

COUNTY OF TULARE RESOURCE MANAGEMENT AGENCY



5961 South Mooney Boulevard
Visalia, CA 93277

Initial Study and Mitigated Negative Declaration

Reed Rezone Kingsburg Project
(GPA 20-005 and PZC 19-015)

January 2021

Prepared by
County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

INITIAL STUDY CHECKLIST

1. **Project Title:** Reed Rezone Kingsburg Project (GPA 20-005 and PZC 19-015)
2. **Lead Agency:** County of Tulare
Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277
3. **Contact Persons:** Charles Przybylski, Planner IV (Project Planner) – 559-624-7131
Hector Guerra, Chief, Environmental Planning Division – 559-624-7121
4. **Project Location:** The Project site is located in the USGS 7.5 Minute Quadrangle: Selma at the northwest corner of Avenue 392 and Road 12. It lies within Section 26, Township 16 South, Range 22 East, MDB&M and has an APN 028-360-009..
5. **Applicant:** Lorin Reed/Reed Family Trust
2508 Tamarack Court
Kingsburg, CA 93631
6. **Owner(s)** Same as applicant
7. **General Plan Designation:** Kingsburg UDB
8. **Zoning:** AE-20 (Exclusive Agriculture – 20 Acre Minimum), A-1
9. **Description of Project (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)** The entire property is currently being used for agricultural purposes (vineyard). The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various size parcels to accommodate commercial and industrial uses.
10. **Surrounding land uses and setting (Brief description):**
North: commercial;
South: agricultural with residence;
East: commercial and residential; and
West: agricultural with residence.
11. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):** Selma-Kingsburg-Fowler (SKF) County Sanitation District (wastewater), City of Kingsburg (domestic water), San Joaquin Valley Unified Air Pollution Control District (air emissions permits), Caltrans (easements).

- 12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that include, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc?** Pursuant to AB 52, a Sacred Land File search reply was received from the Native American Heritage Commission dated July 30, 2020, indicating the search results were negative. On September 11, 2020, tribal consultation notices were sent via certified mail to eleven (11) tribal contacts representing six (6) Native American tribes. As of the date of release of this environmental document, the County has not received any responses from the tribes within the 30-day response time. Mitigation measures have been included in the project to reduce potential impacts on tribal cultural resources in the unlikely event that any are unearthed during construction-related activities.

Figure 1. Vicinity Map

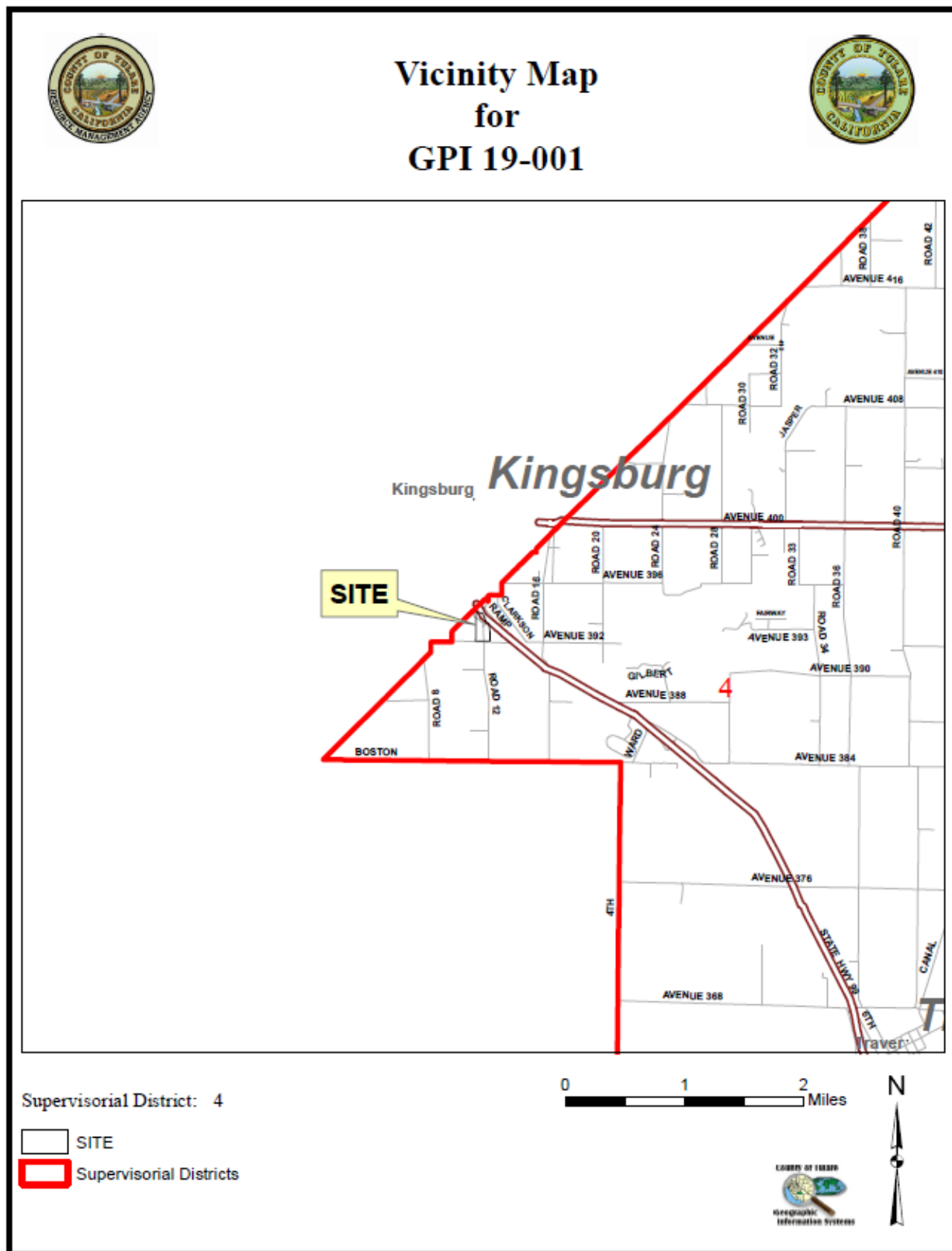
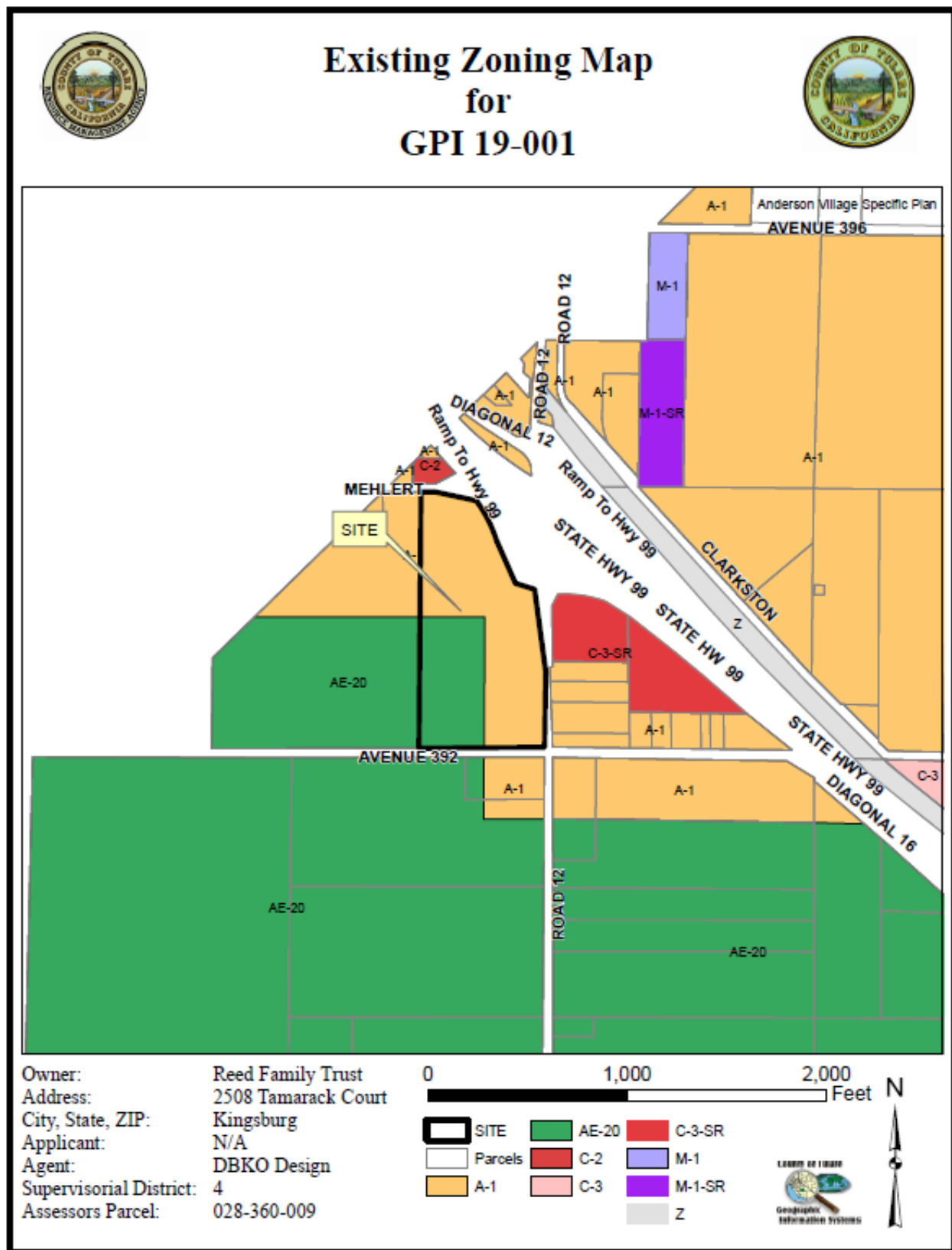


Figure 2. Aerial View of Site



Figure 3. Zoning



100,000 SQ. FT. DISTRIBUTION CENTER

LEGEND:

- BUILDING / FACILITY**
- PARKING**
- LANDSCAPING**
- DETENTION POND (40,000 G.P.)**
- PROPERTY LINE**
- WELL/WATER / PALLET POOL**
- FUELING CANOPY**
- RETAIL SHOPS**
- LOADING DOCK AND ENCLOSURE**
- PRIVATE ACCESS ROADWAY (CONCRETE AREA)**
- 100' ZONE FROM STATE HIGHWAY 99**

SCALE:

- 0.5 ACRES
- 1.0 ACRES
- 1.5 ACRES
- 2.0 ACRES
- 2.5 ACRES
- 3.0 ACRES
- 4.0 ACRES

NOTES:

- 1. ALL DIMENSIONS ARE APPROXIMATE.
- 2. THE 100' ZONE FROM STATE HIGHWAY 99 IS A REQUIREMENT OF THE CALIFORNIA HIGHWAY PATROL.
- 3. THE 100' ZONE FROM STATE HIGHWAY 99 IS A REQUIREMENT OF THE CALIFORNIA HIGHWAY PATROL.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

A. 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 checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and 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 checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

B. 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 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: _____

Hector Guerra
Printed Name

Date: 1/8/21

Chief Environmental Planner
Title

Signature: _____

Reed Schenke, P.E.
Printed Name

Date: 1.8.2020

Environmental Assessment Officer
Title

C. EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

1. AESTHETICS					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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 point.) 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"/>
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies. The western portion of the County includes a portion of the San Joaquin Valley (Valley), and is generally flat, with large agricultural areas and generally compact towns interspersed. In the eastern portion of the County are foothills and the Sierra Nevada mountain range. The project site is located on the Valley floor, which is very fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations and small and medium sized manufacturing plants make up the economic base of the Valley region. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways throughout the County, electric towers and telephone poles are noticeable. Mature trees, residential, commercial, and industrial development, utility structures, and other vertical forms are highly visible in the region because of the flat terrain. Where such vertical elements are absent, views are expansive. Most structures are small; usually one story in height, though occasionally two story structures can be seen in commercial or industrial agricultural complexes. The County provides a wide range of views from both mobile and stationary locations...¹ The proposed Project site is located on the San Joaquin Valley floor at the northwest corner of Avenue 392 and Road 12. Topographically, the Project site is flat (less than 2 percent slope across the site) with an average elevation of approximately 300 feet above mean sea level, and has historically been used for agricultural-related purposes (it is currently planted to vineyard). Other than scattered rural residences, there are no scenic resources such as rivers, lakes, rock outcroppings, historical structures, etc., within or near the Project area. The Kings River lies approximately one (1) mile southeast of the very southeast corner of the Project site

Regulatory Setting

Federal

Aesthetic resources are protected by several federal regulations, none of which are relevant to this Project because it will not be located on lands administered by a federal agency nor is the Project applicant requesting federal funding or any federal permits.

State

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California Energy Commission (CEC) adopted the 2019 Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) which became effective on January 1, 2020². Included in the changes to the Standards are new requirements for outdoor lighting. The requirements vary according to which “Lighting Zone” the lighting equipment is located. The Standards contain lighting power

¹ Tulare County 2030 General Plan: Recirculated Draft EIR (RDEIR). Page 3.1-11.

² California Department of Energy. California Building Standards Commission 2019 California Energy Code Title 24 Part 6. Section 140.7 Prescriptive Requirements for Outdoor Lighting. Page 122.

allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone the project is located. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, alterations that increase the connected load, or replace more than 50% of the existing luminaires (for each outdoor lighting application that is regulated by the Standards) must comply with the lighting power allowances for newly installed equipment.

The Standards base the allowable lighting power on the brightness of the surrounding conditions. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; conversely, when the surrounding conditions are brighter, more light is needed to see. The least lighting power is allowed in Lighting Zone 1 and increasingly more lighting power is allowed in Lighting Zones 2, 3, and 4.

The CEC defines the boundaries of Lighting Zones based on U.S. Census Bureau boundaries for urban and rural areas as well as the legal boundaries of wilderness and park areas (see Standards Table 10-114-A). By default, government designated parks, recreation areas and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government³

California Scenic Highway Program

The Scenic Highway Program allows county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program which was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. Two Eligible State Scenic Highways occur in Tulare County, SRs 198 and 190; however, they are not Designated State Scenic Highways.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 7 – Scenic Landscapes, contains the following goals and policies that relate to aesthetics, preservation of scenic vistas and daytime lighting/nighttime glare and which have potential relevance to the Project's CEQA review:

SL-1.1 Natural Landscapes which requires new development to not significantly impact or block views of Tulare County's natural landscapes;

SL-1.2 Working Landscapes which requires that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape; and

SL-2.1 Designated Scenic Routes and Highways which is intended to protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways.

a) Less Than Significant Impact: For the purposes of this Project, a scenic vista is defined as an area that is designated, signed, and accessible to the public for the purpose of viewing and sightseeing. The Project area is not classified as a County or Designated State Scenic Highway in the Tulare County General Plan. In addition, the project area is not located along a National Wild or Scenic River Corridor. The project site is in a rural area, adjacent to agricultural and commercial establishments and residences, at the northwest corner of Avenue 392 and Road 12. Zoning height limitations would restrict structures, once rezoned to C-2 and M-1, to no greater than six stories or seventy-five feet to uppermost part of roof. No parts of the Project would obstruct local scenic views, be visually intrusive or incompatible with the surrounding area, and therefore the Project would have a less than significant impact on this resource.

b) No Impact: There are no rock outcroppings, historic buildings, or other designated scenic resources within or near the Project site. The California Scenic Highway Program allows counties to nominate an eligible scenic highway to be approved by the California Department of Transportation and placed under the scenic corridor protection program. In Tulare County, there is currently one officially designated scenic highway, and two highways that are eligible for designation. Approximately two miles of the officially designated Scenic Highway (State Route) 180 passes through Tulare County and two Eligible State Scenic Highways (SR 190 and SR 198), and none of these are near the Project site. As such, the Project is not located within the viewshed of any of the listed designated or eligible highway segments.

³ Ibid. Table 140.7-A. Page 123

Additionally, the County of Tulare identified a number of County Scenic Roads in its 2012 General Plan Update; however, none of the roads are near or within the vicinity of the Project site. As a result, the Project would have no impact on existing scenic resources or highways. The Project is located in a relatively flat area and does not contain scenic resources such as significant trees, rock outcroppings, or historic buildings. Therefore, the Project would result in no impact on this resource.

- c) **Less Than Significant Impact:** As noted earlier, the Project site is located in a rural, predominantly agricultural area. It is not close to any of the State Scenic Highways or County Scenic Roads. The entire property is currently being used for grape vineyards, and the Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1). Any future developments shall be required to comply with any relevant regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. The Project site is located south of the City of Kingsburg city limit. As such, single-family subdivisions are located just north of the site, therefore, the Project will have a less than significant impact on this resource item.
- d) **Less Than Significant Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1). Any future developments shall be required to comply with any relevant regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. Therefore, the Project will have a less than significant impact on this resource Item.

2. AGRICULTURAL AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the Rural Valley Lands Plan point evaluation system prepared by the County of Tulare as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Conflict with existing zoning for agriculture use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code 12220(g), timberland (as defined in Public Resource 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"/>
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"/>
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"/>

Analysis:

Environmental Setting

The Project site is located in the San Joaquin Valley portion of Tulare County. This area is characterized by rich, highly productive farmland. Agriculture is the most important sector in Tulare County's economy, and agriculture and related industries make Tulare County one of the two most productive agricultural counties in the United States, according to Tulare County Farm Bureau statistics. "Agricultural lands (crop and commodity production and grazing) also provide the County's most visible source of open space lands. As such, the protection of agricultural lands and continued growth and production of agriculture industries is essential to all County residents."⁴

The 2018 Tulare County Annual Crop and Livestock Report listed Tulare County's total gross production value for 2018 as \$7,213,303,400. Milk was the leading agricultural commodity in Tulare County in 2015, representing 23.5% of the total crop and livestock value. The 2018 report listed over 120 different commodities, 45 of which had a gross value greater than \$1 million. The top five agricultural commodities in the County in 2018, based on total/gross value were milk, grapes, oranges, cattle, and tangerines.⁵

The most recent statewide California Farmland Conversion Report (CFCR) from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) assesses statewide farmlands from the period 2014-2016. However, Tulare County specific data from the period 2014-2016 indicates that agricultural lands in Tulare County in 2014 included 859,171 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 439,961 acres of grazing land, for a total of 1,299,132 acres of agricultural land.⁶

In line with the State of California, Tulare County has also seen a decrease in FMMP-designated farmland. Between the years 2014 and 2016, Tulare County lost 278 acres of Prime Farmland, and gained 1,469 acres of Farmland of Statewide Importance and 270 acres of Unique Farmland.⁷ Farmlands of Statewide Importance are defined as "lands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date."⁸ Overall, between 2017-2016, Tulare County lost 1,079 acres of agricultural lands (which includes 27 acres of grazing land).

As presented in **Table AG-1**, the California Land Conservation Act of 1965 2016 Status Report (December 2016) notes that 1,093,126 acres of farmland with Tulare County is under California Land Conservation Act (Williamson Act) contracts; a program designed to prevent premature conversion of farmland to residential or other urban uses. The 1,093,126 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County divided by the following categories: 569,028 acres of Williamson Act prime, 512,946 acres nonprime, and 11,052 acres of Farmland Security Zone lands (The acreage totals also include 175 acres of Williamson Act prime contract land in nonrenewal and 15,731 acres of Williamson Act of nonprime contract land in nonrenewal.)⁹

Table AG-1¹⁰:	
2012 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts	
Acres	Category
569,028	Total prime = Prime active + NR Prime
512,946	Total Nonprime = Nonprime active + NR Prime
11,052	Farmland Security Zone
1,093,126	TOTAL ACRES in Williamson Act and Farmland Security Zone contracts

Important Farmland Trends

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998¹¹. In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010; 13,815 acres of important farmland, and 14,216 acres of total farmland between 2010 and 2012; and 17,441 acres of important farmland, and 17,678 acres of total farmland between 2012 and 2014.¹² However; as noted earlier, during 2014-2016, Tulare County gained 1,469 acres of important farmland and 270 acres of Unique Farmland, but also lost 278 acres of Prime Farmland for a net reduction of 1,079 total acres of agricultural land (including 27 acres of grazing land).¹³

⁴ Tulare County General Plan 2030 Update, August 2012. Page 3-4.

“For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer).”¹⁴

Forest Lands

“Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests.”¹⁵

As the proposed Project is located on the Valley floor, there is no timberland or forest in the Project vicinity.

Regulatory Setting

Federal

Federal regulations for agriculture and forest resources are not relevant to this project because it is not a federal undertaking (the Project site is not located on lands administered by a federal agency, and the Project applicant is not requesting federal funding or any federal permits).

State

California Environmental Quality Act (CEQA) Definition of Agricultural Lands

Public Resources Code Section 21060.1 defines “agricultural land” for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP serves as a tool to analyze agricultural land use and land use changes throughout California. As such, this Project is being evaluated using the FMMP pursuant to CEQA.

California Department of Conservation, Division of Land Resource Protection

The California Department of Conservation (DOC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands. These agricultural designations are used in planning for the present and future of California’s agricultural land resources. Pursuant to the DOC’s FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM). As noted earlier the FMMP was established in 1982 to assess the location, quality and quantity of agricultural lands, and the conversion of these lands. The FMMP serves as tool to analyze agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The following list provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as Farmland.¹⁶

⁵ 2018 Tulare County Annual Crop and Livestock Report. October 2019. <https://agcomm.co.tulare.ca.us/ag/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2018-crop-report/>. Accessed May 2020.

⁶ California Department of Conservation, Division of Land Resource Protection. Table A-44 Tulare County 2014-2016 Land Use Conversion. https://www.conservation.ca.gov/dlrp/fmmp/Pages/county_info.aspx; then click on “Tulare”. Accessed August 2020.

⁷ Ibid.

⁸ Op. Cit.

⁹ Op. Cit.

¹⁰ Ibid.

¹¹ California Department of Conservation, Division of Land Resource Protection, “Williamson Act Status Report (2010)”. Available at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf
https://www.conservation.ca.gov/dlrp/wa/Pages/stats_reports.aspx

¹² Tulare County Land Use Conversion Tables 2008-2010, 2010-2012, and 2012-2014. Table A-44, Part III. Accessed at May 2020 at: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>.

¹³ Tulare County Land Use Conversion Tables 2014-2016. Table A-44, Part I. Accessed at May 2020 at: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>. Accessed May 2020.

¹⁴ Tulare County General Plan 2030 Update Recirculated Draft EIR (SCH # 2006041162). Page 3.10-6. And, Tulare County General Plan 2030 Update Background Report. Page 4-25.

¹⁵ Ibid. 4-20.

¹⁶ California Department of Conservation. FMMP – Important Farmland Map Categories. Accessed September 2020 at:

- Prime Farmland. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Unique Farmland. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated groves or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- Urban and Builtup Land. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act)

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The Department of Conservation assists all levels of government, and landowners in the interpretation of the Williamson Act related government code. The Department also researches, publishes and disseminates information regarding the policies, purposes, procedures, and administration of the Williamson Act according to government code. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the Act within their jurisdiction. These rules include but are not limited to: enrollment guidelines, acreage minimums, enforcement procedures, allowable uses, and compatible uses.¹⁷

Williamson Act Contracts are formed between a county or city and a landowner for the purpose of restricting specific parcels of land to agricultural or related open space use. Private land within locally-designated agricultural preserve areas are eligible for enrollment under a contract. The minimum term for contracts is ten years. However, since the contract term automatically renews on each anniversary date of the contract, the actual term is essentially indefinite. Landowners receive substantially reduced property tax assessments in return for enrollment under a Williamson Act contract. Property tax assessments of Williamson Act contracted land are based upon generated income as opposed to potential market value of the property.¹⁸

Forestry Resources

State regulations regarding forestry resources are not relevant to the proposed project because no forestry resources exist at the Project site.

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<https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx>

¹⁷ California Department of Conservation. Williamson Act Program. <https://www.conservation.ca.gov/dlrp/wa>. Site accessed August 2020.

¹⁸ <https://www.conservation.ca.gov/dlrp/wa/Pages/contracts.aspx>. Site accessed August 2020.

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare. The following General Plan policies apply to the proposed Project: Policies designed to promote future development patterns that focus growth within established community areas and to mitigate loss of agricultural lands include the following:

AG-1.4 Williamson Act in UDBs and HDBs wherein the County shall support non-renewal or cancellation processes that meet State law for lands within UDBs and HDBs;

AG-1.6 Conservation Easements wherein the County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including “Important Farmlands”), as defined in this Element;

AG-1.8 Agriculture Within Urban Boundaries wherein the County shall not approve applications for preserves or regular Williamson Act contracts on lands located within a UDB and/or HDB unless it is demonstrated that the restriction of such land will not detrimentally affect the growth of the community involved for the succeeding 10 years, that the property in question has special public values for open space, conservation, other comparable uses, or that the contract is consistent with the publicly desirable future use and control of the land in question. If proposed within a UDB of an incorporated city, the County shall give written notice to the affected city pursuant to Government Code §51233; *LU-1.1 Smart Growth and Healthy Communities* wherein the County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development;

LU-1.8 Encourage Infill Development wherein the County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development;

LU-2.5 Agricultural Support Facilities wherein the County shall encourage beneficial reuse of existing or vacant agricultural support facilities for new businesses (including non-agricultural uses); *PF-1.2 Location of Urban Development* wherein the County shall ensure that urban development only takes place in the following areas:

1. Within incorporated cities and CACUDBs;
2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;
3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plan;
4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and
5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the Rural Valley Lands Plan; *PF-1.3 Land Uses in UDBs/HDBs* wherein the County shall encourage those types of urban land uses that benefit from urban services to develop within UDBs and HDBs. Permanent uses which do not benefit from urban services shall be discouraged within these areas. This shall not apply to agricultural or agricultural support uses, including the cultivation of land or other uses accessory to the cultivation of land provided that such accessory uses are time-limited through Special Use Permit procedures;

PF-1.4 Available Infrastructure wherein the County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available, and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies;

PF-1.5 Planning Areas wherein County policies reflect the unique attributes of the various locations and geographic areas in the County. As such, there are policies applicable to one area of the County that are not applicable to others based on natural setting, topography, habitat, existing development, or other attributes which are unique within the planning context of the County;

PF-1.6 Appropriate Land Uses by Location wherein the County shall utilize the Land Use Element and adopted CAC General Plans, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, or Area Plans to designate land uses and intensities that reflect and maintain the appropriate level of urbanized development in each CAC General Plan, Community Plan, Hamlet Plan, Planned Community, Corridor Area, or Area Plan; and

PF-2.4 Community Plans wherein the County shall ensure that community plans are prepared, updated, and maintained for each of the communities. These plans shall include the entire area within the community's UDB and shall address the community's short and long term ability to provide necessary urban services.

Rural Valley Land Plans

For the unincorporated valley portions of Tulare County, growth is guided by the land use policies in the Rural Valley Lands Plan (RVLP) and Planning Framework Element of the Tulare County General Plan 2030 Update.

"Tulare County has identified land for urbanization according to four categories: 1) lands in and around incorporated cities, 2) lands in and around unincorporated communities, 3) lands in foothill development corridors, and 4) lands that qualify under the RVLP. The county is legally responsible for the planning and regulation of all lands that fall outside incorporated city limits, even though cities adopt their own general plans for the incorporated area and a portion of surrounding unincorporated area."

"The RVLP applies to about 773,500 acres of the valley portion of the County, outside the planned Urban Development Boundaries (UDB) and generally below the 600-foot elevation contour line along the foothills of the Sierra Nevada Mountain Range. The purpose of the RVLP is to protect and maintain the agricultural viability of rural valley areas by establishing requirements for exclusive agricultural zoning (containing minimum parcel sizes) appropriate to sustain agriculture and implementing a policy that utilizes resource information to determine the suitability of rural lands for nonagricultural uses. The goal of the RVLP is to "sustain the viability of Tulare County agriculture by restraining division and use of land which is harmful to continued agricultural use." The RVLP utilizes five exclusive agriculture (AE) zones, each requiring a different minimum parcel size (ranging from five to eighty acres). These zones are as follows: AE, AE-10, AE-20, AE-40, and AE-80. The number designation on each zone generally reflects the minimum acres of land needed to productively farm a certain crop at a commercial level."

"In order to grant an exception for the use of the AE zone on properties that have minimal or no agricultural value, a point system is used to evaluate property suitability. Points are awarded for various factors such as parcel size, available public services, and surrounding land uses. Parcels determined to be more suitable for nonagricultural uses may be zoned (discretionary review required) for urban/suburban uses. Parcels that do not meet the requirements for rezoning are not allowed to rezone and must remain agriculturally zoned. ... The RVLP point system [is used] to determine whether a site is suitable to rezone from an agricultural zone on the Valley floor to an urban zone. The county shall not allow re-zoning of parcels that accumulate 17 or more points according to the RVLP Development Criteria. If the number of points accumulated is 11 or less, the parcel may be considered for nonagricultural zoning. A parcel receiving 12 to 16 points shall be determined to have fallen within a "gray" area in which no clear cut decision is readily apparent. In such instances, the Planning Commission and Board of Supervisors shall make a decision based on the unique circumstances pertaining to the particular parcel of land, including factors not covered by this system."

Tulare County Agricultural Conservation Easement Program

The Tulare County Agricultural Conservation Easement Program (ACEP, see Appendix "A") was established to allow the use of agricultural easements to reduce or mitigate any significant impacts resulting from the conversion of certain agricultural land to non-agricultural uses. Resolution 2016-0323, adopted by the Tulare County Board of Supervisors on May 3, 2016, requires the use of farmland conservation easements or other farmland conservation mechanisms for projects requiring County discretionary land use entitlements and the conversion of five (5) or more acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.

"CRITERIA FOR AN EASEMENT: A "Farmland conservation easement" means for the purposes of this ACEP, an easement over agricultural land for the purpose of restricting its use for the term set forth in this resolution for primarily agricultural and agricultural-compatible uses. Any easement offered or used under this program shall, at a minimum, meet these criteria:

- A) Preferably the easement will be located in Tulare County but other suitable land may be encumbered subject to approval by the Board of Supervisors.
- B) The easement will include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency.
- C) The land placed under the easement must be of substantially the same quality, have or could acquire access to water, and could otherwise be feasibly cultivated.

- D) The land placed under the easement must be at a minimum of a one to one (1:1) ratio or its functional equivalent to the loss of defined agricultural lands mitigated.”

TABLE AG-2 SOIL INFORMATION FOR PROJECT SITE				
Map Unit Symbol	Map Unit Name	Non-Irrigated Capability Class	Rating Grade	Acreage/Site Percentage*
105	Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes	6s	4 Poor	100%
Source: USDA/NRCS 2020 accessed at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx .				

As shown in **Table AG-2**, all soils within the Project site have a Poor Rating Grade of 6 meaning that the soils “soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, the density can be increased only slightly by compaction have severe limitations that reduce the choice of plants or that require very careful management, or both” (USDA, 2020).³

- a) **Less Than Significant Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. Checking against the California Important Farmland Finder Map¹⁹, the Project area is classified as Unique Farmland. However; as noted earlier, during 2014-2016, Tulare County gained 1,469 acres of important farmland and 270 acres of Unique Farmland, therefore the loss of 15.71 acres of Unique Farmland results in a net gain of 254.29 acres of Unique Farmland. The Project is consistent with *PF-1.2 Location of Urban Development* wherein the County shall ensure that urban development only takes place in the following areas within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets. Also, the Project is consistent with *PF-1.4 Available Infrastructure* wherein the County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available, and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies. *PF-1.4* can be satisfied when the applicant receives a “Will-Serve Letter” from both the City of Kingsburg and Selma-Kingsburg-Fowler Sanitary District for potable water and sanitary sewer services; respectively. As such, the Project would result in a less than significant impact to this resource.
- b) **No Impact:** According to County’s GIS system, the Project area is not under the Williamson Act. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. All future project proposals within the area will be reviewed on an individual basis and shall be required to comply with any relevant regulations and requirements in the County’s General Plan, Zoning Ordinance, as well as State and Federal regulations. Thus, the Project will result in no impact to this resource.
- c) and d) **No Impact:** The Project will not occur on land zoned as forest land or timberland, or result in a loss of forest land. As such, the Project would have no impact on these resources.
- e) **Less Than Significant Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. As such, the Project does not 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; as such, due to the nature of the Project (i.e., a zone change and development proposal on agricultural land) the impact to this resource will be less than significant.

¹⁹ California Department of Conservation, California Important Farmland Finder, accessed September 2020 at: <https://maps.conservation.ca.gov/DLRP/CIFF/>.

3.		AIR QUALITY			
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.			LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
SIGNIFICANT IMPACT					
Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?				
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?				
c)	Expose sensitive receptors to substantial pollutant concentrations?				
d)	Result is other emissions (such as those leading to odors adversely affecting a substantial number of people?				
Analysis:					
An Air Quality and Greenhouse Gas Analysis Technical Memo was prepared by RMA staff to evaluate potential impacts that development of the Project site may have on air quality (see Attachment “A”).					
Environmental Setting					
The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB), a continuous inter-mountain air basin. The Sierra Nevada Range forms the eastern boundary; the Coast Range forms the western boundary; and the Tehachapi Mountains form the southern boundary. These topographic features restrict air movement through and beyond the SJVAB. The SJVAB is comprised of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties and the valley portion of Kern County; it is approximately 25,000 square miles in area. Tulare County lies within the southern portion of the SJVAB. Air resources in the SJVAB is managed by the San Joaquin Valley Air Pollution Control District (Air District).					
Regulatory Setting					
Both the federal government (through the United State Environmental Protection Agency (EPA)) and the State of California (through the California Air Resources Board (ARB)) have established health-based ambient air quality standards (AAQS) for six air pollutants, commonly referred to as “criteria pollutants.” The six criteria pollutants are: carbon monoxide (CO), ozone (O3), sulfur dioxide (SO2), nitrogen dioxide (NO2), particulate matter (PM10 and PM2.5), and lead (Pb).					
Federal					
National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for each criteria pollutant to protect the public health and welfare. The federal and state standards were developed independently with differing purposes and methods, although both processes are intended to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent.					
The Federal Clean Air Act requires EPA to set NAAQS for the six criteria pollutants, noted above, that occur throughout the United States. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA regulates the criteria pollutants by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.					
EPA is required to designate areas as meeting (attainment) or not meeting (nonattainment) the air pollutant standards. The Federal Clean Air Act (CAA) further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states will use to attain the NAAQS. The Federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to					

incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the Federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures.

The SJVAB is considered to be in attainment for federal and state air quality standards for carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂); attainment for federal and non-attainment for state air quality standards for respirable particulate matter (PM₁₀); and non-attainment of state and federal air quality standards for ozone (O₃) and fine particulate matter (PM_{2.5}). To meet federal Clean Air Act requirements, the Air District has adopted the following attainment plans: the 2004 Extreme Ozone Attainment Demonstration Plan (for the 1-hour standard); the 2007 Ozone Plan (for the 1997 8-hour standard); the 2009 RACT SIP; the 2013 Plan for the Revoked 1-Hour Ozone Standard; the 2014 RACT SIP; the 2016 Plan for the 2008 8-Hour Ozone Standard; the 2007 PM10 Maintenance Plan; the 2008 PM2.5 Plan (for the 1997 annual standard); the 2012 PM2.5 Plan (for the 2006 24-hour standard); the 2015 Plan for the 1997 PM2.5 Standard (for annual and 24-hour standards); the 2016 Moderate Area Plan for the 2012 PM2.5 Standard (annual standard); the 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (annual and 24-hour standards); and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide. The State does not have an attainment deadline for the ozone standards; however, it does require implementation of all feasible measures to achieve attainment at the earliest date possible. State PM₁₀ and PM_{2.5} standards have no attainment planning requirements but, must demonstrate that all measures feasible for the area have been adopted.

State

The California Air Resources Board (CARB or ARB) is the state agency responsible for implementing the federal and state Clean Air Acts. ARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen Sulfide (H₂S), and vinyl chloride.

The Project is located within the San Joaquin Valley Air Basin, which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and parts of Kern counties and is managed by the San Joaquin Valley Unified Air Pollution Control District (SJVAPCD or Air District).

Air basins are designated as attainment or nonattainment. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

Standards and attainment status for listed pollutants in the Air District can be found in **Table AQ-1**. Note that both state and federal standards are presented.

Table AQ-1 SJVAB Attainment Status		
	Designation/Classification	
Pollutant	Federal Standards	State Standards
Ozone – one hour	No Federal Standard ¹	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Extreme ²	Nonattainment
PM ₁₀	Attainment ³	Nonattainment
PM _{2.5}	Nonattainment ⁴	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

- 1 Effective June 15, 2005, the U.S. EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- 2 Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010)
- 3 On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM₁₀ National Ambient Air Quality Standard (NAAQS) and approved the PM₁₀ Maintenance Plan.
- 4 The Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. EPA designated the Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).

Source: San Joaquin Valley Unified Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status.
<http://www.valleyair.org/aqinfo/attainment.htm>. Accessed April 2019.

Local

San Joaquin Valley Unified Air Pollution Control District

Air quality plans and subsequent rules and regulations are used to bring air basins into attainment with NAAQS designed to protect the health and safety of residents within that air basin. In order to show attainment of the standards, the Air District analyzes the growth projections in the SJVAB, contributing factors in the formation and emission of air pollutants, and existing and future emissions controls. The Air District then formulates air quality plans which detail the Air District's control strategy to reach attainment.

New Source Review (NSR), discussed further below as Air District Rule 2201, is a major component of the Air District's attainment strategy as it provides mechanisms by which operating permits may be granted, without interfering with the attainment or maintenance of NAAQS. District implementation of NSR ensures that there is no net increase in emissions above specified thresholds from new and modified stationary sources for all nonattainment pollutants and their precursors.

Indirect Source Review (ISR), discussed further below as Air District Rule 9510, is another important component of the Air District's attainment strategy. ISR requires developers to reduce emissions from residential, commercial and industrial development projects not subject to Air District permitting requirements. Compliance with ISR reduces criteria pollutant emissions from both construction- and operation-related activities of development projects within the SJVAB.

The Air District is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. With the exception of the gas station/mini mart and fast food uses proposed for Lot 1, specific uses within the Project site is unknown at this time. The Air District has several rules and regulations that may apply to the Project, including but not limited to the following:

- Regulation VIII (Fugitive PM₁₀ Prohibitions) – This regulation is a series of eight rules designed to reduce PM₁₀ emissions by reducing fugitive dust emissions. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced.
- Rule 2010 (Permits Required) – This rule requires any person constructing, altering, replacing, or operating a source operation that emits, may emit, or may reduce emissions to obtain an Authority to Construct (ATC) permit and a Permit to Operate (PTO).
- Rule 2201 (New and Modified Stationary Source Review) – This rule provides for the review of new and modified stationary sources of air pollution and to provide mechanisms including emission trade-offs by which ATC permits may be granted without interfering with the attainment or maintenance of ambient air quality standards. NSR applies to new stationary sources and all modification to existing stationary sources which are subject to District permit requirements and, generally requires that new or modified equipment include Best Available Control Technology (BACT) and the emission increase above specified thresholds be offset.
- Rule 3135 (Dust Control Plan Fees) – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the Air District's cost for reviewing these plans and conducting compliance inspections.
- Rules 4101 (Visible Emissions) and 4102 (Nuisance) – These rules apply to any source of air contaminants and prohibit the visible emissions of air contaminants or any activity which creates a public nuisance.
- Rule 4601 (Architectural Coatings) – This rule specifies requirements for the storage, cleanup, and labeling of architectural coatings. The rule applies to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the Air District.
- Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) – This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

- Rule 9510 (Indirect Source Review) –This rule requires developers to mitigate project emissions through 1) on-site design features that reduce trips and vehicle miles traveled, 2) controls on other emission sources, and 3) with reductions obtained through the payment of a mitigation fee used to fund off-site air quality mitigation projects. Rule 9510 requires construction-related NO_x emission reductions of 20 percent and PM₁₀ reductions of 45 percent and operation-related NO_x reductions of 33 percent and PM₁₀ reductions of 50 percent. These reductions are calculated by comparing the unmitigated baseline emissions and mitigated emissions from the first year of project operation. The Air District recommends using the California Emissions Estimator Model (CalEEMod) to quantify project emissions and emission reductions.

