan. Therefore, the proposed project would be consistent with the land use assumptions used by the SJVAPCD in drafting their air quality attainment plans.

While criteria pollutant emissions for the proposed project are not expected to exceed thresholds set by the SJVAPCD based on project size and operations, the proposed project may be subject to the following District Rules and Regulations, which is neither an exhaustive nor exclusive list: Regulation VIII (Fugitive Dust PM₁₀ Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

Prior to the issuance of a building permit from Merced County, the project applicant must contact the SJVAPCD's Small Business Assistance Office to identify applicable SJVAPCD Rules and Regulations, and to determine if an Authority to Construct is required. The project applicant will be required to comply with applicable SJVAPCD Rules and Regulations as noted.

Compliance with applicable SJVAPCD Rules and Regulations would ensure the proposed project would not conflict with or obstruct implementation of any SJVAB attainment plan or other applicable air quality plan. Therefore, a less than significant impact on any applicable air quality plan would result from project implementation.

- b. Less Than Significant Impact.** Implementation of the proposed project would result in construction and operational emissions, including ROG, CO, SO₂, NO_x, and fugitive dust. Construction emissions would be due to site clearing, grading, excavation, building, and paving activities. Operation emissions would consist of heavy truck trips associated with transporting fuel and goods. Based on the CalEEMod modeling for the project, it would not exceed the SJVAPCD's emission thresholds for criteria pollutants during construction or operation.

Although the proposed project would not exceed SJVAPCD significance thresholds, the applicant would still be required to comply with Regulation VIII and all applicable SJVAPCD Rules and Regulations. A summary of control measures for construction and other earthmoving activities that would generate fugitive dust are included in Regulation VIII. Compliance with Regulation VIII would ensure that the proposed construction-related emissions are reduced, and would not exceed SJVAPCD significance criteria.

Because project construction and operation emissions of criteria pollutants are not expected to exceed SJVAPCD significance thresholds, and the proposed project would comply with applicable SJVAPCD Rules and Regulations, the project would not emit air pollutants that would violate any air quality standard or contribute to an existing air quality violation, or result in a cumulatively considerable net increase in any criteria pollutant. A less than significant impact would result, and no mitigation would be necessary.

- c. Less Than Significant Impact.** The nearest existing residential structure that would be considered a sensitive receptor is approximately 2,200 feet east of the project site. Construction equipment generates diesel particulate matter (DPM), identified as a carcinogen by the CARB. The State of California has determined that DPM from diesel-fueled engines poses a chronic health risk with chronic inhalation exposure.

Because of the relatively small project size, short duration of construction activities with potential to generate toxic air emissions, and the relatively distant and scattered locations of nearby sensitive receptors, it is highly unlikely that construction or operation of the proposed project would pose a toxic risk to any nearby sensitive receptors.

- d. Less Than Significant Impact.** During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed uses are not anticipated to emit any objectionable odors. The fuel pumps are not expected to result in odors as they would be equipped with vapor recovery systems. Any odors in general would be confined mainly to the project site and would readily dissipate. Therefore, the

proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 8, 9, 21
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 8, 9
c) Have a substantial adverse effect on federally protected wetlands, (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 10
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 8, 9
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2, 11

a-c. Less Than Significant Impact. The project site is highly disturbed from previous highway-oriented commercial use and weed abatement activity, and is in close proximity to existing similar highway-oriented commercial uses and activity.

Per the California Department of Fish and Wildlife’s Threatened and Endangered Species Listing and the California Natural Diversity Database (CNDDB), two special status species, the San Joaquin Kit Fox and the Tricolored Blackbird are presumed extant in the area. However, because the project site and vicinity are already highly disturbed, there would little to no value as habitat

for sensitive species.

The project site is not located in federally protected wetlands according to data provided in the National Wetlands Inventory; however, a Freshwater Forested/Shrub Wetland is located approximately 0.21 miles south of the project site. On July 25, 2022, a referral was sent to the California Department of Fish & Wildlife and U.S. Fish & Wildlife. No comments were received.

Because the project proposes to reconstruct a gas station which was demolished in 2018 and the proposed land use is consistent with the surrounding area; it is anticipated the project would have a less than significant on special status species, riparian habitat or other sensitive natural community, or protected wetlands. Furthermore, the proposed gas station would not substantially interfere with the movement of any native resident or migratory fish, wildlife species, or established native resident or migratory wildlife corridors. As a result, project implementation would have a less than significant impact on biological resources.

- d.* **Less Than Significant Impact.** The proposed development of the project site would occur on a project site that has been highly disturbed by previous highway-oriented commercial use and is adjacent to similar uses. Therefore, it is not anticipated that the project would block or otherwise significantly impede the movement of the two transient special status species that could inhabit the area, the San Joaquin Kit Fox and the Tri-Colored Blackbird.
- e-f.* **No Impact.** The project site is not located within or in proximity to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The proposed project would have no impact in this regard.

5. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2, 12
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2, 12
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2

A cultural resources survey and assessment of Merced County, meeting Section 15064.5 of the CEQA Guidelines, was completed for the adopted 2030 Merced County General Plan. A detailed description of archival research and field survey methods can be found in the 2030 Merced County General Plan Background Report.

a-b. Less Than Significant Impact. No recorded significant historical or archaeological resources are located on the property, and given the previously disturbed nature of the site from current and past agricultural and commercial use, the project would have a less than significant impact on historical or archaeological resources. However, should historical or archaeological resources be found during project construction, the project would be subject to the conditions detailed in Merced County Planning Commission Resolution No. 20-001 pertaining to the discovery of cultural resources.

c. Less Than Significant Impact. No known human remains have been previously discovered on-site. Therefore, no impact is expected. However, in the event that human remains or unrecorded resources could be exposed during construction activities, Section 7050.5 of the California Health and Safety Code will be implemented. Section 7050.5 requires that all construction and excavation be stopped until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission.

6. ENERGY

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2

- a. Less Than Significant Impact.** The project proposal does not involve any development that would result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. The project proposes to construct a gas station with eight fuel pumps, a 4,900 square-foot convenience store, and related infrastructure and improvements on site. The proposed project will be required to comply with the California Green Building Standards Code, Title 24 of the California Energy Code, and SJVAPCD’s Rules and Regulations. In complying with the aforementioned regulations, the proposed project is expected to have a less than significant impact on energy resources during project construction and operation.
- b. No Impact.** The proposed project would not conflict with any state or local plans for renewable or energy efficiency. The proposed project would therefore have no impact in this regard.

7. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death, involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 14
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 14, 15
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 15
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3, 15
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2

a.i. No Impact. The nearest known faults to Merced County are: The San Andreas Fault approximately 15 miles west of the western border of the County, the Hayward, Greenville, and Calaveras Faults to the northwest, and the Bear Mountain Fault Zone about five miles east of and parallel to the eastern border of the County. Because there are no known faults that lie within Merced County that would affect the project site, no impacts related to the rupture of a known earthquake fault are expected.

- a.ii. Less Than Significant Impact.** The aforementioned faults have been and will continue to be the principal sources of seismic activity affecting Merced County. There are no records of seismic activity originating from Merced County, but there has been documented shaking from earthquake centers outside the County. Only the 1906 earthquake caused major damage in the west side of the County in the Los Banos area, with minor structural damage occurring throughout the County on other occasions. Based on the very limited fault activity in Merced County and the limited external fault impacts that may impact the County, the impact of strong seismic ground shaking would be less than significant on the proposed project.
- a.iii. Less Than Significant Impact.** According to the 2030 Merced County General Plan, no specific liquefaction hazard areas have been identified in the County. This potential is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide. Soils in the north section of the County have a low potential for liquefaction because the groundwater table is low. Liquefaction is caused when soils subjected to ground shaking lose strength due to increased water pressure. In compliance with Section 1803 of the California Building Code, the applicant must submit a soils report prepared by a licensed soils engineer that addresses soil liquefaction. In submitting a soils report pursuant to Section 1803 of the California Building Code, the proposed project would have a less than significant impact as it relates seismic-related ground failure.
- a.iv. No Impact.** The project site is not expected to be subject to landslides. The project site and surrounding land are substantially flat with no substantial slopes nearby. Therefore, the proposed project would not result in impacts that would create landslides.
- b. Less Than Significant Impact.** The project site has been previously cleared and graded for a gas station. While implementation of the proposed project could result in temporary soil erosion and the loss of topsoil due to construction activities, the location where the proposed buildings storage facility would be constructed is generally level from previous grading, and minimal modification to the site's existing topography or ground surface relief would be required.
- c. Less Than Significant Impact.** Soils in the project area are typically categorized as sandy. The project site is Yokut sandy loam per USDA soil mapping (NRCS). The surrounding areas are largely the same or similarly sandy soil types. This soil presents few building limitations, with any limitations being minimized by project design. In compliance with the California Building Code, a soils report must be prepared by a licensed soils engineer for any new construction. The vast majority of construction will take place on the Yokut sandy loam.

According to the 2030 General Plan, the project site has not been identified as an area with subsidence. Subsidence is the settling or sinking of the surface of the earth's crust. Merced County is most affected by subsidence caused by hydro-compaction from groundwater withdrawal and earthquakes. Since the project site is not within a designated subsidence area, there is no anticipated threat from damage caused by subsidence.

In light of the above factors and by submitting a soils report pursuant to the California Building Code, potential impacts from landslides, lateral spreading, subsidence, or unstable soils would be less than significant, and no mitigation would be necessary.

- d.* **Less Than Significant Impact.** Expansive soils are soils that expand when water is added, and shrink when they dry out. Soil in the project area is characterized as Yokut sandy loam, which has few building limitations due to low shrink-swell potential (NRCS Web Soil Survey). California Building Code requires a soils report for most non-residential structures within Merced County. Compliance with California Building Code requirements would reduce risks on the project site from shrink-swell potential to levels considered acceptable for the State, and risks from expansive soils would be considered less than significant.
- e.* **Less Than Significant Impact.** Any existing and future septic systems are required to be reviewed by the Merced County Community and Economic Development Department, Division of Environmental Health, which will determine the appropriate design standards in accordance with all applicable regulations. Soil in the project area is characterized as Yokut sandy loam, which has few building limitations. Other commercial operations in the project vicinity with the same soil characteristics have not been limited in construction of their septic systems. Therefore, the impacts of any septic tanks are anticipated to be less than significant.
- f.* **No Impact.** The project site has already been disturbed by previous highway-oriented commercial operations and there are no known paleontological resources, sites, or unique geologic features on the site. No impact is anticipated.

8. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5, 15, 23
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 5, 23

a. Less Than Significant Impact. Greenhouse gas emissions would result from both construction and operation of the proposed project. Construction activities associated with the proposed project would result in short-term and temporary carbon dioxide emissions. Other greenhouse gas emissions may result during construction depending on type of construction equipment used. The SJVAPCD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod (Appendix A), it is estimated that construction of the proposed project would generate a total of approximately 107.2 metric tons of CO₂e. Yearly emissions resulting from the operation of the project site can be expected to generate 826.5 metric tons of greenhouse gases per year, mostly from mobile sources and mostly in the form of CO₂.

The project was analyzed for consistency with the goals of the California Air Resources Board’s 2017 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197. The AB 32 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by Executive Order B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures. Therefore, the projects incremental contribution to cumulative GHG emissions would not be cumulatively considerable.

b. Less Than Significant Impact. Merced County has not adopted a Climate Action Plan or any greenhouse gas reduction measure other than enforcing the provisions of the California Green Building Code and Title 24 of the California Energy Code. Because transportation is the largest sector of greenhouse gas emissions in California, many reduction strategies and applicable transportation and land use plans focus on reducing travel and making transportation more efficient in order to reduce greenhouse gas emissions. In light of the aforementioned factors, the impact on any greenhouse gas plan, policy, or regulation, including those adopted by the CARB and the SJVAPCD, would be less than significant.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 3
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1, 2
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2, 15
e) For a project located within an airport land use plan area, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1

- a-b. Less Than Significant Impact.** Construction activities for the proposed project would involve the use, storage, transport, and disposal of oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials. Construction and operational activities must be in compliance with California Occupational Safety and Health Administration (OSHA) regulations. Compliance with OSHA regulations would reduce the risk of hazards related to the routine transport, use, or disposal of hazardous materials to a less than significant level during project construction.

Pursuant to Section 18.40.040 of the Merced County Zoning Code, storage of hazardous materials on-site requires filing a Hazardous Materials Business Plan with the Merced County Community and Economic Development Department, Division of Environmental Health. Upon the Division of Environmental Health's review of the project, it was determined that the amount of hazardous substances on-site during project operation would exceed Merced County's threshold quantities required for a Hazardous Materials Business Plan that is inclusive of both the hydrogen and gasoline stored on site. In complying with standard OSHA and Merced County regulations, the risk of hazards to the public or environment, including those related to accident conditions, would be less than significant.

- c. No Impact.** No schools are located within 0.25 miles of the project site. The closest school is Gustine Middle School, located approximately 5.01 miles east of the project site. Based on the nature of the project and the distance from schools, it is reasonable to conclude that the project would not result in hazardous emissions or handle hazardous or acutely hazardous materials or substances that would have the potential to affect the nearby schools. Impacts are anticipated to be less than significant.
- d. No Impact.** The California Department of Toxic Substances Control (DTSC) maintains a Hazardous Waste and Substances Sites List (Cortese List). The Cortese List tracks "Calsites," which are mitigation or brownfield sites subject to Annual Work plans. The project site is not included in the DTSC Cortese List, though the Gustine Bombing Range, a defunct U.S. Navy bombing range, is a site included on the list, and located approximately 0.5 miles west-northwest of the project site, though the proposed project would not have any impact on the Bombing Range, nor would the Bombing Range have any impact on the project site. In addition, a Hazardous Waste and Substance Statement on file with the Merced County Community and Economic Development Department indicates that the site is not included on a list of hazardous materials sites pursuant to Section 65962.5 of the Government Code. Therefore, no impact would result from project implementation.
- e. No Impact.** The project site is located approximately 6.84 miles west-southwest of Gustine Municipal Airport and is not within any adopted airport land use plan or within an airport compatibility zone. The proposed project would have no impact on an airport land use plan area, and the project would not result in a safety hazard or excessive noise for people residing or working in the project area.
- f. Less Than Significant Impact.** The proposed project does not include any modification of existing area roadways or intersections, and the project would not add significant amounts of traffic that would interfere with emergency response or evacuation. Therefore, the proposed project would result in a less than significant impact, and no mitigation would be necessary.

- g. Less Than Significant Impact.** The project site is bordered by grazing land, other gas stations, and vacant land. There are no wildlands, as defined in the 2030 Merced County General Plan, adjacent to the project site. According to the 2030 General Plan, the project site is located in a Local Response Area that is serviced by Merced County Fire Department and in which Fire Hazards are reduced because of fire prevention measures. Therefore, the project would not expose people or structures to significant risks associated with wildland fire, and a less than significant impact would result.

10. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3, 17
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i) result in substantial erosion or siltation on- or off-site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3
iii) contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

- a. Less Than Significant Impact.** The proposed project is not expected to violate any water quality standards or waste discharge requirements, or substantially degrade water quality. The majority of the project site has been previously graded and leveled, and no major grading or earth-moving activities would occur. However, because the proposed project would disturb more than one acre, the applicant would be required to obtain a General Construction Activity Storm Water Permit from the SWRCB for storm water discharges associated with construction activities, which would require the implementation of a SWPPP. The SWPPP must contain BMPs to reduce soil erosion and protect storm water runoff.

Because the project is proposing more than 5,000 square feet of new impervious surface, the applicant must also comply with the County's MS4 Storm Water Permit by implementing site design, source control, runoff reduction and storm water treatment. This is enforced by the Merced County Department of Public Works, Roads Division. In complying with the aforementioned regulations and requirements, the proposed project would not violate any water quality standards or waste discharge requirements during construction or operation, and a less than significant impact on surface and ground water quality would result.

- b. Less Than Significant Impact.** Water usage for the proposed project will not increase substantially. The facility will use water for restrooms provided for employees and customers. The proposed structures and associated paved areas would increase impermeable surface area on-site by approximately 50,000 square feet. This amount of impermeable surface area would not substantially interfere with groundwater recharge, as water is directed to a 49,000-square foot retention basin area. Because the project would not substantially deplete groundwater supplies through extraction, and because the project proposes a design that would allow storm water would percolate into the groundwater system, the impact of the proposed project on groundwater would be less than significant.
- c.i. Less Than Significant Impact.** The project proposes to create approximately 50,000 square feet of impervious surface. During project construction, erosion and siltation of on-site soils could result. Projects which disturb more than one acre of soil are required to obtain a General Construction Activity Stormwater Permit from the SWRCB, which would require implementation of a Storm Water Pollution Prevention Plan (SWPPP). Obtaining a General Construction Activity Stormwater Permit for the proposed project would reduce erosion and siltation to a less than significant level, and no mitigation would be necessary.
- c.ii. Less Than Significant Impact.** The project proposes to create approximately 50,000 square feet of impervious surface. Because the project is proposing more than 5,000 square feet of new impervious surface, the applicant must comply with the County's MS4 Storm Water Permit by implementing site design, source control, runoff reduction and storm water treatment, which is enforced through the Merced County Department of Public Works, Roads Division. In complying with the County's MS4 Storm Water Permit requirements, surface runoff would be managed and flooding on- or offsite would not result, culminating in a less than significant impact on flooding.
- c.iii. Less Than Significant Impact.** The project proposes to create approximately 50,000 square feet of impervious surface, which includes a building for the associated convenience store, driveways, canopies for fuel dispensers, vehicle maneuvering areas, and a parking lot. The planned stormwater drainage for the project is sufficient for the project size and amount of impervious surface that would be created. In complying with the County's MS4 Storm Water Permit and the requirements of the SWRCB, the proposed project would not exceed the capacity of the planned stormwater drainage systems, nor would it provide additional sources of polluted runoff. A less than significant impact on runoff would result from project implementation.
- c.iv. No Impact.** The project area is not located in an identified flood area and would therefore not be expected to impede or redirect any flood flows. Therefore, no impact on flood flows would result from project implementation.

- d.* **No Impact.** The proposed project is not located in a flood hazard, tsunami, or seiche zone. Therefore, there would be no risk of pollutants being released due to project inundation, and no impact would result.
- e.* **Less Than Significant Impact.** The proposed project includes a convenience store, gas pumps, and related infrastructure and construction totaling approximately 50,000 square feet. Considering the relatively small project size and less than significant impact on water resources, the proposed gas station and convenience store would not conflict with or obstruct the implementation of any applicable water quality control plan or sustainable groundwater management plan. A less than significant impact would result.

11. LAND USE AND PLANNING

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1, 2
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1, 3

- a. No Impact.** The project vicinity consists of range land, vacant land, and other gas stations. Because the project is located west of City of Gustine, the proposed project would not divide an established community, and no impact would result from project implementation.
- b. No Impact.** The proposed project does not conflict with any land use plan, policy, or regulation adopted to avoid or mitigate environmental effects.

12. MINERAL RESOURCES

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1, 2, 18
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2, 18

a-b. No Impact. Sand and gravel are the most valuable mineral resources in Merced County. The project site is not located within any sand and gravel resource identified in the Natural Resources Element of the 2030 Merced County General Plan or the State Mineral Resources Map. Furthermore, no mineral extraction activities exist on the project site, and mineral extraction is not included in project designs. No impact on mineral resources would result.

13. NOISE

Would the project result in:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or private use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2

Potential noise impacts of the project can be categorized as those resulting from construction activities and those resulting from operational activities. Development of the proposed project would increase noise levels temporarily during construction. Operational noise associated with the gas station and convenience store would result throughout the lifetime of the project.

Some land uses are considered more sensitive to noise than other uses. Generally, sensitive land uses can include residences, schools, nursing homes, hospitals, and some public facilities such as libraries. Sensitive land uses may also include areas that contain threatened or endangered biological species known to be sensitive to noise.

a-b. Less Than Significant Impact.

Construction Noise

Construction of the proposed gas station and associated convenience store would temporarily increase ambient noise levels in the project vicinity during the construction period. Construction is expected to begin immediately upon project and building permit approval, and would last for approximately nine months. Construction activities, including site clearing, excavation, grading, building construction, and paving, would be considered an intermittent noise impact throughout the construction period of the project. No construction activities would occur that would generate excessive groundborne vibration.

Still, construction activities could result in various effects on sensitive receptors, depending on the presence of intervening barriers or other insulating materials. Chapter 10.60 of the Merced County Code only allows construction activities to occur during weekdays between 7:00 a.m. and 6:00 p.m. Construction activities outside of these hours are prohibited. These hours are so defined because they include a period of time where noise sensitivity is at its lowest.

Because construction activity associated with the proposed project would occur between the hours of 7:00 am and 6:00 pm in compliance with Chapter 10.60 of the Merced County Code, impacts from construction noise would be less than significant, and no mitigation would be necessary.