In 1991 the Air District committed to an Enhanced CEQA Review control measure in its Air Quality Attainment Plan. This program requires the Air District to provide technical assistance to Lead Agencies in addressing air quality issues in environmental documents. In addition, it requires the Air District, acting as a Responsible or Trustee Agency, to comment on air quality impacts and suggest mitigation measures to reduce air quality impacts from land-use related developmental projects. In 1998, the Air District produced their guidance document, the “Guide for Assessing and Mitigating Air Quality Impacts” (GAMAQI), which provides Lead Agencies, consultants and project applicants with uniform procedures for addressing air quality impacts in environmental documents.²⁰ The GAMAQI was revised in 2002 and again in 2015. As new information becomes available, the Air District updates the GAMAQI with technical advisories. The air quality assessment provided in the Air Quality and Greenhouse Gas Assessment Technical Memo (AQ Memo, see Attachment “A”) was conducted following Air District recommendations for quantification of emissions and evaluation of potential impacts as provided in the GAMAQI.

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project:

AQ-1.1 Cooperation with Other Agencies requiring the County to cooperate with other local, regional, Federal, and State agencies (e.g., Valley Air District) in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards to achieve better air quality conditions locally and regionally;

AQ-1.5 California Environmental Quality Act (CEQA) Compliance where the County will ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible;

AQ-2.2 Indirect Source Review regarding mitigating air quality impacts associated with the Project to Valley Air District’s Rule 9510;

AQ-3.4 Landscape regarding the use of ecologically based landscape design principles that can improve local air quality by absorbing CO₂, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates; and

AQ-4.2 Dust Suppression Measures regarding implementation of dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions.

a) Less Than Significant Impact: Air quality plans (also known as AQPs or attainment plans) and subsequent rules are used to bring the applicable air basin into attainment with federal AAQS designed to protect the health and safety of residents within that air basin. In order to show attainment of the standards, the Air District analyzes the growth projections in the San Joaquin Valley Air Basin (SJVAB), contributing factors in the formation and emission of air pollutants, and existing and future emissions controls. The Air District then formulates an AQP which details the Air District’s control strategy to reach attainment. The proposed Project will be required to comply with all applicable Air District rules and regulations, which are the major components to the AQPs and the Air District’s attainment strategy.

The Air District has established thresholds of significance for criteria pollutant emissions. These thresholds are based on District New Source Review (NSR) offset requirements for stationary sources. “Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District’s air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to “Not conflict or obstruct implementation of the District’s air quality plan.”

The Air District has three sets of significance thresholds based on the source of the emissions. According to the GAMAQI, “The District identifies thresholds that separate a project’s short-term emissions from its long-term emissions. The short-term emissions

²⁰ San Joaquin Valley Air Pollution Control District. Enhanced CEQA Review Program Components. http://www.valleyair.org/transportation/ceqa_components.htm, accessed December 2020.

are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations.”

Long-term (operational) emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, “District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District’s significance thresholds... District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds....”

The Air District’s significance thresholds are provided in **Table AQ-2** (Table 1 of the AQ-GHG Technical Memo).

Table AQ-2. Air District Criteria Pollutant Significance Thresholds			
Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15

Source: Air District, GAMAQI, Table 2, page 80; and <http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf>, accessed November 2020.

The development of the Project would result in short-term, temporary, and intermittent construction-related and long-term operations-related criteria air pollutant emissions. Consistent with the Air District guidance, Project-related construction and operation emissions have been estimated using CalEEMod, Version 2016.3.2 (the most recent version of the model). The CalEEMod modeling results can be found in Attachment “A”.

Table AQ-3 (Table 7 of the AQ-GHG Tech Memo) provides the construction-related criteria pollutant emissions and **Table AQ-4** (Table 8 of the AQ-GHG Tech Memo) provides the operations-related criteria pollutant emissions resulting from buildout of the proposed Project.

Table AQ-3. Construction Emissions (including compliance with agency regulations, project design, and implementation of ISR)						
Phase	Estimated Emissions, tons per year					
	ROG	NOx	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
Site Prep & Grading (2021)	0.0853	0.7539	0.5875	1.2800E-03	0.1273	0.0852
Parcel 6 (2022)	0.6120	1.7515	2.2435	4.5300E-03	0.0952	0.1134
Parcel 2 (2023)	0.3879	1.0446	1.4026	2.7900E-03	0.0466	0.0601
Parcel 3 (2023)	0.3267	1.0373	1.3915	2.7400E-03	0.0444	0.0591
Parcel 4 (2023)	0.3118	1.0233	1.3763	2.6500E-03	0.0415	0.0576
Parcel 5 (2023)	0.3767	1.0444	1.4003	2.7800E-03	0.0461	0.0599
Parcel 1 (2025)	0.3304	1.2201	1.7317	3.6600E-03	0.0578	0.0656
Parcel 6 Expansion (2027)	0.2264	0.2480	0.3879	7.1000E-04	0.0108	0.0136
Total Construction	2.6572	8.1230	10.5213	0.0211	0.4697	0.5145
Maximum Annual Emissions (2023)	1.4031	4.1495	5.5707	0.0110	0.1786	0.2367
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No

Source: Table 7 of Attachment “A”.

Table AQ-4. Operational Emissions (including compliance with agency regulations, project design, and implementation of ISR)						
Phase	Estimated Emissions, tons per year					
	ROG	NO _x	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
Parcel 6 (2022)	0.3108	0.3860	0.6280	0.0027	0.0931	0.0474
Parcel 2 (2024)	0.8646	0.4517	6.1339	0.0289	1.1004	0.5419
Parcel 3 (2024)	0.1824	0.2251	0.3491	0.0016	0.0558	0.0284
Parcel 4 (2024)	0.1315	0.1613	0.2502	0.0011	0.0400	0.0204
Parcel 5 (2024)	0.1218	0.1501	0.2327	0.0011	0.0372	0.0189
Parcel 1 (2026)	0.1733	0.2139	0.3316	0.0015	0.0530	0.0270
Parcel 6 Expansion (2028)	0.1598	0.1933	0.2558	0.0013	0.0525	0.0266
Total Operations at Buildout	1.9442	1.7813	8.1813	0.0382	1.4319	0.7106
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
<i>Source: Table 8 of Attachment "A"</i>						

As previously noted, the Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants would “Not conflict or obstruct implementation of the District’s air quality plan.”²¹ The proposed Project will comply with all applicable federal, state, and Air District rules and regulations. As demonstrated in **Tables AQ-3 and AQ-4**, with compliance of existing rules and regulations the estimated Project-related emissions during construction and operations will not exceed the Air District’s CEQA significance thresholds for any criteria pollutant. Furthermore, as a condition of approval, the applicant shall consult with the Air District prior to the start of construction for each phase to further evaluate potential impacts based on Project-specific details and to determine whether a localized pollutant analysis (such as an Ambient Air Quality Analysis or Health Risk Assessment) would be required. Therefore, the Project would not conflict with or obstruct implementation of the applicable AQPs. The Project will have a Less Than Significant Impact related to this Checklist Item.

- b) Less Than Significant Impact:** The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the Air Basin also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project’s individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

To result in a less than significant impact, the following three criteria must be true:

1. *Regional analysis: emissions of nonattainment pollutants must be below the District’s regional significance thresholds.*

The San Joaquin Valley Air Basin is currently designated as non-attainment for ozone, PM₁₀, and PM_{2.5}. (See **Table AQ-1** and Table 4 of the AQ-GHG Tech Memo) for designations and classifications of all criteria pollutants.) Therefore, if the Project exceeds the regional thresholds for PM₁₀ or PM_{2.5}, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional thresholds for NO_x or ROG, then it follows that the project would contribute to a cumulatively considerable impact for ozone. As presented in **Tables AQ-3 and AQ-4** (Tables 7 and 8 of the AQ-GHG Tech Memo), the proposed Project construction- and operational-related emissions would not exceed the Air District’s thresholds of significance for any criteria pollutant. Therefore, this Project would not cumulatively contribute to a significant impact.

2. *Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations.*

Project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. The Air District has determined that projects with emissions below the thresholds of significance would not conflict or obstruct implementation of the Air District’s AQPs. As the Project’s construction- and operational-related emissions do not exceed any thresholds of significance, the Project will not conflict with the current AQPs. Furthermore, the Project will comply with all applicable Air District rules, regulations, and control

²¹ Air District, GAMAQI, Section 7.12, Page 65.

measures, including Regulation VIII (Fugitive PM₁₀ Prohibitions) and Rule 9510 (Indirect Source Review), which have been adopted to reduce potential impacts from project-related emissions. Therefore, the Project is consistent with the AQPs and will have a less than significant impact regarding compliance with applicable rules and regulations.

3. *Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants.*

Since the SJVAB is in nonattainment for PM₁₀, PM_{2.5} and ozone, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable and the Air District's regional thresholds for NO_x, ROG, PM₁₀ and PM_{2.5} are applied as cumulative contribution thresholds. As shown in **Tables AQ-3 and AQ-4** (Tables 7 and 8 of the AQ-GHG Tech Memo), Project-related criteria pollutant emissions would not exceed any threshold of significance during Project construction or operation, which demonstrates the Project's consistency with the applicable AQPs. Therefore, Project-related emissions would not significantly contribute to the existing violation of air quality standards and will have a less than significant impact regarding cumulative health impacts.

- c) **Less Than Significant Impact:** "Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, Lead Agency staff need to consider the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography."²²

The standard measure of the severity of impact is the concentration of a pollutant in the atmosphere compared to the ambient air quality standard for the pollutant for a specified period of time. The severity of the impact increases with the concentration and the amount of time that people are exposed to the pollutant. The change in health impacts with concentration are described in the Air Quality Index (AQI) tables found on the Environmental Protection Agency's (EPA) AirNow website.²³ The Air District provides screening criteria that if exceeded would require dispersion modeling to determine if project emissions would result in a significant health impact.

Pursuant to Air District recommendations and following Air District procedures, the Project's daily emissions were evaluated to determine whether an Ambient Air Quality Analysis (AAQA) would be warranted for the Project.

Table AQ-5 (Table 9 of the AQ-GHG Tech Memo) provides Project-related daily construction emissions. **Table AQ-6** (Table 10 of the AQ-GHG Tech Memo) provides Project-related daily operational emissions.

Table AQ-5. Daily Construction Emissions (pounds/day)						
Phase	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Site Prep, Grading, Basin (2021)	4.27	47.12	29.38	0.06	7.27	4.26
Parcel 6 (2022)	4.60	16.46	16.87	0.03	1.30	0.85
Parcel 2 (2023)	3.53	11.87	12.75	0.03	0.77	0.55
Parcel 3 (2023)	2.97	11.79	12.65	0.02	0.73	0.54
Parcel 4 (2023)	2.83	11.63	12.51	0.02	0.69	0.52
Parcel 5 (2023)	3.42	11.87	12.73	0.03	0.76	0.54
Parcel 1 (2025)	2.75	12.71	14.43	0.03	0.88	0.55
Parcel 6 expansion (2027)	4.12	5.64	7.05	0.01	0.36	0.25
Maximum Daily Emissions (2023)	12.76	47.15	50.64	0.10	2.95	2.15
Exceeds 100 lb/day?	No	No	No	No	No	No
<i>Source: Table 9 of Attachment "A"</i>						

²² Air District, GAMAQI, page 66

²³ US Environmental Protection Agency. AirNow at <https://cfpub.epa.gov/airnow/index.cfm?action=airnow.calculator> (or <https://www.airnow.gov/aqi/aqi-calculator-concentration/>) and AQI Basics at <https://www.airnow.gov/aqi/aqi-basics/>

Table AQ-6. Daily Operational Emissions (pounds/day) ¹						
Phase	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Parcel 6 (2022)	2.35	4.25	4.76	0.02	1.26	0.36
Parcel 2 (2024)	6.55	5.01	46.47	0.22	14.90	4.11
Parcel 3 (2024)	1.38	2.48	2.64	0.01	0.76	0.22
Parcel 4 (2024)	1.00	1.78	1.90	0.01	0.54	0.15
Parcel 5 (2024)	0.92	1.65	1.76	0.01	0.50	0.14
Parcel 1 (2026)	0.95	1.70	1.82	0.01	0.52	0.15
Parcel 6 Expansion (2028)	1.21	2.13	1.94	0.01	0.71	0.20
Total Daily Operations at Buildout	14.37	19.00	61.28	0.29	19.20	5.33
Exceeds 100 lb/day?	No	No	No	No	No	No
<i>Source: Table 10 of Attachment "A"</i>						

As presented in **Tables AQ-5 and AQ-6** (Tables 9 and 10 of the AQ-GHG Tech Memo), daily criteria pollutant emissions associated with the construction and operation of the Project would not exceed the Air District's AAQA screening thresholds of 100 pounds per day. As such, the Project will not expose sensitive receptors to substantial criteria pollutant concentrations. Therefore, the Project will have a Less than Significant Impact related to this Checklist Item.

As discussed in the AQ-GHG Tech Memo, non-criteria pollutant emissions (i.e., diesel particulate matter, toxic air contaminants, valley fever spores, and natural occurring asbestos) could result in potential risks to sensitive receptors. Also, construction- and operation-related activities associated with future development of the Project site may require the transport and use of hazardous materials. Consumer products and gasoline are regulated by the State and use of these products would not pose a significant risk to residents or nearby receptors. Medium- and Heavy-duty diesel trucks would be a source of diesel particulate matter, which is considered to be a TAC. The County will work with the Air District as proposals for development of the site are submitted to the County to determine whether health risk assessments would be required for diesel truck trips associated with each proposed use or for other equipment that may require Air District permits. Furthermore, future applicants will be required to comply with all local, state, and federal policies related to emission of TACs/HAPs in the event such pollutants require control efforts to minimize their impacts. Tulare County Environmental Health Division will require a Hazardous Waste Business Plan if materials exceed 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (compressed gas) handled or stored on site. As such, the Project will not expose sensitive receptors to substantial pollutant concentrations. Less Than Significant Impacts related to this Checklist Item will occur.

- d) Less Than Significant Impact:** Potential odor sources associated with construction-related activities could originate from diesel exhaust from construction equipment and fumes from architectural coating and paving operations. However, construction-related odors, if perceptible, would dissipate as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during construction would not affect a substantial number of people.

Table AQ-7. Air District Screening Levels for Potential Odor Sources	
Odor Generator / Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Sources: Air District, GAMAQI, Table 6, page 103; and http://www.valleyair.org/transportation/GAMAQI-2015/GAMAQI-Criteria-Pollutant-Thresholds-of-Odors.pdf .	

As presented in **Table AQ-7** (Table 6 of the AQ-GHG Tech Memo), the Air District has determined the common land use types that are known to produce odors in the San Joaquin Valley Air Basin. As previously noted, future tenants and specific land uses are not yet known; however, operation of the proposed Project is subject to Air District Rule 4102 (Nuisance) and future uses are not anticipated to create odorous emissions. To ensure potential nuisance odor impacts are addressed, a condition of approval requiring a more detailed analysis for future uses identified in **Table AQ-7** (Table 6 of the AQ-GHG Tech Memo), if any, within the Project site. The detailed analysis would involve contacting the Air District's Compliance Division for information regarding odor complaints. Implementation of the applicable General Plan policies and compliance with applicable Air District rules and regulations specifically designed to address air quality and odor impacts, would reduce potential odor impacts. Therefore, the proposed Project would not result objectionable odors adversely affecting a substantial number of people. Less Than Significant Project-specific Impacts related to this Checklist Item will occur.

4. BIOLOGICAL RESOURCES

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
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"/>

Analysis:

A Biological Species Evaluation Technical Memo was prepared by RMA staff to evaluate potential impacts that development of the Project site may have on biological resources (see Attachment "B").

Environmental Setting

The entire property is currently being used as a vineyard. The Project proposes to rezone the entire 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1) to accommodate commercial and industrial uses.

Special Status Species

Based on the information in the CNDDDB and BIOS, there are three (3) natural communities, thirty-three (33) special status animal species, and twenty-one (21) special status plant species recorded within the 9-quadrangle Project area (Selma, Conejo, Malaga, Sanger, Wahtoke, Reedley, Traver, Burris Park, and Laton). Of the fifty-four (54) species identified in BIOS, twenty-two (22) animal species and four (4) plant species are classified as threatened, endangered, candidate, and/or species of special concern under federal and/or state ranking; and fourteen (14) plant species are classified by the California Native Plant Society as rare, threatened, or endangered in California, but not classified by the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) as threatened, endangered, or candidate species. (See Attachment “B”)

Based on the information in the CNDDDB and BIOS, within the Reedley and Traver quadrangles (Tulare County), the Conejo and Selma quadrangles (Fresno County), and Burris Park quadrangle (Kings County), the Project site is within the historic range (within a five (5) mile radius) of six (6) special status animal species recorded within a 5-mile radius of the Project site: *Buteo swainsoni* (Swainson’s hawk); *Ambystoma californiense* (California tiger salamander); *Antrozous pallidus* (pallid bat); *Eumops perotis californicus* (western mastiff bat); *Coccyzus americanus occidentalis* (western yellow-billed cuckoo); and *Bombus crotchii* (Crotch bumble bee).

To ensure the Project will have a less than significant impact on biological species within the Project area, mitigations measures will be implemented as contained in the Mitigation Monitoring and Reporting Program and as summarized in Item a) of this discussion.

Regulatory Setting

Federal

Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries. Section 9 of the FESA prohibits the taking of listed wildlife, where taking is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16USC1538). Pursuant to Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed plant or wildlife species or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties, provided a Habitat Conservation Plan (HCP) is developed.

Migratory Bird Treaty Act

The MBTA implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits are in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the CDFG Code.

Federal Clean Water Act

The Federal Clean Water Act’s (CWA’s) purpose is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (ACOE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 7b).” The USEPA also has authority over wetlands and may override an ACOE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or Waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the RWQCB.

State

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called candidates by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the CDFG Code as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the CDFG to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened, or candidate species or result in destruction or adverse modification of essential habitat. The CDFG administers the act and authorizes take through Section 2081 agreements (except for designated fully protected species).

Fully Protected Species

The State of California first began to designate species as fully protected prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered pursuant to the CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CDFG Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act

Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (CDFG Code Sections 1900 to 1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants that are not protected pursuant to NPPA. In this case, plants listed as rare or endangered pursuant to the NPPA are not protected pursuant to CESA, but can be protected pursuant to the CEQA. In addition, plants that are not state listed, but that meet the standards for listing, are also protected pursuant to CEQA (Guidelines, Section 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the CNPS Inventory potentially qualify for protection pursuant to CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection pursuant to CEQA. List 3 includes plants for which more information is needed on taxonomy or distribution. Some of these are rare and endangered enough to qualify for protection pursuant to CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project:

ERM-1.1 Protection of Rare and Endangered Species which protects environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development;

ERM-1.4 Protect Riparian Areas where the County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls;

ERM-1.6 Management of Wetlands where the County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats;

ERM-1.7 Planting of Native Vegetation where the County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained; and

ERM-1.16 Cooperate with Wildlife Agencies which states that the County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

a) Less Than Significant Impact: The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial

and industrial uses. Future development of the Project site shall be required to comply with any applicable regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations.

"The most recent California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), RareFind 5 and Biogeographic Information and Observation System (BIOS) was accessed between December 31, 2020, and January 4, 2021. These databases were utilized in the identification of the historic range of special status plant and animal species within the Project vicinity, evaluation of potential impacts on biological species, and determination of applicability of mitigation measures, if needed.

- **9-Quad Area:** The 9-quadrangle Project vicinity includes the Malaga, Sanger, Wahtoke, Conejo, Selma, Reedley, Laton, Burris Park, and Traver quadrangles, and includes portions of Tulare, Kings, and Fresno Counties (see Attachment 1). Review of BIOS (which includes both mapped and unprocessed data) indicates that there are three (3) natural communities, thirty-three (33) special status animal species, and twenty-one (21) special status plant species recorded within the 9-quadrangle Project vicinity. Of the fifty-four (54) species identified in BIOS, twenty-two (22) animal species and four (4) plant species are classified as threatened, endangered, candidate, and/or species of special concern under federal and/or state ranking; and fourteen (14) plant species are classified by the California Native Plant Society as rare, threatened, or endangered in California, but not classified by the United States Fish and Wildlife Service (USFWS) or CDFW as threatened, endangered, or candidate species. (See Attachment 2)
- **Project Quad:** The Project is located within the Selma quadrangle. There are three (3) special status animal species recorded within the Selma quadrangle in which the Project is located. These species include: *Buteo swainsoni* (Swainson's hawk); *Coccyzus americanus occidentalis* (western yellow-billed cuckoo); and *Bombus crotchii* (Crotch bumble bee). The Swainson's hawk and Crotch bumble bee are presumed extant while the western yellow-billed cuckoo is possibly extirpated. There have been no special status plant species recorded within the Selma quadrangle. (See Attachment 3)
- **5-Mile Radius:** There are six (6) special status animal species recorded within a 5-mile radius of the Project site: *Buteo swainsoni* (Swainson's hawk); *Ambystoma californiense* (California tiger salamander); *Antrozous pallidus* (pallid bat); *Eumops perotis californicus* (western mastiff bat); *Coccyzus americanus occidentalis* (western yellow-billed cuckoo); and *Bombus crotchii* (Crotch bumble bee). The California tiger salamander has been determined to be extirpated; the western yellow-billed cuckoo is possibly extirpated; and the Swainson's hawk, pallid bat, western mastiff bat, and Crotch bumble bee are presumed extant. There have been no special status plant species recorded within the 5-mile radius. (See Attachment 4)
- **1-Mile Radius:** There is one (1) special status animal species recorded within a 1-mile radius of the Project site: *Buteo swainsoni* (Swainson's hawk). The Swainson's hawk is presumed extant. There have been no special status plant species recorded within the 1-mile radius. (See Attachment 5)
- **Project Site:** The Project site is within a recorded historic range of one (1) special status animal species, *Buteo swainsoni* (Swainson's hawk). The Swainson's hawk is presumed extant. The Project site is not within any recorded historic range of any special status plant species (See Figure 3).

Based on the information provided in the CNDDDB and BIOS, there have been no special status plant species recorded within a 5-mile radius of the Project site, and no special status plant species, riparian habitat, or other natural community recorded within a 1-mile radius. However, Mitigation Measure BIO-1 will be required prior to any construction-related activities to ensure the Project will have a less than significant impact on special status plant species.

Mitigation Measures for Special Status Plant Species

BIO-1: (*Pre-construction Survey – Special Status Plant Species*) A qualified biologist/botanist shall conduct pre-construction surveys for special status plant species in accordance with the California Department of Fish and Wildlife (CDFW) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). This protocol includes identification of reference populations to facilitate the likelihood of field investigation occurring during the appropriate floristic period. Surveys should be timed to coincide with flowering periods for species that could occur (March-May). In the absence of protocol-level surveys being performed, additional surveys may be necessary.

- If special status plant species are not identified during pre-construction surveys, no further action is required.
- If special status plant species are detected during pre-construction surveys, the biologist/botanist will supervise establishment of a minimum 50-foot no disturbance buffer from the outer edge of the plant population. If buffers

cannot be maintained, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate minimization actions to be taken as appropriate for the species identified and to determine permitting needs.

Based on the information provided in the CNDDDB and BIOS, there have been six (6) special status animal species recorded within a 5-mile radius of the Project site, with one (1) of these species, the Swainson's hawk, having historical range located with the Project site.

The California tiger salamander was recorded approximately 1.1 mile south of the Project site and its presence is classified as extirpated. The the western yellow-billed cuckoo and Crotch bumble bee were recorded approximately 4.7 miles northwest of the Project site. The western yellow-billed cuckoo presence is classified as possibly extirpated. The Crotch bumble bee presence is classified as presumed extant. The pallid bat was recorded approximately 4.4 miles northeast of the Project site and western mastiff bat was recorded approximately 4.3 miles southeast of the Project site. The Project site is currently used as a vineyard and does not provide suitable habitat for these bat species. To ensure the Project will have a less than significant impact on these five (5) special status species, as well as any other special status animal species, Mitigation Measure BIO-2 will be required prior to any construction-related activities.

Mitigation Measures for Special Status Animal Species

BIO-2: (*Pre-construction Survey – Special Status Animal Species*) A qualified biologist will conduct pre-construction surveys during the appropriate periods for special status animal species in accordance with CDFW guidance and recommendations. In the absence of protocol-level surveys being performed, additional surveys may be necessary.

- If special status animal species are not identified during pre-construction surveys, no further action is required.
- If special status animal species are detected during pre-construction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate avoidance and minimization actions to be taken as applicable for the species identified and to determine permitting needs.

In the event that any special status plant or animal species are identified during pre-construction surveys, Mitigation Measure BIO-3 will be required prior to the start of construction to reduce potential impacts during construction-related activities.

Mitigation Measures for Special Status Species Identified in Pre-construction Surveys

BIO-3: (*Employee Education Program*) Prior to the start of construction, the applicant shall retain a qualified biologist/botanist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the special status species that occur, or may occur, on the project site. This training will include a description of the species and its habitat needs; a report of the occurrence of the species in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

Measures for Nesting Raptors and Migratory Birds (Including Loggerhead Shrike)

BIO-4: (*Avoidance*) In order to avoid impacts to nesting raptors and migratory birds, individual Projects within the Project will be constructed, where possible, outside the nesting season (between September 1st and January 31st).

BIO-5: (*Pre-construction Survey*) If Project activities must occur during the nesting season (February 1-August 31), the proponent is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code. A qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds; with the exception of Swainson's hawk. The Swainson's hawk survey will utilize the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000) methodology which will extend to ½-mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-6: (*Pre-construction Survey*) A qualified biologist will conduct pre-construction surveys in accordance with the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology for Swainson's Hawk*

Nesting Surveys in California's Central Valley (2000) which employs the following:

Survey Period	Survey Dates	Survey Time	Number of Surveys Needed
I	January – March 20	All day	1
II	March 20 – April 5	Sunrise – 1000; 1600 to Sunset	3
III	April 5 – April 20	Sunrise – 1200; 1630 – Sunset	3
IV	April 21 – June 10	Monitoring sites only	Initiating surveys is not recommended
V	June 10 – July 30	Sunrise – 1200; 1600 – Sunset	3

If project activities must occur during the nesting season (February 1-August 31), the project proponent and/or their contractor is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code, and a qualified biologist will conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-7: (Buffers) Should any active nests be discovered near proposed work areas, a qualified biologist will determine appropriate construction setback distances and a behavioral baseline of all identified nests based on applicable CDFW guidelines and/or the biology of the affected species. Within these buffers, the biologist will continue monitoring to detect behavioral changes. If adverse behavioral changes occur, the activity causing the changes will cease and CDFW will be consulted to determine if avoidance and minimization measures need to be modified to adequately protect the impacted birds. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged (i.e., when a bird's feathers and wing muscles are sufficiently developed for flight). Unless a variance is approved by CDFW, the buffer shall not be less than 250 feet around active nests of non-listed bird species and not less than 500 feet around active nests of non-listed raptor species until the birds have fledged. Unless a variance is approved by CDFW, a ½ mile distance shall be used for SWHA, until the birds have "fledged".²⁴

With implementation of **Mitigation Measures BIO-1 through BIO-7**, the Project impacts on special status species would be less than significant.

b), c), and d) No Impact: The proposed Project would not 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. The entire property is currently being used for grape vineyards. It is bound by commercial uses to the north (gas station/minimart/rural residence and a self-storage business), agricultural (orchard), agricultural-related structure, and a rural residence to the south, commercial (RV storage) and three rural residences to the east, and agricultural with residence to the west. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park (with various sized parcels), to accommodate commercial and industrial uses. There is no construction related activities for the Project at the moment. There are no riparian habitat, sensitive natural community, wetlands, or any wildlife corridors or nurseries in the immediate Project area. The most recent United States Geological Survey (USGS) National Water Information System (NWIS) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping applications were accessed on August 19, 2020, and again between December 31, 2020 and January 4, 2021.^{25, 26} Based on the information provided in the NWIS, the nearest body of water, the King's River, lies approximately 1.2 miles southeast of the Project site (see Figure 8). Based on the information provided in the NWI, there are freshwater ponds, wetland, riverine, and a private lake all located approximately one (1) mile or greater southeast of the Project site. Therefore, the Project would have no impact on these resources.

e) and f) No Impact: As indicated in items a) - d), the Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park (with various sized parcels) to

²⁴ Tulare County RMA. Biological Species Evaluation Technical Memo. See Attachment "B".

²⁵ USGS. <https://maps.waterdata.usgs.gov/mapper/index.html>

²⁶ USFWS. <https://www.fws.gov/wetlands/data/mapper.html>

accommodate commercial and industrial uses. There are no construction-related activities for the Project at the moment. Any future developments shall be required to comply with any applicable regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. Therefore, the Project would have no impact on these resources.

5. CULTURAL RESOURCES

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."²⁷

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."²⁸

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167"²⁹

Existing Cultural and Historic Resources

"Tulare County's known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources."

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State University Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws.

Regulatory Setting

Federal

²⁷ Tulare County General Plan 2030 Update. Page 8-5.

²⁸ Ibid.

²⁹ Ibid. 8-6.

Cultural resources are protected by several federal regulations, none of which are relevant to this project because it will not be located on lands administered by a federal agency and the project applicant is not requesting federal funding and does not require any permits from any federal agencies.

State

The proposed Project is subject to CEQA which requires public or private projects financed or approved by public agencies to assess their effects on historical resources. CEQA uses the term “historical resources” to include buildings, sites, structures, objects or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (CCR 15064.5, 15126.4). For the purposes of this CEQA document, a significant impact would occur if project implementation:

- Causes a substantial change in the significance of a historical resource
- Causes a substantial adverse change in the significance of an archaeological resource
- Disturbs any human remains, including those interred outside of formal cemeteries

Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined. CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR)
- If the resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5(a))

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1(k), 5024.1, 5024.1(g)).

A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
- Is associated with the lives of persons important in our past
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history Properties that area listed in or eligible for listing in the National Register of Historic Places are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

CEQA Guidelines: Historical Resources

Section 15064.5(a) of the CEQA Guidelines defines historical resources as follows.

- (a) For purposes of this section, the term “historical resources” shall include the following:
 - (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).
 - (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
 - (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole

record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - (B) Is associated with the lives of persons important in our past;
 - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

Section 15126.4(b) of CEQA Guidelines provides specific guidance on the treatment of historical resources as noted below.

(b) Mitigation Measures Related to Impacts on Historical Resources.

- (1) Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995), Weeks and Grimmer, the project’s impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.
- (2) In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.
- (3) Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archaeological site:
 - (A) Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
 - (B) Preservation in place may be accomplished by, but is not limited to, the following:
 - 1. Planning construction to avoid archaeological sites;
 - 2. Incorporation of sites within parks, greenspace, or other open space;
 - 3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.
 - 4. Deeding the site into a permanent conservation easement.
 - (C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.
 - (D) Data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center.

California Public Resources Code §5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

Human Remains

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project:

ERM-6.1 Evaluation of Cultural and Archaeological Resources which states that the County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards;

ERM-6.2 Protection of Resources with Potential State or Federal Designations wherein the County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation’s California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional;

ERM-6.3 Alteration of Sites with Identified Cultural Resources which states that when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource;

ERM-6.4 Mitigation – which states that if preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records;

ERM-6.7 Cooperation of Property Owners where the County should encourage the cooperation of property owners to treat cultural resources as assets rather than liabilities, and encourage public support for the preservation of these resources;

ERM-6.8 Solicit Input from Local Native Americans (which is consistent with AB 52 in regards to Tribal Consultation) wherein the County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance;

ERM-6.9 Confidentiality of Archaeological Sites which is also consistent with AB 52) where the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts; and

ERM-6.10 Grading Cultural Resources Sites wherein the County shall ensure all grading activities conform to the County’s Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

a) and b) Less Than Significant Impact With Mitigation: A cultural resources records search request was made to the Southern San Joaquin Valley Historical Resources Information Center (also known as a CHRIS), at California State University Bakersfield (RS #20-278); the CHRIS results are provided in correspondence dated on August 11, 2020. The records search included an examination of the National Register of Historic Places, the California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources, California State Historic Landmarks, and the HRIC files of

pertinent historical and archaeological data. One recorded resource [P-54-004626 (P-10-003930)] was identified within the Project area. Sixty-one (61) recorded resources have been identified within one half-mile radius, and those resources primarily consist of historic buildings and include an historic railroad. Potentially significant impact could occur if historical or archaeological resources were uncovered during proposed Project construction. However, implementation of the **Mitigation Measures CUL-1** thru **CUL-2** will reduce potential impacts in the unlikely event of encountering a historical or archaeological resource to a less than significant impact with mitigation.

Mitigation Measure CUL-1: If, in the course of Project construction or operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to: planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in place shall be considered, and an appropriate method of achieving preservation in place shall be selected and implemented, if feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential information from and about the site. Mitigation shall be consistent with CEQA Guidelines Section 15126.4(b)(3). An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, hereafter "qualified archaeologist," should inspect the findings within 24 hours of discovery.

Mitigation Measure CUL-2: If cultural resources are encountered during construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.

If it is determined that the Project could damage a significant cultural resource, mitigation should be implemented with a preference for preservation in place, consistent with the priorities set forth in CEQA Guidelines Section 15126.4(b)(3). If avoidance is not feasible, a qualified archaeologist should prepare and implement a detailed treatment plan in consultation with the County of Tulare and, for prehistoric resources, the ethnographically associated Native American tribe. If the resource is determined to be a tribal cultural resource, as defined by Public Resources Code 21074, the County of Tulare, in consultation with the ethnographically associated Native American tribe, should, if feasible, minimize significant adverse impacts by avoiding the resource or treating the resource with culturally appropriate dignity, which includes protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Therefore, implementation of **Mitigation Measures CUL-1** and **CUL-2** would result in a less than significant impact to this Item.

- c) **Less Than Significant Impact With Mitigation:** The entire property is currently being used as a vineyard. Thus, the surface area has been previously, and continues to be actively and repeatedly disturbed. The records search and background research confirmed that no human remains are known to exist in the Project site. Therefore, the proposed Project is not anticipated to impact human remains, including those interred outside of formal cemeteries.

Mitigation Measure CUL-3: Inadvertent Discovery of Human Remains. In the unlikely event of discovery or recognition of any human remains during construction-related activities, the provisions of CEQA Guidelines Section 15064.5(e) shall be followed and such activities should cease within 50 feet of the find until the Tulare County Coroner has been contacted to determine that no investigation of the cause of death is required. If it is determined that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be contacted within 24 hours. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD would, in turn, make recommendations to the County of Tulare for the appropriate means of treating the human remains and any grave goods.

Therefore, implementation of **Mitigation Measure CUL-3** would result in a less than significant impact to this item.

6.	ENERGY				
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Analysis:</p> <p>Environmental Setting</p> <p>The entire property is currently being used as a vineyard, and the Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for future development of an industrial park with various sized parcels to accommodate commercial and industrial uses.</p> <p>Regulatory Setting</p> <p>Federal</p> <p><u>Energy Policy Act of 2005</u></p> <p>The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can obtain federal tax credits for purchasing fuel efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.</p> <p>State</p> <p><u>California Energy Commission</u></p> <p>The California Energy Commission CEC was created in 1974 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy. State of California Integrated Energy Policy (SB 1389) In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicles miles traveled and accommodate pedestrian and bicycle access. The CEC adopted the 2013 Integrated Energy Policy Report on February 20, 2014. The 2013 Integrated Energy Policy Report provides the results of the CEC's assessment of a variety of issues, including:</p> <ul style="list-style-type: none"> ➤ Ensuring that the state has sufficient, reliable, and sage energy infrastructure to meet current and future energy demands; ➤ Monitoring publicly-owned utilities' progress towards achieving 10-year energy efficiency targets; defining and including zero-net-energy goals in state building standards; ➤ Overcoming challenges to increased use of geothermal heat pump/ground loop technologies and procurement of biomethane; ➤ Using demand response to meet California's energy needs and integrate renewable technologies; ➤ Removing barriers to bioenergy development; planning for California's electricity infrastructure needs given potential retirement of power plants and the closure of the San Onofre Nuclear Generating Station; ➤ Estimating new generation costs for utility-scale renewable and fossil-fueled generation; ➤ Planning for new or upgraded transmission infrastructure; ➤ Monitoring utilities' progress in implementing past recommendations related to nuclear power plants; ➤ Tracking natural gas market trends; 					

- Implementing the Alternative and Renewable Fuel and Vehicle Technology Program; and,
- Addressing the vulnerability of California's energy supply and demand infrastructure to the effects of climate change; and planning for potential electricity system needs in 2030.

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

California Global Warming Solutions Act of 2006 (Assembly Bill 32) Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission and CEC with providing information, analysis, and recommendations to the California Air Resources Board regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopted the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project:

ERM-4.1 Energy Conservation and Efficiency Measures wherein the County encourages the use of solar energy, solar hot water panels, and other energy conservation and efficiency features;

ERM-4.2 Streetscape and Parking Area Improvements for Energy Conservation – wherein the County shall promote the planting and maintenance of shade trees along streets and within parking areas of new urban development to reduce radiation heating; and

ERM-4.3 Local and State Programs wherein the County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources.

a) and b) Less Than Significant Impact: The proposed Project will not have a direct or cumulative impact, or create wasteful, inefficient, or unnecessary consumption of energy resources during project construction-related activities or operations. Also, it will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The only energy consumed during construction-related activities would be through the use of fossil fuels (gasoline and diesel operated equipment). Operational energy uses would mainly be through the use of electricity and natural gas onsite and vehicle fuel consumption by vehicles travelling to and from the Project site. The only known desired use is a mini-mart/gas station; other uses would be determined on a case-by-case basis. As such, it would be speculative to estimate potential electricity needs until a specific use is proposed. At that time, future development of the Project site will be required to coordinate/consult with an energy provider (e.g., PG&E.) to determine energy needs and to receive service from said provider. Also, each proposed development would be required to comply with any applicable rules, regulations, requirements, etc., in the County's General Plan, Zoning Ordinance, as well as those required by State and Federal agencies. Therefore, the Project will have a less than significant impact on these resource items.

7. GEOLOGY/SOILS

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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? Refer to Division of Mines and Geology Special Publication No. 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii)	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii)	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv)	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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 waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

“Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges.”³⁰

³⁰ Tulare County General Plan Background Report February 2010. Page 8-5.

“Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building.”³¹

“Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered “potentially active.”³²

“Settlement can occur in poorly consolidated soils during ground-shaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to ground-shaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County.”³³

“Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground-shaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted.”³⁴

Earthquake Hazards

“Ground-shaking is the primary seismic hazard in Tulare County because of the county’s seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of ground-shaking, which is directly related to the magnitude of a quake and the distance from a quake’s epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased ground-shaking over longer periods of time, thereby affecting a larger area. Ground-shaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”³⁵

“There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault** is located approximately 40 miles west of the Tulare County boundary and is greater than 60 miles west of the project area. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the County. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west of

³¹ Ibid.