Operational Noise

Upon completion of project construction, operation of the proposed gas station and convenience store would be unsubstantial. Noise in the area from other identical uses and the adjacent highway is already present. In addition, noise produced would not be located near sensitive receptors. In light of these factors, the proposed project would have a less than significant impact on permanent ambient noise levels.

- c. **No Impact.** The project is not located within an airport land use plan area or in the vicinity of a public or private airstrip. The nearest airport, Gustine Municipal Airport, is located approximately 6.84 miles from the project site. The project site is beyond the boundary of any Airport Plan. Therefore, implementation of the proposed project would neither impact an airstrip nor be affected by an airstrip. No further evaluation is required, and the project would have no impact in this respect.

14. POPULATION AND HOUSING

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1

a. No Impact. The construction and operation of the proposed gas station and convenience store would not result in any increase in local residents, as the jobs that would be provided by the project would be filled with local residents. In addition, there are no off-site improvements associated with the project that would result in unplanned population growth. Therefore, implementation of the proposed project would not result in any project-level impacts related to substantial unplanned population growth during the short-term construction phase of the project or during long-term project operation.

b. Less Than Significant Impact. No dwelling units are located on the project site, nor within the vicinity. Implementation of the proposed project would not displace any existing people.

15. PUBLIC SERVICES

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of: which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:					
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

a. Less Than Significant Impact. The Merced County Fire Department provides fire suppression and recovery, fire law and code enforcement services for the project area. The Gustine Fire Station, located at 686 3rd Avenue in the City of Gustine, is approximately 4.6 miles west-southwest of the project site, and serves the project area. Response times to the project average at ten minutes. The gas station and convenience store would be constructed in compliance with local and state fire codes. On-site fire protection infrastructure will include a water storage tank and an associated pump, enforced during inspections during the building permit application process. As such, an increase in demand for fire services is not expected to result, calls for service would cause only temporary effects, and the proposed project would not result in a notable increase in fire risk and service demand for the area. Project implementation would have a less than significant impact on fire protection.

b. Less Than Significant Impact. Law enforcement services for the project area are provided by the Merced County Sheriff’s Department. The nearest Sheriff’s Community Law Enforcement Office is the Jess “Pooch” Bowling Justice Center, located at 445 "I" Street, Los Banos, CA, approximately 18.15 miles southeast of the project site. Although the type of use proposed does not specifically create an environment generally associated with unlawful activities requiring law enforcement services, the project could have an effect on local sheriff protection services in the event that such services would be required. This effect would be minor and temporary in nature, and impacts concerning law enforcement are less than significant for the proposed project.

c. No Impact. No housing units that have the potential to generate school-age children are proposed, nor will any jobs be created that would attract outside residents.

- d.* **Less Than Significant Impact.** No new homes are proposed for the project, and only local employees will be required. Therefore, completion of the project would not result in the physical altering of parks, nor would it cause the construction of new parks. Employees may use local parks in Gustine, but the project would have a less than significant impact on parks resulting from project implementation.
- e.* **Less Than Significant Impact.** Ran Health Service, located at 489 5th Street, in Gustine, is the closest medical facility and is approximately 4.24 miles northeast of the project site. The nearest hospital is the Memorial Hospital and is located 17.35 miles to the southeast of the project site in Los Banos. No high-injury risk jobs are expected to be created as a result of this project, but completely ruling out injury on the job is not possible, so the impact of usage of medical services will be less than significant.

16. RECREATION

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
Would the project:					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
a.	<p>No Impact. The proposed project would involve the construction and operation of a gas station and convenience store, which is not expected to generate a demand for parkland usage. The closest recreational facility is Digregori Field, located approximately 4.1 miles east-northeast of the project site in the City of Gustine. This facility and other parks in the City is available to serve any recreational needs of the employees. No change in the usage of recreational facilities is likely to result from project implementation, as no jobs are expected to be created from this project. Therefore, no project-level impacts to neighborhood or regional parks would result from project implementation.</p>				
b.	<p>No Impact. The proposed project does not include a recreational component. In addition, because the project does not propose any residential development, parkland dedication or in-lieu fees in conformance with the Quimby Act are not required. Therefore, because the project does not propose recreational facilities or require construction or expansion of recreational facilities, no project-level impacts related to recreation facilities would result.</p>				

17. TRANSPORTATION

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 19
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3

- a. Less Than Significant Impact.** The proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system. There are no current or anticipated transit, roadway, bicycle or pedestrian facilities on the property where the project is proposed (Regional Transportation Plan). In light of these factors, the proposed project would have a less than significant impact with respect to plans, ordinances or policies addressing the circulation system.
- b. Less Than Significant Impact.** The project site is accessed via Highway 140 and is a retail use with an area below 50,000 square feet. As recommended in the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA, retail land uses with an area less than 50,000 sf may be considered as local-serving and may be presumed to create a less than significant VMT impact. Since the total square footage of the proposed project is less than 50,000 sf, the project may be presumed to create a less than significant VMT impact and may be screened from a VMT analysis. Project implementation would have a less than significant impact on transportation circulation, and the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).
- c. Less Than Significant Impact.** The project does not increase the number of driveways fronting on Highway 140. The project proposes to use three existing driveways from Highway 140 for access to the proposed gas station and convenience store. The project does not propose any incompatible uses or large equipment that would substantially increase hazards. The proposed project would not substantially increase hazards due to geometric design features or incompatible uses, and a less than significant impact would result.
- d. Less Than Significant Impact.** According to the 2030 Merced County General Plan, freeways and major county roads would be used as primary evacuation routes. The proposed project will require an encroachment permit for the proposed driveway, but this will not realistically impact the

road in a significant way. The Merced County Fire Department maintains standards for adequate emergency access to the project site, and project approval would be subject to site plan review by the Merced County Fire Department. Compliance with County emergency access standards would ensure that there is adequate emergency access to the proposed facility, and the proposed project would have a less than significant impact on emergency access.

18. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1, 2
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1, 2, 12

a.i. No Impact. The project site is not located in an area that is listed or eligible for listing in the California Register of Historical Resources, nor is the project site located in a local register of historical resources. As a result, the project would have no impact on identified historical resources.

a.ii. No Impact. The project site has already been disturbed by past and present agricultural and commercial uses, and no tribal cultural resources have been found at the site. The 2030 Merced County General Plan, per Public Resources Code section 21074, does not identify any sacred place or object with cultural value to a California Native American tribe in the vicinity of the project site. Therefore, no impact is anticipated. However, should cultural resources be found during project construction, the project would be subject to the conditions detailed in Merced County Planning Commission Resolution No. 20-001 pertaining to the discovery of cultural resources.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2, 3
e) Comply with federal, state and local management and reduction statutes related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

a. Less Than Significant Impact. The proposed project would involve the construction of a gas station and associated convenience store. Project implementation would not result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities. The project proposes more than 5,000 square feet of new impervious surface, and as a result, the project applicant must comply with the County's MS4 Storm Water Permit for building a storm water drainage mechanism, using the large open area of the primary project site as a leach field and drainage basin. The Merced County Department of Public Works, Roads Division enforces the requirements for Storm Water Permits and will review the site plan for the proposed project, which will ensure storm water drainage will have a less than significant environmental impact.

b. Less Than Significant Impact. There is an existing well on the property to supply the proposed use, which will provide for a restroom and general commercial water use. A less than significant impact on water supplies would result.

- c.* **No Impact.** The project site is not currently served by a wastewater treatment provider, nor is it planned to be served by a wastewater treatment provider in the future. No impact on a wastewater treatment provider would result from project implementation.
- d.* **Less Than Significant Impact.** The amount of solid waste generated by the proposed project would not exceed any State or local standards, nor would it be in excess of the capacity of local infrastructure. In addition, the proposed project would not otherwise impair the attainment of solid waste reduction goals. Operation of the proposed project would only produce minimal amounts of solid waste, which would be collected and taken off-site to be collected by Waste Management. In light of the aforementioned factors, the project would have a less than significant impact on local infrastructure related to solid waste.
- e.* **Less Than Significant Impact.** The proposed project would comply with federal, state and local management and reduction statutes related to solid waste. A less than significant impact on management and reduction statutes related to solid waste would result from project implementation.

20. **WILDFIRE**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20

a-d. No Impact. The project site is not located in or near a state responsibility area or lands classified as very high fire hazard severity zones. Based on the project’s location, the project would have no impact on an identified state responsibility area or very high fire hazard severity zone.

21. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Reference(s)
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1, 2, 20
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

a. Less Than Significant Impact. As discussed in Section 2.3.4 (Biological Resources) of this document, the proposed gas station and convenience store project would have a less than significant impact on special status species, habitat, or wildlife dispersal and migration. Furthermore, the proposed project would not affect the local, regional, or national populations or ranges of any plant or animal species and would not threaten any plant or animal communities. Therefore, the proposed project would not result in a Mandatory Findings of Significance related to impacts on Biological Resources.

As discussed in Section 2.3.5 (Cultural Resources) of this document, the proposed project would have a less than significant impact on historical, archaeological, or paleontological resources, and thus, would not eliminate any important examples of California history or prehistory. Therefore, the proposed project would not result in a Mandatory Finding of Significance related to impacts on Cultural Resources.

As explained and thoroughly analyzed throughout this Initial Study document, implementation of the proposed project would have a less than significant impact on the environment. As a result, the proposed project would not result in a Mandatory Findings of Significance related to the quality of the environment.

- b. Less Than Significant Impact.** Implementation of the proposed project would result in the construction and operation of a gas station and convenience store. While the proposed project could contribute to cumulative impacts associated with increased development in Merced County and in the greater San Joaquin Valley, these cumulative impacts have previously been evaluated and considered in the 2030 Merced County General Plan and the 2030 Merced County General Plan Background Report. The 2030 Merced County General Plan EIR evaluated the impacts of implementing the 2030 General Plan, and in doing so, included potential cumulative impacts of development in Merced County. Pursuant to Section 15150 of the CEQA Guidelines, the 2030 Merced County General Plan EIR is hereby incorporated by reference into this Initial Study document.

In addition, in complying with applicable local, state, and federal regulations, the proposed project would not have significant cumulatively considerable impacts. In light of these factors, the proposed project would not result in a Mandatory Finding of Significance related to cumulative impacts.

- c. Less Than Significant Impact.** As discussed in Sections 2.3.1 (Aesthetics), 2.3.3 (Air Quality), 2.3.7 (Geology and Soils), 2.3.8 (Greenhouse Gas Emissions), 2.3.11 (Land Use and Planning), 2.3.13 (Noise), 2.3.14 (Population and Housing), 2.3.15 (Public Services), 2.3.16 (Recreation), 2.3.17 (Transportation), 2.3.19 (Utilities and Service Systems), and 2.3.20 (Wildfire) of this document, no significant impacts are expected from this project and compliance with local, state, and federal regulations would eliminate any possible significant adverse effects on humans.