³² Op. Cit.

³³ Op. Cit. 8-9.

³⁴ Op. Cit. 8-8 and 8-9.

³⁵ Op. Cit. 8-7.

Tulare County lays the “Central California Active Area,” section of the San Andreas Fault where many earthquakes have originated.

- **Owens Valley Fault Group** is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains and is greater than 60 miles east of the project area. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- **Clovis Fault** is considered to be active within the Quaternary Period, although there is no historic evidence of its activity, and is therefore classified as “potentially active.” This fault lies approximately six miles south of the Madera County boundary in Fresno County and is greater than 25 miles north of the project area. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts.³⁶

There are other unnamed faults north of Bakersfield and near Tulare Buttes about 30 miles north of Porterville. These faults are small and have exhibited activity in the last 1.6 million years, but not in the last 200 years. It is also possible, but unlikely, that previously unknown faults could become active in the area.³⁷ No Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the Project area.³⁸

Soils and Liquefaction

“The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”³⁹

“No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the San Joaquin valley portion of the County. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction.”⁴⁰

Landslides

“Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).”⁴¹

Paleontology

Regarding paleontological resources, “Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources.”⁴² CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)).

³⁶ Op. Cit. 3.7-5; and *Tulare County, Revised Draft General Plan 2030 Update*, August 2012. Page 10-7.

³⁷ *Tulare County, Revised Draft General Plan 2030 Update*, August 2012. Page 10-15.

³⁸ California Geological Survey, <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>

³⁹ Tulare County General Plan Background Report, February 2010. Page 8-7.

⁴⁰ Ibid. 8-9.

⁴¹ Op. Cit. 8-10.

⁴² Society of Vertebrate Paleontology. Conformable Impact Mitigation Guidelines Committee Policy Statements. <http://www.vertpaleo.org/ConformableImpactMitigationGuidelinesCommittee.htm>.

If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). California Public Resources Code §5097.5 also applies to paleontological resources.

Regulatory Setting

Federal

None that apply to the Project.

State

California Building Code

“The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards.”⁴³

Alquist-Priolo Earthquake Fault Zoning Act

“The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces.”⁴⁴

State Water Resources Control Board and Regional Water Quality Control Board

National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity- Water Quality Order 99-08 DWQ.

Typically, General Construction Storm Water NPDES permits are issued by the RWQCB for grading and earth-moving activities. The General Permit is required for construction activities that disturb one or more acres. The General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies practices that include prevention of all construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters. The NPDES permits are issued for a five-year term. NPDES general permits require adherence to the Best Management Practices (BMPs) including:

- Site Planning Consideration- such as preservation of existing vegetation.
- Vegetation Stabilization- through methods such as seeding and planting.
- Physical Stabilization- through use of dust control and stabilization measures.
- Diversion of Runoff – by utilizing earth dikes and temporary drains and swales.
- Velocity Reduction – through measures such as slope roughening/terracing.
- Sediment Trapping/Filtering – through use of silt fences, straw bale and sand bag filters, and sediment traps and basins.

Local

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project include:

HS-1.2 Development Constraints wherein the County shall permit development only in areas where the potential danger to the health and safety of people and property can be mitigated to an acceptable level;

HS-1.3 Hazardous Lands wherein the County shall designate areas with a potential for significant hazardous conditions for open space, agriculture, and other appropriate low intensity uses;

⁴³ Tulare County General Plan Background Report, February 2010. Page 8-3.

⁴⁴ Ibid.

HS-1.5 Hazard Awareness and Public Education wherein the County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures;

HS-1.11 Site Investigations wherein the County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding;

HS-2.1 Continued Evaluation of Earthquake Risks wherein the County shall continue to evaluate areas to determine levels of earthquake risk;

HS-2.4 Structure Siting The wherein the County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity;

HS-2.7 Subsidence wherein the County shall confirm that development is not located in any known areas of active subsidence;

HS-2.8 Alquist-Priolo Act Compliance wherein the County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones;

WR-2.2 NPDES Enforcement wherein the County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board;

WR-2.3 Best Management Practices wherein the County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board; and

WR-2.4 Construction Site Sediment Control wherein the County shall continue to enforce provisions to control erosion and sediment from construction sites.

Five County Seismic Safety Element (FCSSE)

The FCSSE report represents a cooperative effort between the governmental entities within Fresno, Kings, Madera, Mariposa and Tulare Counties to develop an adoptable Seismic Safety Element as required by State law. Part I, the Technical Report, is designed to be used when necessary to provide background for the Summary document. Part II, the Summary Report, establishes the framework and rationale for evaluation of seismic risks and hazards in the region. their seismic safety elements. The planning process utilized to develop the Element Part II of the Seismic Safety Element, the Policy Report, has been prepared as a “model” report designed to address seismic hazards as delineated in the Technical Report. The intent has been to develop a planning tool for use by county and city governments in implementing their seismic safety elements. The planning process utilized to develop the Element was developed through the efforts of Technical and Policy Committees, composed of both staff and elected representatives from Cities, Counties, and Special Districts or Areawide Planning Organizations in cooperation with the consulting firms of Envicom Corporation and Quinton-Redgate.⁴⁵

Soils Characteristics

According to the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), and the Soil Survey of Tulare County, the following soil type is located within Project site. Calgro-Calgro consists of moderately deep to a duripan, moderately well drained soils formed in alluvium derived from granitic rock source. Erosion potential is low to moderate and shrink swell potential low. As discussed in Item 2 Agriculture and Forestry Resources, the following descriptions are provided for the soil type:

As shown in **Table GEO-1**, all soils within the Project site have a Poor Rating Grade of 6 meaning that the soils “soil or soil material consisting mainly of particles of nearly the same size. Because these is little difference in size of the particles, the density can be increased only slightly by compaction. have severe limitations that reduce the choice of plants or that require very careful management, or both” (USDA, 2020).

⁴⁵ Five County Seismic Safety Element. Fresno, Kings, Madera, Mariposa, & Tulare Counties.” 1974. Pages 4-7. Prepared by Envicom Corporation. A copy of this document is available at the Tulare County Resources Management Agency and may be accessed upon request.

TABLE GEO-1 SOIL INFORMATION FOR PROJECT SITE				
Map Unit Symbol	Map Unit Name	Non-Irrigated Capability Class	Rating Grade	Acreage/Site Percentage*
105	Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes	6s	4 Poor	100%
Source: USDA/NRCS 2020 accessed at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx .				

- a) **Less Than Significant Impact:** According to the Tulare County General Plan, the planning area lies in the V1 seismic study area, characterized by a relatively thin section of sedimentary rock overlying a granitic basement. The V-1 seismic zone, which is characterized by a relatively thick section of sedimentary rock overlying a granitic basement, has “low” risks for shaking hazards, “minimal” risk for landslides, “low to moderate” risk for subsidence, “low” risks for liquefaction and “minimal” risk for seiching.⁴⁶ The distance to area faults i.e. the Clovis Group, Pond-Poso, and San Andreas, expected sources of significant shaking, is sufficiently great that shaking effects should be minimal.
- i) **Fault Rupture:** No substantial faults are known to occupy Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation. The nearest known faults likely to affect the Project site are the San Andreas Fault (approximately 40 miles west of Tulare County’s western border). According to the Five County Seismic Safety Element (FCSSE), the proposed Project site is located in the V-1 zone, characterized as a moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex. The FCSSE further states that, “Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance to either of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities. Therefore, as noted earlier, no Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the Project area. As such, there is no risk of rupture of a known earthquake fault.
- ii) **Ground Shaking:** The Project area is located in a seismic zone which is sufficiently far from known faults and consists primarily of a stable geological formation. Any impacts regarding strong seismic ground shaking have been discussed in Impact VI-a-i). As such, the impact due to ground shaking would be less than significant.
- iii) **Ground Failure and Liquefaction:** The proposed Project site is located in the Five County Seismic Safety Element’s V-1 zone, and therefore has a low risk of liquefaction. No subsidence-prone soils or oil or gas production is involved with the proposed Project. Based on the soil characteristics of the site (see earlier discussion at Soil Characteristics) the Project would result in no impact.
- iv) **Landslides:** The proposed Project is located in the Five County Seismic Safety Element’s V-1 zone and therefore will have a minimal risk of landslides. As the proposed Project is located on the Valley floor, is situated on relatively flat topography, and there are no geologic landforms on or near the site that could result in a landslide event. Therefore, there is no risk of landslides within or near the Project area.
- b) **Less Than Significant Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. There are no construction related activities for the Project at the moment. Any future developments shall be required to comply with any applicable regulations and requirements in the County’s General Plan, Zoning Ordinance, as well as State and Federal regulations. Therefore, the Project would have a less than significant impact on this resource item.
- c) **Less Than Significant Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. There is no construction related activities for the Project at the moment. As noted earlier, this Project is located in the Five County Seismic Safety Element’s V-1 zone, characterized as a moderately thick section of marine

⁴⁶ Ibid.

and continental sedimentary deposits overlying the granitic basement complex, as such, the Project site has a low to moderate risk of subsidence or liquefaction. Therefore, the Project would result in a less than significant impact.

- d) No Impact:** As noted earlier, according to the USDA, NRCS, and the Soil Survey of Tulare County, the proposed Project site consists entirely of Calgro-Calgro soil. This soil type consists of moderately deep to a duripan, moderately well drained soils formed in alluvium derived from granitic rock source. Erosion potential is low to moderate and shrink swell potential low. As such, the Project would result in no impact and would not create substantial direct or indirect risks to life or property
- e) No Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The Project will not rely on an on-site septic system; rather, the Project will be served by the Selma-Kingsburg-Fowler (SKF) Sanitary District. Prior to development of the site, the applicant will be required (as a Condition of Approval) to receive a Will-Serve Letter from SKF. As such, the Project would result in no impact.
- f) Less Than Significant Impact With Mitigation:** There are no known paleontological resources within the Project area, nor are there any known geologic features in the proposed Project area. Project construction will not be anticipated to disturb any paleontological resources not previously disturbed; however, **Mitigation Measure(s) CUL-1 thru CUL-3**, as specified in Item 5. Cultural Resources (as applicable), will ensure that any impact will be less than significant.

8. GREENHOUSE GAS EMISSIONS

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
b)	Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

An Air Quality and Greenhouse Gas Analysis Technical Memo was prepared by RMA staff to evaluate potential impacts that development of the Project site may have on air quality (see Attachment "A").

Environmental Setting

"An increase in the near surface temperature of the earth. Global warming has occurred in the distant past as the result of natural influences, but the term is most often used to refer to the warming predicted to occur as a result of increased emissions of greenhouse gases. Scientists generally agree that the earth's surface has warmed by about 1 degree Fahrenheit in the past 140 years, but warming is not predicted evenly around the globe. Due to predicted changes in the ocean currents, some places that are currently moderated by warm ocean currents are predicted to fall into deep freeze as the pattern changes."⁴⁷ "The warming of the earth's atmosphere attributed to a buildup of CO₂ or other gases; some scientists think that this build-up allows the sun's rays to heat the earth, while making the infra-red radiation atmosphere opaque to infrared radiation, thereby preventing a counterbalancing loss of heat. Ibid. Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)."⁴⁸ "Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO₂ and methane are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF₆ is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to

⁴⁷ Tulare County General Plan 2030 Update Background Report. Page 6-31. Accessed April 2019 at: <http://generalplan.co.tulare.ca.us/documents.html> then scroll down to and select Background Report

⁴⁸ Ibid. 6-16 and 6-20.

global warming, although there is much uncertainty concerning the magnitude and rate of the warming.”⁴⁹ “Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas; o Increase of heat index over land areas; and
- More intense precipitation events.”⁵⁰

“Snowpack and snowmelt may also be affected by climate change. Much of California’s precipitation falls as snow in the Sierra Nevada and southern Cascades Mountain ranges, and snowpack represents approximately 35 percent of the state’s useable annual water supply.”⁵¹ “The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended.”⁵² As air temperatures increase due to climate change, the water stored in California’s snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.”⁵³

“In 2007, Tulare County generated approximately 5.2 million tonnes of Carbon Dioxide Equivalent (CO₂e). The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources, the third largest portion (11%) is from electricity sources.”⁵⁴ Table 6-7 [Table GHG-1 in this document] identifies Tulare County’s emissions by sector in 2007.”⁵⁵

“In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO₂e. The largest portion of these emissions (59%) is attributed to dairies/feedlots, while the second largest portion (20%) is from mobile sources, and third largest portion (11%) is from electricity as shown on Table 6-8 [Table GHG-2 in this document]. Per capita emissions in 2030 are projected to be approximately 27 tonnes of CO₂e per resident.”⁵⁶

The Tulare County General Plan contains the following: Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO₂ and methane are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF₆ is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.”⁵⁷

Table GHG-1 GHG Emissions by Sector in 2007 ⁵⁸		
Sector	CO ₂ e (tons/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	5,208,060	100%
Per Capita	36.1	

⁴⁹ Op. Cit. 6-31.

⁵⁰ Op. Cit.

⁵¹ Op. Cit. 8-85.

⁵² Op. Cit.

⁵³ Op. Cit.

⁵⁴ Op. Cit. 6-36.

⁵⁵ Op. Cit. 6-38.

⁵⁶ Op. Cit.

⁵⁷ Op. Cit. 6-31.

⁵⁸ Op. Cit.

Table GHG-2 GHG Emissions by Sector in 2030⁵⁹		
Sector	CO _{2e} (tons/year)	% of Total
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	6,105,480	100%
<i>Per Capita</i>	27.4	

The San Joaquin Valley Air Pollution Control District (Air District) proposed, and subsequently adopted, the following process for determining the cumulative significance of project specific GHG emissions on global climate change when issuing permits for stationary source projects:

- “Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement [Best Performance Practices] BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to [Business As Usual] BAU, including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB’s AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Project requiring preparation of an Environmental Impact Report would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.”⁶⁰

Regulatory Setting

Federal

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization’s Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years.

The USEPA Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO₂-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in *Massachusetts v. EPA* (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA. On April 17, 2009, the USEPA found that

⁵⁹ Op. Cit.

⁶⁰ District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency. Page 8 and 9. Accessed in May 2020 at: <https://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>

CO₂, CH₄, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

State

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations applied to automobiles and light trucks beginning with the 2009 model year.

California has taken action to reduce GHG emissions. In June 2005, Governor Schwarzenegger signed Executive Order S-3-05 to address climate change and GHG emissions in California. This Order sets the following goals for statewide GHG emissions:

- Reduce to 2000 levels by 2010
- Reduce to 1990 levels by 2020
- Reduce to 80 percent below 1990 levels by 2050

In 2006, California passed AB 32, the California Global Warming Solutions Act of 2006. The Act requires ARB to design and implement emission limits, regulations, and other feasible cost-effective measures to reduce statewide GHG emissions to 1990 levels by 2020. Senate Bill 97 was signed into law in August 2007. The Senate Bill required the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resource Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. On April 13, 2009, the OPR submitted to the Secretary for Natural Resources its recommended amendments to the State CEQA Guidelines for addressing GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting the amendments. Following a 55-day public comment period and 2 public hearings, and in response to comments, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments. The Natural Resources Agency transmitted the adopted amendments and the entire rulemaking file to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the CCR. The Amendments became effective on March 18, 2010.

The AB 32 Scoping Plan contains the main strategies California will use to reduce GHG emissions that cause climate change. The scoping plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms (such as a cap-and-trade system), and an AB 32 cost of implementation fee regulation to fund the program. The first regulation adopted by the ARB pursuant to AB 32 was the regulation requiring mandatory reporting of GHG emissions. The regulation requires large industrial sources emitting more than 25,000 metric tons of CO₂ per year to report and verify their GHG emissions from combustion of both fossil fuels and biomass-derived fuels. The California Cap and Trade program is being developed and the ARB must adopt regulations by January 1, 2011. Also, Governor Schwarzenegger directed the ARB, pursuant to Executive Order S-21-09, to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020.

CEQA Guidelines: Greenhouse Gas Emissions

Section 15064.4 of the CEQA Guidelines provides specific guidance on determining the significance of impacts from GHG emissions as noted below.

- (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
 - (1) Quantify greenhouse gas emissions resulting from a project, and/or
 - (2) Rely on a qualitative analysis or performance based standards.
- (b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency

should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
 - (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
 - (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.
- (c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 9 – Air Quality contains a number of policies that apply to projects within Tulare County that support GHG reduction efforts and which have potential relevance to the Project's CEQA review:

AQ-1.3 Cumulative Air Quality Impacts wherein the County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts;

AQ-1.5 California Environmental Quality Act (CEQA) Compliance wherein the County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible;

AQ-1.7 Support Statewide Climate Change Solutions wherein the County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies, as appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies;

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan wherein the County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

Tulare County Climate Action Plan

The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare (County) actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer

greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.⁶¹

- a) **Less Than Significant Impact:** The Air District has determined that projects consistent with an adopted Climate Action Plan (CAP) would be considered to have a less than significant impact on the environment. The Tulare County CAP was initially adopted in August 2012 and serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan 2030 Update (General Plan) which provides the supporting framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The General Plan fulfills many sustainability and GHG reduction objectives at the program level. The CAP identifies the policies from the various General Plan elements that promote more efficient development and reduces travel and energy consumption. The CAP requires projects to achieve reductions in excess of the reduction identified in the Scoping Plan. The CAP identifies General Plan policies in place to assist the County in reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The CAP identifies the County's fair share of reductions required to maintain consistency with the State's target.

The only known uses at this time are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments within the Project site would be required to comply with the CAP. Based on the preliminary site plan and proposed land use types, the Project would exceed the 4,200 average daily trips and requires quantification of GHG emissions. Project-related emissions were estimated using CalEEMod, Version 2016.3.2 (see Attachment "A"), and are summarized below. **Table GHG-1** (Table 11 of the AQ-GHG Tech Memo) provides the Project's construction-related GHG emission while **Table GHG-2** (Table 12 of the AQ-GHG Tech Memo) provides the Project's operations-related GHG emissions.

Table GHG-1. Construction-Related GHG Emissions (mitigated)	
	CO _{2e} Emissions (metric tons per year)
Construction Total	1,817
Amortized Annual Emissions	61
<i>Source: Table 9 of calculation sheets, see Attachment "A" of this document.</i>	

Table GHG-2. Operations-Related GHG Emissions (metric tons per year)			
	CO _{2e} Emissions (unmitigated)	CO _{2e} Emissions (mitigated)	CO _{2e} Emissions Reduction
Total Operations	4,469	4,227	5.42%
Amortized Annual Emissions	61	61	0%
Total Project Emissions	4,530	4,288	5.35%
<i>Source: Table 10 of calculation sheets, see Attachment "A" of this document.</i>			

As demonstrated in **Table GHG-2** (Table 12, of the AQ-GHG Tech Memo) the Project achieves an approximately 5.35% reduction in GHG emissions through compliance with current regulation. The analysis included GHG reductions from compliance with Renewable Portfolio Standards for energy producers and from compliance with 2019 California Building Code or Green Building Standards. At this time the only known uses are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments within the Project site would be required to comply with the CAP, including incorporation of project features designed to reduce vehicle trips and vehicle miles traveled attributable to the Project. As future development is unknown, incorporation of project-specific design features that would reduce GHG emissions cannot be incorporated into the emissions analysis. Therefore, the emissions reductions presented above underestimate the actual reductions that would be achieved. As such, the Project demonstrates continued progress towards the County achieving the 2017 Scoping Plan Update 2030 reduction requirements with an overall GHG reduction. Furthermore, the State anticipates increases in the number of zero emission vehicles operated in the State under the Advanced Clean Car Program. Compliance with SB 375 reduction targets for light duty vehicles will provide continued reductions in emissions from that source through SB 375's 2035 milestone year.

⁶¹ Tulare County Climate Action Plan, Page 1. Accessed May 2019 at: <http://generalplan.co.tulare.ca.us/documents.html>, then select tab noted as "Climate Action Plan February 2010 Draft"

Future developments within the Project site would be required to comply with the CAP. Although Project-related vehicle trips exceed the CAP consistency thresholds, the Project will provide a GHG emission reduction benefit as future buildout of the site will provide additional employment opportunities for the residents in the Project vicinity, thereby reducing vehicle miles traveled associated with commuting to nearby communities/cities for such opportunities. Future developments with the Project area will continue to comply with existing and future regulations, and applicable Tulare County General Plan and Kingsburg Area Community Plan policies. Future development will be required to incorporate design features sufficient to demonstrate consistency with the required 10% reduction in GHG emissions consistent with the CAP. As such, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, less than significant impacts related to this Checklist Item will occur.

- b) Less Than Significant Impact:** Since the proposed Project is located in an unincorporated area of Tulare County, the most applicable GHG plans are the Tulare County Climate Action Plan and ARB's 2017 Climate Change Scoping Plan. As previously noted, the CAP, initially adopted in August 2012, serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan which provides the supporting framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The General Plan fulfills many sustainability and GHG reduction objectives at the program level. The CAP identifies the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption. The CAP requires projects achieve reductions in excess of the reduction identified in the Scoping Plan. The CAP identifies General Plan policies in place to assist the County in reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The CAP identifies the County's fair share of reductions required to maintain consistency with the State's target.

Table 17 of the 2018 CAP Update (Table 13 of the AQ-GHG Report) lists the overarching consistency requirements for all projects based on consistency with County land use plans that apply to the project location. Reviews for consistency with land use plans require planning staff to review projects to determine if they comply with applicable plan policies and implementation measures. The Project is consistent with the requirements identified in Table 17 of the CAP.

Table 18 of the 2018 CAP Update (Table 14 of the AQ-GHG Report) provides a checklist containing measures that will provide reductions necessary to achieve CAP consistency. A project checklist that can be used by staff is provided as Appendix C of the 2018 CAP Update. As the County CAP requires projects to achieve reductions in excess of the reductions required in the Scoping Plan and by State legislation, projects that are consistent with the County CAP would not conflict with any applicable plan, policy or regulation adopted for reducing GHG emissions. The only known uses at this time are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments within the Project site will be required to comply with the requirements of the Tulare County CAP. Furthermore, development of the Project site will be required to comply with all applicable regulations and requirements in the County's General Plan, Kingsburg Area Specific Plan, Zoning Ordinance, as well as State and Federal regulations. Therefore, the Project does not conflict with the reduction strategies included in the Scoping Plan. Less Than Significant Impacts related to this Checklist Item will occur.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result,	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	would it create a significant hazard to the public or the environment?				
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The proposed Project site is located in northwestern Tulare County (County), California, at the northwest corner of Avenue 392 and Road 12, just south of the City of Kingsburg. The Tulare County Seat, Visalia, is located approximately 15 miles southeast of the Project site.

The nearest airport, Visalia Municipal Airport (in the City of Visalia) is approximately 15 miles southeast of the proposed Project site. The nearest operational landfill is Visalia Landfill, approximately 12 miles southeast of the proposed Project site.

The nearest elementary, Lincoln Elementary School, (in Kingsburg) is less than 0.5 miles northeast of the Project site, while the nearest high school (Kingsburg High School) is less than one mile northeast of the Project site.

Regulatory Setting

Federal

None that apply, the local hazardous waste regulatory authority is the County of Tulare.

State

The California Department of Industrial Relations, Division of Occupational Safety and Health, is the administering agency designed to protect worker health and general facility safety. The California Department of Forestry and Fire Protection (CalFire) has designated the area that includes the Project site as a Local Responsibility Area-Unincorporated, which is defined as an area where the local fire jurisdiction is responsible for emergency fire response. The Project area is also not located in a fire hazard severity zone.⁶²

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update (at Chapter 10 – Health and Safety) contains the following goals and policies that relate to hazards and hazardous materials, and which have potential relevance to the Project’s CEQA review:

HS-4.1 Hazardous Materials wherein the County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan;

HS-4.2 Establishment of Procedures to Transport Hazardous Wastes wherein the County shall continue to cooperate with the California Highway Patrol (CHP) to establish procedures for the movement of hazardous wastes and explosives within the County;

⁶² Fire Hazard Severity Zones in SRA, https://osfm.fire.ca.gov/media/6830/fhszs_map54.pdf, accessed 8/4/20.

HS-4.3 Incompatible Land Uses wherein the County shall prevent incompatible land uses near properties that produce or store hazardous waste; and

HS-4.4 Contamination Prevention wherein the County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

a) and b) Less Than Significant Impact: Proposed Project construction will require the transport and use of small quantities of hazardous materials in the form of, for example, gasoline, diesel and oil during construction-related activities. Fuels to the service station once it is operational. Construction-related activities will be intermittent, temporary, and short-term as they occur. If refueling of construction-related equipment occurs on-site, there is the potential for small leaks due to refueling of the construction-related equipment; however, standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for accidental release of construction-related fuels and other hazardous materials. These BMPs will prevent, minimize, or remedy storm water contamination from spills or leaks, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials.

Proposed Project operations will require the storage of gasoline and diesel fuels. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements. The Applicant will be required to comply with applicable San Joaquin Valley Air Pollution Control District (Air District), including but not limited to, Rule 4621 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants), 4622 (Gasoline Transfer into Motor Vehicle Fuel Tanks), 4623 (Storage of Organic Liquids), etc.

Therefore, the proposed Project will not result in a significant hazard to the public or the environment and impacts will be less than significant.

c) Less Than Significant Impact: The nearest school (Lincoln Elementary) is approximately 0.50 miles northeast of the Project site. The proposed Project would result in the rezoning of an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The Tulare County Environmental Health Services Division (TCEHSD) requires submittal of a Hazardous Materials Business Plan, if the site ever handles or stores quantities of hazardous materials in excess of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas or any amount of a hazardous waste. Compliance with local, state and federal regulations would be adequate such that the Project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the Project would result in a less than significant impact to this resource.

d) Less Than Significant Impact: According to the State of California Department of Toxic Substances Control (DTSC) – Envirostor Search, one voluntary cleanup site (City of Kingsburg-Old Municipal Landfill; inactive-needs evaluation as of October 4, 2018) is approximately 1.22 miles southeast of the Project site.⁶³ The proposed Project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5. Therefore, as the proposed Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, it would result in less than significant impact to this resource.

e) No Impact: The nearest airport, Visalia Municipal Airport, is approximately 15 miles southeast of the proposed Project site; There are no private airports within the Project vicinity. The proposed Project will not conflict with Tulare County Airport Land Use Plan (ALUP) policy, and it is not within any airport's safety zone. The proposed Project will not result in a safety hazard for people working in the area. As such, the Project would result in no impact to this resource.

f) Less Than Significant Impact: The entire property is currently being used as vineyard. The proposed Project would rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1) for the future development of an industrial park with various sized parcels to accommodate commercial and industrial uses. All future developments will be required to conform to federal, state, and local standards and will be reviewed individually. Thus, the proposed Project would have a less than significant impact to the resource.

g) No Impact: The entire property is currently being used as vineyard. The proposed Project would rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1) for the future development of an industrial park with various sized parcels to accommodate commercial and industrial uses. According to CalFire's Fire Hazard Severity Zones Map⁶⁴,

⁶³ California Dept. of Toxic and Substances Control Accessed August 2020 at: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Tulare+County%2C+CA>.

⁶⁴ California Department of Forestry and Fire Protection (CalFire). Accessed September 2020 at: <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

the Project area is not located in any fire hazard severity zones and is designated as a Local Responsibility Area (LRA)-Unincorporated. As such, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires and would result in no impact to this resource.

10. HYDROLOGY AND WATER QUALITY

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i)	Result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
iii)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv)	Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
e)	Conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

Tulare County has a dry climate with evaporation rates that exceeds rainfall. The local climate is considered warm desert with annual precipitation approximately 7 to 9 inches, and variable rainfall rates. The majority of precipitation (roughly 84%) falls during the months of November through April.

Hydrology in the Project vicinity is associated with the Tulare Lake Basin, one of three main water subareas in the county. The Tulare Lake Basin is in the northern alluvial fan and basin subarea which is characterized by southwest-to-south flowing rivers, creeks, and irrigation canal systems that convey water from the Sierra Nevada to the west toward the Tulare Lake Bed. The northern portion of the basin is internally drained by the San Joaquin and Kings Rivers.⁶⁵ The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River, and is essentially a closed basin because surface water drains north into the San Joaquin River only in years of extreme rainfall.

Regulatory Setting

Federal

Clean Water Act

⁶⁵ California Department of Water Resources. "Water Quality Control Plan for the Tulare Lake Basin". May 2018. Page 3-9California's Site accessed September 2020.

The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

National Flood Insurance Act

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

State

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), located in Sacramento, CA, is the agency with jurisdiction over water quality issues in the State of California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code) which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The Project site is located within the Central Valley Region.

Regional Water Quality Board

The Central Valley Regional Water Quality Control Board (RWQCB) administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The plan will include specifications for Best Management Practices (BMPs) that will be implemented during proposed Project construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the California Storm Water Best Management Practice Handbook (2003), and are recognized as effectively reducing degradation of surface waters to an acceptable level. Additionally, the SWPPP will describe measures to prevent or control runoff degradation after construction is complete, and identify a plan to inspect and maintain these facilities or project elements.

Local

Tulare County Land Development Regulations

The Tulare County Resource Management Agency (RMA) is responsible for review, approval, and enforcement of planning and land development throughout the unincorporated portions of Tulare County. County of Tulare regulations that direct planning and land development (and related water and wastewater utilities) include the Tulare County General Plan, Zoning Ordinance, Subdivision Ordinance, and CEQA procedures. These responsibilities are divided between Planning Branch, Public Works Branch, and other divisions or departments of RMA, and in coordination with the Environmental Health Division of the Tulare County Health and Human Services Agency, and the Tulare County Fire Department.

The County's flood damage prevention code is intended to promote public health, safety, and general welfare in addition to minimizing public and private losses due to flood conditions. The County code provisions to protect against flooding include requiring uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling the alteration of natural flood plains; and preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. The County flood damage prevention code, most recently amended by Ord. No. 3212 and effective October 29, 1998, is modeled based upon FEMA guidance.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: (Chapter 10 – Health and Safety and Chapter 11 – Water Resources) contains the following goals and policies that relate to hydrology and water quality and which have potential relevance to the Project’s California Environmental Quality Act (CEQA) review:

AG-1.17 Agricultural Water Resources wherein the County shall seek to protect and enhance surface water and groundwater resources critical to agriculture;

HS-4.4 Contamination Prevention wherein the County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination;

WR-1.1 Groundwater Withdrawal wherein the County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County. These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes;

WR-2.1 Protect Water Quality wherein all major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. This policy requires the County to confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site;

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement wherein the County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board;

WR-2.3 Best Management Practices (BMPs) wherein the County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board; and

WR-2.4 Construction Site Sediment Control wherein the County shall continue to enforce provisions to control erosion and sediment from construction sites.

a) Less Than Significant Impact: The proposed Project would result in the rezoning of an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1). For any future developments within the Project site, the State Water Resources Control Board requires any new construction project greater than one acre to complete a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP would be prepared for the Project by a qualified engineer or erosion control specialist as a condition of approval and would be submitted to the County for review and approval before being implemented during construction. The SWPPP would be designed to reduce potential impacts related to erosion and surface water quality during construction activities and throughout the life of the Project. It would include Project information and best management practices (BMP). The BMPs would include dewatering procedures, stormwater runoff quality control measures, concrete waste management, watering for dust control, and construction of perimeter silt fences, as needed. Implementation of the SWPPP will minimize the potential for the Project to substantially alter the existing drainage pattern in a manner that will result in substantial erosion or siltation onsite or offsite. There will be no discharge to any surface or groundwater sources which may impact water quality standards. The proposed project will be served by an onsite storm water system which is subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Storm Water Permit adopted by the State Water Quality Control Board (SWRCB). This permit requires that discharges of pollutants from areas of new development be reduced to the maximum extent practicable. Compliance with this standard requires that control measures be incorporated into the design of new development to reduce pollution discharges in site runoff over the life of the project, as such, the site will include an on-site stormwater detention basin suitable to accommodate potential stormwater flows as specified by the County of Tulare. In addition, the Project will generate typical wastewater (sewer) associated with commercial/industrial development. The applicant is seeking to receive service from SKF regarding wastewater service (See Section 3.18 – Utilities for a discussion regarding waste discharge requirements, wastewater characteristics and water quality standards pertaining to Project-related wastewater). As such, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the Project would result in a less than significant impact to this resource.

b) Less Than Significant Impact: The Project site is located in a rural area at the northwest corner of Avenue 392 and Road 12. It is bound by commercial to the north, agricultural with residence to the south, commercial and residential to the east, and agricultural with residence to the west. The proposed Project would result in the rezoning of an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1). Any future developments shall be required to comply with any relevant

regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. Therefore, the Project would have less than significant impact to this resource. The applicant is seeking to receive service from City of Kingsburg regarding potable water service. As the only known specific use will be the gas station/mini-mart, it is unlikely that water demand would exceed the ability of water supply. As such, until a specific use and subsequent water demand is known, The City of Kingsburg will provide the final determination regarding water availability and any possible connection fees (or other improvements) as deemed appropriate by the City of Kingsburg. Overall, as it is unlikely that the Project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge, a less than significant impact would occur.

- c) **Less Than Significant Impact:** The proposed Project will not 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 regarding:
- i) **Erosion and Siltation; Less Than Significant Impact:** The extent of potential erosion will vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. The relatively flat nature of the site reduces the need for extensive grading for future building pads, internal streets, off-street parking, shipping/receiving area, storage areas, etc. Other ground disturbances include any drilling, trenching, landscaping, and excavation of the stormwater detention pond. The site is and will continue to have a relatively-flat topography after site construction. Also, as noted earlier, a SWPPP will be in place during construction, as described in Impact 10-a. Therefore, construction-related activities will minimally disturb the ground surface resulting in a less than significant impact from erosion and siltation.
 - ii) **Runoff resulting in Flooding On- or Off-site; Less Than Significant Impact:** The site will not result in waters capable of flooding either on- or off-site. The site will include its own stormwater detention basin to confine stormwater and/or runoff within the Project site. The site is not subject to flooding and lies within Flood Zone X (area of minimal flooding) for the entire Project site per the Federal Emergency Management Agency FIRM map.⁶⁶ As such, the Project would result in a less than significant impact to or from this resource Item.
 - iii) **Runoff affecting Drainage Systems and Polluted Runoff; No Impact:** (See Item 10 a), b) c) i) and ii). As the Project will not connect to any existing or planned stormwater drainage system, it will not provide any additional sources of polluted runoff. As noted earlier, the site will include its own stormwater detention basin to confine stormwater and/or runoff within the Project site. Therefore, the Project would result in no impact to this resource. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and as such, would result in no impact.
 - iv) **Impede or Redirect Flood Flows Less Than Significant Impact:** (See Item 10 c) i) - iii). As noted earlier, the Project site is not subject to flooding and lies within Flood Zone X and the proposed Project will include its own stormwater detention basin to confine stormwater and/or runoff within the Project site. As such, the Project would result in in a less than significant impact to or from this resource Item.
- d) **No Impact:** The Project is not located on or near any areas that would result in or be impact by a flood hazard, tsunami, or seiche zones, that would result in a risk release of pollutants due to project inundation. As indicated in Item 10 b) and c), the Project site is located in a rural area at the northwest corner of Avenue 392 and Road 12 and lies within Zone X (area of minimal flood hazard). Therefore, there would be no impact from potential inundation by flood hazard, tsunami, or seiches.
- e) **No Impact:** The proposed Project would result in the rezoning of an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1) at the moment. As mentioned in Item 10 a), a SWPPP and BMP will be required to be implemented as future developments within the proposed Project site occurs. Thus, the Project would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan.

11. LAND USE AND PLANNING

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁶⁶ Federal Emergency Management Agency. FEMA's National Flood Hazard Layer (NFHL) Viewer. <https://www.arcgis.com/apps/webappviewer/index.html?id=8b0ad51996444d4879338b5529aa9cd>. Accessed January 2021.

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"/>
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Analysis:

Environmental Setting

The Project site is located in a semi-rural area at the northwest corner of Avenue 392 and Road 12; the entire property is currently being used as vineyard. It is bound by commercial (gas station/mini-mart and self-storage) to the northwest, agricultural-related uses (with one residence) to the south, commercial (RV storage) and four residences to the east, and agricultural with a rural residence to the west. Tulare County is bordered by Fresno County to the north, Kings County to the west; Kern County to the south; and Inyo County to the east.

Existing land uses in Tulare County have been organized into generalized categories that are summarized on **Table LU-1**. These lands total 3,930 square miles or approximately 81 percent of Tulare County. Open space, which includes wilderness, national forests, monuments and parks, and county parks, encompass 1,230 square miles, or approximately 25 percent of the County. Agricultural uses total over 2,150 square miles or about 44 percent of the entire county. Incorporated cities in Tulare County capture less than three percent of the entire County.

Table LU-1		
County of Tulare Summary of Assessed Land by Generalized Use Categories⁶⁷		
Generalized Land Use Category	Square Miles¹	Percentage²
Residential	110	2
Commercial	10	Less than 1%
Industrial	10	Less than 1%
Agriculture	2,150	44
Public (including airports, charitable organizations, churches, fraternal organizations, government owned land, hospitals and rest homes, institutional facilities, rehab facilities and schools)	420	9
Open Space (including national forests and parks, timber preserves)	1,230	25
Classified Subtotal	3,930	81
Unclassified (includes streets and highways, rivers, canals, etc.)	780	16
Unincorporated County Subtotal	4,710	97
Incorporated Cities	130	3
Total County	4,840	100
Notes: 1 One square mile = 640 acres.		
2 Percent reflect those estimated for the total land area of the County and may not equal 100 due to rounding.		

Regulatory Setting

Federal

Federal regulations for land use are not relevant to the Project because it is not a federal undertaking. Further, the Project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State

The Project is being evaluated pursuant to CEQA; however, there are no state regulations, plans, programs, or guidelines associated with land use and planning that are applicable to the proposed Project.

Local

Tulare County General Plan 2030 Update

⁶⁷ Tulare County General Plan 2030 Update Background Report. Page 3-53.

The Tulare County General Plan 2030 Update contains the following goals and policies that relate to land use and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review:

LU-1.1 Smart Growth and Healthy Communities wherein the County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development;

PF-1.2 Location of Urban Development wherein the County shall ensure that urban development only takes place in the following areas:

1. Within incorporated cities and CACUDBs;
2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;
3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plan;
4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and
5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the Rural Valley Lands Plan; *PF-1.3 Land Uses in UDBs/HDBs* wherein the County shall encourage those types of urban land uses that benefit from urban services to develop within UDBs and HDBs. Permanent uses which do not benefit from urban services shall be discouraged within these areas. This shall not apply to agricultural or agricultural support uses, including the cultivation of land or other uses accessory to the cultivation of land provided that such accessory uses are time-limited through Special Use Permit procedures;

PF-1.4 Available Infrastructure wherein the County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available, and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies;

PF-1.5 Planning Areas wherein County policies reflect the unique attributes of the various locations and geographic areas in the County. As such, there are policies applicable to one area of the County that are not applicable to others based on natural setting, topography, habitat, existing development, or other attributes which are unique within the planning context of the County;

PF-1.6 Appropriate Land Uses by Location wherein the County shall utilize the Land Use Element and adopted CAC General Plans, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, or Area Plans to designate land uses and intensities that reflect and maintain the appropriate level of urbanized development in each CAC General Plan, Community Plan, Hamlet Plan, Planned Community, Corridor Area, or Area Plan; and

PF-2.4 Community Plans wherein the County shall ensure that community plans are prepared, updated, and maintained for each of the communities. These plans shall include the entire area within the community's UDB and shall address the community's short and long term ability to provide necessary urban services.

a) and b) No Impact: The project site is located in a semi-rural area (i.e., at the urban fringe of the City of Kingsburg) at the northwest corner of Avenue 392 and Road 12, and the entire property is currently being used as vineyard. The proposed Project would result in the rezoning of an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1) at the moment. Thus, the Project would have no impact on these resources. The Project is consistent with and would implement Tulare County General Plan policies *LU-1.1 Smart Growth and Healthy Communities*; *PF-1.2 Location of Urban Development*; *PF-1.4 Available Infrastructure*; *PF-1.5 Planning Areas*; *PF-1.6 Appropriate Land Uses by Location*; and *PF-2.4 Community Plans*; as such, the Project would result in no impact to this resource.