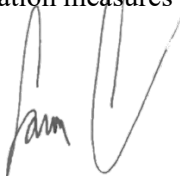
As discussed in Sections 2.3.9 (Hazards and Hazardous Materials) and 2.3.10 (Hydrology and Water Quality), there could likewise be significant impacts unless compliance with local, state, and federal regulations is enforced through a MMRP.

Therefore, the proposed project would not result in a Mandatory Finding of Significance related to environmental effects that could cause substantial adverse effects on humans.

SECTION 3: ENVIRONMENTAL DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:  _____ Date: 01/12/2022 _____

Printed Name: Cameron Christie
Title: Planner I

Community and Economic Development Department
Merced County

SECTION 4: REFERENCES

1. 2030 Merced County General Plan.

2. 2030 Merced County General Plan Background Report.
3. Merced County Zoning Code.
4. California Department of Conservation – Farmland Mapping and Monitoring Program (FMMP), 2016.
5. San Joaquin Valley Air Pollution Control District – Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), March 19, 2015.
6. San Joaquin Valley Air Pollution Control District – Small Project Analysis Level (SPAL), June 2012.
7. Sharla Yang, San Joaquin Valley Air Pollution Control District Air Quality Specialist, Personal Communication, April 2019 through May 2019.
8. California Department of Fish and Wildlife – Threatened and Endangered Species Listing, August 2018.
9. California Department of Fish and Wildlife – California Natural Diversity Database (CNDDDB).
10. U.S. Fish & Wildlife Service – National Wetlands Inventory.
11. California Department of Fish & Wildlife – Conservation Plan Boundaries – HCP and NCCP.
12. Merced County Planning Commission Resolution No. 20-001.
13. California Building Code.
14. Natural Resources Conservation Service (NRCS) – Web Soil Survey.
15. A&L Western Agricultural Laboratories – Organic Fertilizer Report, Provided by Applicant.
16. Department of Toxic Substances Control (DTSC) – Cortese List.
17. State Water Resources Control Board (SWRCB) – Storm Water Program.
18. California Department of Conservation – State Mineral Resources Map.
19. Merced County Association of Governments – 2018 Regional Transportation Plan.
20. CAL FIRE – State Responsibility Area Map.
21. 2030 Merced County General Plan EIR

22. Fire Effects Information System (FEIS). *Quercus lobate*.
23. LSA - Air Quality and Greenhouse Gas Memorandum for the proposed Merced County Gas Station Project

APPENDICES

APPENDIX A: AIR QUALITY AND GREENHOUSE GAS MEMORANDUM

MEMORANDUM

DATE: November 14, 2022

To: Gurvinder (Bob) Aujla

FROM: Amy Fischer, Principal
Cara Carlucci, Senior Planner

SUBJECT: Air Quality and Greenhouse Gas Memorandum for the proposed Merced County Gas Station Project

INTRODUCTION

This Air Quality and Greenhouse Gas Analysis for the proposed Gas Station Project (project) in Merced County has been prepared using methods and assumptions recommended in the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI)*.¹ This analysis includes a description of existing regulatory framework, an assessment of project construction and operation period emissions, and an assessment of greenhouse gas (GHG) emissions.

PROJECT LOCATION AND DESCRIPTION

The project site is located at the southeast corner of Interstate-5 (I-5) and Sullivan Road/State Highway 140 in Merced County, California (Assessor's Parcel Number [APN] 069-026-009). The project site is surrounded by an auto repair shop and a gas station to the north, a gas station to the east, and vacant land to the south and west.

The proposed project would construct a 4,900-square-foot convenience store with an 8 fuel pump gas station. In addition, the project would also include 16 electric and hydrogen vehicle charging spaces, 37 parking spaces, and 11 RV parking spaces. The project site would be accessible via three driveways on Sullivan Road. Construction of the proposed project is expected to begin in early 2023 and occur for approximately 9 months. The proposed project would not require any soil import or export.

¹ San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. *Guidance for Assessing and Mitigating Air Quality Impacts*. March 19. Website: www.valleyair.org/transportation/ceqa_idx.htm (accessed November 2022).

Existing Sensitive Land Uses in the Project Area

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses that are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution.² The project site is surrounded by vacant land and commercial uses. There are no sensitive receptors located within a 1,000-foot radius of the project site; the closest sensitive receptors include residential uses located approximately 2,200 feet along Gravel Pit Road east of the project site.

ENVIRONMENTAL SETTING

Air Quality Background

Air quality is primarily a function of both local climate and local sources of air pollution and regional pollution transport. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, and terrain, and for photochemical pollutants, sunshine.

A region's topographic features have a direct correlation with air pollution flow and, therefore, are used to determine the boundary of air basins. The proposed project is located in Merced County, within the jurisdiction of the SJVAPCD, which regulates air quality in the San Joaquin Valley Air Basin (SJVAB).

The SJVAB is comprised of approximately 25,000 square miles and covers all of seven counties including Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare, and the western portion of an eighth, Kern. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi Mountains in the south (6,000 to 8,000 feet in elevation). The valley is topographically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. An aerial view of the SJVAB would simulate a "bowl" opening only to the north. These topographic features restrict air movement through and out of the basin.

Both the State of California (State) and the federal government have established health-based Ambient Air Quality Standards (AAQS) for six criteria air pollutants: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and suspended particulate matter (PM_{2.5} and PM₁₀). The SJVAB is designated as nonattainment for O₃ and PM_{2.5} for federal standards and nonattainment for O₃, PM₁₀, and PM_{2.5} for State standards.

² SJVAPCD. 2015. *Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI)*. March. Website: http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf (accessed November 2022).

Air quality monitoring stations are located throughout the nation and maintained by the local air districts and State air quality regulating agencies. Data collected at permanent monitoring stations are used by the United States Environmental Protection Agency (USEPA) to identify regions as “attainment” or “nonattainment” depending on whether the regions meet the requirements stated in the applicable National Air Quality Standards (NAAQS). Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of attainment, such as marginal, moderate, serious, severe, and extreme, are used to classify each air basin in the State on a pollutant-by-pollutant basis. The classifications are used as a foundation to create air quality management strategies to improve air quality and comply with the NAAQS. The SJVAB attainment statuses for each of the criteria pollutants for Merced County are listed in Table A.

Table A: SJVAB Air Quality Attainment Status for Merced County

Pollutant	State	Federal
Ozone (1-hour)	Severe/Nonattainment	Standard Revoked
Ozone (8-hour)	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment (Maintenance)
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	No Federal Regulation
Hydrogen Sulfide	Unclassified	No Federal Regulation

Source: California Air Resources Board (2016) and United States Environmental Protection Agency (2016).

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

Ozone levels, as measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by the SJVAPCD and other regional, State, and federal agencies. The reduction of peak concentrations represents progress in improving public health; however, the SJVAB still exceeds the State standard for 1-hour and 8-hour ozone levels. In addition, the SJVAB was designated as a serious nonattainment area for the federal 1997 8-hour ozone level in June 2004. The USEPA lowered the national 8-hour ozone standard from 0.80 to 0.75 parts per million (ppm) on May 27, 2008. The San Joaquin Valley is classified as nonattainment for the 1-hour and 8-hour ozone standards at the State and federal level, although a request for redesignation as attainment of the 1-hour ozone standard was submitted to the USEPA in 2014.

During the 2019 to 2021 time period, the monitoring station at 385 S. Coffee Avenue in Merced (the closest monitoring station to the project site) recorded the following exceedances of the State and federal 1-hour and 8-hour ozone standards:³

- 6 exceedances of the federal 8-hour ozone standard in 2019, 20 in 2020, and 21 in 2021
- 6 exceedances of the State 8-hour ozone standard in 2019, 21 in 2020, and 24 in 2021
- No exceedances of the federal 1-hour ozone standard in the three-year period
- No exceedances of the State 1-hour ozone standard in 2019, 2 in 2020, and 2 in 2021

National and State standards have also been established for PM_{2.5} over 24-hour and yearly averaging periods. PM_{2.5}, because of the small size of individual particles, can be especially harmful to human health. PM_{2.5} is emitted by common combustion sources such as cars, trucks, buses, and power plants, in addition to ground-disturbing activities. The SJVAB is considered a nonattainment area for the PM_{2.5} standard at the State and federal levels. The following PM_{2.5} exceedances were recorded at the Merced air monitoring station:

- 1 exceedance of the federal 24-hour PM_{2.5} standard in 2019, 23 in 2020, and 13 in 2021

The SJVAB is classified as a PM₁₀ nonattainment area at the State level and was redesignated from serious nonattainment to attainment of the federal PM₁₀ standard in 2008. Because the SJVAB was redesignated from nonattainment to attainment, a PM₁₀ maintenance plan was adopted in 2007 and is required to be updated every 10 years. The following PM₁₀ exceedances were recorded at the 2334 M Street air monitoring station in Merced (the closest station to the project site measuring PM₁₀):

- No exceedances of the federal 24-hour PM₁₀ standard in 2019, 1 in 2020, and 0 in 2021.

No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations since 1991. The SJVAB is currently considered an attainment area for State and federal 8-hour and 1-hour CO standards.

Greenhouse Gas and Global Climate Change Background

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and

³ California Air Resources Board (CARB). 2021. iADAM Air Quality Data Statistics. Website: www.arb.ca.gov/adam (accessed November 2022).

- Sulfur hexafluoride (SF₆).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally occurring GHGs such as CO₂, CH₄, and N₂O, some gases, such as HFCs, PFCs, and SF₆, are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e).

REGULATORY FRAMEWORK

Air quality and GHG standards and the regulatory framework are discussed below.

Federal Regulations

At the federal level, the USEPA has been charged with implementing national air quality programs. USEPA air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1963. The federal CAA was amended in 1970, 1977, and 1990.

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO₂ emissions under the federal CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change. This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emissions standards.

California Air Resources Board

The California Air Resources Board (CARB) is the State’s “clean air agency.” The CARB’s goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations. The CARB is also the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California’s air pollution problems. Key efforts by the State are described below.

Assembly Bill 2588 Air Toxics “Hot Spots” Information and Assessment Act

Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances their facilities routinely released into the air. The goals of the Air Toxics “Hot Spots” Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook

The CARB has developed an Air Quality and Land Use Handbook⁴ which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, recent air pollution studies have shown an association between respiratory and other noncancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for “sensitive” land uses such as homes, medical facilities, day-care centers, schools, and playgrounds.

Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses, including:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and

⁴ CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.

- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to further examine project sites for actual health risk associated with the location of new, sensitive land uses.

Assembly Bill 32 (2006), California Global Warming Solutions Act

California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO₂e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies that California will implement to achieve the reduction of approximately 169 MMT of CO₂e, or approximately 30 percent, from the State's projected 2020 emission level of 596 MMT of CO₂e under a business-as-usual scenario (this is a reduction of 42 MMT CO₂e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO₂e)
- The Low-Carbon Fuel Standard (15.0 MMT CO₂e)
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO₂e)
- A renewable portfolio standard for electricity production (21.3 MMT CO₂e)

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high-speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO₂e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust California Environmental Quality Act (CEQA) equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020 and also sets the groundwork to reach long-term goals set forth in Executive Orders (EOs) S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,⁵ to reflect the 2030 target set by EO B-30-15 and codified by Senate Bill (SB) 32.

The Draft 2022 Scoping Plan Update⁶ assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 375 (2008)

Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, the CARB approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations (MPOs). The CARB may update the targets every 4 years and must update them every 8 years. MPOs in turn must demonstrate how their plans, policies, and transportation investments meet the targets set by the CARB through Sustainable Community Strategies (SCS). The SCS are included with the Regional Transportation Plan (RTP), a report required by State law. However, if an MPO finds that its SCS will not meet the GHG reduction target, it may prepare an Alternative Planning Strategy (APS). The APS identifies the impediments to achieving the targets.

⁵ CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

⁶ CARB. 2021. *Draft 2022 Scoping Plan Update*. May 10. Website: <https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf> (accessed November 2022).

Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. The CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target and therefore is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act

SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent.
- Increase energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other nonrenewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to State energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197

In the summer of 2016, the Legislature passed, and the Governor signed, SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (IPCC) analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO₂e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by the CARB was posted in December 2016.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which raises California’s renewable portfolio standard requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

EO B-55-18, signed on September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” EO B-55-18 directs the CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO₂e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Safer Affordable Fuel-Efficient Vehicles Rule

On March 21, 2020, the USEPA and National Highway Traffic Safety Administration (NHTSA) finalized the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks.⁷ The SAFE Vehicles Rule amends certain existing Corporate Average Fuel Economy (CAFE) and tailpipe CO₂ emissions standards for passenger cars and light trucks and establishes new standards, all covering model years 2021 through 2026. The current administration withdrew portions of the SAFE Rule, concluding that the SAFE Rule overstepped the agency’s legal authority and finalized updated CAFE Standards for model years 2024 through 2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model years 2026. The agency projects the final standards will avoid the consumption of about 234 billion gallons of gas between model years 2030 to 2050. The NHTSA also projects that the standards will cut greenhouse gases from the atmosphere, reduce air pollution, and reduce the country’s dependence on oil.

⁷ United States Department of Transportation (USDOT). 2020. The Safer Affordable Fuel-Efficient “SAFE” Vehicle Rule. March 31. Website: [https://www.nhtsa.gov/corporate-average-fuel-economy/safe#:~:text=The%20Safer%20Affordable%20Fuel%2DEfficient%20\(SAFE\)%20Vehicles%20Rule%2C,model%20years%202021%20through%202026](https://www.nhtsa.gov/corporate-average-fuel-economy/safe#:~:text=The%20Safer%20Affordable%20Fuel%2DEfficient%20(SAFE)%20Vehicles%20Rule%2C,model%20years%202021%20through%202026) (accessed November 2022).

San Joaquin Valley Air Pollution Control District

The SJVAPCD has specific air quality-related planning documents, rules, and regulations. This section summarizes the local planning documents and regulations that may be applicable to the proposed project as administered by the SJVAPCD with CARB oversight.

Rule 8011—General Requirements: Fugitive Dust Emission Sources

Fugitive dust regulations are applicable to outdoor fugitive dust sources. Operations, including construction operations, must control fugitive dust emissions in accordance with SJVAPCD Regulation VIII. According to Rule 8011, the SJVAPCD requires the implementation of control measures for fugitive dust emission sources.

Guidance for Assessing and Mitigating Air Quality Impacts

The SJVAPCD prepared the GAMAQI to assist lead agencies and the project applicants in evaluating the potential air quality impacts of projects in the SJVAB. The GAMAQI provides SJVAPCD-recommended procedures for evaluating potential air quality impacts during the CEQA environmental review process. The GAMAQI provides guidance on evaluating short-term (construction) and long-term (operational) air emissions. The most recent version of the GAMAQI, adopted on March 19, 2015, was used in this evaluation. It contains guidance on the following:

- Criteria and thresholds for determining whether a project may have a significant adverse air quality impact
- Specific procedures and modeling protocols for quantifying and analyzing air quality impacts
- Methods to mitigate air quality impacts
- Information for use in air quality assessments and environmental documents, including air quality, regulatory setting, climate, and topography data.

Additional SJVAPCD Measures

Based on the SJVAPCD comment letter for the proposed project⁸, the following additional measures are recommended for reducing emissions:

Voluntary Emission Reduction Agreement. Criteria pollutant emissions may result in emissions exceeding the SJVAPCD's significance thresholds, potentially resulting in a significant impact on air quality. When a project is expected to have a significant impact, the SJVAPCD recommends the environmental review also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this project.

⁸ SJVAPCD. 2022. *Conditional Use Permit (No. CUP22-005) and Site Plan Review (No. SPR20-004), District Reference Number 20221020*. August 19.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the SJVAPCD serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent agrees to mitigate project-specific emissions by providing funds for the SJVAPCD's incentive programs.

In implementing VERA, the SJVAPCD verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the SJVAPCD certifies to the Lead Agency that the mitigation is completed.

Idling of Heavy-Duty Trucks. The goal of this strategy is to limit the potential for localized PM_{2.5} and toxic air contaminant impacts associated with the idling of heavy-duty trucks. The diesel exhaust from idling has the potential to impose significant adverse health and environmental impacts. The SJVAPCD recommends the environmental review to include measures to ensure compliance of the state anti-idling regulation (13 California Code of Regulations [CCR] 2485 and 13 CCR 2480) and discuss the importance of limiting the amount of idling, especially near sensitive receptors.

Vegetative Barriers and Urban Greening. The SJVAPCD suggests the incorporation of vegetative barrier and urban greening as a measure to further reduce air pollution exposure on sensitive receptors. Vegetative barriers have been shown to be an additional measure to potentially reduce a population's exposure to air pollution through the interception of airborne particles and the uptake of gaseous pollutants. Examples of vegetative barriers include but are not limited to the following: trees, bushes, shrubs, or a mix of these. In the same manner, urban greening is also a way to help improve air quality and public health in addition to enhancing the overall beautification of a community with drought tolerant, low maintenance greenery.

On-Site Solar Deployment. It is the policy of the State of California that renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers by December 2045. The SJVAPCD suggests that the incorporation of solar power systems as an emissions reduction strategy.

Climate Change Action Plan

In August 2008, the SJVAPCD adopted the Climate Change Action Plan (CCAP).⁹ The CCAP directed the SJVAPCD to develop guidance to assist lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project-specific GHG emissions on global climate change.

⁹ SJVAPCD. 2008. Climate Change Action Plan. November.

In December 2009, the SJVAPCD adopted the document: Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA¹⁰ and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency.¹¹ The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards (BPS),¹² to assess significance of project-specific GHG emissions on global climate change during the environmental review process, as required by CEQA. Projects implementing BPS in accordance with SJVAPCD’s guidance would be determined to have a less than significant individual and cumulative impact on GHG emissions and would not require project-specific quantification of GHG emissions.

2030 Merced County General Plan

The County of Merced addresses air quality in the Air Quality Element of the County’s General Plan¹³. The Air Quality Element contains goals and policies that work to reduce air pollutants and greenhouse gas emissions, anticipate adaptation to global and local climate change, mitigate significant local and regional air quality impacts of projects through CEQA, improve air quality through improved public facilities, reduce traffic congestion and vehicle trips, and protect residents from toxic air pollutants and noxious odors. The following policies from the Air Quality Element are applicable to the proposed project:

- **Policy AQ-1.1: Energy Consumption Reduction.** Encourage new residential, commercial, and industrial development to reduce air quality impacts from energy consumption.
- **Policy AQ-1.2. Business Energy Reduction Strategies.** Encourage all businesses to: replace high mileage fleet vehicles with more efficient and/or alternative fuel vehicles; increase the energy efficiency of facilities; transition toward the use of renewable energy instead of non-renewable energy sources; adopt purchasing practices that promote emissions reductions and reusable materials; and increase recycling.
- **Policy AQ-2.1: Air Quality Plan Compliance.** Require all development projects to comply with applicable regional air quality plans and policies.
- **Policy AQ-3.1: Automotive Trip Reduction Program.** Prepare and implement an automotive trip reduction program for County employees, which may include:

¹⁰ SJVAPCD. 2009. Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17.

¹¹ SJVAPCD. 2009. Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency. December 17.

¹² SJVAPCD. 2009. Final Staff Report Appendix J: GHG Emission Reduction Measures – Development Projects. December 17.

¹³ County of Merced. 2013. *2030 Merced County General Plan, Air Quality Element*. December 10. Website: [2030-Merced-County-General-Plan \(countyofmerced.com\)](https://www.countyofmerced.com/2030-Merced-County-General-Plan) (accessed November 2022)

- Department-sponsored carpooling efforts and rideshare programs;
- Preferred parking locations for carpool/rideshare users;
- Transit-cost reimbursement or subsidy for employees; and
- Incentives for employees who use alternative means of transportation (e.g., train, biking, walking, carpooling)
- **Policy AQ-3.5: Purchasing Preferences.** Institute environmentally-responsible purchasing, including giving preference to products that reduce or eliminate indirect greenhouse gas emissions and promote recycling.
- **Policy AQ-4.4: Transportation Alternatives.** Require employers and developers to provide employees and residents with attractive, affordable transportation alternatives, such as transit stops, van pool pick-up and dropoff locations, and biking paths/storage.
- **Policy AQ-5.1: Residential Buffers.** Require effective buffers between residential and other sensitive land uses, and nonresidential land uses that generate hazardous air emissions such as highways (e.g., I-5 and SR-99), trucking centers, gasoline dispensing facilities, and dry cleaners. Effective buffers shall be determined by requiring consultation with the SJVAPCD for any project that may have a health risk impact, including those projects that would otherwise appear to be exempt from CEQA requirements.
- **Policy AQ-5.2: New Point Sources.** Require new air pollution point sources such as, but not limited to, industrial, manufacturing, and processing facilities to be located an adequate distance from residential areas and other sensitive receptors.
- **Policy AQ-6.1: Particulate Emissions from Construction.** Support the San Joaquin Valley Air Pollution Control District's efforts to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible and consistent with State and Federal regulations.
- **Policy AQ-6.3: Paving Materials.** Require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.
- **Policy AQ-6.5: Industrial Best Management Practices.** Require industrial facilities to incorporate economically feasible Best Management Practices and control technology to reduce PM10 and PM2.5 emissions consistent with State and Federal regulations.
- **AQ-6.8: Voluntary Emissions Reduction Agreement.** Require all project applicants, where project emissions for any criteria pollutant have been evaluated to exceed SJVAPCD significance thresholds, to consult with the SJVAPCD regarding the establishment of a Voluntary Emissions Reduction Agreement between AQ-8 2030 Merced County General Plan | December 10, 2013

2030 Merced County General Plan Air Quality Element the applicant and the SJVAPCD. Support the SJVAPCD in its efforts to fund the Emission Reduction Incentive Program.