12.	MINERAL RESOURCES				
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
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"/>

Analysis:

Environmental Setting

Per the Tulare County General Plan Background Report, Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the Tulare County, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the County are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains.

Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur.

Aggregate resources are the most valuable mineral resource in Tulare County because it is a major component of the Portland cement concrete (PCC) and asphaltic concrete (AC). PCC and AC are essential to constructing roads, buildings, and providing for other infrastructure needs. There are four streams that have provided the main source of high quality sand and gravel in Tulare County: Kaweah River, Lewis Creek, Deer Creek and the Tule River. The highest quality deposits are located at the Kaweah and Tule Rivers. Lewis Creek deposits are considerably inferior to those of the other two rivers.

Regulatory Setting

Federal

There are no federal or local regulations pertaining to mineral resources relevant to the proposed project.

State

California Surface Mining and Reclamation Act of 1975

Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for

the inventory of mineral lands in the State of California. The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 8 – Environmental Resources Management contains the following goals and policies that relate to mineral resources and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review:

ERM-2.1 Conserve Mineral Deposits wherein the County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate; and

ERM-4.6 Renewable Energy wherein the County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind, solar, bio-fuels and co-generation.

a) and b) No Impact: The Project site is located at the northwest corner of Avenue 392 and Road 12. It is not near or in the vicinity of any known mineral resource zones⁶⁸ or mineral resource production sites⁶⁹. Therefore, the Project would have no impact on these resource items. The Tulare County General Plan Update (see Figure 8.1 Mineral Resource Zone in the General Plan) indicates the locations of State-designated Mineral Resource Zones. According to the map, the Project site is not located in or within 10 miles of a Mineral Resource Zone. The California Department of Conservation indicates that the nearest, active mining operation (Mont La Salle Material Site, mining sand and gravel owned and operated by the Fresno County Department of Public Works) is located approximately 8.5 miles northeast of the Project site; and the next nearest mine is the Kings River sand and gravel mine (also owned and operated by the Fresno County Department of Public Works) located approximately 15 miles southwest of the Project site.⁷⁰ As such, the Project would not 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.

13. NOISE

Would the project result in:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
b)	Generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

⁶⁸ Tulare County General Plan 2030 Update. Figure 8-2. Page 8-12 (Part I).

⁶⁹ Tulare County General Plan Background Report. Figure 10-1.

⁷⁰ State of California Department Of Conservation Division of Mine Reclamation, Maps: Mines and Mineral Resources accessed September 2020 at: <https://maps.conservation.ca.gov/mol/index.html>.

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 public 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"/>
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Analysis:

Environmental Setting

The Project site is located at the northwest corner of Avenue 392 and Road 12, and the entire property is currently being used as grape vineyard. The proposed Project would result in rezoning of an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. It is bound by commercial (gas station/mini-mart and self-storage) to the northwest, agricultural-related uses (with one residence) to the south, commercial (RV storage) and four residences to the east, and agricultural with a rural residence to the west. Typically sensitive receptors on noise-sensitive lands include residences, hospitals, places of worship, libraries and schools, nature and wildlife preserves, and parks. The only noise sensitive land uses located near the proposed Project vicinity are rural residences with the nearest located greater than 250-feet from the Project site.

Within the Tulare County General Plan Background Report, existing noise levels were recorded within unincorporated areas of County. Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be anticipated, the quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources.⁷¹

Noise levels around the Project site are associated with farm equipment and associated agricultural activities. Maximum noise levels generated by farm-related tractors typically range from 77 to 85 dB at a distance of 50 feet from the tractor, depending on the horsepower of the tractor and the operating conditions. Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is generated at the proposed Project site, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation. During periods without noise generated by agricultural production, noise levels would be typical of other noise-sensitive areas in unincorporated Tulare County, as discussed above.

The Tulare County General Plan Background Report Safety section and the Tulare County General Plan 2030 Update serve as the primary policy statement by the County for implementing policies to maintain and improve the noise environment in Tulare County. The General Plan presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of the Tulare County noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.⁷²

Regulatory Setting

Federal

Federal Vibration Policies

The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 PPV without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 RMS (Root Mean Square = The square root of the arithmetic average of the squared amplitude of the signal).⁷³

State

California Noise Control Act

⁷¹ County of Tulare General Plan 2030 Background Report. Page 8-77.

⁷² Ibid.

⁷³ U.S. Department of Transportation, "The Noise and Vibration Impact Assessment Manual". September 2018. FTA Report No. 0123 Federal Transit Administration. Figure 5-4 (Typical Levels of Ground-Borne Vibration) at Page 113; see also 5.5 Human Response to Transit Ground-borne Vibration and Noise discussion on pages 117 and 118. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

The California Noise Control Act was enacted in 1973 (Health and Safety Code § 46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff will work with the OPR to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

Local

Analytical noise modeling techniques, in conjunction with actual field noise level measurements, were used to develop generalized Ldn or Community Noise Equivalent Level (CNEL) contours for traffic noise sources within Tulare County for existing conditions. Traffic data representing annual average daily traffic volumes, truck mix, and the day/night distribution of traffic for existing conditions (1986) and future were obtained from the Tulare County Public Works Department and used in the Tulare County Noise Element. The Tulare County General Plan 2030 Update Health & Safety Element (2012) includes noise and land use compatibility standards for various land uses. These are shown in **Table NOI-1 Land Use Compatibility for Community Noise Environments**⁷⁴:

Table NOI-1

Land Use Category		Community Noise Exposure- L_{dn} or CNEL (dB)						
		50	55	60	65	70	75	80
	Residential - Low Density Single Family, Duplex, Mobile Homes							
	Residential – Multi-Family							
	Transient Lodging – Motels, Hotels							
	Schools, Libraries, Churches, Hospitals, Nursing Homes							
	Auditoriums, Concerts Halls, Amphitheaters							
	Sports Arenas, Outdoor Spectator Sports							
	Playgrounds, Neighborhood Parks							
	Golf Courses, Riding Stables, Water Recreation, Cemeteries							
	Office Buildings, Business Commercial and Professional							
	Industrial, Manufacturing, Utilities, Agriculture							
	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.						
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
	Clearly Unacceptable	New construction or development generally should not be undertaken.						

[Source: Figure Noise-1. State Land Use Compatibility Standards for Community Noise Environment: California Governor's Office of Planning and Research, October 2003]

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 10 – Health and Safety contains the following goals and policies that relate to noise and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review:

⁷⁴ Tulare County General Plan 2030 Update. Goals and Policies Report. Page 10-25.

HS-8.4 Airport Noise Contours wherein the County shall ensure new noise sensitive land uses are located outside the 60 CNEL contours of all public use airports;

HS-8.6 Noise Level Criteria wherein the County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC);

HS-8.8 Adjacent Uses wherein the County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County;

HS-8.11 Peak Noise Generators wherein the County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval;

HS-8.18 Construction Noise wherein the County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 a.m. to 7 p.m., Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors; and

HS-8.19 Construction Noise Control wherein the County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

a) and b) Less Than Significant Impact: The Project site is located at the northwest corner of Avenue 392 and Road 12, and the entire property is currently being used as vineyard. The proposed Project would result in rezoning an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. All future development within the Project area will be reviewed on an individual basis and shall be required to comply with any applicable policies and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations.

Operational noise is anticipated to be below Tulare County General Plan noise standards of 60 dB Ldn (or CNEL) or less at the exterior of nearby residences and 45 dB Ldn (or CNEL) or less within interior living spaces. At full buildout, it is anticipated that the commercial and/or industrial uses, with the exception of the gas station/mini-mart, will generally operate between 7:00 a.m. – 6:00 p.m., Monday thru Friday. The gas station/mini-mart may operate 24 hours per day, seven days per week. Operational peak periods are generally early morning hours (e.g. 6-9 a.m.) and late afternoon (e.g. 5-7 p.m.) resulting in intermittent periods of mostly vehicle circulation noise. As noted in the Sequoia Gateway Commerce Park environmental impact report, "At a minimum distance of 440 feet, the primary noise source associated with parking lots, fast-food restaurants, and gas stations is vehicle circulation. Hourly average noise levels resulting from the noise-generating activities in a busy parking lot would range from 27 to 37 dBA Leq at 440 feet."⁷⁵ Therefore, operational noise impacts from the Project would be less than significant.

Project Construction Noise Impacts: Project construction will include site preparation such as leveling, grading, and other earth shaping activities; construction of structures (buildings), construction of internal roads, off-street parking, shipping/receiving areas, storage areas; trenching, excavation of the stormwater detention basin, etc. Construction-related short-term, intermittent, temporary noise levels will be higher than existing ambient noise levels in the Project area today, but will no longer occur after construction-related activities are completed.

Activities involved in construction will generate maximum noise levels, as indicated in **Table NOI-2**, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise controls.

⁷⁵ Sequoia Gateway Commerce Park Draft EIR, September 2018, Page 3.10-20. Prepared by Bet Verrips, Environmental Consulting. Adopted and certified by the Tulare County Board of Supervisors, December 4, 2018. Resolution No. 2018-0938.

Table NOI-2 Typical Construction Noise Levels		
Type of Equipment	dBA at 50 ft	
	Without Feasible Noise Control	With Feasible Noise Control
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban environments. Most residents of urban areas (and urban fringes) recognize this reality and expect to hear construction activities on occasion. The General Plan 2030 Update Health and Safety Element (2012) does not identify short-term, construction-noise-level thresholds. It limits noise generating activities (such as construction) to hours of normal business operation unless specific County approval is given. Construction-related activities will be restricted to daytime hours and will be short-term and temporary in nature.

Although impacts are considered less than significant, the Project will be required to adhere to the County's noise policies to ensure that impacts remain less than significant, as follows:

HS-8.11 Peak Noise Generators - The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

Also, the sensitive receptors located in the Project area are shielded from the construction areas by distance, existing roadways, agricultural vegetation, and agricultural-related structures.

"Vibration is an oscillatory motion that can be described in terms of the displacement, velocity, or acceleration. Because the motion is oscillatory, there is no net movement of the vibration element and the average of any of the motion metrics is zero. Displacement is the most intuitive metric. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. The velocity represents the instantaneous speed of the floor movement and acceleration is the rate of change of the speed. Although displacement is easier to understand than velocity or acceleration, it is rarely used for describing ground-borne vibration. Most transducers used for measuring ground-borne vibration use either velocity or acceleration. Furthermore, the response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration."⁷⁶

"The effects of ground-borne vibration can include perceptible movement of floors in buildings, rattling of windows, shaking of items on shelves or hanging on walls, and low-frequency noise (ground-borne noise). Building damage is not a factor for typical transportation projects, but in extreme cases, such as during blasting or pile-driving during construction, vibration could cause damage to buildings. Although the perceptibility threshold is approximately 65 VdB, human response to vibration is not usually

⁷⁶ Ibid.

substantial unless the vibration exceeds 70 VdB. A vibration level that causes annoyance is well below the damage risk threshold for typical buildings (100 VdB).⁷⁷ “Ground-borne vibration is almost never a problem outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of a building, the motion does not provoke the same adverse human reaction.”⁷⁸ **Table NOI-3** presents the human response to different levels of ground-borne vibration and noise. “The vibration level (VdB) is presented with the corresponding frequency assuming that the vibration spectrum peaks at 30 Hz or 60 Hz.(xi) The groundborne noise levels (dBA) are estimated for the specified vibration velocity with a peak vibration spectrum of 30 Hz (Low Freq) and 60 Hz (Mid Freq). Note that the human response differs for vibration velocity level based on frequency. For example, the noise caused by vibrating structural components may cause annoyance even though the vibration cannot be felt. Alternatively, a low frequency vibration can cause annoyance while the ground-borne noise level it generates does not.”⁷⁹

Table NOI-3			
Human Response to Different levels of Ground-Bourne Vibration and Noise			
Vibration Velocity Level	Noise Level		Human Response
	Low Freq*	Mid Freq**	
65 VdB	25 dBA	40dBA	Approximate threshold of perception for many humans. Low frequency sound: usually inaudible. Mid-frequency sound: excessive for quiet sleeping areas.
75 VdB	35 dBA	50dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying. Low-frequency noise: tolerable for sleeping areas. Mid-frequency noise: excessive in most quiet occupied
85 VdB	45 dBA	60dBA	Vibration tolerable only if there are an infrequent number of events per day. Low-frequency noise: excessive for sleeping areas. Mid-frequency noise: excessive even for infrequent events for some activities.
*Approximate noise level when vibration spectrum peak is near 30 Hz.			
**Approximate noise level when vibration spectrum peak is near 60 Hz.			

Table NOI-4 presents average source levels in terms of velocity for various types of construction equipment measured under a wide variety of construction activities.

Table NOI-4	
Vibration Levels for Varying Construction Equipment	
Type of Equipment	Peak Particle Velocity @ 25 Feet (inches/second)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003
Jackhammer	0.035
Vibratory Hammer	0.070
Vibratory Compactor/roller	0.210

“Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day. Increases in groundborne vibration levels attributable to the proposed Project would be primarily for grading and construction activities. Such activities would likely require the use of various off-road equipment, such as tractors, concrete mixers, graders, and haul trucks. The use of major groundborne vibration-generating construction equipment, such as pile drivers, would not be required for this

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Ibid.

Project. Once operational, the proposed Project will not result in the on-going use of equipment that produces groundbourne vibration, as vibration from vehicles is dependent upon vehicle speed. Since this is a residential project, vehicle speed is not likely to exceed 25-30 miles per hour. As such, any operational vibrations will be Less Than Significant.

There are no federal or state standards that address construction noise or vibration. Additionally, Tulare County does not have regulations that define acceptable levels of vibration. One reference suggesting vibration standards is the Federal Transit Administration (FTA) publication concerning noise and vibration impact assessment from transit activities. Although the FTA guidelines are to be applied to transit activities and construction, they may be reasonably applied to the assessment of the potential for annoyance or structural damage resulting from other activities. To prevent vibration annoyance in residences, a level of 80 VdB (vibration velocity level in dB) or less is suggested when there are fewer than 70 vibration events per day. A level of 100 VdB or less is suggested by the FTA guidelines to prevent damage to fragile buildings.

Groundborne vibration levels associated with representative off-road equipment are summarized in Table NOI-4. While these construction-related activities would result in minor amounts of groundborne vibration (when compared to the 80-100VdB level as suggested by the FTA guidelines noted earlier), such groundborne noise or vibration would attenuate rapidly from the source and would not be generally perceptible outside of the construction areas. Therefore, based on the vibration levels presented in Table NOI-4, ground vibration generated by off-road equipment would not be anticipated to exceed approximately 0.08 inches per second ppv at 25 feet. Estimated vibration levels at the nearest structures (which is 50 feet west of the nearest Project activity area) would not exceed the minimum recommended criteria for structural damage or human annoyance (0.2 in/sec ppv). As a result, this impact would be Less Than Significant.”⁸⁰

Construction Related Vibration Impacts: The use of impact post driving or drilling will be utilized to install the solar arrays and drilling and cranes for construction of the new transmission line. While these construction-related activities will result in minor amounts of groundbourne vibration, such groundbourne noise or vibration will attenuate rapidly from the source and will not be generally perceptible outside of the construction areas. As such, impacts to the neighboring sensitive receptors will be less than significant.

Project Operational Vibration Impacts: As described in Impact 13 a), the Project’s operations and maintenance will result in minimal maintenance activities. Other than the minimal traffic trips related to maintenance, there will be no vibrational impacts from Project operation. Therefore, the exposure of persons to or generation of excessive groundborne vibration.

Therefore, the Project would result in a less than significant impact and would not generate excessive groundborne vibration or groundborne noise.

- c) No Impact:** The nearest airport, Sequoia Field Airport, is approximately 13.30 miles southeast of the proposed Project site; There are no private airports within the Project vicinity. Therefore, there will be no impact.

14. POPULATION AND HOUSING					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
Analysis: Environmental Setting The California Department of Finance (DOF) provides population estimates for Tulare County. According to DOF population estimates, between 2010 and 2018, Tulare County grew from 442,179 to 475,834 persons ⁸¹ ; an increase of 33,655 persons. Between					

⁸⁰ Ibid.

⁸¹ State of California, Department of Finance. E-4 Population Estimates for City, Counties, and the State, 2018-2018. Sacramento, California. November 2012 Accessed in

2010 and 2018, the County experienced an average yearly population growth of 0.84 percent, for a total (Year 2018) population of 475,837.

The annual growth rate for the entire County is anticipated to increase from 1.9 percent to 2.4 percent through 2030. While the percentage of the County's population living in incorporated cities is anticipated to increase by 2030, the percentage of persons living in unincorporated areas in the County will decrease by 2030. The Tulare County Association of Governments (TCAG) projects an additional 313,970 people to be living in Tulare County by 2030 for a total projected population of approximately 742,970.⁸²

Regulatory Setting

Federal

U.S. Department of Housing and Urban Development (HUD)

“HUD’s mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes; utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business.”⁸³ However, as the Project does not propose any housing, HUD or other federal regulations do not apply to this Project.

State

California Department of Housing and Community Development (HCD)

HCD’s mission is to “Promote safe, affordable homes and strong vibrant communities throughout California.”⁸⁴ “In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element.”⁸⁵

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (California Government Code §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local

Tulare County Regional Housing Needs Assessment Plan 2014-2023

The Tulare County Association of Governments (TCAG) was responsible for allocating the State’s projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element. Tulare County has no control over the countywide population and housing projections provided to TCAG when it prepared the Regional Housing Needs Assessment Plan.

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:⁸⁶

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;

August 2020 at: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-4/2010-18/>

⁸² Tulare County General Plan 2030 Update. General Plan Background Report. Table 2-16. Page 2-31.

⁸³ U.S. Department of Housing and Urban Development, Mission, <https://www.hud.gov/about/mission>. Accessed August 2020.

⁸⁴ California Department of Housing and Community Development, Mission, <http://www.hcd.ca.gov/about/mission.shtml>. Accessed August 2020.

⁸⁵ Tulare County Housing Element 2015 Update. Page 1-3.

⁸⁶ TCAG. Tulare County Regional Blueprint. May 2009. Page 18. <https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/tulare-county-blue-print/>. Accessed August 2020.

- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and
- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

“The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. ...HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible.”⁸⁷

“HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants.”⁸⁸

a) Less Than Significant Impact: The project site is located in a rural area at the northwest corner of Avenue 392 and Road 12, and it is proposing to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1). Future development of the Project site shall be required to comply with any relevant regulations and requirements in the County’s General Plan, Zoning Ordinance, as well as State and regulations. Project-related employees during both the construction and operational phases are anticipated to reside within the Project vicinity and would not result in unplanned population growth. Thus, the Project would have less than significant impact on this resource.

b) No Impact: The project site is located in a rural area at the northwest corner of Avenue 392 and Road 12. As indicated in Item 14 a), the Project is proposing to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1). The entire property is currently being used for grape vineyards and no housing units are located on the site. As such, the Project would not displace any people or housing units. Therefore, the Project would have no impact on this resource.

15. PUBLIC SERVICES

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 public services:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The Tulare County Sheriff will continue to service the Kingsburg Area, with City police forces assumed to be the first responders.

⁸⁷ Tulare County Housing Element 2015 Update. Page 5-12.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20TULARE%20COUNTY%20Housing%20Element%20Update%202015.pdf>. Accessed August 2020.

⁸⁸ Ibid.

Tulare County Fire Department has 28 stations that are situated throughout the County within its most densely populated areas. “Established in 1912, the Kingsburg Fire Department is a fully paid fire department operating out of one centrally located fire station equipped with one front-line engine, and two ALS ambulances with a minimum daily staffing of (1) captain and (5) firefighters. Supplemental staffing is provided by a part-time staff of Reserve Firefighters.”⁸⁹

The nearest elementary School, Lincoln Elementary, is approximately 0.55 miles northeast of the Project site, while the nearest high school (Kingsburg High School) is approximately 0.91 miles north of the Project site in Kingsburg.

Kingsburg Downtown Park is the nearest City of Kingsburg owned/operated park near the Project site. The next nearest park is Bicentennial Park located approximately 0.8 miles northwest of the Project site. The nearest operational landfill is Teapot Dome Landfill, approximately 20.65 miles southeast of the proposed Project site. When it reinitiates active operations in 2020 (estimated), the Woodville Landfill is located approximately 29.85 miles southeast of the site.

Regulatory Setting

Federal

None that are applicable to this Project.

State

California Fire Code and Building Code

The purpose of the California Fire Code (Title 24, Part 9 of the California Code of Regulations) is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.⁹⁰

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update, Chapter 14 – Public Facilities and Services, contains the following policies that relate to public services and may apply to this Project:

PFS-7.2 Fire Protection Standards wherein the County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection;

PFS-7.5 Fire Staffing and Response Time Standards wherein the County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards;

PFS-7.6 Provision of Station Facilities and Equipment wherein the County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County’s service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County;

PFS-7.12 Design Features for Crime Prevention and Reduction wherein the County shall promote the use of building and site design features as means for crime prevention and reduction; and

PFS-7.9 Sheriff Response Time wherein the County shall work with the Sheriff’s Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

⁸⁹ Revised Kingsburg Area Plan, P 8-1.

⁹⁰ 2016 California Fire Code (Title 24, Part 9 of the California Code of Regulations). Page 3. Accessed August 2020.
<https://www.citymb.info/Home/ShowDocument?id=28089>

As discussed in more detail in Items a) – e), the proposed Project will not rely on the addition or alteration of any public services. The subject site is within the northwestern portion of Tulare County and will utilize existing services provided by Tulare County. There will be a less than significant impact on public services.

- a) **Fire Protection – Less Than Significant Impact:** The Kingsburg Fire Department will continue to provide fire protection services to the proposed Project site upon development. The Department is a fully paid fire department operating out of one centrally located fire station equipped with one front-line engine, and two ALS ambulances with a minimum daily staffing of (1) captain and (5) firefighters. Supplemental staffing is provided by a part-time staff of Reserve Firefighters⁹¹. The Project is proposing to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. Thus, there would be less than significant impact to this resource.
- b) **Police Protection – Less Than Significant Impact:** The County of Tulare will continue to provide police protection services to the Project site upon development. “The Kingsburg substation serves different areas with 10 patrols. According to the Tulare County Sheriff’s Department 2014-2015 Annual Report (page 6), there are currently 592 allocated sworn officers serving the unincorporated population of 146,651 resulting in a service ratio of 2.47%. This ratio is still above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. Thus, the Project would have a less than significant impact on this resource.”⁹²
- c) **Schools – No Impact:** The nearest elementary School, Lincoln Elementary, is approximately 0.55 miles northeast of the Project site, while the nearest high school (Kingsburg High School) is approximately 0.91 miles north of the Project site in Kingsburg. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The Project is not proposing construction of any residential structures which could result in the increase of school-aged children. Thus, the Project would have no impact on this resource.
- d) **Parks – No Impact:** The Kingsburg Downtown Park, approximately 0.65 miles to the north, is the nearest park to the Project site. The next nearest park is Bicentennial Park located approximately 0.8 miles northwest of the Project site. As the Project is not proposing to add more residential units, the Project will not create a need for additional park or recreational services. Thus, the Project would have no impact on this resource.
- e) **Other Public Facilities – No Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The Project will receive water services from City of Kingsburg Water, and electricity and natural gas will be provided by Pacific Gas and Electric. The Selma-Kingsburg-Fowler Sanitation District will provide the Project area with sewer services, and storm water will be collected and retained onsite via a new ponding basin. For any future developments within the Project site, a “Will Serve” letter from off-site community water and/or sewage disposal provider will be required. Thus, the Project would have no impact on this resource.

16. RECREATION					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
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"/>
Analysis:					
Environmental Setting					

⁹¹ Revised Kingsburg Area Plan, P 8-1.

⁹² Ibid.

“Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them.”⁹³ Two new parks were completed and became operational in the unincorporated communities of Plainview (Plainview Community Park) in 2016 and Earlimart (Earlimart Community Park) in 2017. In addition to the 15 parks and recreation facilities that are owned and operated by Tulare County, there are State Parks and Forests, National Parks and National Forests, trails, and recreational areas. The Kingsburg Downtown Park, approximately 0.65 miles to the north, is the nearest park to the Project site, with the next nearest park, Bicentennial Park, being located approximately 0.8 miles northwest of the Project site. Lastly, each incorporated city in the County maintains and operates municipal park and recreation facilities which can also be accessed by the County’s total population.

Federal

Lakes Kaweah and Success

“Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake’s Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching.

Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking. The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area.”⁹⁴

National Parks and National Forests

“Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer.”⁹⁵

Sequoia National Forest

“Sequoia National Forest takes its name from the Giant Sequoia, which is the world’s largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and Mexico, crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year.”⁹⁶

Giant Sequoia National Monument

“The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail.”⁹⁷

⁹³ Tulare County General Plan 2030 Update Background Report. February 2010. Page 4-1. Access <http://generalplan.co.tulare.ca.us/documents.html> then scroll to Recirculated Draft EIR, the click on “Appendix B-Background Report”

⁹⁴ Ibid. 4-7

⁹⁵ Op. Cit. 4-8.

⁹⁶ Op. Cit. 4-9.

⁹⁷ Op. Cit.

Sequoia and Kings Canyon National Parks (SEKI)

“The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks, and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges, the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.5 million people visit the two parks on an annual basis.”⁹⁸

State

“The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest.”⁹⁹ Colonel Allensworth State Historic Park (approximately 3,715 acres in area) is located in the unincorporated community of Allensworth in southwestern Tulare County, approximately 45 miles south of the Project site.

Other Recreational Facilities

Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.¹⁰⁰

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust.

Regulatory Setting

Federal

None that apply to this Project

State

None that apply to this Project.

Local

None that apply to this Project.

a) and b) Less Than Significant Impact: The entire property is currently being used for grape vineyards. As discussed in Item 15 Public Utilities, there are two parks less than one mile away from the Project site. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. No population growth will be associated with or necessitated by the Project as employees will come from and reside within the Project vicinity. As such, there is no need to increase the usage, construct new, or expand existing recreational facilities. Thus, the Project will have no impact on these resources.

⁹⁸ Op. Cit.

⁹⁹ Op. Cit. 4-7.

¹⁰⁰ Op. Cit. 4-10 to 4-11.

17.	TRANSPORTATION				
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
b)	Would the project 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"/>
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"/>
d)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Analysis: Environmental Setting <p>Tulare County's planned circulation system consists of an extensive network of regional streets and roads, local streets and State Highways. The existing State Highway system was completed in the 1950's and 60's. The average design life of a State Highway is approximately 20 years and many Tulare County's highways were constructed 50 years ago. With industry intensification and other development, many facilities are beginning to show structural fatigue (e.g., surface cracks, potholes, and broken pavement). Caltrans and the Tulare County places emphasis on corridors as an important element of the existing transportation system. Corridors are defined as broad geographic areas that include various modes of transportation, local roads and State Highways.</p> <p>The proposed Project is located south of the City of Kingsburg at the northwest corner of Avenue 392 and Road 12 and adjacent to State Route 99, an interregional corridor with Fresno County to the north and Kern County to the south. The Project is located in an area that is a mix of commercial, rural residential and agriculture uses. The entire property is currently being used for grape vineyards. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses.</p> <p>"Public transportation provides an economical and efficient alternative for getting people to work, school and other chosen destinations. In Tulare County, buses are the primary mode of public transportation. Public transportation also takes the form of shared ride taxi, automobile and vanpools; dial-a-ride, and specialized handicapped accessible services. In Tulare County, social service transportation is provided by the following: local transit agencies, demand responsive operators and city/county special programs for senior citizens, mental health organizations and disabled citizens programs. These programs are funded and subsidized through State and federal grants, Local Transportation Funds (LTF), State Transit Assistance Funds (STAF), and local transportation sales tax revenues."¹⁰¹</p> <p>"Tulare County's transportation system is composed of several State Routes, including three freeways, multiple highways, as well as numerous county and city routes. The county's public transit system also includes two common carriers (Greyhound and Orange Belt Stages), the AMTRAK Service Link, other local agency transit and Para transit services, general aviation, limited passenger air service and freight rail service."¹⁰²</p> <p>"Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County."¹⁰³</p> <p>"There are nine public use airports in Tulare County. These include six publicly owned and operated facilities (Porterville Municipal, Sequoia Field, Tulare Municipal [Mefford Field], Visalia Municipal, Woodlake, and Harmon Field [currently closed]) and three privately owned and operated airports (Alta Airport [currently closed], Thunderhawk Field, and Eckert Field). Badger Field is under consideration</p>					

¹⁰¹ Tulare County General Plan 2030 Update Background Report. Page 1-14.

¹⁰² Ibid. Page 5-4.

¹⁰³ Op. Cit.

for Federal Aviation Administration (FAA) recertification as a restricted private airfield (as of August 2006).”¹⁰⁴ The nearest airport to the proposed Project, Sequoia Field Airport, is approximately 13.30 miles southeast of the proposed Project site.

Regulatory Setting

Federal

Several federal regulations govern transportation issues. They include: Title 49, CFR, Sections 171-177 (49 CFR 171-177) which governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles; 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations which address safety considerations for the transport of goods, materials, and substances over public highways; and 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, which directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

State

CEQA Guidelines: Transportation Impacts

Section 15064.3 of the CEQA Guidelines provides specific guidance on determining the significance of transportation impacts as noted below

Section 15064.3 Determining the Significance of Transportation Impacts

(a) Purpose.

This section describes specific considerations for evaluating a project’s transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, “vehicle miles traveled” refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project’s effect on automobile delay shall not constitute a significant environmental impact.

(b) Criteria for Analyzing Transportation Impacts.

- (1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- (2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
- (3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project’s vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
- (4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project’s vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

¹⁰⁴ Op. Cit. 13-2.

- (c) Applicability. The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

Caltrans: Transportation Concept Reports

Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCP) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept".

Caltrans Guide for the Preparation of Traffic Impact Studies

"The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS)."¹⁰⁵ The consultant VRPA Technologies, Inc. prepared a trip generation and trip distribution report for the Project.

Local

Tulare County Transportation Control Measures (TCM)

"Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

- Rideshare Programs;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;
- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities."¹⁰⁶

Tulare County Association of Governments (TCAG)

Assembly Bill (AB) 69 State law has required the preparation of Regional Transportation Plans (RTPs) to address transportation issues and assist local and state decision makers in shaping California's transportation infrastructure."¹⁰⁷ The Tulare County Association of Government has prepared the 2014 Regional Transportation Plan. Specific policies that may apply to the proposed Project include:¹⁰⁸

Tulare County General Plan 2030 Update

Chapter 13. Transportation & Circulation Element (2020 Update)

"The General Plan 2030 Update amendment includes planning objectives, policies, and standards to reduce greenhouse gas emissions, make the most of efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity. The Transportation and Circulation element contains programmatic policies that provide a guide for a balanced, multimodal transportation (Complete Streets) network that meets the needs of all uses of County streets, roads, and highways for safe and convenient travel manner that is suitable for all users, including bicyclists, children, persons with disabilities, motorists, movers of

¹⁰⁵ Caltrans Guide for the preparation of traffic studies. Page ii.

¹⁰⁶ Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report. Page 3.2-2.

¹⁰⁷ California Transportation Commission, 2017; 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations. Page 9. http://www.dot.ca.gov/hq/tpp/offices/orip/rtp/index_files/2017FINALDraft_MPORTPGuidelines.pdf

¹⁰⁸ Tulare County Association of Governments. Regional Transportation Plan. 2018 Policy Element. Page A-15 and A-16. <https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/policy-element/>

commercial goods, pedestrians, users of public transportation, and seniors. These planning objectives, policies and standards reflect the rural, suburban, and urban contexts of each of the individual planning areas within the County.

The Transportation and Circulation Element implements Tulare County's Vehicle Miles Traveled Guidelines (VMT Guidelines or Guidelines) for the implementation of Senate Bill 743 (SB 743) in the unincorporated area of Tulare County. SB 743 was passed by the legislature and signed into law in the fall of 2013. This legislation led to a change in the way that transportation impacts will be measured under the California Environmental Quality Act (CEQA). Starting on July 1, 2020, automobile delay and level of service (LOS) may no longer be used as the performance measure to determine the transportation impacts of land development projects under CEQA and the new performance measure will be vehicle miles traveled (VMT).

SB 743 applies to both land development and transportation projects. The VMT analysis methodology for land development projects was developed in order to accomplish the following:

- Meet the requirements of CEQA, including the new SB 743 regulations that were adopted into CEQA in December 2018 and go into effect on July 1, 2020.
- Provide for transportation improvements to be built that benefit Tulare County residents and facilitate travel by walking, bicycling, and transit.
- Provide for analysis and mitigation of VMT impacts in a way that is feasible and within the scale of land development projects in Tulare County.

Although VMT will be the performance measure for CEQA transportation studies, this Transportation and Circulation Element still requires consideration of roadway operational analysis (LOS) in the project approval process and may condition projects to provide roadway improvements. Guidelines are provided for the evaluation of the effect of projects on roadways, including the determination of appropriate roadway improvements as included in the VMT Guidelines."¹⁰⁹

General Plan Policies

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project:

TC-1.15 Traffic Impact Study wherein the County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS "D" or worse occurs, will be required to prepare and submit this study. The traffic impact study will include impacts from all vehicles, including truck traffic.

TC-1.16 County Level Of Service (LOS) Standards wherein the County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual; and

HS-1.9 Emergency Access wherein the County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

City of Kingsburg General Plan Policies

Arterial and Collector Street Policy 9 – Direct access to Arterials and Collectors from residential development is to be discouraged except where physical conditions do not allow for other design solutions. In commercial and multi-family areas, access may be required from an alley or from a continuous driveway along the rear of adjacent commercial lots. Access from the street side yard of a corner lot which sides onto an Arterial shall be prohibited in new subdivisions or on undeveloped lots in existing subdivisions.

a) Less Than Significant Impact: The Project site is located at the northwest corner of Avenue 392 and Road 12. It proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. Any future developments shall be required to comply with any relevant regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. The Project does not require construction of any roadways, and will generate approximately 0.72 trips per day on average for operation and maintenance. As the Project will not generate significant new traffic, and based on existing conditions, there is no anticipated change in the operating conditions of the roadways from what currently exists. As such, the Project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or

¹⁰⁹ Tulare County General Plan 2030 Update, Chapter 13 Transportation & Circulation (updated 2020). Page 13-3

highways. The Project is in a semi-rural area within an existing roadway infrastructure and is adjacent to SR 99 and will not require development/construction of additional roadway infrastructure. As it will not result in a substantial amount of employees, it will not result in a substantial need for transit, bicycle, or pedestrian facilities. Therefore, the Project would result in a less than significant impact

- b) Less Than Significant Impact:** The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses.

SB 743 eliminates LOS as a basis for determining significant transportation impacts under CEQA and provides a new performance metric, VMT. As a result, the State has shifted from measuring a project's impact to drivers (LOS) to measuring the impact of driving (VMT) as it relates to achieving State goals of reducing greenhouse gas (GHG) emissions, encouraging infill development, and improving public health through active transportation.

The VMT Analysis follows the CEQA guidance for determining transportation impacts in accordance with SB 743. The County has established VMT analysis procedures adopting and setting its own VMT metric and thresholds to conduct this analysis. It noted that the County's VMT Guidelines, as adopted, are consistent with the approach provided in the Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory), dated December 2018.

The OPR Technical Advisory recommends screening criteria to identify types, characteristics, or locations of projects that would not result in significant impacts to VMT. If a project meets screening criteria, then it is presumed that VMT impacts would be less than significant for the project and a detailed VMT analysis is not required.

Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends quantified thresholds for these land uses for purposes of analysis and mitigation. In general, the recommended "Threshold of Significance" is if a proposed project exceeds a level of 15 percent below existing regional VMT for that type of project, a significant transportation impact may be generated. However, for other uses (i.e. retail projects), a net increase in total VMT may indicate a significant transportation impact.

Project Screening

Prior to undertaking a detailed VMT analysis, the Technical Advisory advises that a screening process be conducted "to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study." The Thresholds of Significance and Project Screening Criteria, below, provides a summary of the screening criteria and thresholds used for the project.

Thresholds of Significance and Screening Criteria and Threshold

Thresholds of Significance¹¹⁰

The following Thresholds of Significance per Tulare County's VMT Guideline apply to this Project. Thresholds of significance for VMT analysis are also based on OPR's recommendations, but some refinements have been made to reflect the predominantly rural character of Tulare County; following are refinements applicable to Tulare County:

- OPR recommends a significance threshold of 15% below average. For Tulare County, the significance threshold is below the TAZ average. Therefore, projects that have a VMT/capita or VMT/employee equal to or above the average VMT/capita or VMT/employee in the TAZ in which the project is located would be presumed to have a significant transportation impact.
- OPR recommends that local-serving retail projects can be presumed to have a less than significant transportation impact. This is because local-serving retail typically reduces trip lengths by providing additional destinations that tend to replace trips to more distant retail locations. For Tulare County, this concept is also used and it is extended to other types of local-serving projects such as schools, public facilities, parks, and local-serving medical offices.
- OPR does not recommend a specific threshold for industrial projects. For Tulare County, an industrial project has a

¹¹⁰ Tulare County. Tulare County SB 743 Guidelines Page 5. June 2020. Accessed January 2021 at: <https://tularecounty.ca.gov/rma/index.cfm/rma-documents/planning-documents/tulare-county-sb-743-guidelines-final/>

significant impact if its VMT/employee equals or exceeds average VMT/employee for the TAZ in which the project is located. It should be noted that goods movement is not subject to VMT analysis. Therefore, goods movement trips associated with an industrial project would not be included when determining VMT/employee.

Screening Criteria¹¹¹

The Project has been evaluated by RMA staff which has used its judgement to determine that the Project meets the following Screening Criteria that it is Local-Serving Retail and Similar Land Uses. This determination is based on the fact that this Project is less a generator but rather an attractor to provide not only local opportunities for the nearby city of Kingsburg, but also regional opportunities for pass by traffic using SR 99 (a major regional transportation corridor) which is immediately adjacent to and west of SR99.

Consistent with OPR's Technical Advisory, local-serving retail uses are presumed to have a less than significant impact on VMT since they tend to attract vehicle trips from adjacent areas that would have otherwise been made to more distant retail locations. This presumption also applies in Tulare County and is applicable to this Project.

Therefore, based on the fact that the proposed Project is located within less than a half-mile proximity of a major transportation corridor (SR 99), and that the Project provides local opportunities that result in reduced VMT, ; the Project would result in less than significant impact to this resource Item. As such, no mitigation is required to reduce VMT.

c) Less Than Significant Impact: The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. Any future developments shall be required to comply with any relevant regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. Thus, the Project will have less than significant impact to this resource.

d) No Impact: At the moment the Project is merely proposing to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. All future project proposals within the area will be reviewed on an individual basis and shall be required to comply with any relevant regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. Thus, the Project will have no impact to this resource.

18. TRIBAL CULTURAL RESOURCES					
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:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	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, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysis: Environmental Setting “Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams.					

¹¹¹ Ibid. 6.

Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory.”¹¹²

“California’s coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.”¹¹³

“The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167”¹¹⁴

Existing Cultural and Historic Resources

Tulare County’s known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources.

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State University Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws.

Records Search Results

The proposed Project is located within the Kingsburg Urban Development Boundary (UDB). The Kingsburg Area and Specific Plan (KASP, formerly referred to as the Kingsburg Area 2020 Community Plan) is currently being prepared. A search by the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS) to identify areas previously surveyed and identify known cultural resources present within or in close proximity to the KASP Study Area (which includes the Project site) was requested on July 28, 2020 and results were received on August 11, 2020 (see Attachment “C”). According to the CHRIS research for the KASP Study Area, there have been three (3) previous cultural resource studies conducted within the project area and five (5) additional studies conducted within the one-half mile radius. The CHRIS results also indicate that there is one (1) recorded resource within the KASP Study Area and 61 recorded resource within the one-half mile radius. These resources primarily consist of historic buildings and include an historic railroad.

Native American Consultation

The Native American Heritage Commission (NAHC) maintains a contact list of Native American Tribes as having traditional lands located within the County’s jurisdiction. A search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC) was also requested for the KASP Study Area and resulted in negative results (i.e., no sacred lands were identified in the Project site) in a letter received from the NAHC on July 30, 2020 (see Attachment “C”). Pursuant to AB 52 and SB 18, Tulare County RMA staff submitted consultation requests to thirteen (13) Tribal contacts, representing five (5) Native American Tribes (see Attachment “C”), by certified mail on August 21, 2020, and also submitted these requests via email on August 24, 2020. As of the time of release of this IS/MND, the County has not received any responses from the Tribes regarding these consultation referrals.

Regulatory Setting

Federal

¹¹² Tulare County General Plan 2030 Update. Page 8-5.

¹¹³ Ibid.

¹¹⁴ Ibid. 8-6.

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources.¹¹⁵ The legislation established the National Register of Historic Places and the National Historic Landmarks Program.¹¹⁶ It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state.¹¹⁷ A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements for federal agencies to consider the effects of proposed federal Projects on historic properties (Section 106, NHPA).¹¹⁸ Federal agencies and recipients of federal funding are required to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.¹¹⁹

State

California State Office of Historic Preservation (OHP)

“The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), a gubernatorial appointee, and the State Historical Resources Commission.”¹²⁰

“OHP's responsibilities include identifying, evaluating, and registering historic properties; ensuring compliance with federal and state regulatory obligations; encouraging the adoption of economic incentives programs designed to benefit property owners; encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California.”¹²¹

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.¹²²

Native American Heritage Commission

“The Native American Heritage Commission (NAHC), created in statute in 1976, is a nine-member body, appointed by the Governor, to identify and catalog cultural resources (i.e., places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands) in California. The Commission is charged with the duty of preserving and ensuring accessibility of sacred sites and burials, the disposition of Native American human remains and burial items, maintain an inventory of Native American sacred sites located on public lands, and review current administrative and statutory protections related to these sacred sites.”¹²³

Tribal Consultation Requirements: AB 52 (Gatto, 2014)

The Public Resources Code has established that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative

¹¹⁵ Advisory Council on Historic Preservation. The National Historic Preservation Program. <http://www.achp.gov/overview.html>

¹¹⁶ Ibid.

¹¹⁷ Op. Cit.

¹¹⁸ Op. Cit.

¹¹⁹ Op. Cit.

¹²⁰ Office of Historic Preservation. Mission and Responsibilities. http://ohp.parks.ca.gov/?page_id=1066

¹²¹ Ibid.

¹²² Office of Historic Preservation. California Register of Historic Places. http://www.ohp.parks.ca.gov/?page_id=21238

¹²³ Native American Heritage Commission. Welcome. <http://nahc.ca.gov/>

declaration, or environmental impact report for a project. (Pub. Resources Code, § 21080.3.1.) If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact.¹²⁴

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

- (c) CEQA applies to effects on archaeological sites.
 - (1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
 - (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
 - (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.
 - (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

Sections 15064.5 (d) through (f) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

- (d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
 - (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
 - (2) The requirements of CEQA and the Coastal Act.
- (e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
 - (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
 - (B) If the coroner determines the remains to be Native American:
 - 1. The coroner shall contact the Native American Heritage Commission within 24 hours.
 - 2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

¹²⁴ Office of Planning and Research. Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA (May 2015). Page 3.
http://opr.ca.gov/docs/DRAFT_AB_52_Technical_Advisory.pdf

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - (B) The descendant identified fails to make a recommendation; or
 - (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.
 - (f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

Local

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

ERM-6.1 Evaluation of Cultural and Archaeological Resources wherein the County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards;

ERM-6.2 Protection of Resources with Potential State or Federal Designations wherein the County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources;

ERM-6.3 Alteration of Sites with Identified Cultural Resources which states that when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource;

ERM-6.4 Mitigation which states that if preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records;

ERM-6.9 Confidentiality of Archaeological Sites wherein the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts; and

ERM-6.10 Grading Cultural Resources Sites wherein the County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

a) and b) Less Than Significant Impact With Mitigation: As previously noted, the Native American Heritage Commission (NAHC) conducted a search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC) which concluded negative results (i.e., no sacred lands were identified in the Project site). The five (5) Native American Tribes identified in the NAHC Sacred Lands File search were notified consistent with AB 52 and SB 18 requirements; no responses have been received by the County as of the date of release of this IS/MND. However, as there is possibility of accidental discovery of subsurface resources during construction-related earthmoving activities, **Mitigation Measures CUL-1 through CUL-3** as specified at Item 5 Cultural Resources would be implemented thereby reducing the potential level of impact to this resource as

less than significant for resources 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 to a resource consider significant to a California Native American tribe. Therefore, the Project would result in a less than significant impact to this resource.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

"Tulare County and special districts provide many important services to County residents and businesses in unincorporated communities and hamlets such as water, wastewater, storm drainage, solid waste removal, utilities, communications, fire protection, law enforcement, and a number of other community facilities and services (schools, community centers, etc.)."¹²⁵

"Water districts supply water to communities and hamlets throughout the County. Most communities and some hamlets have wastewater treatment systems; however, several communities including Three Rivers, Plainview, Alpaugh, and Ducor rely on individual septic systems. Storm drainage facilities are generally constructed and maintained in conjunction with transportation improvements or new subdivisions in communities. Solid waste collection in the County is divided into service areas, as determined by the Board of Supervisors, with one license for each area. Southern California Edison provides electric service to the south and central areas of Tulare County while PG&E provides electric service in the north. The [Southern California] Gas Company is the primary provider of natural gas throughout the County."¹²⁶

Regulatory Setting

Federal

U.S. Environmental Protection Agency (U.S. EPA) - Federal Regulation Title 40, Part 503

In 1993, the U.S. Environmental Protection Agency (U.S. EPA) promulgated Standards for the Use or Disposal of Sewage Sludge (Code of Federal Regulations Title 40, Part 503), which establish pollutant limitations, operational standards for pathogen and vector

¹²⁵ Tulare County General Plan Update 2030. Page 14-3.

¹²⁶ Ibid. 14-3.

attraction reduction, management practices, and other provisions intended to protect public health and the environment from any reasonably anticipated adverse conditions from potential waste constituents and pathogenic organisms.

This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.¹²⁷

Resource Conservation and Recovery Act (RCRA)¹²⁸

Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

- Protecting human health and the environment from the potential hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner
- To achieve these goals, RCRA established three distinct, yet interrelated, programs:
 - ✓ The [solid waste program](#), under RCRA Subtitle D, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.
 - ✓ The [hazardous waste program](#), under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal — in effect, from “cradle to grave.”
 - ✓ The underground storage tank (UST) program, under RCRA Subtitle I, regulates [underground storage tanks](#) containing hazardous substances and petroleum products. RCRA banned all open dumping of waste, encouraged [source reduction](#) and [recycling](#), and promoted the [safe disposal of municipal waste](#). RCRA also mandated strict controls over the [treatment, storage, and disposal of hazardous waste](#).

State

The Integrated Waste Management Act (Assembly Bill 939)

In 1989 the California legislature passed the Integrated Waste Management Act of 1989, known as AB 939. The bill mandates a reduction of waste being disposed: jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance.

The Regional Water Quality Control Board – Biosolids

In California, the beneficial reuse of treated municipal sewage sludge (*a.k.a.*, biosolids) generally must comply with the California Water Code in addition to meeting the requirements specified in Part 503 in Title 40 of the Code of Federal Regulations.

In July 2004, the State Water Resources Control Board adopted [Water Quality Order No. 2004-12-DWQ](#) (General Order), and certified a supporting statewide [Programmatic Environmental Impact Report](#) (PEIR)

The General Order incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

¹²⁷ Title 40: Protection of Environment Part 503: Standards for the Use of Disposal of Sewage Sludge, <http://www.ecfr.gov/cgi-bin/text-idx?SID=faac2040ebd49d57cc2786437545c8cf&node=40:30.0.1.2.42.1.13.1&rgn=div8>

¹²⁸ United States Environmental Protection Agency. Accessed at: <https://www.epa.gov/history/epa-history-resource-conservation-and-recovery-act>, 8/11/2020.

Persons interested in seeking coverage under the General Order should contact the appropriate Regional Water Quality Control Board. Only applicants who submit a complete *Notice of Intent* (NOI), appropriate application fee, and are issued a Notice of Applicability by the executive officer of the appropriate Regional Water Quality Control Board are authorized to land apply biosolids at an agricultural, horticultural, silvicultural, or land reclamation site as a soil amendment under the General Order.

State Water Resources Control Board, Divisions of Drinking Water and Clean Water

Recycled water regulations are administered by both Central RWQCB and the California State Water Resources Control Board (SWRCB). The regulations governing recycled water are found in a combination of sources, including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations (CCR). Issues related to the treatment and distribution of recycled water are generally under the permitting authority of RWQCB and the Clean Water Division of the SWRCB.

Department of Resources Recycling and Recovery (CalRecycle)

CalRecycle (formerly the California Integrated Waste Management Board) governs solid waste regulations on the state level, delegating local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). Regulations authored by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board (SWRCB) pertaining to landfills (Title 23, Chapter 15) to form CCR Title 27.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Local

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

PFS-3.2 Adequate Capacity wherein the County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity;

PFS-4.3 Development Requirements wherein the County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance;

PFS-4.4 Stormwater Retention Facilities wherein the County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge;

PFS-4.5 Detention/Retention Basins Design wherein the County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible;

PFS-4.7 NPDES Enforcement wherein the County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program;

PFS-5.3 Solid Waste Reduction wherein the County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs;

PFS-5.4 County Usage of Recycled Materials and Products wherein the County shall encourage all industries and government agencies in the County to use recycled materials and products where economically feasible;

PFS-5.5 Private Use of Recycled Products wherein the County shall work with recycling contractors to encourage businesses to use recycled products and encourage consumers to purchase recycled products;

PFS-5.6 Ensure Capacity wherein the County shall require evidence that there is adequate capacity within the solid waste system for the processing, recycling, transmission, and disposal of solid waste prior to approving new development;

PFS-5.7 Provisions for Solid Waste Storage, Handling, and Collection wherein the County shall ensure all new development adequately provides for solid waste storage, screening, handling, and collection prior to issuing building permits;

PFS-5.8 Hazardous Waste Disposal Capabilities wherein the County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan;

PFS-9.1 Expansion of Gas and Electricity Facilities wherein the County shall coordinate with gas and electricity service providers to plan the expansion of gas and electrical facilities to meet the future needs of County residents;

PFS-9.2 Appropriate Siting of Natural Gas and Electric Systems wherein the County shall coordinate with natural gas and electricity service providers to locate and design gas and electric systems that minimize impacts to existing and future residents;

PFS-9.4 Power Transmission Lines wherein the County shall work with the Public Utilities Commission and power utilities in the siting of transmission lines to avoid interfering with scenic views, historic resources, and areas designated for future urban development;

and *PFS-9.3 Transmission Corridors* wherein the County shall work with the Public Utilities Commission and power utilities so that transmission corridors meet the following minimum requirements:

1. Transmission corridors shall be located to avoid health impacts on residential lands and sensitive receptors, and
2. Transmission corridors shall not impact the economic use of adjacent properties.

a) – c) Less Than Significant Impact: The entire property is currently being used for grape vineyards. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The Project applicant proposes to receive water services from City of Kingsburg Water (via an Extra-Territorial Agreement) and electricity and natural gas services from the Pacific Gas and Electric Company (PG&E). No new or expansion of water facilities is anticipated since the City has peak production capacity of 150 million gallons (MG) and, as of 2017, average monthly usage had been approximately 95 MG over the previous six years, and in the previous three years, average usage had been substantially less at 80.2 MG.¹²⁹ As such, no new wells or water import will be required, and no new or expansion of water facilities is anticipated. The Project site is within the Selma-Kingsburg-Fowler Sanitation District (SKF) Sphere of Influence and the applicant will be required to enter into an Extra-Territorial Agreement with SKF. Storm water will be collected and retained onsite via a new ponding basin. As of 2017, SKF processed an average of 2.7 MGD, with average flows of approximately 4.5 MGD, and with a hydraulic capacity of approximately 8.0 MGD.¹³⁰ A "Will Serve" letter from off-site community water and sewage disposal providers will be required for any individual project proposals in the future. Any future developments shall be required to comply with any relevant regulations and requirements in the County's General Plan, Zoning Ordinance, as well as State and Federal regulations. Thus, the Project will have less than significant impact on these resources.

d) and e) Less Than Significant Impact: The proposed Project does not include the creation or expansion of a solid waste facility. Solid waste service to the City of Kingsburg is provided under a franchise agreement with Waste Management, which utilizes active Class III landfills within Fresno County. Waste Management has capacity and will serve the solid waste disposal needs for the proposed Project. The proposed Project would not 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, and it will comply with federal, state, and local management and reduction statutes and regulations related to solid waste as applicable. Thus, the Project would have less than significant impact on these resources.

¹²⁹ Andersen Village Draft EIR, Page 3.18-7. <https://tularecounty.ca.gov/rma/index.cfm/projects/planning-projects/applicant-projects/hash-farms/hash-draft-eir-complete/>

¹³⁰ Ibid, Page 3.18-5

20. WILDFIRES					
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

The entire property is currently being used for grape vineyards. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. The Project is not located in or near state responsibility areas or lands classified as fire hazard severity zones.

Regulatory Setting

Federal

Federal Responsibility Areas

Federal responsibility areas (FRA) include lands administered by the following Federal Agencies: the United States Department of Agriculture Forest Service, the United States Department of the Interior, National Park Service, Fish and Wildlife Service, Bureau of Indian Affairs, and Bureau of Land Management, State Responsibility Area, Fire Safe Regulations (Title 14- Natural Resources Division 1.5, Department of Forestry Chapter 7, Fire Protection Subchapter 2, SRA Fire Safe Regulations Articles 1-5).. Given the Project is not located in or near areas of federal jurisdiction, and that the proposed Project will not be funded by any federal sources, no federal wildland fire regulations would apply to the proposed Project.

State

State Responsibility Area

Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. The State Responsibility Area (SRA) is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. SRA regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRA. These measures provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification.

Local

Local Responsibility Area

Local responsibility areas (LRA) include incorporated cities, cultivated agriculture lands, and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government.

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies would apply to this Project if it were located on sloped areas, fire hazards areas, lands susceptible to landslides, subsidence/settlement, contamination, and/or flooding; potential for wildland fires; etc.;

ERM-7.3 Protection of Soils on Slopes wherein unless otherwise provided for in this General Plan, building and road construction on slopes of more than 30 percent shall be prohibited, and development proposals on slopes of 15 percent or more shall be accompanied by plans for control or prevention of erosion, alteration of surface water runoff, soil slippage, and wildfire occurrence;

HS-1.5 Hazard Awareness and Public Education wherein the County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures;

HS-1.11 Site Investigations wherein the County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding;

HS-6.1 New Building Fire Hazards wherein the County shall ensure that all building permits in urban areas, as well as areas with potential for wildland fires, are reviewed by the County Fire Chief;

HS-6.2 Development in Fire Hazard Zones wherein the County shall ensure that development in extreme or high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable State and County fire standards;

HS-6.3 Consultation with Fire Service Districts wherein the County shall consult the appropriate fire service district in areas identified as subject to high and extreme fire hazard, for particular regulations or design requirements prior to issuance of a building permit or approval of subdivisions;

HS-6.5 Fire Risk Recommendations wherein the County shall encourage the County Fire Chief to make recommendations to property owners regarding hazards associated with the use of materials, types of structures, location of structures and subdivisions, road widths, location of fire hydrants, water supply, and other important considerations regarding fire hazard that may be technically feasible but not included in present ordinances or policies;

HS-6.6 Wildland Fire Management Plans wherein the County shall require the development of wildland fire management plans for projects adjoining significant areas of open space that may have high fuel loads;

HS-6.13 Restoration of Disturbed Land wherein the County shall support the restoration of disturbed lands resulting from wildfires;

HS-6.14 Coordination with Cities wherein the County shall coordinate with cities to develop cohesive fire safety plans with overlapping coverage; and

HS-6.15 Coordination of Fuel Hazards on Public Lands wherein the County shall work with local and Federal agencies to support efforts to reduce fuel related hazards on public lands.

- a) **No Impact t:** Tulare County has in place an emergency plan to cope with natural disasters that are statewide or happen locally. The County Fire Department and local stationed California Department of Forestry (CDF) are well prepared to fight fires locally as well as statewide. The United States Forest Service (USFS) is in charge of fires that happen in the national parks and Tulare County assists with the fire management process as needed. "In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain."¹³¹ The Project does not involve or necessitate the need of any changes to any state, federal, or local emergency response or evacuation plan. Thus, the Project would have no impact to this resource.

¹³¹ Tulare County General Plan 2030 Update Background Report, pages 8-35 to 8-36

b) – d) Less Than Significant Impact: The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various sized parcels to accommodate commercial and industrial uses. According to Cal Fire’s *Fire Hazard Severity Zones in SRA* map, the Project site is not in the State Responsibility Area and not located within any fire hazard severity zones.¹³² The Project area is relatively flat, the entire property is currently being used for grape vineyards, and is surrounded by agriculture or urban uses. With this environmental context, the proposed Project site is not located within a wildlands area. Conditions of approval requiring all future development within the Project site to submit plans for County Fire Department review, and would be required to meet construction methods compliant with the current California Building Code and California Fire Code standards (such as lighting, fire extinguishers, access/egress, etc.). The Project will not exacerbate wildfire risks or expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, due to slope, prevailing winds, and other factors. The Project will not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The Project will not 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. Thus, the Project would have a less than significant impact to the Wildfire resource.

21. MANDATORY FINDINGS OF SIGNIFICANCE

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 a rare or endangered plant or animal species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Analysis:

The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project will have a less than significant effect on the local environment. The Project proposes to rezone an existing 15.71-acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various size parcels to accommodate commercial and industrial uses. The only known desired uses at this time are a mini-mart/gas station and a fast food establishments; other uses would be determined on a case-by-case basis.

a) Less Than Significant Impact With Mitigation: The potential for impacts to historical, paleontological, and cultural resources from the construction and operation of the proposed Project will be less than significant with the incorporation of the **Mitigation Measures CUL-1** through **CUL -5** as contained in Item 5 Cultural Resources and Mitigation Measure, Item 7 Geology/Soils and Item 18 Tribal Cultural Resources. The analysis contained in Item 4 Biological Resources concludes that this resource has the potential to be impacted and has included **Mitigation Measures BIO-1** through **BIO-7**. Accordingly, the proposed Project will involve no potential for significant impacts due to degradation of the quality of the environment, substantial reductions in the habitat of a fish or wildlife species, causing a fish or wildlife population to drop below self-sustaining levels, threatening to eliminate a plant or animal community, reduction in the number or restriction of the range of a rare or endangered plant or animal

¹³² Cal Fire’s Hazard Severity Zones in State Responsibility’s Areas, https://osfm.fire.ca.gov/media/6830/fhszs_map54.pdf, accessed August 5, 2020.

or elimination of important examples of the major periods of California history or prehistory. As such, the impact will be less than significant for biological resources and less than significant with mitigation for cultural and tribal cultural resources.

- b) Less Than Significant Impact With Mitigation:** Projects considered in a cumulative analysis include those that would be constructed concurrently with the Project and those that would be in operation at the same time as the Project. The cumulative projects considered in this analysis are limited to projects that would result in similar impacts to the Project due to their potential to collectively contribute to significant cumulative impacts, as well as other development projects that would be located in the vicinity of the Project. There are no similar non-residential projects under consideration or construction located in and around a 10-mile radius of the Project site. Tulare County staff have determined that there are no projects that could have the potential to contribute to cumulative impacts. The Project was determined to have no impacts to Energy, Land Use and Planning, Mineral Resources, Population and Housing, Recreation and Wildfire. Therefore, the Project will not result in considerable impacts in combination with the other similar projects. The following environmental impacts were determined to be less than significant and did not require mitigation: Aesthetics, Agricultural Resources, Air Quality, Greenhouse Gases, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Public Services, and Utilities and Service Systems. The analysis contained in Item 17 Transportation concludes that this resource has the potential to be impacted and has included **Mitigation Measures TRA-1 thru TRA-6**. As discussed earlier, the Project will result in less than significant impacts to cultural resources (including Tribal Cultural Resources) and with incorporation/implementation of mitigation measures identified earlier.

The majority of the potential impacts resulting from the Project will be short term, temporary, and intermittent occurring during Project construction-related activities; and with impacts resulting from Project-related traffic during operations at buildout as discussed in the earlier environmental analysis. Because construction-related impacts are of a short duration, temporary, intermittent, and localized, they would have to occur concurrently and in proximity of other projects in order to have a cumulative impact. Construction-related impacts (which are primarily associated with air quality, biological resources, noise, and traffic) are not likely to act cumulatively with any other projects in a manner that would result in significant impacts.

This Project (as described in Items 3 and 8 and in Attachment “A”) will have short-term impacts with regard to air quality and greenhouse gases during construction-related activities. However, the emissions associated with this Project are minor as compared to baseline emissions levels as quantified in Items 3 and 8, and are not considered cumulatively considerable pursuant to guidelines from the Air District. (See Impact 3(b) for a complete discussion of the Project's cumulative air quality impacts.) The proposed Project would comply with Air District Rule 9510 (Indirect Source Review) and Rule 2201 (New and Modified Stationary Source Review), as applicable to future developments within the Project site; therefore, reducing the Project specific and cumulative impacts to a less than significant level. In addition, the Project would lead to cumulatively beneficial reductions in GHG emissions.

As discussed in Item 4, the Project site consists of disturbed agricultural land. With implementation of mitigation measures, operation of the Project would not result in the loss of sensitive biological habitats, sensitive status species or sensitive cultural resources as seen in Attachments “B” and “C”. As such, when combined cumulatively with other projects, the Project would not result in impacts to biological or cultural resources that are cumulatively considerable.

As discussed in Item 17, at full buildout Project-related transportation would not result in significant traffic impacts with implementation of mitigation measures as seen in Attachment “D”. As such, when combined cumulatively with other projects, the Project would not result in significant impacts on transportation that are cumulatively considerable.

No archaeological, paleontological or historic resources were located on the project site. With implementation of the cultural resource mitigation measures called for in Item 5, the Project would not cause cumulatively considerable historical or cultural resource impacts because impacts to unknown cultural resources would be minimized.

The Project will not cause cumulatively considerable impacts related to hazards and hazardous materials. While small amounts of hazardous materials may be used or transported as a result of the Project, these activities will occur in compliance with applicable laws and regulations, and any impacts resulting from use, transport, disposal, or accident or upset conditions will be localized in nature. As a result, any Project-level impacts will not have the potential to contribute to hazards associated with other projects because these impacts would only occur intermittently, if at all. Similarly, the Project will not contribute to cumulative wildland fire-related impacts because it is located in an area with low wildland fire risk,

The Project will not cause cumulatively considerable hydrology and water quality-related impacts. The Project applicant will be required to implement a SWPPP to reduce impacts and will not cause discharge to any surface or groundwater sources or alter the course of any stream or river. Nor will the Project change runoff patterns in the area.

The Project will not cause cumulatively considerable land use and planning impacts. The Project is consistent with all applicable land use planning policies, and will be required to implement a reclamation plan at the end of the Project's life. The reclamation plan will ensure that the Project does not result in effects on neighboring land uses. As a result, the Project's impacts will not be cumulatively significant.

The Project also will not combine noise-related impacts with that of other projects to cause cumulatively considerable impacts. Construction-related activities will cause short-term, temporary, and intermittent increases in noise in the area, and could occur at the same time as other noise-causing events in the area. However, no other concurrent construction project are anticipated to occur adjacent to or near the Project site, and operational noise will be minimal. As a result, the Project is not anticipated to considerably contribute to cumulative noise impacts during construction or operation.

Because the Project will not cause population growth in the area, it will not lead to construction of new or expanded police or fire protection facilities, or interfere with operation of existing facilities, or create the need for new recreation facilities. The Project will also be designed to minimize fire hazard, and existing emergency response in the area is adequate. Cumulative projects in the area are similarly situated, in that they will not lead to the new for new or expanded police or fire protection facilities or recreation facilities or cause substantial fire hazards. As a result, the Project will not cause cumulatively considerable public services or recreation impacts.

Finally, the Project will not cause cumulatively considerable utilities-related impacts. The Project will obtain a "Will Serve" notice from the SKF Sanitation District prior to the start of construction of any parcel within the Project site; as such, the Project will not cause cumulatively considerable utilities-related impacts.

Each of the cumulative projects considered in this section would be required to comply with project-specific mitigation measures and/or conditions of approval, as well as applicable General Plans, zoning ordinances, laws and policies. The implementation of the identified Project-specific mitigation measures and compliance with applicable codes, compliance with the Tulare County General Plan, identified Best Management Practices, ordinances, laws and other required regulations will reduce the magnitude of any contribution to cumulative impacts to a less than significant level.

- c) **Less Than Significant Impact:** The proposed Project will not result in substantial adverse effect on human beings, either directly or indirectly. Mitigation measures are provided to reduce the Project's potential effects on Biological Resources, Cultural Resources, Geology/Soils (paleontological resources), Transportation, and Tribal Cultural Resources to less than significant (see Mitigation Measures **BIO-1** thru **BIO-7**, **CUL-1** thru **CUL-3**, and **TRA-1** thru **TRA-6** as included in the Mitigation and Monitoring Program included in Attachment "E"). No additional mitigation measures will be required. Therefore, implementation of the proposed Project would result in a less than significant impact.

REFERENCES

- California Department of Conservation. California Geological Survey (CGS). Regulatory Maps Portal. Website: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps>. Accessed May 2020.
- California Department of Conservation. FMMP – Important Farmland Map Categories. Website: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/> then click on tul16_no.pdf . Accessed May 2020.
- California Department of Conservation, Division of Land Resource Protection (DLRP). Farmland Mapping and Monitoring Program (FMMP), California Farmland Conversion Report 2008-2010. Website: https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2014-2016/field_reports/tul16.pdf. Accessed May 2020.
- California Land Conservation Act of 1965 2016 Status Report. December 2016. Website: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf Accessed May 2020.
- California Department of Conservation, Division of Land Resource Protection. Department of Conservation, Farmland Mapping and Monitoring Program, Table 2012-2014. Table A-44, Part I. Website: <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>. Accessed May 2020.
- California Department of Conservation, Division of Land Resource Protection. Table A-44 Tulare County 2014-2016 Land Use Conversion. Website: https://www.conservation.ca.gov/dlrp/fmmp/Pages/county_info.aspx. Accessed May 2020.
- California Department of Conservation, Division of Land Resource Protection, “Williamson Act Status Report (2010)”. Website: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf. Accessed May 2020
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). Oil, Gas, and Geothermal Fields in California, 2001. Website: ftp://ftp.consrv.ca.gov/pub/oil/maps/Map_S-1.pdf. Accessed May 2020.
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). California Department of Conservation, Division of Oil, Gas, and Geothermal Resources Well Finder. Website: <http://maps.conservation.ca.gov/doggr/index.html>. Accessed May 2020.
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). Oil and Gas Maps: District 4. Website: <https://maps.conservation.ca.gov/>. Accessed May 2020.
- California Department of Conservation. Office of Mine Reclamation. Website: <https://maps.conservation.ca.gov/mol/index.html>. Accessed May 2020.
- California Department of Forestry and Fire Protection (CAL FIRE). Fire and Resource Assessment Program (FRAP). Fire Hazard Severity Zones in LRA. October 5, 2007. Website: http://frap.fire.ca.gov/webdata/maps/tulare/fhszs_map.54.pdf. Accessed May 2020.
- California Department of Forestry and Fire Protection (CAL FIRE). Fire and Resource Assessment Program (FRAP). FRAP Mapping, SRA Viewer. Website: http://www.fire.ca.gov/firepreventionfee/sraviewer_launch. Accessed May 2020.

California Department of Toxic Substances Control (DTSC). *EnviroStor*. Websites:
<http://www.envirostor.dtsc.ca.gov/public/>. Accessed May 2020.

California Department of Toxic Substances Control (DTSC). DTSC's Hazardous Waste and Substances Sites List – Site Cleanup (Cortese List). Websites:
<https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Tulare+County%2C+CA> and
https://www.envirostor.dtsc.ca.gov/public/map/?global_id=CAL000102751, Accessed May 2020

California Department of Transportation (Caltrans). Transportation Concept Report State Route 190, District 06. October 2015. http://www.dot.ca.gov/d6/planning/tcrs/sr190tcr/sr190_final_october.pdf, accessed May 2020

California Department of Transportation (Caltrans). Guide for the Preparation of Traffic Impact Studies. December 2002. http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf, accessed May 2020.

California Department of Water Resources. Bulletin 118 – Update 2003. October 2003. Website:
<http://www.water.ca.gov/groundwater/bulletin118.cfm>. Accessed March 2, 2020.

California Department of Water Resources. Bulletin 118 – Interim Update 2016, California's Groundwater, Working Toward Sustainability. December 22, 2016. Website:
http://www.water.ca.gov/groundwater/bulletin118/docs/Bulletin_118_Interim_Update_2016.pdf. Accessed May 2020.

California Department of Water Resources. Groundwater Basin Boundary Assessment Tool. Website:
<https://gis.water.ca.gov/app/bbat/>. Accessed March 2, 2020.

California Health and Safety Code Section 7050.5 and Public Resource Code Section 5097.98. and . Websites accessed May 2020.

Federal Emergency Management Agency FIRM Panel 06107CL300E June 16, 2009. Accessed May 2020 at:
<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-119.24027126756349,36.137670866489145,-119.15718716111826,36.17232174266695>.

Five County Seismic Safety Element for Fresno, Kings, Madera, Mariposa & Tulare Counties. 1974.

San Joaquin Valley Unified Air Pollution Control District. Climate Change Action Plan (CCAP). Website accessed May 2020 at: https://www.valleyair.org/Programs/CCAP/CCAP_menu.htm.

San Joaquin Valley Unified Air Pollution Control District. Current District Rules and Regulations. Accessed May 2020 at: <http://www.valleyair.org/rules/1ruleslist.htm>.

San Joaquin Valley Unified Air Pollution Control District. Draft Policy: CEQA Project Analysis Levels. Accessed in May 2020 at: https://www.valleyair.org/Programs/CCAP/CCAP_menu.htm.

San Joaquin Valley Unified Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). March 19, 2015. Website: http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf. Accessed May 2020.

San Joaquin Valley Unified Air Pollution Control District. Small Project Analysis Level (SPAL). June 2012. Website: <http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF>. Accessed May 2019.

State Water Resources Control Board. Storm Water Program.
http://www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml. Website accessed May 2020.

2018 Tulare County Annual Crop and Livestock Report. October 2019. Accessed May 2020 at: <https://agcomm.co.tulare.ca.us/ag/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2018-crop-report/>.

Tulare County. Climate Action Plan. August 2012. Website: <http://generalplan.co.tulare.ca.us/documents.html>, then locate “Climate Action Plan February 2010 Draft”, select “February 2010 Climate Action Plan”. Accessed May 2020.

Tulare County. Comprehensive Airport Land Use Plan (CALUP). December 2012. <http://www.tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/countywide-planning/comprehensive-airport-land-use-plan/tc-calup-adopted-dec-2012/>. Accessed May 2020.

Tulare County. General Plan 2030 Update. August 2012. Website accessed May 2020 at: <http://generalplan.co.tulare.ca.us/documents.html>.

Tulare County. General Plan 2030 Update Background Report. February 2010. Website accessed May 2020 at: <http://generalplan.co.tulare.ca.us/documents.html> then locate “Background Report February 2010”, select “February 2010 Background Report”

Tulare County. General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR). February 2010. Website accessed May 2020 at: <http://generalplan.co.tulare.ca.us/documents.html> then locate “Recirculated Draft Environmental Impact Report February 2010 Draft”, select “Recirculated DEIR”

Tulare County. Tulare County SB 743 Guidelines. June 2020. Accessed at: <https://tularecounty.ca.gov/rma/index.cfm/rma-documents/planning-documents/tulare-county-sb-743-guidelines-final/>

Tulare County Association of Governments. 2014-2040 Regional Transportation Plan & Sustainable Communities Strategy. June 30, 2014. <http://www.tularecog.org/wp-content/uploads/2015/06/Final-2014-Regional-Transportation-Plan-Sustainable-Communities-Strategy-FULL-DOCUMENT.pdf>. Accessed May 2020.

Tulare County Farm Bureau. Tulare County Agricultural Facts. October 2018. Accessed May 2020 at: <https://www.tulcofb.org/index.php?page=agfacts>.

Tulare County Fire Department. Accessed May 2020 at: <https://tularecounty.ca.gov/fire/index.cfm/stations-map/>

Tulare County Public and Private Airports, California. Website: <http://www.tollfreeairline.com/california/tulare.htm>. Accessed May 2020.

Tulare County Sheriff’s Department. Website: <http://www.tularecounty.ca.gov/sheriff/>. Accessed May 2020.

United States Department of Agriculture, Forest Service. Sequoia National Forest, Office Addresses. Website: <https://www.fs.usda.gov/detail/sequoia/about-forest/offices>. Accessed May 2020.

United States Department of Agriculture, Natural Resources Conservation Service (NRCS). Web Soil Survey. Accessed in May 2020 at: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

United States Department of Transportation, Federal Transit Administration. Construction Noise Handbook, 2006. Websites: http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm and http://www.fhwa.dot.gov/environment/noise/construction_noise/special_report/hcn04.cfm#sou. Accessed May 2020.

United States Department of Transportation, Federal Transit Administration. Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06; May, 2006. Website:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed May 2020.

United States Fish and Wildlife Service. National Wetlands Inventory. Website:
<http://www.fws.gov/wetlands/Data/Mapper.html>. Accessed May 2020.

United States Geological Survey. National Water Information System (NWIS) Mapper: Website:
<http://maps.waterdata.usgs.gov/mapper/index.html>. Accessed May 2020.

United States Geological Survey, 1989. The Severity of an Earthquake. Website:
<http://pubs.usgs.gov/gip/earthq4/severitygip.html>. Accessed May 2020.

ATTACHMENT “A”

Air Quality and Greenhouse Gases



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TECHNICAL MEMORANDUM AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

DATE: January 7, 2021

TO: Hector Guerra, Chief Environmental Planner

FROM: Jessica Willis, Planner IV

SUBJECT: Air Quality and Greenhouse Gas Assessment for the Reed Rezone Kingsburg Project (GPA 20-005, PZC 19-015)

PROJECT DESCRIPTION

The Project proposes to rezone an existing ± 15.71 -acre property from AE-20 to Commercial (C-2) and Light Industrial (M-1), for the future development of an industrial park, with various size parcels to accommodate commercial and industrial uses. The site plan indicates that a total of approximately $\pm 195,000$ square foot of building space would be developed in six (6) phases.

- Parcel 1: $\pm 17,500$ sf (consisting of $\pm 3,000$ sf gas station and mini mart with 8 gas pumps, $\pm 3,500$ sf fast food with drive-thru, and $\pm 11,000$ sf retail) on ± 3.0 acres;
- Parcel 2: $\pm 30,000$ sf commercial/light industrial on ± 2.0 acres;
- Parcel 3: $\pm 21,500$ sf commercial/light industrial on ± 1.7 acres;
- Parcel 4: $\pm 20,000$ sf commercial/light industrial on ± 1.4 acres;
- Parcel 5: $\pm 28,500$ sf commercial/light industrial on ± 1.9 acres;
- Parcel 6: $\pm 50,000$ sf commercial/light industrial, with $\pm 28,000$ sf potential future expansion, on ± 4.0 acres; and
- Basin: 30,000 sf basin on ± 1.71 acres

The property owner proposes to develop Parcel 6 (the southernmost parcel) as Phase 1, with each of the remaining parcels to be developed individually as the economy dictates. Future developments of each industrial parcel will conform to the M-1 allowed uses. As no tenants have been identified, the proposed development timing and specific use of each phase is unknown. However, to allow flexibility in project design and development, and to provide a conservative estimate of project-related emissions, the analysis assumes: the entire Project site would be prepared and graded, and that the wastewater basin would be installed in 2021; construction of Parcel 6 begins in 2022; construction of Parcels 2 thru 5 begins in 2023; construction of Parcel 1 begins in 2025; construction of the expansion area begins in 2027; and operations of each parcel would commence upon completion of construction.

PURPOSE AND NEED FOR ASSESSMENT

This document is intended to assist Tulare County Resource Management Agency (RMA) staff in the preparation of the Air Quality and Greenhouse Gas (GHG) components of the Mitigated Negative Declaration (MND) being prepared for the Reed Rezone Kingsburg Project (GPA 20-005, PZC 19-015). The assessment is intended to provide sufficient detail regarding potential impacts of Project implementation and to identify mitigation measures, if necessary, to reduce potentially significant impacts.

The air quality assessment provided in this document was prepared to evaluate whether the air pollutant emissions generated from implementation of the Project would cause significant impacts to air quality and health risks to nearby receptors. The GHG assessment was prepared to evaluate whether the estimated GHG emissions generated from the implementation of the Project would cause significant impacts on global climate change.

The assessments were conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology for the Air Quality and GHG assessments follows Air District recommendations for quantification of emissions and evaluation of potential impacts as provided in their guidance documents:

- *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI), adopted March 19, 2015.¹
- *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA*, adopted December 17, 2009.²

The assessments are intended to provide the County of Tulare (County) with sufficient detail regarding potential impacts of Project implementation and to identify mitigation measures, if necessary, to reduce potentially significant impacts.

SIGNIFICANCE THRESHOLDS

CEQA Guidelines define a significant effect on the environment as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.³ To determine if a project would have a significant impact on air quality and climate change, the type, level, and impact of criteria pollutant and GHG emissions generated by the project must be evaluated. Appendix G of the CEQA Guidelines provides the criteria (as Checklist Items) for evaluating potential impacts on the environment. The CEQA criteria and the Air District's significance thresholds and guidance for evaluation are provided below.

Air Quality Significance Thresholds

Air Quality Plans

¹ Air District. Guidance for Assessing and Mitigating Air Quality Impacts. March 19, 2015. https://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf. Accessed November 2020.