METHODOLOGY

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site.

As discussed previously in the Project Location and Description section of this memorandum, construction of the proposed project is expected to begin in early 2023 and occur for 9 months, which was included in CalEEMod. Other detailed construction information is currently unavailable; therefore, this analysis utilizes CalEEMod default assumptions. This analysis also assumes use of Tier 2 construction equipment, as required by current CARB regulations for off-road vehicles.

Operational Emissions

This air quality analysis includes estimating emissions associated with long-term operation of the project. Indirect emissions of criteria pollutants with regional impacts would be emitted by project-generated vehicle trips. In addition, localized air quality impacts (i.e., higher carbon monoxide concentrations or “hot-spots”) near intersections or roadway segments in the project vicinity would also potentially occur due to project-generated vehicle trips.

Consistent with the SJVAPCD’s guidance for estimating emissions, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project. The analysis was conducted using land use codes *Convenience Store with Gas Station* and *Parking Lot*. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions. CalEEMod output sheets are attached.

Greenhouse Gas Emissions

GHG emissions associated with the project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term GHG emissions associated with project-related vehicle trips. Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project’s contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste

generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the project.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

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

The SJVAPCD defines emissions thresholds in the GAMAQI, established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds (Table B) are regarded as conservative and would overstate an individual project’s contribution to health risks. The related impacts are discussed further in the Project Impact Analysis section.

Table B: SJVAPCD Construction and Operation Thresholds of Significance (Tons per Year)

	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
Construction Thresholds	100	10	10	27	15	15
Operation Thresholds	100	10	10	27	15	15

Source: Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015).
 CO = carbon monoxide
 NO_x = nitrous oxides
 PM_{2.5} = particulate matter less than 2.5 microns in size
 PM₁₀ = particulate matter less than 10 microns in size
 ROG = reactive organic compounds
 SJVAPCD = San Joaquin Valley Air Pollution Control District
 SO_x = sulfur oxide

The emissions thresholds in the SJVAPCD GAMAQI were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants.¹⁴ Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project’s contribution to health risks.

¹⁴ SJVAPCD. 2015. Op. cit.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse GHG emission impact if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Neither the County of Merced, nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, this analysis evaluates the GHG emissions based on the project's consistency with State GHG reduction goals.

PROJECT IMPACT ANALYSIS

The proposed project would release emissions over the long term associated with traffic generation and operation of the project site. Emissions would include criteria air pollutants and GHG emissions. The sections below describe the proposed project's consistency with applicable air quality plans, estimated project emissions, and the significance of impacts with respect to CEQA and consistency with the SJVAPCD's rules and regulations.

Air Quality

Consistency with Applicable Air Quality Plans

An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a nonattainment area. The main purpose of the air quality plan is to bring the area into compliance with the requirements of the federal and State air quality standards. To bring the San Joaquin Valley into attainment, the SJVAPCD adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016 to satisfy Clean Air Act requirements and ensure attainment of the 75 parts per billion (ppb) 8-hour ozone standard.¹⁵

To ensure the SJVAB's continued attainment of the USEPA PM₁₀ standard, the SJVAPCD adopted the 2007 PM₁₀ Maintenance Plan in September 2007.¹⁶ The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards in November 2018 to address the USEPA 1997 annual PM_{2.5} standard of 15 micrograms per cubic meter (µg/m³) and 24-hour PM_{2.5} standard of 65 µg/m³, the 2006 24-hour PM_{2.5} standard of 35 µg/m³, and the 2012 annual PM_{2.5} standard of 12 µg/m³.¹⁷

¹⁵ SJVAPCD. 2016. *2016 Plan for the 2008 8-Hour Ozone Standard*. June 16. Website: www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm (accessed November 2022).

¹⁶ SJVAPCD. 2007. *2007 PM₁₀ Maintenance Plan and Request for Redesignation*. Website: www.valleyair.org/Air_Quality_Plans/docs/Maintenance%20Plan10-25-07.pdf (accessed November 2022).

¹⁷ SJVAPCD. 2018. *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards*. November 15. Website: <http://valleyair.org/pmplans/documents/2018/pm-plan-adopted/2018-Plan-for-the-1997-2006-and-2012-PM2.5-Standards.pdf> (accessed November 2022).

CEQA requires that certain proposed projects be analyzed for consistency with the applicable air quality plan. For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. As discussed below, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed the SJVAPCD thresholds of significance. Implementation of Regulatory Control Measure (RCM) AIR-1, provided below, would further reduce construction dust impacts. Operational emissions associated with the proposed project would also not exceed SJVAPCD established significance thresholds. Therefore, the proposed project would not conflict with or obstruct implementation of SJVAPCD air quality plans.

Criteria Pollutant Analysis

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The following analysis assesses the potential construction- and operation-related air quality impacts.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrous oxides (NO_x), reactive organic gases (ROG), directly emitted particulate matter (PM_{2.5} and PM₁₀), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Site preparation and project construction would include the following tasks: site preparation, grading, building construction, paving, and architectural coatings. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SJVAPCD has established Regulation VIII measures for reducing fugitive dust emissions (PM₁₀). With the implementation of Regulation VIII measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, ROGs, and some soot particulate (PM_{2.5}

and PM₁₀) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

CalEEMod was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Construction-related emissions are presented in Table C, below. CalEEMod output sheets are attached.

Table C: Project Construction Emissions (Tons per Year)

Project Construction	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction Emissions	0.1	1.0	0.7	<0.1	0.1	<0.1
SJVAPCD Thresholds	10.0	10.0	100.0	27.0	15.0	15.0
Exceeds?	No	No	No	No	No	No

Source: Compiled by LSA (November 2022).

CO = carbon monoxide

NO_x = nitrous oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

ROG = reactive organic compounds

SJVAPCD = San Joaquin Valley Air Pollution Control District

SO₂ = sulfur dioxide

As shown in Table C, construction emissions associated with the project would not exceed the SJVAPCD’s thresholds for ROG, NO_x, CO, PM₁₀, and PM_{2.5} emissions. In addition to the construction period thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction. Implementation of RCM AIR-1 would ensure that the proposed project complies with Regulation VIII.

RCM AIR-1 Consistent with San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII (Fugitive PM₁₀ Prohibitions), the following controls are required to be included as specifications for the proposed project and implemented at the construction site:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant or covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.

- When materials are transported off site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/ suppressant.

Construction emissions associated with the proposed project would be less than significant with implementation of RCM AIR-1. Therefore, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State AAQS.

Operational Emissions. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project.

PM₁₀ emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM₁₀ occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other particulate matter emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. The proposed project would generate a minimal amount of energy source emissions, which would primarily be associated with lighting and heating.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of landscaping equipment.

Emission estimates for operation of the project were calculated using CalEEMod. The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly

dispersed on release or, in the case of vehicle emissions associated with the project, emissions are released in other areas of the SJVAB. The annual emissions associated with project operational trip generation, energy, and area sources are identified in Table D for ROG, NO_x, CO, sulfur oxide (SO_x), PM₁₀, and PM_{2.5}. CalEEMod output sheets are attached.

Table D: Project Operation Emissions (Tons per Year)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source Emissions	<0.1	<0.1	<0.1	0.0	0.0	0.0
Energy Source Emissions	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Source Emissions	1.1	1.4	5.9	<0.1	0.6	0.2
Total Project Operation Emissions	1.1	1.4	5.9	<0.1	0.6	0.2
SJVAPCD Significance Threshold	10.0	10.0	100.0	27.0	15.0	15.0
Exceed Threshold?	No	No	No	No	No	No

Source: Compiled by LSA (November 2022).

Note: Some values may not appear to add up correctly due to rounding.

CO = carbon monoxide

NO_x = nitrous oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

ROG = reactive organic compounds

SJVAPCD = San Joaquin Valley Air Pollution Control District

SO_x = sulfur oxide

As shown in Table D, the proposed project would not exceed annual criteria pollutant significance thresholds for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State AAQS.

In addition, since the proposed project would not exceed SVJACPD thresholds and due to the distance of the nearest sensitive receptors, no additional measures such as a VERA, vegetative barriers and urban greening or on-site solar measures would be required. In addition, the proposed project would comply with renewable energy requirements as PG&E is the private utility that would supply the proposed project's electricity and natural gas services. In 2021, a total of 50 percent of PG&E's delivered electricity came from renewable sources, including solar, wind, geothermal, small hydroelectric and various forms of bioenergy.¹⁸ PG&E reached California's 2020 renewable energy goal in 2017, and is positioned to meet the State's 60 percent by 2030 renewable energy mandate set forth in SB 100. In addition, PG&E plans to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

¹⁸ PG&E, 2022. *Exploring Clean Energy Solutions*. Website: https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page?WT.mc_id=Vanity_cleanenergy (accessed October 2022).

Sensitive Receptors

Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day-care centers, nursing homes, hospitals, and residential dwelling units. As identified above, the project site is surrounded by vacant land and commercial uses. There are no sensitive receptors located within a 1,000-foot radius of the project site; the closest sensitive receptors include residential uses located approximately 2,200 feet along Gravel Pit Road east of the project site.

Construction of the proposed project may expose sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement RCM AIR-1 described above. With implementation of this mitigation measure, project construction pollutant emissions would be below the SJVAPCD significance thresholds.