² Air District. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA. December 17, 2009. <https://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf>. Accessed November 2020.

³ CEQA Guidelines Sections 15002(g) and 15382

The Air District has established thresholds of significance for criteria pollutant emissions. These thresholds are based on District New Source Review (NSR) offset requirements for stationary sources. “Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District’s air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to “Not conflict or obstruct implementation of the District’s air quality plan”. ”⁴

The Air District has three sets of significance thresholds based on the source of the emissions. According to the GAMAQI, “The District identifies thresholds that separate a project’s short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations.”⁵

Long-term (operational) emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, “District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District’s significance thresholds... District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds....”⁶

The Air District’s significance thresholds are provided in **Table 1**.

Table 1. Air District Criteria Pollutant Significance Thresholds			
Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15
Source: Air District, GAMAQI, Table 2, page 80; and http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf , accessed November 2020.			

⁴ Air District, GAMAQI, Section 7.12, Page 65.

⁵ Air District, GAMAQI, Section 8.1, Page 75

⁶ Air District, GAMAQI, Section 8.2.1, Page 76

Air Quality Violations

“Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project’s property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The need to perform an air quality dispersion modeling analysis for any project (urban development, commercial, or industrial projects) is determined on a case-by-case basis depending on the level of emissions associated with the proposed project. If such modeling is found necessary, the project consultant should check with the District to determine the appropriate model and input data to use in the analysis. Specific information for assessing significance, including screening tools and modeling guidance is available on-line at the District’s website www.valleyair.org.”⁷

“The thresholds of significance for Ambient Air Quality are based on the California Ambient Air Quality Standard (CAAQS) and National Ambient Air Quality Standard (NAAQS). A project would be considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of an ambient air quality standard by exceeding any of the following:

1. Any of the CAAQS, or
2. Any of the NAAQS, and if available, the associated Significant Impact Level (SIL).”⁸

Table 2 provides the California and National Ambient Air Quality Standards.

Table 2. Ambient Air Quality Standards				
Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone (O₃)	1 Hour	0.09 ppm (180 µg/m ³)	---	Same as Primary
	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm* (137 µg/m ³)	
Respirable Particulate Matter (PM₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	Annual Arithmetic Mean	20 µg/m ³	---	
Fine Particulate Matter (PM_{2.5})	24 Hour	---	35 µg/m ³	Same as Primary
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	---
	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	---
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)	---	---
Nitrogen Dioxide (NO₂)	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	Same as Primary
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	

⁷ Air District, GAMAQI, Section 7.13, Page 65

⁸ Air District, GAMAQI, Section 8.4, Page 90

Table 2. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	---
	3 Hour	---	---	0.5 ppm (1300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)	---
	Annual Arithmetic Mean	---	0.030 ppm (for certain areas)	---
Lead	30 Day Average	1.5 µg/m ³	---	---
	Calendar Quarter	---	1.5 µg/m ³ (for certain areas)	Same as Primary
	Rolling 3-Month Average	---	0.15 µg/m ³	
Visibility Reducing Particles	8 Hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standards	
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)		
* The standard at the time of the GAMAQI was 0.075 ppm; the standard presented here was finalized on October 26, 2015. Abbreviations: ppm = parts per million; mg/m ³ = milligram per cubic meter; µg/m ³ = micrograms per cubic meter. Sources: Air District, GAMAQI, Table 3, page 91; ARB, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf , accessed November 2020.				

“The District ISR rule exempts small development projects (see Table 4 [of the GAMAQI]) from project-specific mitigation requirements. The District performed extensive analysis to identify small projects for which additional mitigation is not feasible. For instance, the exemptions include small residential housing developments of less than 50 units and commercial developments of less than 2,000 square feet. All projects on the exemption list emit less than 2 tons per year of either PM10 or NO_x, which is substantially lower than the District’s 10-ton per year significance thresholds. Furthermore, as the tailpipe emissions from motor vehicles continue to decline, these projects will emit even less today than was estimated in 2005 when this rule was adopted. In addition, two tons per year is expected to result in daily emissions of less than the 100 lb/day screening level for either NO_x or PM10 that the District has concluded that projects under the ISR exemption thresholds will have a less than significant impact on air quality. Consequently, projects below ISR applicability thresholds are not expected to exceed the thresholds of significance for criteria pollutants emissions (see Section 8.3 [of the GAMAQI]). In addition, projects below the ISR applicability thresholds are not expected to violate any air quality standards or contribute substantially to an existing or projected air quality violation and will not exceed the thresholds of significance for ambient air quality. In this case, the District concludes no emission calculation is needed and no ambient air quality analysis is required.”⁹

⁹ Air District, GAMAQI, Section 8.4.4, Page 95

Table 3 provides the Air District’s ambient air quality analysis (AAQA) screening levels for development projects. For projects that exceed the screening thresholds identified in Table 3, the Air District provides further guidance on how to evaluate the 100 pound per day screening level in their guidance document *Ambient Air Quality Analysis Project Daily Emissions Assessment*.¹⁰

Table 3: AAQA Screening Levels For Development Project	
Development Project Type	Space / Size
Residential	50 dwelling units
Commercial	2,000 square feet
Light Industrial	25,000 square feet
Heavy Industrial	100,000 square feet
Medical Office	20,000 square feet
General Office	39,000 square feet
Educational	9,000 square feet
Governmental	10,000 square feet
Recreational	20,000 square feet
Transportation / Transit	Construction exhaust emissions equal or exceeding 2.0 tons NO _x or 2.0 tons PM ₁₀
Source: Air District, GAMAQI, Table 4, page 96	

Cumulative Increase in Emissions

“By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the District’s attainment plans. Consequently, the District’s application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project’s individual emissions would have a cumulatively significant impact on air quality. A Lead Agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located [CCR §15064(h)(3)]. Thus, if project specific emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the District is in non-attainment under applicable Federal or State ambient air quality standards. This does not imply that if the project is below all such significance thresholds, it cannot be cumulatively significant.”¹¹

Table 4 provides the San Joaquin Valley Air Basin attainment status for federal and state ambient air quality standards.

¹⁰ Air District Ambient Air Quality Analysis Project Daily Emissions Assessment, http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI_AAQA_05-24-2013.pdf, accessed November 2020.

¹¹ Air District, GAMAQI, Section 7.14, Pages 65-66

Table 4. San Joaquin Valley Attainment Status		
Pollutant	Designation	
	Federal Standards	State Standards
Ozone—1-hour	No Federal Standard	Nonattainment/Severe
Ozone—8-hour	Nonattainment/Extreme	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Attainment
Source: Air District, http://www.valleyair.org/aqinfo/attainment.htm , accessed November 2020.		

Exposure Risks

The location of a project is a major factor in determining whether the project will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and receptors decreases. From a health risk perspective, there are two (2) categories of projects that have the potential to cause long-term health risks impacts:

- Type A Projects: Land use projects that will place new toxic sources in the vicinity of existing receptors. This category includes sources of toxic emissions such as gasoline dispensing facilities, asphalt batch plants, warehouse distribution centers, freeways and high traffic roads, and other stationary sources that emit toxic substances.
- Type B Projects: Land use projects that will place new receptors in the vicinity of existing toxic sources. This category includes residential, commercial, and institutional developments proposed in the vicinity of existing sources such as stationary sources, freeways and high traffic roads, rail yards, and warehouse distribution centers.¹²

“Various tools already exist to perform a screening analysis from stationary sources impacting receptors (Type A projects) as developed for the AB2588 Hot Spots and air district permitting programs. Screening tools may include prioritization charts, AERSCREEN and various spreadsheets. For projects being impacted by existing sources (Type B projects), one screening tool is contained in the ARB Handbook: *Air Quality and Land Use Handbook: A Community Health Perspective*. The document includes a table entitled “*Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*” with recommended buffer distances associated with various types of common sources. If a proposed project is located within an established buffer distance to any of the listed sources, a health risk screening and/or assessment should be performed to assess risk to potential sensitive receptors. These guidelines are intended only for projects that are impacted by a single source. Another useful tool is the CAPCOA Guidance Document: *Health Risk Assessments for*

¹² Air District, GAMAQI, Section 6.5, Page 44

Proposed Land Use Projects. CAPCOA prepared the guidance to assist Lead Agencies in complying with CEQA requirements. The guidance document describes when and how a health risk assessment should be prepared and what to do with the results.”¹³

Table 5 presents the Air District’s and ARB’s siting recommendations for projects proposing sensitive land uses.

Table 5: ARB Recommendations on Siting New Sensitive Land Uses	
Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.
Sources: Air Resources Board, <i>Air Quality and Land Use Handbook: A Community Health Perspective</i> , Page 4, Table 1-1, https://www.arb.ca.gov/ch/handbook.pdf , accessed November 2020. California Air Pollution Control Officers Association, <i>Health Risk Assessments for Proposed Land Use Projects</i> , Page 9, Table 2, http://www.valleyair.org/transportation/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf , accessed November 2020.	

“Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects

¹³ Air District, GAMAQI, Section 6.5, Page 45

of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, Lead Agency staff need to consider the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography. Lead Agencies are encouraged to use the screening tools for Toxic Air Contaminant presented in section 6.5 (Potential Land Use Conflicts and Exposure of Sensitive Receptors [pages 44 – 45 of the GAMAQI]) to identify potential conflicts between land use and sensitive receptors and include the result of their analysis in the referral document.”¹⁴

Nuisance Odors

“Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. Rather, the District recommends that odor analyses strive to fully disclose all pertinent information. The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley. These are presented in Chapter 8 [of the GAMAQI, Table 6 of this memo] along with a reasonable distance from the source within which, the degree of odors could possibly be significant.”¹⁵

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing receptor. The second occurs when a new receptor locates near an existing source of odor. “An analysis of potential odor impacts should be conducted for the following two situations:

1. Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
2. Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.”¹⁶

“The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley Air Basin. These are presented in Table 6 (Screening Levels For Potential Odor Sources) [of the GAMAQI] along with a reasonable distance from the source within which, the degree of odors could possibly be significant. Table 6 (Screening Levels for Potential Odor Sources) [of the GAMAQI], can be used as a screening tool to qualitatively assess a project’s potential to adversely affect area receptors. This list of facilities is not all-inclusive. The Lead Agency should evaluate facilities not included in the table or projects separated by greater distances if warranted by local conditions or special circumstances. If the proposed project would result in sensitive receptors being located closer than the screening level distances, a more detailed analysis should be provided.”¹⁷

Table 6 presents the Air District’s screening levels for potential nuisance odor sources.

¹⁴ Air District, GAMAQI, Section 7.15, Page 66

¹⁵ Air District, GAMAQI, Section 7.16, Pages 66-67

¹⁶ Air District, GAMAQI, Section 8.6, Page 102

¹⁷ Air District, GAMAQI, Section 8.6, Pages 102-103

Table 6. Air District Screening Levels for Potential Odor Sources	
Odor Generator / Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Sources: Air District, GAMAQI, Table 6, page 103; and http://www.valleyair.org/transportation/GAMAQI-2015/GAMAQI-Criteria-Pollutant-Thresholds-of-Odors.pdf .	

Greenhouse Gas Significance Thresholds

Climate Change Scoping Plan¹⁸

The California State Legislature adopted Assembly Bill 32 (AB 32) on September 27, 2006. AB 32 focuses on reducing GHG emissions to 1990 levels by the year 2020 and to 80% below 1990 levels by the year 2050. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (2008 Scoping Plan), which outlines actions recommended to obtain that goal. The 2008 Scoping Plan calls for an “ambitious but achievable” reduction in California’s GHG emissions, cutting emissions approximately 29% from BAU emission levels projected for 2020, or about 10% from 2008 levels. On a per capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020.

The California State Legislature adopted Senate Bill 32 (SB 32) on September 8, 2016. SB 32 focuses on reducing GHG emissions to 40% below 1990 levels by the year 2030. Pursuant to the requirements in SB 32, the ARB adopted the Climate Change Scoping Plan Update (2017 Scoping Plan), which outlines actions recommended to obtain that goal. ARB recommends statewide targets of no more than six (6) metric tons CO₂e per capita by 2030 and no more than two (2) metric tons CO₂e per capita by 2050.

Air District Guidance

“On December 17, 2009, the District’s Governing Board adopted the District Policy: *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The

¹⁸ ARB, AB 32 Climate Change Scoping Plan website. <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan>, accessed November 2020. The links to the 2008 Scoping Plan documents are located on the left side of the page.

District's Governing Board also approved the guidance document: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA*. In support of the policy and guidance document, District staff prepared a staff report: *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*. These documents adopted in December of 2009 continue to be the relevant policies to address GHG emissions under CEQA. As these documents may be modified under a separate process, the latest versions should be referenced to determine the District's current guidance at the time of analyzing a particular project."^{19, 20, 21, 22}

"It is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change. GHG emissions, and their associated contribution to climate change, are inherently a cumulative impact issue. Therefore, project-level impacts of GHG emissions are treated as one-in-the-same as cumulative impacts.

In summary, the staff report evaluates different approaches for assessing significance of GHG emission impacts. As presented in the report, District staff reviewed the relevant scientific information and concluded that the existing science is inadequate to support quantification of the extent to which project specific GHG emissions would impact global climate features such as average air temperature, average rainfall, or average annual snow pack. In other words, the District was not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. This is readily understood, when one considers that global climate change is the result of the sum total of GHG emissions, both manmade and natural that occurred in the past; that is occurring now; and will occur in the future.

In the absence of scientific evidence supporting establishment of a numerical threshold, the District policy applies performance based standards to assess project-specific GHG emission impacts on global climate change. The determination is founded on the principal that projects whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006, commonly referred to as "AB 32", should be considered to have a less than significant impact on global climate change. For a detailed discussion of the District's establishment of thresholds of significance for GHG emissions, and the District's application of said thresholds, the reader is referred to the above referenced staff report, District Policy, and District Guidance documents."²³

¹⁹ Air District, GAMAQI, Section 8.9, Page 110

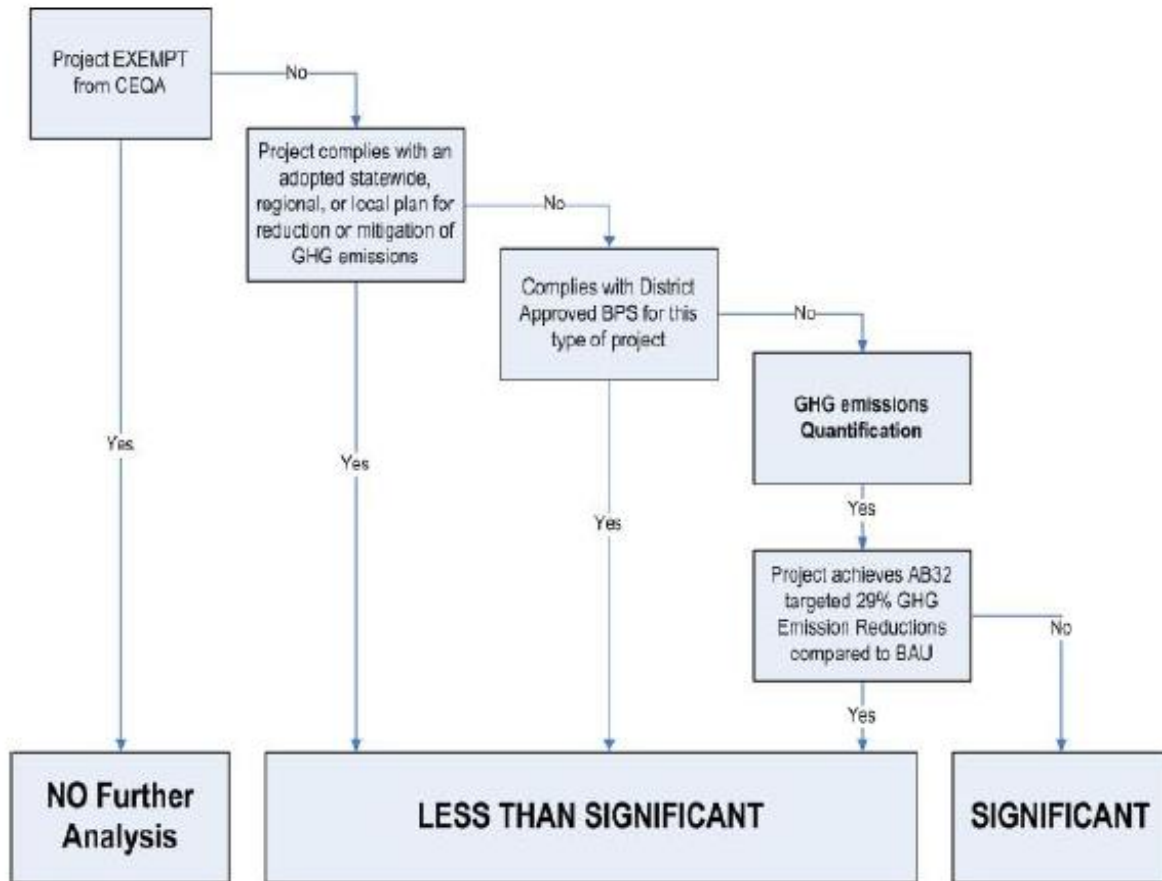
²⁰ As of November 2020, the Air District's "Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency" can be found online at <https://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>.

²¹ As of November 2020, the Air District's "Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" can be found online at <https://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf>.

²² As of November 2020, the "Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act" can be found online at <https://www.valleyair.org/Programs/CCAP/12-17-09/1%20CCAP%20-%20FINAL%20CEQA%20GHG%20Staff%20Report%20-%20Dec%2017%202009.pdf>.

²³ Air District, GAMAQI, Section 8.9.1, Pages 111-112

Figure 1. Process of Determining Significance of Greenhouse Gas Emissions



Source: Air District, GAMAQI, Figure 6, Page 113

“As presented in Figure 6 (Process of Determining Significance of Greenhouse Gas Emissions) [of the GAMAQI, and Figure 1 of this memo], the policy provides for a tiered approach in assessing significance of project specific GHG emission increases.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the Lead Agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the Lead Agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).
- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since

the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

The District guidance for development projects also relies on the use of BPS. For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Projects implementing any combination of BPS, and/or demonstrating a total 29 percent reduction in GHG emissions from business-as-usual (BAU), would be determined to have a less than cumulatively significant impact on global climate change."²⁴

The Air District's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* states, "Projects implementing Best Performance Standards in accordance with this guidance would be determined to have a less than significant individual and cumulative impact on global climate change and would not require project specific quantification of GHG emissions. Projects exempt from the requirements of CEQA, and projects complying with an approved GHG emission reduction plan or mitigation program would also be determined to have a less than significant individual or cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified final CEQA document. Projects not implementing BPS would require quantification of project specific GHG emissions. To be determined to have a less than significant individual and cumulative impact on global climate changes, such projects must be determined to have reduced or mitigated GHG emissions by 29%, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be expected for all projects for which the lead agency has determined that an Environmental Impact Report is required, regardless of whether the project incorporates Best Performance Standards."²⁵

"If total GHG emissions reductions measures add up to 29% or more, are enforceable, and are required as a part of the development's approval process, the project achieves the Best Performance Standard (BPS) for the respective type of development project. Thus, the GHG emissions from the development project would be determined to have a less than individually and cumulatively significant impact on global climate change for CEQA purposes."²⁶

"By definition, BPS for development projects is achieving a project-by-project 29% reduction in GHG emissions, compared to BAU. Thus, it is reasonable to conclude that Lead Agencies implementing the proposed *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* threshold will achieve an overall reduction in GHG emissions consistent with AB 32 emission reduction targets..."²⁷

The Air District's guidance document was adopted to provide a basis for lead agencies to establish significance thresholds consistent with ARB's 2008 Scoping Plan. The Air District currently does not have a recommendation for establishing thresholds or assessing significance consistent with the reduction requirements established in ARB's 2017 Scoping Plan Update, which requires a 33.2%

²⁴ Air District, GAMAQI, Section 8.9.1, Page 112

²⁵ Air District, Guidance for Valley Land-use Agencies, Page 4

²⁶ Air District, Guidance for Valley Land-use Agencies, Pages 7-8

²⁷ Air District, Guidance for Valley Land-use Agencies, Page 8

reduction from BAU to achieve the 2030 target. As such, Tulare County prepared and adopted the Tulare County 2018 Climate Action Plan (CAP) Update.

“The CAP serves as a guiding document for County of Tulare (“County”) actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan’s framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.”²⁸

“The County of Tulare (County) adopted the Tulare County Climate Action Plan (CAP) in August 2012. The CAP includes provisions for an update when the State of California Air Resources Board (CARB) adopts a Scoping Plan Update that provides post-2020 targets for the State and an updated strategy for achieving a 2030 target. Governor Brown signed Senate Bill (SB) 32 on September 8, 2016 which contains the new 2030 target. The CARB 2017 Scoping Plan Update for the Senate Bill (SB) 32 2030 targets was adopted by the CARB on December 14, 2017 which provided new emission inventories and a comprehensive strategy for achieving the 2030 target (CARB 2017a). With the adoption of the 2017 Scoping Plan, the County proceeded with the 2018 CAP Update that is provided in this document.

The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County’s strategy to address the SB 32 2030 target. The 2030 target requires the State to reduce emissions by 40 percent below 1990 levels from the 2017 Scoping Plan and County data. The CAP identifies the County’s fair share of reductions required to maintain consistency with the State target.”²⁹

IMPACT EVALUATION

AIR QUALITY IMPACTS

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Project Impact Analysis: *Less Than Significant Impact*

Air quality plans (also known as AQPs or attainment plans) and subsequent rules are used to bring the applicable air basin into attainment with federal AAQS designed to protect the health and safety of residents within that air basin. In order to show attainment of the standards, the Air District analyzes the growth projections in the San Joaquin Valley Air Basin (SJVAB), contributing factors in the formation and emission of air pollutants, and existing and future emissions controls. The Air District then formulates an AQP which details the Air District’s control strategy to reach attainment.

The Air District’s 2016 Plan for the 2008 8-Hour Ozone Standard, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2007 PM₁₀ Maintenance Plan and Request for Redesignation, 2008 PM_{2.5} Plan, 2012 PM_{2.5} Plan, 2015 Plan for the 1997 PM_{2.5} Standard, and the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard outline a number of control strategies to help the Air District reach

²⁸ Tulare County Climate Action Plan, December 2018 Update. Page 1.
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/220Climate%20Action%20Plan/CLIMATE%20ACTION%20PLAN%202018%20UPDATE.pdf>. Accessed November 2020.

²⁹ Ibid.

attainment for the revoked federal 1-hour ozone standard, the 24-hour PM₁₀ standard, and the federal and state PM_{2.5} standards, respectively. The 2008 PM_{2.5} Plan, 2012 PM_{2.5} Plan, and 2015 Plan for the 1997 PM_{2.5} Standard focus specifically on PM_{2.5}, although the control strategies from previous PM₁₀ plans (particularly those related to fugitive dust control) have already improved the SJVAB ambient PM_{2.5} levels. Therefore, because fugitive dust controls continue to be addressed in the PM₁₀ plan, the plans contain a comprehensive list of strict regulatory and incentive-based measures to reduce directly emitted PM_{2.5} and precursor emissions. The San Joaquin Valley Air Basin is in attainment for CO, SO₂, and lead, so there are no attainment plans for those pollutants.³⁰

The proposed Project will be required to comply with all applicable Air District rules and regulations including, but not limited to, the following:³¹

- Regulation VIII (Fugitive PM₁₀ Prohibitions) – This regulation is a series of eight rules designed to reduce PM₁₀ emissions by reducing fugitive dust emissions. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced.
- Rule 2010 (Permits Required) – This rule requires any person constructing, altering, replacing, or operating a source operation that emits, may emit, or may reduce emissions to obtain an Authority to Construct (ATC) permit and a Permit to Operate (PTO).
- Rule 2201 (New and Modified Stationary Source Review, or NSR) – This rule provides for the review of new and modified stationary sources of air pollution and to provide mechanisms including emission trade-offs by which ATC permits may be granted without interfering with the attainment or maintenance of ambient air quality standards. NSR applies to new stationary sources and all modification to existing stationary sources which are subject to District permit requirements and, generally requires that new or modified equipment include Best Available Control Technology (BACT) and the emission increase above specified thresholds be offset.
- Rule 3135 (Dust Control Plan Fees) – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the Air District's cost for reviewing these plans and conducting compliance inspections.
- Rules 4101 (Visible Emissions) and 4102 (Nuisance) – These rules apply to any source of air contaminants and prohibit the visible emissions of air contaminants or any activity which creates a public nuisance.
- Rule 4601 (Architectural Coatings) – This rule specifies requirements for the storage, cleanup, and labeling of architectural coatings. The rule applies to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the Air District.
- Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) – This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.
- Rule 9510 (Indirect Source Review) – Also known as ISR, this rule requires developers to mitigate project emissions through 1) on-site design features that reduce trips and vehicle miles traveled, 2) controls on other emission sources, and 3) with reductions obtained through the payment of a mitigation fee used to fund off-site air quality mitigation projects. Rule 9510

³⁰ More information on Air District air quality plans can be found online at http://valleyair.org/Air_Quality_Plans/air-quality-plans.htm.

³¹ Air District rules and regulations can be found online at: <https://www.valleyair.org/rules/1ruleslist.htm>.

requires construction-related NO_x emission reductions of 20 percent and PM₁₀ reductions of 45 percent and operation-related NO_x reductions of 33 percent and PM₁₀ reductions of 50 percent. These reductions are calculated by comparing the unmitigated baseline emissions and mitigated emissions from the first year of project operation. The Air District recommends using the California Emissions Estimator Model (CalEEMod) to quantify project emissions and emission reductions. Rule 9510 was adopted to reduce the impacts of development on Air District's attainment plans.

The development of the Project would result in short-term, temporary, and intermittent construction-related and long-term operations-related criteria air pollutant emissions. Consistent with the Air District guidance, Project-related construction and operation emissions have been estimated using CalEEMod, Version 2016.3.2 (the most recent version of the model). The CalEEMod modeling results can be found in Attachment "A".

Construction phasing, off-road construction equipment and on-road employee, hauling, and vendor vehicle estimates utilized model default values. Model defaults were also utilized for operational activities, except where Project-specific information could be input. The following changes to default values were used:

- *Project Characteristics – Intensity Factors:* The California Renewable Portfolio Standard (RPS) requires 33 percent of electricity retail sales to be served by renewable resources. The Annual RPS reports indicate that Pacific Gas and Electric Company (PG&E) Actual Procurements were 32.9% in 2016, 33% in 2017, 39% in 2018, and 31% in 2019. renewable resources, averaging 34% over the 4-year period.³² As such, the intensity factors were adjusted to reflect the required 33% reduction.
- *Land Use:* For this analysis, it is assumed that site preparation and grading for the entire Project site and installation of the ponding basin will occur with the development of Parcel 6 (Phase 1), beginning in April 2021. Because development timing and specific uses within the Project site are not yet known, parking lot and building construction for each parcel was assessed individually. The lot acreage for each subsequent phase has been adjusted to account for the area of the entire parcel; however, assumptions regarding landscaping, parking lot and building area were made based on proposed land use types and the initial site plan map.
- *Construction – Dust from Material Movement:* The Project includes an on-site stormwater retention basin. The site plan indicates the basin will be 33,000 square foot in surface area; however, the volume of the basin is unknown at this time. This analysis assumes the depth of the basin will be between 3 and 4 feet. As such, approximately 4,000 cubic yards of soil will be moved. Although it is expected that the soil will remain onsite, to evaluate a conservative estimate of potential construction-related mobile source emissions, the soil is treated as exported materials.
- *Construction – Trips and VMT:* Dump trucks can haul approximately 10-14 cubic yards of soil. This analysis utilizes a haul capacity of 12 cubic yards. As such, it would take 333 trucks to haul soil from the basin offsite.
- *Operational - Vehicle Trips:* The Weekday Trip Rates and the Primary, Diverted and Pass-by trip percentages were changed to reflect the data provided in the Traffic Impact Study (TIS)

³² California Public Utilities Commission, RPS Reports and Data (Annual Reports in November 2017, 2018, 2019, and 2020).
https://www.cpuc.ca.gov/RPS_Reports_Data/. Accessed January 2021.

prepared for the Project. The TIS utilized the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) and accounts for a 5% internal capture rate. The Project trip distribution is based upon Tulare County Association of Governments (TCAG) and Fresno Council of Government (Fresno COG) model plots, engineering judgement, prevailing traffic patterns in the study area, major routes, and population centers.

- *Operational – Water and Wastewater:* The Project will connect to the Selma-Kingsburg-Fowler Sanitation District wastewater treatment facilities. As such, there are no onsite septic tanks and the percentage has been redistributed to Aerobic and Facultative Lagoon percentages.
- *Mitigation – Construction:* Water Exposed Area 2 times per day and Unpaved Road Vehicle Speed of 15 miles per hour was selected to account for compliance with Air District Regulation VIII requirements.
- *Mitigation – Traffic:* The following items were selected: Low Density Suburban Project Setting; Improve Destination Accessibility with the job center at 0.7 miles from the site; and Improve Pedestrian Network within the Project site.
- *Mitigation – Area:* It is assumed that 3% landscape equipment will be implemented per Air District accepted defaults.
- *Mitigation – Energy:* For non-residential uses, the California 2016 Building Standards results in 4.6% less electricity usage than the 2013 standards; as such, the Project is evaluated with a 4.6% improvement of Title 24 requirements. For non-residential uses, the California 2019 Building Standards results in 30% less lighting energy than the 2016 standards; as such, the Project is evaluated with the 30% lighting reduction.
- *Mitigation – Water:* Low-flow bathroom faucets, kitchen faucets, toilets and showers were selected to account for Title 24 and Green Building Code requirements; and use of water-efficient irrigation systems was selected to account for the County’s Model Water Efficient Landscaping Ordinance (also referred to as MWEL0).

Table 7 provides the construction-related criteria pollutant emissions and **Table 8** provides the operations-related criteria pollutant emissions resulting from buildout of the proposed Project.

Table 7. Construction Emissions (including compliance with agency regulations, project design, and implementation of ISR)						
Phase	Estimated Emissions, tons per year					
	ROG	NOx	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
Site Prep & Grading (2021)	0.0853	0.7539	0.5875	1.2800E-03	0.1273	0.0852
Parcel 6 (2022)	0.6120	1.7515	2.2435	4.5300E-03	0.0952	0.1134
Parcel 2 (2023)	0.3879	1.0446	1.4026	2.7900E-03	0.0466	0.0601
Parcel 3 (2023)	0.3267	1.0373	1.3915	2.7400E-03	0.0444	0.0591
Parcel 4 (2023)	0.3118	1.0233	1.3763	2.6500E-03	0.0415	0.0576
Parcel 5 (2023)	0.3767	1.0444	1.4003	2.7800E-03	0.0461	0.0599
Parcel 1 (2025)	0.3304	1.2201	1.7317	3.6600E-03	0.0578	0.0656
Parcel 6 Expansion (2027)	0.2264	0.2480	0.3879	7.1000E-04	0.0108	0.0136
Total Construction	2.6572	8.1230	10.5213	0.0211	0.4697	0.5145
Maximum Annual Emissions (2023)	1.4031	4.1495	5.5707	0.0110	0.1786	0.2367
SJVAPCD Annual Threshold	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
Source: CalEEMod Reports and Table 3 of calculation sheets, see Attachment “A” of this document.						

Table 8. Operational Emissions (including compliance with agency regulations, preliminary project design, and implementation of ISR)						
Phase	Estimated Emissions, tons per year					
	ROG	NO _x	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
Parcel 6 (2022)	0.3108	0.3860	0.6280	0.0027	0.0931	0.0474
Parcel 2 (2024)	0.8646	0.4517	6.1339	0.0289	1.1004	0.5419
Parcel 3 (2024)	0.1824	0.2251	0.3491	0.0016	0.0558	0.0284
Parcel 4 (2024)	0.1315	0.1613	0.2502	0.0011	0.0400	0.0204
Parcel 5 (2024)	0.1218	0.1501	0.2327	0.0011	0.0372	0.0189
Parcel 1 (2026)	0.1733	0.2139	0.3316	0.0015	0.0530	0.0270
Parcel 6 Expansion (2028)	0.1598	0.1933	0.2558	0.0013	0.0525	0.0266
Total Operations at Buildout	1.9442	1.7813	8.1813	0.0382	1.4319	0.7106
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
<i>Source: CalEEMod Reports and Table 6 of calculation sheets, see Attachment "A" of this document.</i>						

As previously noted, the Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants (see **Table 1**) would “Not conflict or obstruct implementation of the District’s air quality plan.”³³ The proposed Project will comply with all applicable federal, state, and Air District rules and regulations. As demonstrated in **Tables 7 and 8**, with compliance of existing rules and regulations the estimated Project-related emissions during construction and operations will not exceed the Air District’s CEQA significance thresholds for any criteria pollutant. Furthermore, as a condition of approval, the applicant shall consult with the Air District prior to the start of construction for each phase to further evaluate potential impacts based on Project-specific details and to determine whether a localized pollutant analysis (such as an Ambient Air Quality Analysis or Health Risk Assessment) would be required. Therefore, the Project would not conflict with or obstruct implementation of the applicable AQPs. The Project will have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Air Basin. The Project would be considered to have a significant cumulative impact on air quality if Project-specific impacts are determined to be significant. As presented in **Table 8**, the long-term operational-related emissions at full buildout would result in 1.94 tons per year (tpy) ROG, 1.78 tpy NO_x, 8.18 tpy CO, 0.04 tpy SO_x, 1.43 tpy PM₁₀, and 0.71 tpy PM_{2.5}. The emissions analysis demonstrates the Project will not exceed the Air District’s thresholds of significance. As such, the Project will not conflict with or obstruct implementation of the applicable air quality plans. Furthermore, development of each parcel will be required to implement all applicable General Plan policies and to comply with all applicable federal, state, and Air District rules and regulations. Therefore, the Project will result in a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

³³ Air District, GAMAQI, Section 7.12, Page 65.

As previously noted, the Project will not exceed the Air District's thresholds of significance and therefore, will not conflict with or obstruct implementation of the applicable air quality plans. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Project Impact Analysis: ***Less Than Significant Impact***

The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the Air Basin also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

To result in a less than significant impact, the following three criteria must be true:

1. *Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds.*

As discussed earlier at item a), the SJVAB is currently designated as non-attainment for ozone, PM₁₀, and PM_{2.5}. (See **Table 4** for designations and classifications of all criteria pollutants.) Therefore, if the Project exceeds the regional thresholds for PM₁₀ or PM_{2.5}, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional thresholds for NO_x or ROG, then it follows that the project would contribute to a cumulatively considerable impact for ozone. As presented in **Tables 7 and 8**, proposed Project construction- and operational-related emissions would not exceed the Air District's thresholds of significance for any criteria pollutant. Therefore, this Project would not cumulatively contribute to a significant impact.

2. *Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations.*

Project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. The Air District has determined that projects with emissions below the thresholds of significance would not conflict or obstruct implementation of the Air District's AQPs. As the Project's construction- and operational-related emissions do not exceed any thresholds of significance, the Project will not conflict with the current AQPs. Furthermore, the Project will comply with all applicable Air District rules, regulations, and control measures, including Regulation VIII (Fugitive PM₁₀ Prohibitions) and Rule 9510 (Indirect Source Review), which have been adopted to reduce potential impacts from project-related emissions. Therefore, the Project is consistent with the AQPs and will have a less than significant impact regarding compliance with applicable rules and regulations.

3. *Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants.*

Since the SJVAB is in nonattainment for PM₁₀, PM_{2.5} and ozone, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable and the Air District's regional thresholds for NO_x, ROG, PM₁₀ and PM_{2.5} are applied as cumulative contribution thresholds. As shown in **Tables 7 and 8**, Project-related criteria pollutant emissions would not exceed any threshold of significance during Project construction or operation, which demonstrates the Project's consistency with the applicable AQPs. Therefore, Project-related emissions would not significantly contribute to the existing violation of air quality standards and will have a less than significant impact regarding cumulative health impacts.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The Project would be considered to have a significant cumulative impact on air quality if Project-specific impacts are determined to be significant. As presented in **Table 8**, the long-term operational-related emissions at full buildout would result in 1.94 tons per year (tpy) ROG, 1.78 tpy NO_x, 8.18 tpy CO, 0.04 tpy SO_x, 1.43 tpy PM₁₀, and 0.71 tpy PM_{2.5}. As such, the emissions analysis demonstrates that Project-specific emissions are below the Air District's thresholds of significance at a project-specific level, and that the Project will not cause or contribute to an existing air quality violation. Furthermore, development of each parcel within the Project site will be required to implement all applicable General Plan policies and to comply with all applicable Air District rules and regulations. Because Project-specific impacts are less than significant, the proposed Project will have a ***Less Than Significant Cumulative Impact*** on air quality.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

As previously noted, Project-related criteria pollutant emissions fall below the Air District's significance thresholds and the Project will be required to implement all applicable General Plan policies and to comply with all applicable federal, state, and Air District rules and regulations. Therefore, because the Project would have ***Less Than Significant Project-specific Impacts***, the Project will have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less Than Significant Impact***

Criteria Pollutant Emissions

"Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, Lead Agency staff need to consider the nature of the air pollutant emissions, the

proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography.”³⁴

The standard measure of the severity of impact is the concentration of a pollutant in the atmosphere compared to the ambient air quality standard for the pollutant for a specified period of time. The severity of the impact increases with the concentration and the amount of time that people are exposed to the pollutant. The change in health impacts with concentration are described in the Air Quality Index (AQI) tables found on the Environmental Protection Agency’s (EPA) AirNow website.³⁵ The Air District provides screening criteria that if exceeded would require dispersion modeling to determine if project emissions would result in a significant health impact.

Pursuant to Air District recommendations and following Air District procedures, the Project’s daily emissions were evaluated to determine whether an Ambient Air Quality Analysis (AAQA) would be warranted for the Project.

Table 9 provides Project-related daily construction emissions. **Table 10** provides Project-related daily operational emissions.