The proposed project would also include a gas station with 8 fuel pumps. However, as identified in Table D above, project operational emissions of criteria pollutants would be below SJVAPCD significance thresholds; thus, they are not likely to have a significant impact on these residences given the distance and the dispersion that would occur. The fuel pumps would be required to comply with SJVAPCD rules for gasoline vapor recovery, including Rule 2260 Registration Requirements for Equipment Subject to California's Oil and Gas Regulation, Rule 3156 Fees for Equipment Subject to Rule 2260 Registration Requirements for Equipment Subject to California's Oil and Gas Regulation, and Rule 4622 Gasoline Transfer into Motor Vehicle Fuel Tanks. Compliance with SJVAPCD rules would further limit doses and exposures, reducing potential health risk related to diesel vapors to a level that is not significant. In addition, the closest sensitive receptors include residential uses located approximately 2,200 feet along Gravel Pit Road east of the project site. At this distance and with compliance with SJVAPCD rules, nearby sensitive receptors would not be exposed to a risk that equals or exceeds 20 in one million in regard to carcinogenic TACs. In addition, nearby sensitive receptors would not be exposed to a risk that equals or exceeds a health index of 1 for non-carcinogenic TACs.

In addition, it is assumed that trucks accessing the project site would travel via I-5, away from the nearest sensitive receptors. In addition, any on-site trucks would be required to comply with idling requirements to limit idling emissions. Therefore, operation emissions from the project would not result in a substantial health risk. The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

As such, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction and operation.

Objectionable Odors

The SJVAPCD addresses odor criteria within the GAMAQI. The district has not established a rule or standard regarding odor emissions; rather, the district has a nuisance rule: "Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact."

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed uses are not anticipated to emit any objectionable odors. The fuel pumps are not expected to result in odors as they would be equipped with vapor recovery systems. Any odors in general would be confined mainly to the project site and would readily dissipate. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Greenhouse Gas Emissions

Generation of Greenhouse Gas Emissions

This section discusses the project's impacts related to the release of GHG emissions for both construction and operational phases of the project.

Construction GHG Emissions. Construction-related GHG emissions are typically emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. Construction activities, such as grading, site preparation, and construction, on-site construction vehicles, equipment hauling materials to and from a project site, and motor vehicles transporting the construction crew typically produce combustion emissions from various sources.

The SJVAPCD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed project would generate a total of approximately 107.2 metric tons of CO₂e.

Operational GHG Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks, and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Emissions estimates for operation of the proposed project were calculated using CalEEMod. Table E shows the emissions sources by category; mobile source emissions are the largest category, at approximately 98 percent of total CO₂e emissions, followed by energy and waste source emissions at approximately 1 percent of the total, area and water source emissions are approximately less than 1 percent of the total. CalEEMod output sheets are attached.

Table E: Operational Greenhouse Gas Emissions

Emissions Category	Operational Emissions (Metric Tons per Year)				
	CO ₂	CH ₄	N ₂ O	CO ₂ e	Percent of Total
Area Source	<0.1	0.0	0.0	<0.1	<1
Energy Source	7.2	<0.1	<0.1	7.3	1
Mobile Source	785.2	0.1	0.1	811.1	98
Waste Source	3.0	0.2	0.0	7.4	1
Water Source	0.4	<0.1	<0.1	0.8	<1
Total Operational				826.5	100.0

Source: Compiled by LSA (November 2022).

Note = Some values may not appear to add up correctly due to rounding.

CH₄ = methane

CO₂e = carbon dioxide equivalent

CO₂ = carbon dioxide

N₂O = nitrous oxide

As shown in Table E, the proposed project would generate approximately 825.7 metric tons of CO₂e annually. The SJVAPCD has not established a numeric threshold for GHG emissions. As discussed, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither Merced County, nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, the proposed project was analyzed for consistency with State GHG reduction goals, as discussed below.

In addition, the proposed project was analyzed for consistency with the goals of the 2017 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197.

Executive Order B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Executive Order B-30-15. CARB released the 2017 Scoping Plan,¹⁹ to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. SB 32 builds on AB 32 and keeps us on the path toward achieving the State’s 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

The Draft 2022 Scoping Plan Update²⁰ assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology,

¹⁹ California Air Resources Board. 2017. *California’s 2017 Climate Change Scoping Plan*. November.

²⁰ CARB. 2021. op. cit.

energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

As identified above, the AB 32 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by Executive Order B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations, established by the California Energy Commission and the County's current building code, regarding energy conservation and green building standards. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would be required to comply with the latest Title 24 standards of the California Code of Regulations, which includes a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would install low maintenance landscape features. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. However, vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

Therefore, the proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32 and SB 32 and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

CONCLUSION

Based on the analysis presented above, with implementation of RCM AIR-1, construction and operational activities associated with the proposed project would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. In addition, the proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The proposed project would also not result in objectionable odors affecting a substantial number of people. The project would also not result in the emission of substantial GHG emissions. Additionally, the project would not conflict with the State's GHG emissions reductions objectives embodied in AB 32, EO B-30-15, SB 32, and AB 197. Therefore, the proposed project's incremental contribution to cumulative GHG emissions would not be cumulatively considerable.

Attachment: CalEEMod Output Sheets

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Merced County Gas Station Project
Merced County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	4.90	1000sqft	0.11	4,900.00	0
Parking Lot	64.00	Space	0.58	25,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project would construct a 4,900 sq ft convenience store with gas station and a total of 64 parking spaces.

Construction Phase - Construction will begin early 2023 and last 9 months.

Off-road Equipment - Default construction equipment

Demolition - No demolition

Grading - Balanced site

Vehicle Trips - Default trip generation

Construction Off-road Equipment Mitigation - Use of construction equipment Tier 2, comply with SJVAPCD

Regulation VIII

Area Mitigation -

Fleet Mix - Default fleet mix

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	100.00	150.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	10.00

2.0 Emissions Summary

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-2-2023	4-1-2023	0.2399	0.3473
2	4-2-2023	7-1-2023	0.2390	0.3729
3	7-2-2023	9-30-2023	0.2120	0.3085
		Highest	0.2399	0.3729

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	0.0248	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Energy	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	7.1940	7.1940	7.7000e-004	1.4000e-004	7.2542
Mobile	1.1023	1.4395	5.8890	8.3800e-003	0.6176	9.5200e-003	0.6272	0.1657	8.9400e-003	0.1746	0.0000	785.1807	785.1807	0.0946	0.0792	811.1330
Waste						0.0000	0.0000		0.0000	0.0000	2.9901	0.0000	2.9901	0.1767	0.0000	7.4077
Water						0.0000	0.0000		0.0000	0.0000	0.1152	0.2538	0.3689	0.0119	2.8000e-004	0.7503
Total	1.1273	1.4421	5.8918	8.4000e-003	0.6176	9.7100e-003	0.6274	0.1657	9.1300e-003	0.1748	3.1052	792.6297	795.7349	0.2840	0.0796	826.5465

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0248	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Energy	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	7.1940	7.1940	7.7000e-004	1.4000e-004	7.2542
Mobile	1.1023	1.4395	5.8890	8.3800e-003	0.6176	9.5200e-003	0.6272	0.1657	8.9400e-003	0.1746	0.0000	785.1807	785.1807	0.0946	0.0792	811.1330
Waste						0.0000	0.0000		0.0000	0.0000	2.9901	0.0000	2.9901	0.1767	0.0000	7.4077
Water						0.0000	0.0000		0.0000	0.0000	0.1152	0.2538	0.3689	0.0119	2.8000e-004	0.7503
Total	1.1273	1.4421	5.8918	8.4000e-003	0.6176	9.7100e-003	0.6274	0.1657	9.1300e-003	0.1748	3.1052	792.6297	795.7349	0.2840	0.0796	826.5465

	ROG	NOx	CO	SO2	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	1/2/2023	1/13/2023	5	10	
2	Grading	Grading	1/16/2023	1/27/2023	5	10	
3	Building Construction	Building Construction	1/30/2023	8/25/2023	5	150	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Architectural Coating	Architectural Coating	9/11/2023	9/22/2023	5	10
5	Paving	Paving	8/28/2023	9/8/2023	5	10

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 0.58

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,350; Non-Residential Outdoor: 2,450; Striped Parking Area: 1,536 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	12.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6500e-003	0.0000	2.6500e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0309	0.0196	5.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	4.2748	4.2748	1.3800e-003	0.0000	4.3094
Total	2.6700e-003	0.0309	0.0196	5.0000e-005	2.6500e-003	1.1300e-003	3.7800e-003	2.9000e-004	1.0400e-003	1.3300e-003	0.0000	4.2748	4.2748	1.3800e-003	0.0000	4.3094

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	7.4000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1672	0.1672	1.0000e-005	1.0000e-005	0.1689
Total	9.0000e-005	7.0000e-005	7.4000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1672	0.1672	1.0000e-005	1.0000e-005	0.1689

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1900e-003	0.0000	1.1900e-003	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5400e-003	0.0431	0.0293	5.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003	0.0000	4.2748	4.2748	1.3800e-003	0.0000	4.3094
Total	1.5400e-003	0.0431	0.0293	5.0000e-005	1.1900e-003	1.2000e-003	2.3900e-003	1.3000e-004	1.2000e-003	1.3300e-003	0.0000	4.2748	4.2748	1.3800e-003	0.0000	4.3094

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	7.4000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1672	0.1672	1.0000e-005	1.0000e-005	0.1689
Total	9.0000e-005	7.0000e-005	7.4000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1672	0.1672	1.0000e-005	1.0000e-005	0.1689

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0266	0.0000	0.0266	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6700e-003	0.0509	0.0278	7.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	6.1905	6.1905	2.0000e-003	0.0000	6.2406
Total	4.6700e-003	0.0509	0.0278	7.0000e-005	0.0266	2.1000e-003	0.0287	0.0128	1.9300e-003	0.0148	0.0000	6.1905	6.1905	2.0000e-003	0.0000	6.2406

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

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	1.5000e-004	1.0000e-004	1.1800e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2675	0.2675	1.0000e-005	1.0000e-005	0.2703
Total	1.5000e-004	1.0000e-004	1.1800e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2675	0.2675	1.0000e-005	1.0000e-005	0.2703

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					0.0120	0.0000	0.0120	5.7800e-003	0.0000	5.7800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0300e-003	0.0613	0.0404	7.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	6.1905	6.1905	2.0000e-003	0.0000	6.2405
Total	2.0300e-003	0.0613	0.0404	7.0000e-005	0.0120	1.5500e-003	0.0135	5.7800e-003	1.5500e-003	7.3300e-003	0.0000	6.1905	6.1905	2.0000e-003	0.0000	6.2405

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

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	1.5000e-004	1.0000e-004	1.1800e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2675	0.2675	1.0000e-005	1.0000e-005	0.2703
Total	1.5000e-004	1.0000e-004	1.1800e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2675	0.2675	1.0000e-005	1.0000e-005	0.2703

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0474	0.4814	0.5323	8.6000e-004		0.0240	0.0240		0.0221	0.0221	0.0000	75.1563	75.1563	0.0243	0.0000	75.7640
Total	0.0474	0.4814	0.5323	8.6000e-004		0.0240	0.0240		0.0221	0.0221	0.0000	75.1563	75.1563	0.0243	0.0000	75.7640

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

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	4.4000e-004	0.0169	5.4700e-003	8.0000e-005	2.4800e-003	1.1000e-004	2.5900e-003	7.2000e-004	1.1000e-004	8.2000e-004	0.0000	7.3206	7.3206	3.0000e-005	1.0900e-003	7.6455
Worker	3.3000e-003	2.3400e-003	0.0266	6.0000e-005	7.1800e-003	4.0000e-005	7.2200e-003	1.9100e-003	4.0000e-005	1.9500e-003	0.0000	6.0186	6.0186	2.2000e-004	1.9000e-004	6.0819
Total	3.7400e-003	0.0192	0.0320	1.4000e-004	9.6600e-003	1.5000e-004	9.8100e-003	2.6300e-003	1.5000e-004	2.7700e-003	0.0000	13.3392	13.3392	2.5000e-004	1.2800e-003	13.7273

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	0.0353	0.8026	0.5972	8.6000e-004		0.0289	0.0289		0.0289	0.0289	0.0000	75.1562	75.1562	0.0243	0.0000	75.7639
Total	0.0353	0.8026	0.5972	8.6000e-004		0.0289	0.0289		0.0289	0.0289	0.0000	75.1562	75.1562	0.0243	0.0000	75.7639

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3.4 Building Construction - 2023

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	4.4000e-004	0.0169	5.4700e-003	8.0000e-005	2.4800e-003	1.1000e-004	2.5900e-003	7.2000e-004	1.1000e-004	8.2000e-004	0.0000	7.3206	7.3206	3.0000e-005	1.0900e-003	7.6455
Worker	3.3000e-003	2.3400e-003	0.0266	6.0000e-005	7.1800e-003	4.0000e-005	7.2200e-003	1.9100e-003	4.0000e-005	1.9500e-003	0.0000	6.0186	6.0186	2.2000e-004	1.9000e-004	6.0819
Total	3.7400e-003	0.0192	0.0320	1.4000e-004	9.6600e-003	1.5000e-004	9.8100e-003	2.6300e-003	1.5000e-004	2.7700e-003	0.0000	13.3392	13.3392	2.5000e-004	1.2800e-003	13.7273

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	0.0404	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785

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3.5 Architectural Coating - 2023

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-005	3.0000e-005	3.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0669	0.0669	0.0000	0.0000	0.0676
Total	4.0000e-005	3.0000e-005	3.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0669	0.0669	0.0000	0.0000	0.0676

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	0.0394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	0.0400	0.0118	9.1600e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2023

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-005	3.0000e-005	3.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0669	0.0669	0.0000	0.0000	0.0676
Total	4.0000e-005	3.0000e-005	3.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0669	0.0669	0.0000	0.0000	0.0676

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0600e-003	0.0275	0.0351	6.0000e-005		1.3200e-003	1.3200e-003		1.2300e-003	1.2300e-003	0.0000	4.6996	4.6996	1.3700e-003	0.0000	4.7338
Paving	7.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.8200e-003	0.0275	0.0351	6.0000e-005		1.3200e-003	1.3200e-003		1.2300e-003	1.2300e-003	0.0000	4.6996	4.6996	1.3700e-003	0.0000	4.7338

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.3000e-004	2.6600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6019	0.6019	2.0000e-005	2.0000e-005	0.6082
Total	3.3000e-004	2.3000e-004	2.6600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6019	0.6019	2.0000e-005	2.0000e-005	0.6082

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	1.9800e-003	0.0419	0.0345	6.0000e-005		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	4.6996	4.6996	1.3700e-003	0.0000	4.7338
Paving	7.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.7400e-003	0.0419	0.0345	6.0000e-005		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	4.6996	4.6996	1.3700e-003	0.0000	4.7338

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.3000e-004	2.6600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6019	0.6019	2.0000e-005	2.0000e-005	0.6082
Total	3.3000e-004	2.3000e-004	2.6600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6019	0.6019	2.0000e-005	2.0000e-005	0.6082

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1023	1.4395	5.8890	8.3800e-003	0.6176	9.5200e-003	0.6272	0.1657	8.9400e-003	0.1746	0.0000	785.1807	785.1807	0.0946	0.0792	811.1330
Unmitigated	1.1023	1.4395	5.8890	8.3800e-003	0.6176	9.5200e-003	0.6272	0.1657	8.9400e-003	0.1746	0.0000	785.1807	785.1807	0.0946	0.0792	811.1330

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	3,058.58	3,058.58	3,058.58	1,640,635	1,640,635
Parking Lot	0.00	0.00	0.00		
Total	3,058.58	3,058.58	3,058.58	1,640,635	1,640,635

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
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Parking Lot	9.50	7.30	7.30	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
Convenience Market with Gas Pumps	0.507674	0.048153	0.157435	0.157913	0.031283	0.007497	0.013742	0.047950	0.000797	0.000458	0.021748	0.002230	0.003119
Parking Lot	0.507674	0.048153	0.157435	0.157913	0.031283	0.007497	0.013742	0.047950	0.000797	0.000458	0.021748	0.002230	0.003119

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.4197	4.4197	7.2000e-004	9.0000e-005	4.4634
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.4197	4.4197	7.2000e-004	9.0000e-005	4.4634
NaturalGas Mitigated	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7743	2.7743	5.0000e-005	5.0000e-005	2.7908
NaturalGas Unmitigated	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7743	2.7743	5.0000e-005	5.0000e-005	2.7908

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas Pumps	51989	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7743	2.7743	5.0000e-005	5.0000e-005	2.7908
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		2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7743	2.7743	5.0000e-005	5.0000e-005	2.7908

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas Pumps	51989	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7743	2.7743	5.0000e-005	5.0000e-005	2.7908
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		2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7743	2.7743	5.0000e-005	5.0000e-005	2.7908

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	38808	3.5907	5.8000e-004	7.0000e-005	3.6262
Parking Lot	8960	0.8290	1.3000e-004	2.0000e-005	0.8372
Total		4.4197	7.1000e-004	9.0000e-005	4.4634

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	38808	3.5907	5.8000e-004	7.0000e-005	3.6262
Parking Lot	8960	0.8290	1.3000e-004	2.0000e-005	0.8372
Total		4.4197	7.1000e-004	9.0000e-005	4.4634

6.0 Area Detail

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0248	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Unmitigated	0.0248	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-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	3.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Total	0.0248	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Total	0.0248	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.3689	0.0119	2.8000e-004	0.7503
Unmitigated	0.3689	0.0119	2.8000e-004	0.7503

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.362955 / 0.222457	0.3689	0.0119	2.8000e-004	0.7503
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.3689	0.0119	2.8000e-004	0.7503

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.362955 / 0.222457	0.3689	0.0119	2.8000e-004	0.7503
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.3689	0.0119	2.8000e-004	0.7503

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9901	0.1767	0.0000	7.4077
Unmitigated	2.9901	0.1767	0.0000	7.4077

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	14.73	2.9901	0.1767	0.0000	7.4077
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.9901	0.1767	0.0000	7.4077

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	14.73	2.9901	0.1767	0.0000	7.4077
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.9901	0.1767	0.0000	7.4077

9.0 Operational Offroad

Merced County Gas Station Project - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

APPENDIX B: VEHICLE MILES TRAVELED MEMORANDUM



CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

November 14, 2022

Gurvinder Aujla
3159 W. Buckeye Road
Phoenix, Arizona, 85009

Subject: Merced County Gas Station Vehicle Miles Traveled Memorandum (LSA Project No. GDA2201)

Dear Gurvinder:

LSA Associates, Inc. (LSA) has prepared this Vehicle Miles Traveled Memorandum (Memo) for the proposed Merced County Gas Station Project (project) in the unincorporated county of Merced (County). The proposed project will consist of a gas station with 16 vehicle fueling position (VFP) gas station, one 4,900 square feet (SF) convenience store, and 16 Electric vehicle (EV) charging stations. The project will be located at the southeast corner of the interchange between Interstate 5 (I-5) and State Route 140 (SR-140)-Sullivan Road.

The objective of this Memo is to determine whether a detailed VMT analysis will be required for the project.

VEHICLE MILES TRAVELED ANALYSIS

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) Guidelines for use. Among the changes to the guidelines was the removal of vehicle delay and level of service as the sole basis of determining CEQA impacts. With the implementation of the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on VMT.

It is LSA's understanding that the County is yet to adopt its own VMT Guidelines. For jurisdictions that are yet to adopt their own VMT analysis guidelines, the California Governor's Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA*, dated December 2018 (TA) is typically utilized for preparation of a VMT analysis. Therefore, for purposes of this analysis, the OPR TA has been followed to prepare the VMT analysis for this Project.

The OPR TA acknowledges that certain activities and projects for development projects may result in a reduction of VMT and GHG emissions and may therefore be assumed to produce a less than significant transportation impact. Due to a presumption of less than significant impact as accepted by OPR, a variety of projects may be screened out of SB 743-related VMT analysis requirements.

The TA suggests that screening thresholds be utilized to identify such projects that are expected to cause a less-than-significant impact. Page 12 of the TA indicates:

“Many agencies use ‘screening thresholds’ to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.”

As recommended in the OPR TA, retail land uses with an area less than 50,000 sf may be considered as local-serving and may be presumed to create a less than significant VMT impact. Since the total square footage of the proposed project is less than 50,000 sf, the project may be presumed to create a less than significant VMT impact and may be screened from a VMT analysis.

Additionally, due to the location of the project, it is estimated that the gas station/convenience store trips will not be new trips generated by the project within the region, rather these will be diverted trips from existing I-5 and SR-140 traffic which will make a stop at the project facility en route to their destination. As such, since the gas station/convenience store trips are not new trips, they are not likely to increase the regional VMT and therefore are not estimated to cause any significant VMT impact.

As previously mentioned, the project also includes 16 EV charging stations. It is anticipated that majority that these trips will be diverted trips from I-5 traffic. Additionally, as these trips are being made by EVs, they are not estimated to add greenhouse gas (GHG) in the environment, which is the main intension of SB 743. As such, the EV charging component of the project is also not estimated to have any significant VMT impact.

Since both the gas station/convenience store and EV charging facility are estimated to have less than significant VMT impact, the project overall is estimated to have less than significant VMT impact and could be screened out from a detailed VMT analysis.

If you have any questions, please do not hesitate to contact me at (951) 781-9310 or Ambarish.Mukherjee@lsa.net.

Sincerely,

LSA



Ambarish Mukherjee, AICP, PE
Principal