Table 9. Daily Construction Emissions (pounds/day)						
PHASE	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Site Prep, Grading, Basin (2021)	4.27	47.12	29.38	0.06	7.27	4.26
Parcel 6 (2022)	4.60	16.46	16.87	0.03	1.30	0.85
Parcel 2 (2023)	3.53	11.87	12.75	0.03	0.77	0.55
Parcel 3 (2023)	2.97	11.79	12.65	0.02	0.73	0.54
Parcel 4 (2023)	2.83	11.63	12.51	0.02	0.69	0.52
Parcel 5 (2023)	3.42	11.87	12.73	0.03	0.76	0.54
Parcel 1 (2025)	2.75	12.71	14.43	0.03	0.88	0.55
Parcel 6 expansion (2027)	4.12	5.64	7.05	0.01	0.36	0.25
Maximum Daily Emissions (2023)	12.76	47.15	50.64	0.10	2.95	2.15
Exceeds 100 lb/day?	No	No	No	No	No	No
<i>Source: Table 7 of calculation sheets, see Attachment “A” of this document.</i>						

Table 10. Daily Operational Emissions (pounds/day)¹						
PHASE	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Parcel 6 (2022)	2.35	4.25	4.76	0.02	1.26	0.36
Parcel 2 (2024)	6.55	5.01	46.47	0.22	14.90	4.11
Parcel 3 (2024)	1.38	2.48	2.64	0.01	0.76	0.22
Parcel 4 (2024)	1.00	1.78	1.90	0.01	0.54	0.15
Parcel 5 (2024)	0.92	1.65	1.76	0.01	0.50	0.14
Parcel 1 (2026)	0.95	1.70	1.82	0.01	0.52	0.15
Parcel 6 Expansion (2028)	1.21	2.13	1.94	0.01	0.71	0.20
Total Daily Operations at Buildout	14.37	19.00	61.28	0.29	19.20	5.33
Exceeds 100 lb/day?	No	No	No	No	No	No
<i>Source: Table 8 of calculation sheets, see Attachment “A” of this document.</i>						

³⁴ Air District, GAMAQI, page 66

³⁵ US Environmental Protection Agency. AirNow at https://cfpub.epa.gov/airnow/index.cfm?action=airnow_calculator (or <https://www.airnow.gov/aqi/aqi-calculator-concentration/>) and AQI Basics at <https://www.airnow.gov/aqi/aqi-basics/>

As presented in **Tables 9 and 10**, daily criteria pollutant emissions associated with the construction and operation of the Project would not exceed the Air District's AAQA screening thresholds of 100 pounds per day. As such, the Project will not expose sensitive receptors to substantial criteria pollutant concentrations. Therefore, the Project will have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Non-Criteria Pollutant Emissions

Construction Equipment TACs/HAPs: Particulate emissions from diesel powered construction equipment are considered a TAC by the California Air Resources Board. There are no specific development projects (such as residential, commercial, or industrial uses) associated with the Community Plan. However, future development projects have the potential to temporarily expose receptors to increased pollutant emission concentrations from diesel powered construction equipment during the short-term construction phase. However, construction emissions are temporary and would cease upon completion of construction activities. The short-term nature of construction-related emissions would not expose nearby receptors to substantial TAC concentrations. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Dust-borne TACs/HAPs: Development of the proposed Project has the potential to temporarily expose nearby receptors to fugitive particulate (dust) emissions during the short-term construction phases or from landscaping activities once the Project is operational. As of November 2020, there were no listings within the proposed Project area in the California Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site (Cortese) list.³⁶ A query performed on the DTSC *Envirostor* mapping program indicated that there are no superfund, state response, voluntary cleanup, school cleanup or corrective actions within one (1) mile of the Project planning area.³⁷ A query of the State Water Resources Control Board (WRCB) *GeoTracker* mapping program revealed that there are no cleanup sites within the Project area; the nearest leaking underground storage tank (LUST) site is more than 1,200 feet to the northwest; (completed – case closed) the nearest cleanup program site is more than 1,200 feet to the northeast (completed – case closed); and there is one permitted underground storage tank (UST) site located directly north of the Project site.³⁸ A query performed on the U.S. Environmental Protection Agency (EPA) *Superfund Enterprise Management System* (SEMS) website found that there are no listed polluted sites within the Project area.³⁹ Therefore, fugitive dust emissions resulting from earthmoving activities during construction or landscaping activities during operations, would not expose future residents or nearby receptors to substantial pollutant concentrations. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Construction of the proposed Project has the potential to temporarily expose nearby receptors to other airborne hazards from generation of fugitive dust emissions during earthmoving activities. Although not specifically required by CEQA, the following discussions related to valley fever and naturally occurring

³⁶ DTSC. Hazardous Waste and Substance Site List.

https://www.envirostor.dtsc.ca.gov/public/search.asp?page=3&cmd=search&business_name=&main_street_name=&city=&zip=&county=&status=ACT%2CBKLG%2CCOM&branch=&site_type=CSITES%2CFUDS&npl=&funding=&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SIT E+LIST+%28CORTSE%29&reporttype=CORTSE&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&operating=&po st_closure=&non_operating=&corrective_action=&tiered_permit=&evaluation=&spec_prog=&national_priority_list=&senate=&congress=&assembly =&critical_pol=&business_type=&case_type=&searchtype=&hwmp_site_type=&cleanup_type=&ocieerp=&hwmp=False&permitted=&pc_permitted= &inspections=&complaints=&censustract=&ccesdecile=&school_district=&orderby=city. Accessed November 2020.

³⁷ DTSC. Envirostor. Sites and Facilities mapping website. <https://www.envirostor.dtsc.ca.gov/public/map/>. Accessed November 2020.

³⁸ WRCB, GeoTracker, Sites and Facilities mapping website <https://geotracker.waterboards.ca.gov/map/#>. Accessed November 2020.

³⁹ EPA, SEMS Search, <https://www.epa.gov/enviro/sems-search>, accessed November 2020.

asbestos are included to satisfy requirements for full disclosure of potential Project-related impacts and are for information purposes only.

Valley Fever: Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides*. According to the Centers for Disease Control (CDC), the San Joaquin Valley is considered an endemic area for valley fever.⁴⁰ “Valley fever, also called coccidioidomycosis, is an infection caused by the fungus *Coccidioides*. The fungus is known to live in the soil in the southwestern United States and parts of Mexico and Central and South America. The fungus was also recently found in south-central Washington. People can get Valley fever by breathing in the microscopic fungal spores from the air, although most people who breathe in the spores don’t get sick. Usually, people who get sick with Valley fever will get better on their own within weeks to months, but some people will need antifungal medication. Certain groups of people are at higher risk for becoming severely ill. It’s difficult to prevent exposure to *Coccidioides* in areas where it’s common in the environment, but people who are at higher risk for severe Valley fever should try to avoid breathing in large amounts of dust if they’re in these areas”⁴¹

Construction-related activities generate fugitive dust that could potentially contain *Coccidioides* spores. The Project will be required to implement General Plan Policy AQ-4.2 (Dust Suppression Measures), which was specifically designed to address impacts from the generation of dust emitted into the air. The Project will be required to comply with Air District Regulation VIII (Fugitive PM10 Prohibitions) requirements, including submittal of construction notification and/or dust control plan(s), which minimize the generation of fugitive dust during construction-related activities. Therefore, implementation of General Plan policies and compliance with Air District rules and regulations would reduce the chance of exposure to valley fever during construction-related activities. **Less Than Significant Project-specific Impacts** related to this Checklist Item will occur.

Naturally Occurring Asbestos: In areas containing naturally occurring asbestos, earthmoving construction-related activities, such as grading and trenching, could expose receptors to windblown asbestos. According to a United States Geological Soil Survey map of areas where naturally occurring asbestos in California are likely to occur, the Project is not located in an area known to contain naturally occurring asbestos.⁴² The Project site and the immediate vicinity has been previously disturbed by agricultural operations and by rural residential and commercial/retail development. Future development projects will be required to implement General Plan Policy AQ-4.2 (Dust Suppression Measures) to comply with Air District Regulation VIII (Fugitive PM10 Prohibitions) requirements, thereby reducing the chance of exposure to valley fever during construction-related activities. Therefore, **Less Than Significant Project-specific Impacts** related to this Checklist Item will occur.

Regulation and Consultation

With the exception of the mini-mart/gas station and fast food uses proposed for Parcel 1, specific uses of each parcel is unknown. However, construction- and operation-related activities associated with future development of the Project site may require the transport and use of hazardous materials. Consumer products and gasoline are regulated by the State and use of these products would not pose a significant risk to residents or nearby receptors. Medium- and Heavy-duty diesel trucks would be a source of diesel

⁴⁰ CDC, <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/maps.html>, accessed November 2020.

⁴¹ CDC, <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/index.html>, accessed November 2020.

⁴² USGS, *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California*, <http://pubs.usgs.gov/of/2011/1188/>, accessed November 2020; Agency for Toxic Substances and Disease Registry (ATSDR), <https://www.atsdr.cdc.gov/NOA/DOCS/USAMAP.PDF>, accessed November 2020.

particulate matter, which is considered to be a TAC. The County will work with the Air District as proposals for development of the site are submitted to the County to determine whether health risk assessments would be required for diesel truck trips associated with each proposed use or for other equipment that may require Air District permits. Furthermore, future applicants will be required to comply with all local, state, and federal policies related to emission of TACs/HAPs in the event such pollutants require control efforts to minimize their impacts. Tulare County Environmental Health Division will require a Hazardous Waste Business Plan if materials exceed 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (compressed gas) handled or stored on site.⁴³ As such, the Project will not expose sensitive receptors to substantial pollutant concentrations. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. The Tulare County General Plan includes policies, which were specifically designed to engage responsible agencies in the CEQA process, to reduce air pollutant emissions through project design, require compliance with emission-reducing regulations, and to address potential impacts from siting incompatible uses in close proximity to each other. Applicable General Plan policies will be implemented for the Project. Compliance with applicable Air District rules and regulations would further reduce potential impacts from exposure to TAC and HAP emissions, as well as valley fever and asbestos. As previously noted, a condition of approval requiring the applicant to consult with the Air District prior to the start of construction for each phase for further evaluation of potential impacts based on Project-specific details and to determine whether a localized pollutant analysis (such as an Ambient Air Quality Analysis or Health Risk Assessment) would be required. As such, the development of the proposed Project would not expose the public to substantial pollutant concentrations. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

All applicable General Plan policies will be implemented for the Project. Compliance with applicable Air District rules and regulations, including Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) for stationary sources and Rule 9510 (Indirect Source Review) for non-permitted sources, will reduce potential impacts from exposure to TAC and HAP emissions, as well as valley fever and asbestos. Therefore, the proposed Project would not expose the public to substantial pollutant concentrations. ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

d) Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)

Project Impact Analysis: ***Less Than Significant Impact***

⁴³ Tulare County Health and Human Services Agency, Environmental Health Division. Hazardous Material Business Plan. <https://tularecountyeh.org/eh/index.cfm/our-services/hazardous-materials-cupa/hazardous-materials-business-plan-hmbp/> and <https://tularecountyeh.org/eh/index.cfm/guidance-library/hazmat-cupa/hazardous-materials-business-plan-hmbp/business-plan-faqs/>. Accessed November 2020.

Potential odor sources associated with construction-related activities could originate from diesel exhaust from construction equipment and fumes from architectural coating and paving operations. However, construction-related odors, if perceptible, would dissipate as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during construction would not affect a substantial number of people.

As presented in **Table 6**, the Air District has determined the common land use types that are known to produce odors in the San Joaquin Valley Air Basin. As previously noted, future tenants and specific land uses are not yet known; however, operation of the proposed Project is subject to Air District Rule 4102 (Nuisance) and future uses are not anticipated to create odorous emissions. To ensure potential nuisance odor impacts are addressed, a condition of approval requiring a more detailed analysis for future uses identified in **Table 6**, if any, within the Project site. The detailed analysis would involve contacting the Air District's Compliance Division for information regarding odor complaints. Implementation of the applicable General Plan policies and compliance with applicable Air District rules and regulations specifically designed to address air quality and odor impacts, would reduce potential odor impacts. Therefore, the proposed Project would not result objectionable odors adversely affecting a substantial number of people. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. Development within the Project site will be subject to Air District Rule 4102 (Nuisance). A condition of approval has been included requiring additional odor assessment in consultation with the Air District in the event that any future tenant consists of a land use included in Table 6. As such, the Project will not expose a substantial number of people to objectionable odors. Therefore, ***Less Than Significant Cumulate Impacts*** related to this Checklist Item will occur.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

The Project is not a source of nuisance odors. As such, the Project will not expose a substantial number of people to objectionable odors. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

GREENHOUSE GAS IMPACTS

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Project Impact Analysis: ***Less Than Significant Impact***

The Air District has determined that projects consistent with an adopted Climate Action Plan (CAP) would be considered to have a less than significant impact on the environment. The Tulare County CAP was initially adopted in August 2012 and serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan 2030 Update (General Plan) which provides the supporting

framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The General Plan fulfills many sustainability and GHG reduction objectives at the program level. The CAP identifies the policies from the various General Plan elements that promote more efficient development and reduces travel and energy consumption. The CAP requires projects to achieve reductions in excess of the reduction identified in the Scoping Plan. The CAP identifies General Plan policies in place to assist the County in reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The CAP identifies the County's fair share of reductions required to maintain consistency with the State's target.

The CAP thresholds for determining consistency with the CAP are 500 dwelling units, 100,000 square feet of retail, or equivalent intensity for other uses (i.e., projects that generate 4,200 vehicle trips per day)⁴⁴. These thresholds are the amounts currently required from development related sources within the County to demonstrate consistency with SB 32 2030 targets. Projects exceeding the consistency thresholds must comply with the requirements of the CAP, which requires a GHG analysis report demonstrating emission reductions of at least 31% below 2015 levels by 2030 or a 9% reduction from 2030 BAU emissions. As the CAP implements the County's strategy to achieve the State's 2030 reduction targets, projects below the consistency thresholds have been determined to be consistent with the State's targets and do not require GHG emissions quantification. Projects below the consistency thresholds would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

The only known uses at this time are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments within the Project site would be required to comply with the CAP. The CAP states, "The 2018 CAP Update includes an additional method of determining project consistency with the CAP and 2030 targets. Projects subject to CEQA review could use a checklist containing design features and measures that are needed to determine consistency. Large projects (500-unit subdivisions and 100,000 square feet of retail or equivalent intensity for other uses) and new specific plans should provide a greenhouse gas analysis report quantifying GHG emissions to demonstrate that the project emissions are at least 31 percent below 2015 levels by 2030 or 9 percent below BAU emissions in 2030. These are the amounts currently required from development related sources to demonstrate consistency with SB 32 2030 targets. Smaller projects may also prepare a GHG analysis report if the checklist is not appropriate for a particular project or is deemed necessary by the project proponent or County staff. The GHG analysis should incorporate as many measures as possible from the CalEEMod mitigation component as described in Table 15 [of the 2018 CAP] and can take credit for 2017 Scoping Plan measures that have not been incorporated into CalEEMod but that will be adopted prior to 2030 such as 50 percent RPS."⁴⁵

"The County has already approved a substantial number of lots for development. Development of some of these lots will be limited by various factors such as water supply, sewer/septic capability, road capacity, etc. that cannot be addressed during the planning horizon due to lack of resources. This means that the County expects that new development proposals will be received that are more likely to develop before existing lots are developed because the rural community, landowner, or developer has the resources to provide all improvements and services required for the site. As a rough estimate, this analysis assumes that 40 percent of the development will occur on existing lots and 60 percent will occur

⁴⁴ Tulare County Climate Action Plan, December 2018 Update. Pages 73 and Appendix C. CAP Consistency Checklist

⁴⁵ Tulare County Climate Action Plan. Page 73.

in new developments. Development occurring on existing lots will be subject to existing conditions of the approved subdivision and zoning standards. Development occurring in new subdivisions and projects [after 2012] would be subject to additional measures required to mitigate significant impacts. The County will encourage developers of existing lots [established prior to 2012] to implement measures that reduce greenhouse gas emissions, but it has no authority to require additional reductions beyond those required by State regulation, the building code, and local ordinance.”⁴⁶

“Commercial and industrial development in Tulare County during the 2020 and 2030 planning timeframes will comply with increasingly stringent State energy efficiency regulations in most projects. For industrial projects where the SJVAPCD is a Responsible Agency, the project will be expected to implement Best Performance Standards included in the SJVAPCD Guidelines for Addressing Greenhouse Gas Emissions on the processes and stationary equipment that emit greenhouse gases to levels that meet or exceed State targets and may be subject to Cap-and-Trade Program requirements.”⁴⁷

Based on the preliminary site plan and proposed land use types, the Project would exceed the 4,200 average daily trips and requires quantification of GHG emissions. Project-related emissions were estimated using CalEEMod, Version 2016.3.2 (see Attachment “A”), and are summarized below. **Table 11** provides the Project’s construction-related GHG emission while **Table 12** provides the Project’s operations-related GHG emissions.

TABLE 11. CONSTRUCTION-RELATED GHG EMISSIONS (mitigated)	
	CO _{2e} Emissions (metric tons per year)
Construction Total	1,817
Amortized Annual Emissions	61
<i>Source: Table 9 of calculation sheets, see Attachment “A” of this document.</i>	

TABLE 12. OPERATIONS-RELATED GHG EMISSIONS (metric tons per year)			
	CO _{2e} Emissions (unmitigated)	CO _{2e} Emissions (mitigated)	CO _{2e} Emissions Reduction
Total Operations	4,469	4,227	5.42%
Amortized Annual Emissions	61	61	0%
Total Project Emissions	4,530	4,288	5.35%
<i>Source: Table 10 of calculation sheets, see Attachment “A” of this document.</i>			

The Air District does not have a recommendation for lead agencies in assessing the significance of construction related GHG emissions. Emissions from construction would be temporary; however, to account for the construction emissions, the emissions were amortized based on the average life of all future development (30 years) and added to the operational emissions.

As demonstrated in **Table 12**, the Project achieves an approximately 5.35% reduction in GHG emissions through compliance with current regulation. The analysis included GHG reductions from compliance with Renewable Portfolio Standards for energy producers and from compliance with 2019 California

⁴⁶ Tulare County Climate Action Plan. Page 76

⁴⁷ Tulare County Climate Action Plan. Page 76

Building Code or Green Building Standards. At this time the only known uses are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments within the Project site would be required to comply with the CAP, including incorporation of project features designed to reduce vehicle trips and vehicle miles traveled attributable to the Project. As future development is unknown, incorporation of project-specific design features that would reduce GHG emissions cannot be incorporated into the emissions analysis. Therefore, the emissions reductions presented above underestimate the actual reductions that would be achieved. As such, the Project demonstrates continued progress towards the County achieving the 2017 Scoping Plan Update 2030 reduction requirements with an overall GHG reduction. Furthermore, the State anticipates increases in the number of zero emission vehicles operated in the State under the Advanced Clean Car Program. Compliance with SB 375 reduction targets for light duty vehicles will provide continued reductions in emissions from that source through SB 375's 2035 milestone year.

Future developments within the Project site would be required to comply with the CAP. Although Project-related vehicle trips exceed the CAP consistency thresholds, the Project will provide a GHG emission reduction benefit as future buildout of the site will provide additional employment opportunities for the residents in the Project vicinity, thereby reducing vehicle miles traveled associated with commuting to nearby communities/cities for such opportunities. Future developments with the Project area will continue to comply with existing and future regulations, and applicable Tulare County General Plan and Kingsburg Area Community Plan policies. Future development will be required to incorporate design features sufficient to demonstrate consistency with the required 10% reduction in GHG emissions consistent with the CAP. As such, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. Project-related emissions would be considered to have a significant cumulative impact if project-specific impacts are determined to be significant. As previously noted, the only known uses at this time are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments would be required to comply with the CAP. As such, the Project is consistent with the Tulare County CAP and therefore, is consistent with the reduction targets established in the state's Scoping Plan. As the proposed Project would result in Less Than Significant Project-specific Impacts, ***Less Than Significant Cumulative Impacts*** would also occur.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

As previously noted, the Project is consistent with the Tulare County CAP and the reduction targets established in the Scoping Plan. As such, the Project would not generate GHG emissions that would have a significant impact on the environment. ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

b) Would the project conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis:

Less Than Significant Impact

Since the proposed Project is located in an unincorporated area of Tulare County, the most applicable GHG plans are the Tulare County Climate Action Plan and ARB's 2017 Climate Change Scoping Plan. As previously noted, the CAP, initially adopted in August 2012, serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan which provides the supporting framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The General Plan fulfills many sustainability and GHG reduction objectives at the program level. The CAP identifies the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption. The CAP requires projects achieve reductions in excess of the reduction identified in the Scoping Plan. The CAP identifies General Plan policies in place to assist the County in reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The CAP identifies the County's fair share of reductions required to maintain consistency with the State's target.

"The 2018 CAP Update includes an additional method of determining project consistency with the CAP and 2030 targets. Projects subject to CEQA review could use a checklist containing design features and measures that are needed to determine consistency. Large projects (500-unit subdivisions and 100,000 square feet of retail or equivalent intensity for other uses) and new specific plans should provide a greenhouse gas analysis report quantifying GHG emissions to demonstrate that the project emissions are at least 31 percent below 2015 levels by 2030 or 9 percent below BAU emissions in 2030. These are the amounts currently required from development related sources to demonstrate consistency with SB 32 2030 targets. Smaller projects may also prepare a GHG analysis report if the checklist is not appropriate for a particular project or is deemed necessary by the project proponent or County staff. The GHG analysis should incorporate as many measures as possible from the CalEEMod mitigation component as described in Table 15 and can take credit for 2017 Scoping Plan measures that have not been incorporated into CalEEMod but that will be adopted prior to 2030 such as 50 percent RPS.

Table 17 [of the 2018 CAP] lists the overarching consistency requirements for all projects based on consistency with County land use plans that apply to the project location. Reviews for consistency with land use plans require planning staff to review projects to determine if they comply with applicable plan policies and implementation measures."⁴⁸

TABLE 13. CEQA PROJECT REQUIREMENTS FOR CONSISTENCY WITH CAP	
Item	Required
Project helps to meet the density goals from the Tulare Blueprint	Yes
Consistency with General Plan policies	Yes
Consistency with Rural Valley Lands Plan or Foothill Growth	Yes

⁴⁸ Tulare County Climate Action Plan. Page 73.

Management Plan development criteria	
Consistency with Urban Growth Boundary expansion criteria	Yes
Consistency for development within Rural Community Urban Development Boundaries (UDB) and Hamlet Development Boundaries (HDB), and Legacy Development Boundaries (LDB)	Yes
Note: Criteria as identified in the General Plan Planning Framework Source: 2018 CAP Update, Table 17, page 73	

“A more detailed review for compliance with CAP measures is required to ensure that a project is doing its part in reducing emissions. Table 18 [of the 2018 CAP] provides a checklist containing measures that will provide reductions necessary to achieve CAP consistency. A project checklist that can be used by staff is provided as Appendix C.”⁴⁹

TABLE 14. CAP CONSISTENCY CHECKLIST	
CAP Measure	Compliance
Land Use: Project is consistent with the Tulare County General Plan policies listed in the CAP applicable to GHG emissions and sustainability.	Review for compliance during project review process.
Land Use—Residential: Subdivisions and multifamily projects propose densities consistent with County commitments for the Tulare Blueprint. Densities in subdivisions within the boundaries of Valley rural communities must be at least 5.0 units per acre. (County R-1 zoning has a 6,000 square foot minimum lot size or 7.26 units per gross acre). Overall residential density is 5.3 units per acre for the entire County including the cities. Mountain subdivisions over 50 lots require review to determine if they are consistent with the Blueprint.	Review development plans during project review to determine if densities are consistent with Blueprint.
Land Use—Non-Residential: Retail and office projects should be constructed within the boundaries of Rural Communities, HDB, UDB, LDB, and in designated transportation corridors to provide needed local goods services to residents and the traveling public. Agricultural industrial projects may be constructed in rural locations as long as consistent with the General Plan.	Review development plans to ensure locations are appropriate for type of project that is proposed and consistent with County plans.
Land Use Design: Projects that require construction of new roads or major intersection improvements provide a fair share of improvements such as sidewalks and pedestrian friendly crossings, and bike lanes/paths connecting to schools, shopping, and other uses consistent with County development standards.	Include roadway improvements as conditions of approval of subdivision or commercial site plan
Energy Efficiency: Project complies with current version of Title 24. (Current version is 2016 Title 24)	Provide copy of the Title 24 Report demonstrating compliance with the applicable standards with Building Permit application.
Renewable Energy: Project includes solar panels or other alternative energy source meeting County Solar Ordinance or new Title 24 standards whichever is more stringent.	Include solar on building plans and provide Title 24 compliance reports with Building Permit applications.
EV Charging: Project meets charging installation/charging ready requirements of the CalGreen Code.	Include charging in building plans
CalGreen Building Code Water: Project complies with indoor and outdoor water conservation measures.	Provide copy of report showing code compliance.

⁴⁹ Tulare County Climate Action Plan. Page 73

Water Conservation Landscaping:	Project complies with County water conservation ordinance requirements for landscaping.
Solid Waste: Project has access to recycling service for homes and businesses meeting CalRecycle requirements.	County verify that providers are in compliance with CalRecycle regulations regarding recycling and diversion of solid waste.
Large Employment Projects: Projects that will have large numbers of employees (over 100) are required to comply with Rule 9410 Employee Trip Reduction Plans (ETRIP). Provide a copy of the ETRIP plan to the County after approval of the plan by the SJVAPCD.	Employer is responsible for compliance with Rule 9410
Industrial Projects: Industrial projects that are large employers will comply with Rule 9410. Industrial process related GHG emissions are not under the County's regulatory authority but will require permits from the SJVAPCD and may be subject to Cap-and-Trade.	Employer is responsible for compliance with Rule 9410
Note: Criteria as identified in the General Plan Planning Framework Source: 2018 CAP Update, Table 18, pages 73-74	

As the County CAP requires projects to achieve reductions in excess of the reductions required in the Scoping Plan and by State legislation, projects that are consistent with the County CAP would not conflict with any applicable plan, policy or regulation adopted for reducing GHG emissions. The only known uses at this time are a mini-mart/gas station and a fast food business; other uses would be determined on a case-by-case basis. Future developments within the Project site will be required to comply with the requirements of the Tulare County CAP. Furthermore, development of the Project site will be required to comply with all applicable regulations and requirements in the County's General Plan, Kingsburg Area Specific Plan, Zoning Ordinance, as well as State and Federal regulations. Therefore, the Project does not conflict with the reduction strategies included in the Scoping Plan. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. The Project is consistent with the applicable Scoping Plan reductions measures and the Air District's CCAP. The Project will implement applicable Tulare County General Plan and Tulare County CAP policies. As such, the Project will not conflict with applicable state, regional, and local plans, policies or regulation adopted for the purpose of reducing the emissions of greenhouse gases. ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item would occur.

ATTACHMENT A

Emissions Summary Tables

1. CONSTRUCTION EMISSIONS WITH REGULATION AND PROJECT DESIGN (from CalEEMod report)

Phase	ROG	NOx	CO	SO2	PM10 exhaust*	Total PM10	PM 2.5
Site Prep, Grading, Basin (2021)	0.0853	0.9424	0.5875	1.2800E-03	0.0402	0.1454	0.0852
Parcel 6 (2022)**	0.6120	2.1894	2.2435	4.5300E-03	0.0992	0.1731	0.1134
Parcel 2 (2023)	0.3879	1.3057	1.4026	2.7900E-03	0.0536	0.0847	0.0601
Parcel 3 (2023)	0.3267	1.2966	1.3915	2.7400E-03	0.0536	0.0808	0.0591
Parcel 4 (2023)	0.3118	1.2791	1.3763	2.6500E-03	0.0535	0.0754	0.0576
Parcel 5 (2023)	0.3767	1.3055	1.4003	2.7800E-03	0.0536	0.0839	0.0599
Parcel 1 (2025)	0.3304	1.5251	1.7317	3.6600E-03	0.0541	0.1051	0.0656
Parcel 6 expansion (2027)	0.2264	0.3100	0.3879	7.1000E-04	0.0128	0.0196	0.0136
TOTAL EMISSIONS	2.6572	10.1538	10.5213	0.0211	0.4206	0.7680	0.5145
Maximum Yearly Emissions	1.4031	5.1869	5.5707	0.0110	0.2143	0.3248	0.2367

* Exhaust emissions are used for ISR reduction calculations; these values are included in the Total PM10 emissions.

** The values represent the sum of all construction for this phase.

Note: The values presented for each pollutant are in TONS/YEAR and is the total sum for all years of construction.

2. ISR CONSTRUCTION REDUCTION PERCENTAGES

Phase	NOx			PM10 exhaust		
	Required	Achieved	Needed	Required	Achieved	Needed
Site Prep, Grading, Basin (2021)	20%	0%	20%	45%	0%	45%
Parcel 6 (2022)**	20%	0%	20%	45%	0%	45%
Parcel 2 (2023)	20%	0%	20%	45%	0%	45%
Parcel 3 (2023)	20%	0%	20%	45%	0%	45%
Parcel 4 (2023)	20%	0%	20%	45%	0%	45%
Parcel 5 (2023)	20%	0%	20%	45%	0%	45%
Parcel 1 (2025)	20%	0%	20%	45%	0%	45%
Parcel 6 expansion (2027)	20%	0%	20%	45%	0%	45%

3. CONSTRUCTION EMISSIONS WITH IMPLEMENTATION OF ISR REDUCTIONS

Phase	ROG	NOx	CO	SO2	PM10*	PM 2.5
Site Prep, Grading, Basin (2021)	0.0853	0.7539	0.5875	1.2800E-03	0.1273	0.0852
Parcel 6 (2022)**	0.6120	1.7515	2.2435	4.5300E-03	0.0952	0.1134
Parcel 2 (2023)	0.3879	1.0446	1.4026	2.7900E-03	0.0466	0.0601
Parcel 3 (2023)	0.3267	1.0373	1.3915	2.7400E-03	0.0444	0.0591
Parcel 4 (2023)	0.3118	1.0233	1.3763	2.6500E-03	0.0415	0.0576
Parcel 5 (2023)	0.3767	1.0444	1.4003	2.7800E-03	0.0461	0.0599
Parcel 1 (2025)	0.3304	1.2201	1.7317	3.6600E-03	0.0578	0.0656
Parcel 6 expansion (2027)	0.2264	0.2480	0.3879	7.1000E-04	0.0108	0.0136
TOTAL EMISSIONS	2.6572	8.1230	10.5213	0.0211	0.4697	0.5145
Maximum Yearly Emissions	1.4031	4.1495	5.5707	0.0110	0.1786	0.2367

* Because compliance with Regulation VIII requirements is assumed to achieve the required fugitive dust reductions, ISR requires reductions for only exhaust emissions.

4. OPERATIONAL EMISSIONS WITH REGULATION (from CalEEMod report)

Phase	ROG	NOx	CO	SO2	PM10	PM 2.5
Parcel 6	0.3108	0.5605	0.6280	2.7000E-03	0.1664	0.0474
Parcel 1	0.8646	0.6607	6.1339	2.8900E-02	1.9674	0.5419
Parcel 2	0.1824	0.3271	0.3491	1.5800E-03	0.0998	0.0284
Parcel 3	0.1315	0.2344	0.2502	1.1300E-03	0.0715	0.0204
Parcel 4	0.1218	0.2181	0.2327	1.0500E-03	0.0665	0.0189
Parcel 5	0.1733	0.3108	0.3316	1.4900E-03	0.0948	0.0270
Parcel 6 expansion	0.1598	0.2818	0.2558	1.3400E-03	0.0939	0.0266
TOTAL EMISSIONS	1.9442	2.5934	8.1813	0.0382	2.5603	0.7106

5. ISR OPERATION REDUCTION PERCENTAGES

Phase	NOx			PM10		
	Required	Achieved	Needed	Required	Achieved	Needed
Parcel 6	33.00%	1.87%	31.13%	50.00%	5.92%	44.08%
Parcel 1	33.00%	1.36%	31.64%	50.00%	5.93%	44.07%
Parcel 2	33.00%	1.81%	31.19%	50.00%	5.92%	44.08%
Parcel 3	33.00%	1.81%	31.19%	50.00%	5.92%	44.08%
Parcel 4	33.00%	1.81%	31.19%	50.00%	5.91%	44.09%
Parcel 5	33.00%	1.81%	31.19%	50.00%	5.92%	44.08%
Parcel 6 expansion	33.00%	1.61%	31.39%	50.00%	5.92%	44.08%

6. OPERATIONAL EMISSIONS WITH IMPLEMENTATION OF ISR REDUCTIONS

Phase	ROG	NOx	CO	SO2	PM10	PM 2.5
Parcel 6	0.3108	0.3860	0.6280	0.0027	0.0931	0.0474
Parcel 1	0.8646	0.4517	6.1339	0.0289	1.1004	0.5419
Parcel 2	0.1824	0.2251	0.3491	0.0016	0.0558	0.0284
Parcel 3	0.1315	0.1613	0.2502	0.0011	0.0400	0.0204
Parcel 4	0.1218	0.1501	0.2327	0.0011	0.0372	0.0189
Parcel 5	0.1733	0.2139	0.3316	0.0015	0.0530	0.0270
Parcel 6 expansion	0.1598	0.1933	0.2558	0.0013	0.0525	0.0266
TOTAL EMISSIONS	1.9442	1.7813	8.1813	0.0382	1.4319	0.7106

7. CONSTRUCTION EMISSIONS TOTALS (pounds per day)

PHASE	ROG	NOx	CO	SO2	Total PM10	PM 2.5
SITE PREP, GRADING, & BASIN						
Total Pounds	170.60	1,884.80	1,175.00	2.56	290.80	170.40
Construction Days	40	40	40	40	40	40
Pounds per Day	4.27	47.12	29.38	0.06	7.27	4.26
PARCEL 6						
Total Pounds	1,224.00	4,378.78	4,486.96	9.06	346.20	226.78
Construction Days	266	266	266	266	266	266
Pounds per Day	4.60	16.46	16.87	0.03	1.30	0.85
PARCEL 2						
Total Pounds	775.80	2,611.40	2,805.20	5.58	169.40	120.20
Construction Days	220	220	220	220	220	220
Pounds per Day	3.53	11.87	12.75	0.03	0.77	0.55
PARCEL 3						
Total Pounds	653.40	2,593.20	2,783.00	5.48	161.60	118.20
Construction Days	220	220	220	220	220	220
Pounds per Day	2.97	11.79	12.65	0.02	0.73	0.54
PARCEL 4						
Total Pounds	623.60	2,558.20	2,752.60	5.30	150.80	115.20
Construction Days	220	220	220	220	220	220
Pounds per Day	2.83	11.63	12.51	0.02	0.69	0.52
PARCEL 5						
Total Pounds	753.40	2,611.00	2,800.60	5.56	167.80	119.80
Construction Days	220	220	220	220	220	220
Pounds per Day	3.42	11.87	12.73	0.03	0.76	0.54
PARCEL 1						
Total Pounds	660.80	3,050.20	3,463.40	7.32	210.20	131.20
Construction Days	240	240	240	240	240	240
Pounds per Day	2.75	12.71	14.43	0.03	0.88	0.55
LOT 6 EXPANSION						
Total Pounds	452.80	620.00	775.80	1.42	39.20	27.20
Construction Days	110	110	110	110	110	110
Pounds per Day	4.12	5.64	7.05	0.01	0.36	0.25
Maximum Yearly Emissions						
	12.76	47.15	50.64	0.10	2.95	2.15

8. OPERATIONAL EMISSIONS TOTALS (pounds per day)

PHASE	ROG	NOx	CO	SO2	Total PM10	PM 2.5
PARCEL 6						
Total Pounds	621.60	1,121.00	1,256.00	5.40	332.80	94.80
Operational Days	264	264	264	264	264	264
Pounds per Day	2.35	4.25	4.76	0.02	1.26	0.36
PARCEL 2						
Total Pounds	1,729.20	1,321.48	12,267.80	57.80	3,934.80	1,083.80
Operational Days	264	264	264	264	264	264
Pounds per Day	6.55	5.01	46.47	0.22	14.90	4.11
PARCEL 3						
Total Pounds	364.80	654.20	698.20	3.16	199.60	56.80
Operational Days	264	264	264	264	264	264
Pounds per Day	1.38	2.48	2.64	0.01	0.76	0.22
PARCEL 4						
Total Pounds	263.00	468.80	500.40	2.26	143.00	40.80
Operational Days	264	264	264	264	264	264
Pounds per Day	1.00	1.78	1.90	0.01	0.54	0.15
PARCEL 5						
Total Pounds	243.60	436.20	465.40	2.10	133.00	37.80
Operational Days	264	264	264	264	264	264
Pounds per Day	0.92	1.65	1.76	0.01	0.50	0.14
PARCEL 1						
Total Pounds	346.60	621.60	663.20	2.98	189.60	54.00
Operational Days	365	365	365	365	365	365
Pounds per Day	0.95	1.70	1.82	0.01	0.52	0.15
PARCEL 6 EXPANSION						
Total Pounds	319.60	563.60	511.60	2.68	187.80	53.20
Operational Days	264	264	264	264	264	264
Pounds per Day	1.21	2.13	1.94	0.01	0.71	0.20
TOTAL OPERATIONS AT BUILDOUT						
	14.37	19.00	61.28	0.29	19.20	5.33

Table 9. CONSTRUCTION-RELATED GHG EMISSIONS (Metric Tons CO₂e per year)

Phase	unmitigated	mitigated	reduction
Site Prep & Grading	114.35	114.35	0.00%
Parcel 1	313.73	313.73	0.00%
Parcel 2	236.35	236.35	0.00%
Parcel 3	231.28	231.28	0.00%
Parcel 4	223.02	223.02	0.00%
Parcel 5	235.74	235.74	0.00%
Parcel 6	399.25	399.25	0.00%
Parcel 6 Expansion	63.26	63.26	0.00%
Total Construction	1,816.99	1,816.99	0.00%
Amortized Construction	60.57	60.57	0.00%

Table 10. OPERATIONS-RELATED GHG EMISSIONS

Phase	unmitigated	mitigated	% reduction
Parcel 1	2,917.83	2,783.74	4.60%
Parcel 2	260.88	242.78	6.94%
Parcel 3	187.70	174.50	7.03%
Parcel 4	174.10	161.98	6.96%
Parcel 5	247.86	230.65	6.94%
Parcel 6	458.02	425.10	7.19%
Parcel 6 Expansion	223.05	208.29	6.62%
Total Operations	4,469.45	4,227.03	5.42%
Amortized Construction	60.57	60.57	0.00%
PROJECT TOTAL	4,530.01	4,287.60	5.35%

Change to CalEEMod Default Documentation

Utility Information for RPS Requirements - Pacific Gas & Electric

Intensity	Default with RPS (based on 2008 data)	2008 RPS Reductions *	2008 adjusted without RPS	2020 RPS requirements	2020 Adjusted	2030 RPS	2030 Adjusted
CO2	641.345	0.12	807.739	0.33	541.1854	0.5	403.870
CH4	0.029	0.12	0.037	0.33	0.02447	0.5	0.018
N2O	0.00617	0.12	0.008	0.33	0.005206	0.5	0.004

* per PG&E 2008 Corporate Responsibility Report, 12% of energy came from renewables

https://www.pgecorp.com/corp_responsibility/reports/2008/our_environment/future_planning.html

Intensity	Default with RPS (based on 2008 data)	2008 RPS Reductions *	2008 adjusted without RPS	2024 RPS requirements	2024 Adjusted	2030 RPS	2030 Adjusted
CO2	641.345	0.12	807.739	0.40	484.6436	0.5	403.870
CH4	0.029	0.12	0.037	0.40	0.02191	0.5	0.018
N2O	0.00617	0.12	0.008	0.40	0.004662	0.5	0.004

Intensity	Default with RPS (based on 2008 data)	2008 RPS Reductions *	2008 adjusted without RPS	2027 RPS requirements	2027 Adjusted	2030 RPS	2030 Adjusted
CO2	641.345	0.12	807.739	0.45	444.2567	0.5	403.870
CH4	0.029	0.12	0.037	0.45	0.02009	0.5	0.018
N2O	0.00617	0.12	0.008	0.45	0.004274	0.5	0.004

RPS Reductions Requirements

2013	20.00%
2014	21.67%
2015	23.33%
2016	25.00%
2017	27.00%
2018	29.00%
2019	31.00%
2020	33.00%
2021	34.75%
2022	36.50%
2023	38.25%
2024	40.00%
2025	41.67%
2026	43.33%
2027	45.00%
2028	46.67%
2029	48.33%
2030	50.00%

TIS Trip Generation Info

Land Use ID	Land Use	Quantity	Unit	Daily Trip Rate	Avg Daily Trips	Trip Length	Avg Daily VMT
945	Mini-Mart / Gas Station	8	fueling positions	205.36	1,643	9.5	15,607
933	Fast Food, No Drivethru	3,500	square feet	346.23	1,212	9.5	11,512
820	Retail Shops	11,000	square feet	121.82	1,340	9.5	12,730
130	Industrial Park	150,000	square feet	7.73	1,159	9.5	11,011
				Total	5,354		50,860
				Capture Rate	5%		5%
				Internal Capture	268		2,543
				Adjusted ADT	5,086		48,317

Calculated Trip Rates for CalEEMod Analysis

Land Use ID	Land Use	Quantity	Unit	Adjusted Daily Trip Rate	Avg Daily Trips	Trip Length	Avg Daily VMT
945	Mini-Mart / Gas Station	8	fueling positions	195.09	1,561	9.5	14,827
933	Fast Food, No Drivethru	3,500	square feet	328.92	1,151	9.5	10,937
820	Retail Shops	11,000	square feet	115.73	1,273	9.5	12,094
130	Industrial Park	150,000	square feet	7.34	1,101	9.5	10,460
				Total with Captured Trips	5,086		48,317

Note: The Average Daily VMT includes ALL vehicles, not just the passenger vehicles.

SOURCES FOR TITLE 24 REQUIREMENTS & EFFICIENCIES

http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/2013_Building_Energy_Efficiency_Standards_FAQ.pdf

States that energy savings for SFR built to 2013 standards will use 25% less than homes built to 2008 standards (lighting, heating, cooling, ventilation, and water heating).

http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/2012-5-31-Item-05-Adoption_Hearing_Presentation.pdf

SFR built to 2013 standards will use 25% less than homes built to 2008 standards.

MFR built to 2013 standards will use 14% less than homes built to 2008 standards.

Non-residential built to 2013 standards will use 30% less than those built to 2008 standards.

http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf

States that energy savings for SFR built to 2016 standards will use 28% less than homes built to 2013 standards (lighting, heating, cooling, ventilation, and water heating).

http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/15-day_language/impact_analysis/2016_Impact_Analysis_2015-06-03.pdf

SFR will use 11.7% less electricity and 21.1% less gas than homes built to 2013 standards.

MFR will use 15.2% less electricity and 30.7% less gas than homes built to 2013 standards.

Non-residential will use 4.6% less electricity and 0.5% less gas than those built to 2013 standards.

https://www.energy.ca.gov/sites/default/files/2020-10/2016%20FAQ%20Building%20Standards_ada.pdf

2016 building standards: SFR uses 28% less in lighting, heating & cooling, ventilation & water heating than 2013 standards

https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

2019 building standards: SFR uses 7% less than 2016 standards (53% with rooftop solar); non-residential will use 30% less than 2016 standards due to lighting

CalEEMod Report

Site Grading, Preparation, Basin

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

Reed Rezone - Site Prep, Grading, Basin
Tulare County, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	0.00	1000sqft	15.71	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	541.19	CH4 Intensity (lb/MW hr)	0.024	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

Project Characteristics - intensity factors account for the 33% RPS requirements in 2020

Land Use - lot acreage changed to account for site prep and grading of entire site; no buildings with this phase

Construction Phase -

Trips and VMT - basin assumed to be 4,000 cubic yards of soil; dump trucks can carry 10-14 cubic yards of soil so 12 cy is assumed

Grading - basin is 30,000 sf and assumed to be between 3-4 feet deep; worst case is that soil is exported off site

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - .

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	4,000.00
tblLandUse	LotAcreage	0.00	15.71
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	541.19
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	HaulingTripNumber	500.00	333.00
tblWaterMitigation	PercentReductionInFlowBathroomFaucet	32	18

2.0 Emissions Summary

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0853	0.9424	0.5875	1.2800e-003	0.2266	0.0402	0.2668	0.1052	0.0370	0.1422	0.0000	113.5388	113.5388	0.0323	0.0000	114.3470
Maximum	0.0853	0.9424	0.5875	1.2800e-003	0.2266	0.0402	0.2668	0.1052	0.0370	0.1422	0.0000	113.5388	113.5388	0.0323	0.0000	114.3470

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0853	0.9424	0.5875	1.2800e-003	0.1052	0.0402	0.1454	0.0482	0.0370	0.0852	0.0000	113.5387	113.5387	0.0323	0.0000	114.3469
Maximum	0.0853	0.9424	0.5875	1.2800e-003	0.1052	0.0402	0.1454	0.0482	0.0370	0.0852	0.0000	113.5387	113.5387	0.0323	0.0000	114.3469

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	53.56	0.00	45.49	54.16	0.00	40.08	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2021	9-30-2021	1.0267	1.0267
		Highest	1.0267	1.0267

2.2 Overall Operational

Unmitigated Operational

[illegible]

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	7/1/2021	7/14/2021	5	10	
2	Grading	Grading	7/15/2021	8/25/2021	5	30	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 75****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	333.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

3.2 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530

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	3.9000e-004	2.5000e-004	2.5800e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5966	0.5966	2.0000e-005	0.0000	0.5970
Total	3.9000e-004	2.5000e-004	2.5800e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5966	0.5966	2.0000e-005	0.0000	0.5970

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

3.2 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0407	0.0102	0.0509	0.0223	9.4000e-003	0.0317	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530

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	3.9000e-004	2.5000e-004	2.5800e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5966	0.5966	2.0000e-005	0.0000	0.5970
Total	3.9000e-004	2.5000e-004	2.5800e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5966	0.5966	2.0000e-005	0.0000	0.5970

Reed Rezone - Site Prep, Grading, Basin - Tulare County, Annual

3.3 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1303	0.0000	0.1303	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034
Total	0.0629	0.6960	0.4632	9.3000e-004	0.1303	0.0298	0.1601	0.0540	0.0274	0.0814	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2600e-003	0.0428	7.3500e-003	1.3000e-004	2.8400e-003	1.4000e-004	2.9800e-003	7.8000e-004	1.3000e-004	9.2000e-004	0.0000	12.4932	12.4932	4.1000e-004	0.0000	12.5034
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-003	8.4000e-004	8.6100e-003	2.0000e-005	2.3900e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9887	1.9887	6.0000e-005	0.0000	1.9901
Total	2.5600e-003	0.0436	0.0160	1.5000e-004	5.2300e-003	1.6000e-004	5.3900e-003	1.4200e-003	1.4000e-004	1.5700e-003	0.0000	14.4818	14.4818	4.7000e-004	0.0000	14.4935

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3.3 Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0587	0.0000	0.0587	0.0243	0.0000	0.0243	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033
Total	0.0629	0.6960	0.4632	9.3000e-004	0.0587	0.0298	0.0884	0.0243	0.0274	0.0517	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2600e-003	0.0428	7.3500e-003	1.3000e-004	2.8400e-003	1.4000e-004	2.9800e-003	7.8000e-004	1.3000e-004	9.2000e-004	0.0000	12.4932	12.4932	4.1000e-004	0.0000	12.5034
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-003	8.4000e-004	8.6100e-003	2.0000e-005	2.3900e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9887	1.9887	6.0000e-005	0.0000	1.9901
Total	2.5600e-003	0.0436	0.0160	1.5000e-004	5.2300e-003	1.6000e-004	5.3900e-003	1.4200e-003	1.4000e-004	1.5700e-003	0.0000	14.4818	14.4818	4.7000e-004	0.0000	14.4935

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

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5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

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[illegible]

6.2 Area by SubCategory

Unmitigated

[illegible]

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

CalEEMod Report

Parcel 1

Reed Rezone - Parcel 1 - Tulare County, Annual

Reed Rezone - Parcel 1

Tulare 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	8.00	Pump	0.07	3,000.00	0
Fast Food Restaurant w/o Drive Thru	3.50	1000sqft	0.08	3,500.00	0
Strip Mall	11.00	1000sqft	0.25	11,000.00	0
Parking Lot	2.00	Acre	2.00	87,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	484.64	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - intensity factors account for the projected RPS requirements in 2024

Land Use - site prep & grading done in phase 1; mini-mart acreage & square footage per proposal; this is 3.0 acre site, but parking area assumed to be 80% of parcel size

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	1,129.40	3,000.00
tblLandUse	LotAcreage	0.03	0.07
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	484.64
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	DV_TP	21.00	65.00
tblVehicleTrips	DV_TP	37.00	65.00
tblVehicleTrips	DV_TP	40.00	65.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00

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tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	14.00	35.00
tblVehicleTrips	PR_TP	51.00	35.00
tblVehicleTrips	PR_TP	45.00	35.00
tblVehicleTrips	WD_TR	542.60	195.09
tblVehicleTrips	WD_TR	716.00	328.92
tblVehicleTrips	WD_TR	44.32	115.73
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Reed Rezone - Parcel 1 - Tulare County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3304	1.5251	1.7317	3.6600e-003	0.0510	0.0541	0.1051	0.0138	0.0517	0.0656	0.0000	312.5676	312.5676	0.0466	0.0000	313.7331
Maximum	0.3304	1.5251	1.7317	3.6600e-003	0.0510	0.0541	0.1051	0.0138	0.0517	0.0656	0.0000	312.5676	312.5676	0.0466	0.0000	313.7331

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3304	1.5251	1.7317	3.6600e-003	0.0510	0.0541	0.1051	0.0138	0.0517	0.0656	0.0000	312.5673	312.5673	0.0466	0.0000	313.7328
Maximum	0.3304	1.5251	1.7317	3.6600e-003	0.0510	0.0541	0.1051	0.0138	0.0517	0.0656	0.0000	312.5673	312.5673	0.0466	0.0000	313.7328

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2025	3-31-2025	0.4868	0.4868
2	4-1-2025	6-30-2025	0.4919	0.4919
3	7-1-2025	9-30-2025	0.4973	0.4973
		Highest	0.4973	0.4973

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	0.0880	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.4000e-004	4.4000e-004	0.0000	0.0000	4.7000e-004
Energy	4.7800e-003	0.0434	0.0365	2.6000e-004		3.3000e-003	3.3000e-003		3.3000e-003	3.3000e-003	0.0000	101.3698	101.3698	3.3600e-003	1.4200e-003	101.8785
Mobile	0.7818	6.6546	6.3333	0.0299	2.0701	0.0180	2.0881	0.5557	0.0168	0.5725	0.0000	2,781.8175	2,781.8175	0.1358	0.0000	2,785.2135
Waste						0.0000	0.0000		0.0000	0.0000	10.5291	0.0000	10.5291	0.6223	0.0000	26.0855
Water						0.0000	0.0000		0.0000	0.0000	0.6937	2.8083	3.5020	0.0275	1.5400e-003	4.6484
Total	0.8746	6.6980	6.3700	0.0302	2.0701	0.0213	2.0914	0.5557	0.0201	0.5758	11.2229	2,885.9960	2,897.2189	0.7890	2.9600e-003	2,917.8263

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0880	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.3000e-004	4.3000e-004	0.0000	0.0000	4.6000e-004
Energy	4.7200e-003	0.0429	0.0360	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	93.3715	93.3715	3.0100e-003	1.3400e-003	93.8454
Mobile	0.7719	6.5642	6.0976	0.0286	1.9470	0.0171	1.9641	0.5226	0.0160	0.5386	0.0000	2,656.6857	2,656.6857	0.1333	0.0000	2,660.0188
Waste						0.0000	0.0000		0.0000	0.0000	10.5291	0.0000	10.5291	0.6223	0.0000	26.0855
Water						0.0000	0.0000		0.0000	0.0000	0.5550	2.3127	2.8677	0.0220	1.2300e-003	3.7851
Total	0.8646	6.6071	6.1339	0.0289	1.9470	0.0204	1.9674	0.5226	0.0193	0.5419	11.0841	2,752.3703	2,763.4544	0.7806	2.5700e-003	2,783.7353

	ROG	NOx	CO	SO2	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	1.14	1.36	3.71	4.47	5.95	4.14	5.93	5.95	4.13	5.89	1.24	4.63	4.62	1.06	13.18	4.60

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2025	11/4/2025	5	220	
2	Paving	Paving	11/5/2025	11/18/2025	5	10	
3	Architectural Coating	Architectural Coating	11/19/2025	12/2/2025	5	10	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 2****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,250; Non-Residential Outdoor: 8,750; Striped Parking Area: 5,227 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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
Building Construction	8	43.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2025**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	0.1639	1.3226	1.5408	2.7500e-003		0.0517	0.0517		0.0495	0.0495	0.0000	228.5088	228.5088	0.0419	0.0000	229.5565
Total	0.1639	1.3226	1.5408	2.7500e-003		0.0517	0.0517		0.0495	0.0495	0.0000	228.5088	228.5088	0.0419	0.0000	229.5565

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3.2 Building Construction - 2025**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	3.6500e-003	0.1509	0.0271	5.0000e-004	0.0124	1.5000e-004	0.0125	3.5700e-003	1.5000e-004	3.7200e-003	0.0000	47.4714	47.4714	1.6000e-003	0.0000	47.5115
Worker	0.0153	8.4400e-003	0.0940	3.0000e-004	0.0377	2.2000e-004	0.0379	0.0100	2.0000e-004	0.0102	0.0000	26.8725	26.8725	5.7000e-004	0.0000	26.8866
Total	0.0189	0.1594	0.1211	8.0000e-004	0.0500	3.7000e-004	0.0504	0.0136	3.5000e-004	0.0139	0.0000	74.3439	74.3439	2.1700e-003	0.0000	74.3981

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	0.1639	1.3226	1.5408	2.7500e-003		0.0517	0.0517		0.0495	0.0495	0.0000	228.5086	228.5086	0.0419	0.0000	229.5563
Total	0.1639	1.3226	1.5408	2.7500e-003		0.0517	0.0517		0.0495	0.0495	0.0000	228.5086	228.5086	0.0419	0.0000	229.5563

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3.2 Building Construction - 2025**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	3.6500e-003	0.1509	0.0271	5.0000e-004	0.0124	1.5000e-004	0.0125	3.5700e-003	1.5000e-004	3.7200e-003	0.0000	47.4714	47.4714	1.6000e-003	0.0000	47.5115
Worker	0.0153	8.4400e-003	0.0940	3.0000e-004	0.0377	2.2000e-004	0.0379	0.0100	2.0000e-004	0.0102	0.0000	26.8725	26.8725	5.7000e-004	0.0000	26.8866
Total	0.0189	0.1594	0.1211	8.0000e-004	0.0500	3.7000e-004	0.0504	0.0136	3.5000e-004	0.0139	0.0000	74.3439	74.3439	2.1700e-003	0.0000	74.3981

3.3 Paving - 2025**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	3.9300e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003	0.0000	7.7565	7.7565	2.4600e-003	0.0000	7.8179
Paving	2.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.5500e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003	0.0000	7.7565	7.7565	2.4600e-003	0.0000	7.8179

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3.3 Paving - 2025**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.3000e-004	1.4900e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4261	0.4261	1.0000e-005	0.0000	0.4263
Total	2.4000e-004	1.3000e-004	1.4900e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4261	0.4261	1.0000e-005	0.0000	0.4263

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	3.9300e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003	0.0000	7.7565	7.7565	2.4600e-003	0.0000	7.8179
Paving	2.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.5500e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003	0.0000	7.7565	7.7565	2.4600e-003	0.0000	7.8179

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3.3 Paving - 2025**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.3000e-004	1.4900e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4261	0.4261	1.0000e-005	0.0000	0.4263
Total	2.4000e-004	1.3000e-004	1.4900e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4261	0.4261	1.0000e-005	0.0000	0.4263

3.4 Architectural Coating - 2025**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	0.1398					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.1407	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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3.4 Architectural Coating - 2025**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	8.0000e-005	8.9000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2557	0.2557	1.0000e-005	0.0000	0.2558
Total	1.5000e-004	8.0000e-005	8.9000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2557	0.2557	1.0000e-005	0.0000	0.2558

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	0.1398					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.1407	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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3.4 Architectural Coating - 2025**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	8.0000e-005	8.9000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2557	0.2557	1.0000e-005	0.0000	0.2558
Total	1.5000e-004	8.0000e-005	8.9000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2557	0.2557	1.0000e-005	0.0000	0.2558

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

Improve Destination Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7719	6.5642	6.0976	0.0286	1.9470	0.0171	1.9641	0.5226	0.0160	0.5386	0.0000	2,656.6857	2,656.6857	0.1333	0.0000	2,660.0188
Unmitigated	0.7818	6.6546	6.3333	0.0299	2.0701	0.0180	2.0881	0.5557	0.0168	0.5725	0.0000	2,781.8175	2,781.8175	0.1358	0.0000	2,785.2135

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	1,560.72	1,635.76	1335.04	2,101,159	1,976,140
Parking Lot	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	1,151.22	2,436.00	1750.00	1,942,929	1,827,325
Strip Mall	1,273.03	462.44	224.73	1,440,631	1,354,913
Total	3,984.97	4,534.20	3,309.77	5,484,720	5,158,379

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	35	65	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	35	65	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	35	65	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.553600	0.030510	0.178341	0.111706	0.014635	0.004106	0.019904	0.078682	0.001795	0.001105	0.004014	0.001044	0.000558
Parking Lot	0.553600	0.030510	0.178341	0.111706	0.014635	0.004106	0.019904	0.078682	0.001795	0.001105	0.004014	0.001044	0.000558
Fast Food Restaurant w/o Drive Thru	0.553600	0.030510	0.178341	0.111706	0.014635	0.004106	0.019904	0.078682	0.001795	0.001105	0.004014	0.001044	0.000558
Strip Mall	0.553600	0.030510	0.178341	0.111706	0.014635	0.004106	0.019904	0.078682	0.001795	0.001105	0.004014	0.001044	0.000558

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	46.6799	46.6799	2.1200e-003	4.8000e-004	46.8763
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54.0751	54.0751	2.4500e-003	5.6000e-004	54.3027
NaturalGas Mitigated	4.7200e-003	0.0429	0.0360	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6916	46.6916	8.9000e-004	8.6000e-004	46.9691
NaturalGas Unmitigated	4.7800e-003	0.0434	0.0365	2.6000e-004		3.3000e-003	3.3000e-003		3.3000e-003	3.3000e-003	0.0000	47.2947	47.2947	9.1000e-004	8.7000e-004	47.5758

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	32100	1.7000e-004	1.5700e-003	1.3200e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7130	1.7130	3.0000e-005	3.0000e-005	1.7232
Fast Food Restaurant w/o Drive Thru	736470	3.9700e-003	0.0361	0.0303	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	39.3008	39.3008	7.5000e-004	7.2000e-004	39.5344
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
Strip Mall	117700	6.3000e-004	5.7700e-003	4.8500e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2809	6.2809	1.2000e-004	1.2000e-004	6.3182
Total		4.7700e-003	0.0434	0.0365	2.6000e-004		3.3000e-003	3.3000e-003		3.3000e-003	3.3000e-003	0.0000	47.2947	47.2947	9.0000e-004	8.7000e-004	47.5758

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	30910.4	1.7000e-004	1.5200e-003	1.2700e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6495	1.6495	3.0000e-005	3.0000e-005	1.6593
Fast Food Restaurant w/o Drive Thru	730719	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	38.9940	38.9940	7.5000e-004	7.1000e-004	39.2257
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
Strip Mall	113338	6.1000e-004	5.5600e-003	4.6700e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	6.0482	6.0482	1.2000e-004	1.1000e-004	6.0841
Total		4.7200e-003	0.0429	0.0360	2.5000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6916	46.6916	9.0000e-004	8.5000e-004	46.9691

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	24450	5.3748	2.4000e-004	6.0000e-005	5.3974
Fast Food Restaurant w/o Drive Thru	101395	22.2896	1.0100e-003	2.3000e-004	22.3834
Parking Lot	30492	6.7030	3.0000e-004	7.0000e-005	6.7312
Strip Mall	89650	19.7077	8.9000e-004	2.0000e-004	19.7906
Total		54.0751	2.4400e-003	5.6000e-004	54.3027

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	20815.7	4.5759	2.1000e-004	5.0000e-005	4.5952
Fast Food Restaurant w/o Drive Thru	93861.9	20.6336	9.4000e-004	2.1000e-004	20.7204
Parking Lot	21344.4	4.6921	2.1000e-004	5.0000e-005	4.7119
Strip Mall	76324.2	16.7783	7.6000e-004	1.7000e-004	16.8489
Total		46.6799	2.1200e-003	4.8000e-004	46.8763

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0880	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.3000e-004	4.3000e-004	0.0000	0.0000	4.6000e-004
Unmitigated	0.0880	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.4000e-004	4.4000e-004	0.0000	0.0000	4.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0740					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.4000e-004	4.4000e-004	0.0000	0.0000	4.7000e-004
Total	0.0880	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.4000e-004	4.4000e-004	0.0000	0.0000	4.7000e-004

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0740					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.3000e-004	4.3000e-004	0.0000	0.0000	4.6000e-004
Total	0.0880	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.3000e-004	4.3000e-004	0.0000	0.0000	4.6000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.8677	0.0220	1.2300e-003	3.7851
Unmitigated	3.5020	0.0275	1.5400e-003	4.6484

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	0.0836574 / 0.0512739	0.1686	1.1800e-003	7.0000e-005	0.2176
Fast Food Restaurant w/o Drive Thru	1.06237 / 0.0678107	1.6917	0.0149	8.3000e-004	2.3120
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.814798 / 0.499392	1.6417	0.0115	6.4000e-004	2.1189
Total		3.5020	0.0275	1.5400e-003	4.6484

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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	0.0669259 / 0.0481462	0.1403	9.4000e-004	5.0000e-005	0.1796
Fast Food Restaurant w/o Drive Thru	0.849894 / 0.0636743	1.3606	0.0119	6.6000e-004	1.8569
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.651838 / 0.468929	1.3668	9.1600e-003	5.1000e-004	1.7487
Total		2.8677	0.0220	1.2200e-003	3.7851

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Reed Rezone - Parcel 1 - Tulare County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.5291	0.6223	0.0000	26.0855
Unmitigated	10.5291	0.6223	0.0000	26.0855

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	40.32	8.1846	0.4837	0.0000	20.2770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	11.55	2.3446	0.1386	0.0000	5.8085
Total		10.5292	0.6223	0.0000	26.0855

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	40.32	8.1846	0.4837	0.0000	20.2770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	11.55	2.3446	0.1386	0.0000	5.8085
Total		10.5292	0.6223	0.0000	26.0855

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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11.0 Vegetation

CalEEMod Report

Parcel 2

Reed Rezone - Parcel 2 - Tulare County, Annual

Reed Rezone - Parcel 2

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	30.00	1000sqft	0.69	30,000.00	0
Parking Lot	0.91	Acre	0.91	39,639.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	484.64	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Reed Rezone - Parcel 2 - Tulare County, Annual

Project Characteristics - intensity factors account for the projected RPS requirements in 2024

Land Use - site prep & grading done in phase 1; this is 2.0 acre site, but parking area assumed to be 80% of parcel size

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	484.64
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	DV_TP	19.00	65.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PR_TP	79.00	35.00
tblVehicleTrips	WD_TR	6.83	7.34
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3879	1.3057	1.4026	2.7900e-003	0.0311	0.0536	0.0847	8.4400e-003	0.0517	0.0601	0.0000	235.5011	235.5011	0.0341	0.0000	236.3546
Maximum	0.3879	1.3057	1.4026	2.7900e-003	0.0311	0.0536	0.0847	8.4400e-003	0.0517	0.0601	0.0000	235.5011	235.5011	0.0341	0.0000	236.3546

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3879	1.3057	1.4026	2.7900e-003	0.0311	0.0536	0.0847	8.4400e-003	0.0517	0.0601	0.0000	235.5009	235.5009	0.0341	0.0000	236.3544
Maximum	0.3879	1.3057	1.4026	2.7900e-003	0.0311	0.0536	0.0847	8.4400e-003	0.0517	0.0601	0.0000	235.5009	235.5009	0.0341	0.0000	236.3544

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.4610	0.4610
2	4-1-2023	6-30-2023	0.4658	0.4658
3	7-1-2023	9-30-2023	0.4710	0.4710
		Highest	0.4710	0.4710

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	0.1414	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.5000e-004	5.5000e-004	0.0000	0.0000	5.9000e-004
Energy	2.1100e-003	0.0192	0.0161	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	84.0870	84.0870	3.2700e-003	1.0300e-003	84.4772
Mobile	0.0395	0.3140	0.3469	1.5400e-003	0.1037	9.5000e-004	0.1046	0.0278	8.8000e-004	0.0287	0.0000	142.7837	142.7837	6.3400e-003	0.0000	142.9422
Waste						0.0000	0.0000		0.0000	0.0000	7.5513	0.0000	7.5513	0.4463	0.0000	18.7079
Water						0.0000	0.0000		0.0000	0.0000	2.4545	8.2521	10.7066	0.0973	5.4200e-003	14.7555
Total	0.1831	0.3331	0.3633	1.6600e-003	0.1037	2.4100e-003	0.1061	0.0278	2.3400e-003	0.0302	10.0058	235.1234	245.1291	0.5532	6.4500e-003	260.8833

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1414	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Energy	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	75.6597	75.6597	2.9100e-003	9.4000e-004	76.0128
Mobile	0.0390	0.3088	0.3334	1.4700e-003	0.0975	9.0000e-004	0.0984	0.0262	8.4000e-004	0.0270	0.0000	136.0960	136.0960	6.1900e-003	0.0000	136.2508
Waste						0.0000	0.0000		0.0000	0.0000	7.5513	0.0000	7.5513	0.4463	0.0000	18.7079
Water						0.0000	0.0000		0.0000	0.0000	1.9636	6.6017	8.5653	0.0779	4.3400e-003	11.8044
Total	0.1824	0.3271	0.3491	1.5800e-003	0.0975	2.2900e-003	0.0998	0.0262	2.2300e-003	0.0284	9.5149	218.3579	227.8728	0.5332	5.2800e-003	242.7764

	ROG	NOx	CO	SO2	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	0.36	1.81	3.90	4.82	5.95	4.98	5.92	5.96	4.70	5.86	4.91	7.13	7.04	3.61	18.14	6.94

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2023	10/6/2023	5	200	
2	Paving	Paving	10/7/2023	10/20/2023	5	10	
3	Architectural Coating	Architectural Coating	10/21/2023	11/3/2023	5	10	

Reed Rezone - Parcel 2 - Tulare County, Annual

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.91****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped Parking Area: 2,378 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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
Building Construction	7	29.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701

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3.2 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	2.2800e-003	0.0904	0.0179	3.0000e-004	7.2700e-003	9.0000e-005	7.3600e-003	2.1000e-003	9.0000e-005	2.1900e-003	0.0000	28.2991	28.2991	9.1000e-004	0.0000	28.3219
Worker	0.0108	6.4100e-003	0.0683	2.0000e-004	0.0231	1.4000e-004	0.0232	6.1400e-003	1.3000e-004	6.2700e-003	0.0000	17.8552	17.8552	4.3000e-004	0.0000	17.8660
Total	0.0130	0.0968	0.0862	5.0000e-004	0.0304	2.3000e-004	0.0306	8.2400e-003	2.2000e-004	8.4600e-003	0.0000	46.1542	46.1542	1.3400e-003	0.0000	46.1879

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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698

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3.2 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	2.2800e-003	0.0904	0.0179	3.0000e-004	7.2700e-003	9.0000e-005	7.3600e-003	2.1000e-003	9.0000e-005	2.1900e-003	0.0000	28.2991	28.2991	9.1000e-004	0.0000	28.3219
Worker	0.0108	6.4100e-003	0.0683	2.0000e-004	0.0231	1.4000e-004	0.0232	6.1400e-003	1.3000e-004	6.2700e-003	0.0000	17.8552	17.8552	4.3000e-004	0.0000	17.8660
Total	0.0130	0.0968	0.0862	5.0000e-004	0.0304	2.3000e-004	0.0306	8.2400e-003	2.2000e-004	8.4600e-003	0.0000	46.1542	46.1542	1.3400e-003	0.0000	46.1879

3.3 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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4100e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4100e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

3.4 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	0.2168					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	0.2178	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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3.4 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	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848
Total	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848

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	0.2168					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	0.2178	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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3.4 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	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848
Total	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848

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

Improve Destination Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0390	0.3088	0.3334	1.4700e-003	0.0975	9.0000e-004	0.0984	0.0262	8.4000e-004	0.0270	0.0000	136.0960	136.0960	6.1900e-003	0.0000	136.2508
Unmitigated	0.0395	0.3140	0.3469	1.5400e-003	0.1037	9.5000e-004	0.1046	0.0278	8.8000e-004	0.0287	0.0000	142.7837	142.7837	6.3400e-003	0.0000	142.9422

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	220.20	74.70	21.90	274,414	258,086
Parking Lot	0.00	0.00	0.00		
Total	220.20	74.70	21.90	274,414	258,086

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	35	65	0
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
Industrial Park	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622
Parking Lot	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	55.7082	55.7082	2.5300e-003	5.7000e-004	55.9427
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.1951	63.1951	2.8700e-003	6.5000e-004	63.4611
NaturalGas Mitigated	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9515	19.9515	3.8000e-004	3.7000e-004	20.0701
NaturalGas Unmitigated	2.1100e-003	0.0192	0.0161	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.8919	20.8919	4.0000e-004	3.8000e-004	21.0161

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	391500	2.1100e-003	0.0192	0.0161	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.8919	20.8919	4.0000e-004	3.8000e-004	21.0161
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		2.1100e-003	0.0192	0.0161	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.8919	20.8919	4.0000e-004	3.8000e-004	21.0161

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	373877	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9515	19.9515	3.8000e-004	3.7000e-004	20.0701
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		2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9515	19.9515	3.8000e-004	3.7000e-004	20.0701

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	273600	60.1452	2.7300e-003	6.2000e-004	60.3984
Parking Lot	13873.9	3.0499	1.4000e-004	3.0000e-005	3.0627
Total		63.1951	2.8700e-003	6.5000e-004	63.4611

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	243704	53.5733	2.4300e-003	5.5000e-004	53.7988
Parking Lot	9711.7	2.1349	1.0000e-004	2.0000e-005	2.1439
Total		55.7082	2.5300e-003	5.7000e-004	55.9427

6.0 Area Detail**6.1 Mitigation Measures Area**

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Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive 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	0.1414	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Unmitigated	0.1414	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.5000e-004	5.5000e-004	0.0000	0.0000	5.9000e-004

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.5000e-004	5.5000e-004	0.0000	0.0000	5.9000e-004
Total	0.1414	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.5000e-004	5.5000e-004	0.0000	0.0000	5.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Total	0.1414	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004

7.0 Water Detail

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7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.5653	0.0779	4.3400e-003	11.8044
Unmitigated	10.7066	0.0973	5.4200e-003	14.7555

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7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	6.9375 / 0	10.7066	0.0973	5.4200e-003	14.7555
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		10.7066	0.0973	5.4200e-003	14.7555

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	5.55 / 0	8.5653	0.0779	4.3400e-003	11.8044
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		8.5653	0.0779	4.3400e-003	11.8044

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.5513	0.4463	0.0000	18.7079
Unmitigated	7.5513	0.4463	0.0000	18.7079

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	37.2	7.5513	0.4463	0.0000	18.7079
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		7.5513	0.4463	0.0000	18.7079

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	37.2	7.5513	0.4463	0.0000	18.7079
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		7.5513	0.4463	0.0000	18.7079

9.0 Operational Offroad

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

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

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

Boilers

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

Equipment Type	Number
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11.0 Vegetation

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CalEEMod Report

Parcel 3

Reed Rezone - Parcel 3 - Tulare County, Annual

Reed Rezone - Parcel 3

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	21.50	1000sqft	0.49	21,500.00	0
Parking Lot	0.87	Acre	0.87	37,897.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	484.64	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - intensity factors account for the projected RPS requirements in 2024

Land Use - site prep & grading done in phase 1; this is 1.7 acre site, but parking area assumed to be 80% of parcel size

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	484.64
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	DV_TP	19.00	65.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PR_TP	79.00	35.00
tblVehicleTrips	WD_TR	6.83	7.34
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3267	1.2966	1.3915	2.7400e-003	0.0272	0.0536	0.0808	7.4000e-003	0.0517	0.0591	0.0000	230.4349	230.4349	0.0340	0.0000	231.2848
Maximum	0.3267	1.2966	1.3915	2.7400e-003	0.0272	0.0536	0.0808	7.4000e-003	0.0517	0.0591	0.0000	230.4349	230.4349	0.0340	0.0000	231.2848

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3267	1.2966	1.3915	2.7400e-003	0.0272	0.0536	0.0808	7.4000e-003	0.0517	0.0591	0.0000	230.4347	230.4347	0.0340	0.0000	231.2846
Maximum	0.3267	1.2966	1.3915	2.7400e-003	0.0272	0.0536	0.0808	7.4000e-003	0.0517	0.0591	0.0000	230.4347	230.4347	0.0340	0.0000	231.2846

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.4575	0.4575
2	4-1-2023	6-30-2023	0.4623	0.4623
3	7-1-2023	9-30-2023	0.4674	0.4674
		Highest	0.4674	0.4674

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	0.1022	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Energy	1.5100e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	60.9924	60.9924	2.3800e-003	7.5000e-004	61.2751
Mobile	0.0283	0.2250	0.2486	1.1000e-003	0.0743	6.8000e-004	0.0750	0.0200	6.3000e-004	0.0206	0.0000	102.3283	102.3283	4.5400e-003	0.0000	102.4419
Waste						0.0000	0.0000		0.0000	0.0000	5.4117	0.0000	5.4117	0.3198	0.0000	13.4074
Water						0.0000	0.0000		0.0000	0.0000	1.7591	5.9140	7.6731	0.0697	3.8900e-003	10.5747
Total	0.1320	0.2388	0.2603	1.1800e-003	0.0743	1.7300e-003	0.0760	0.0200	1.6800e-003	0.0216	7.1708	169.2352	176.4060	0.3965	4.6400e-003	187.6995

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1022	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.9000e-004	3.9000e-004	0.0000	0.0000	4.2000e-004
Energy	1.4400e-003	0.0131	0.0110	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	54.7339	54.7339	2.1100e-003	6.8000e-004	54.9890
Mobile	0.0279	0.2213	0.2390	1.0500e-003	0.0699	6.5000e-004	0.0705	0.0188	6.0000e-004	0.0194	0.0000	97.5354	97.5354	4.4400e-003	0.0000	97.6464
Waste						0.0000	0.0000		0.0000	0.0000	5.4117	0.0000	5.4117	0.3198	0.0000	13.4074
Water						0.0000	0.0000		0.0000	0.0000	1.4073	4.7312	6.1385	0.0558	3.1100e-003	8.4598
Total	0.1315	0.2344	0.2502	1.1300e-003	0.0699	1.6500e-003	0.0715	0.0188	1.6000e-003	0.0204	6.8190	157.0009	163.8199	0.3822	3.7900e-003	174.5030

	ROG	NOx	CO	SO2	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	0.36	1.81	3.90	4.24	5.95	4.62	5.92	5.96	4.76	5.83	4.91	7.23	7.13	3.61	18.32	7.03

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2023	10/6/2023	5	200	
2	Paving	Paving	10/7/2023	10/20/2023	5	10	
3	Architectural Coating	Architectural Coating	10/21/2023	11/3/2023	5	10	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.87****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,250; Non-Residential Outdoor: 10,750; Striped Parking Area: 2,274 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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
Building Construction	7	25.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701

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3.2 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	2.0800e-003	0.0821	0.0163	2.7000e-004	6.6100e-003	9.0000e-005	6.7000e-003	1.9100e-003	8.0000e-005	1.9900e-003	0.0000	25.7264	25.7264	8.3000e-004	0.0000	25.7472
Worker	9.2700e-003	5.5300e-003	0.0589	1.7000e-004	0.0199	1.2000e-004	0.0200	5.2900e-003	1.1000e-004	5.4100e-003	0.0000	15.3924	15.3924	3.7000e-004	0.0000	15.4017
Total	0.0114	0.0877	0.0752	4.4000e-004	0.0265	2.1000e-004	0.0267	7.2000e-003	1.9000e-004	7.4000e-003	0.0000	41.1188	41.1188	1.2000e-003	0.0000	41.1489

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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698

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3.2 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	2.0800e-003	0.0821	0.0163	2.7000e-004	6.6100e-003	9.0000e-005	6.7000e-003	1.9100e-003	8.0000e-005	1.9900e-003	0.0000	25.7264	25.7264	8.3000e-004	0.0000	25.7472
Worker	9.2700e-003	5.5300e-003	0.0589	1.7000e-004	0.0199	1.2000e-004	0.0200	5.2900e-003	1.1000e-004	5.4100e-003	0.0000	15.3924	15.3924	3.7000e-004	0.0000	15.4017
Total	0.0114	0.0877	0.0752	4.4000e-004	0.0265	2.1000e-004	0.0267	7.2000e-003	1.9000e-004	7.4000e-003	0.0000	41.1188	41.1188	1.2000e-003	0.0000	41.1489

3.3 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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.3600e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.3600e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

3.4 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	0.1574					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	0.1583	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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3.4 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	9.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1539	0.1539	0.0000	0.0000	0.1540
Total	9.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1539	0.1539	0.0000	0.0000	0.1540

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	0.1574					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	0.1583	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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3.4 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	9.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1539	0.1539	0.0000	0.0000	0.1540
Total	9.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1539	0.1539	0.0000	0.0000	0.1540

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

Improve Destination Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0279	0.2213	0.2390	1.0500e-003	0.0699	6.5000e-004	0.0705	0.0188	6.0000e-004	0.0194	0.0000	97.5354	97.5354	4.4400e-003	0.0000	97.6464
Unmitigated	0.0283	0.2250	0.2486	1.1000e-003	0.0743	6.8000e-004	0.0750	0.0200	6.3000e-004	0.0206	0.0000	102.3283	102.3283	4.5400e-003	0.0000	102.4419

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	157.81	53.54	15.70	196,663	184,962
Parking Lot	0.00	0.00	0.00		
Total	157.81	53.54	15.70	196,663	184,962

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	35	65	0
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
Industrial Park	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622
Parking Lot	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40.4353	40.4353	1.8400e-003	4.2000e-004	40.6055
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	46.0199	46.0199	2.0900e-003	4.7000e-004	46.2136
NaturalGas Mitigated	1.4400e-003	0.0131	0.0110	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.2986	14.2986	2.7000e-004	2.6000e-004	14.3836
NaturalGas Unmitigated	1.5100e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	14.9726	14.9726	2.9000e-004	2.7000e-004	15.0615

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	280575	1.5100e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	14.9726	14.9726	2.9000e-004	2.7000e-004	15.0615
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		1.5100e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	14.9726	14.9726	2.9000e-004	2.7000e-004	15.0615

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	267945	1.4400e-003	0.0131	0.0110	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.2986	14.2986	2.7000e-004	2.6000e-004	14.3836
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		1.4400e-003	0.0131	0.0110	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.2986	14.2986	2.7000e-004	2.6000e-004	14.3836

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	196080	43.1041	1.9600e-003	4.4000e-004	43.2855
Parking Lot	13264	2.9158	1.3000e-004	3.0000e-005	2.9281
Total		46.0199	2.0900e-003	4.7000e-004	46.2136

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	174655	38.3942	1.7400e-003	4.0000e-004	38.5558
Parking Lot	9284.81	2.0411	9.0000e-005	2.0000e-005	2.0497
Total		40.4353	1.8300e-003	4.2000e-004	40.6055

6.0 Area Detail**6.1 Mitigation Measures Area**

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Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive 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	0.1022	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.9000e-004	3.9000e-004	0.0000	0.0000	4.2000e-004
Unmitigated	0.1022	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0157					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0864					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Total	0.1022	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0157					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0864					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.9000e-004	3.9000e-004	0.0000	0.0000	4.2000e-004
Total	0.1022	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.9000e-004	3.9000e-004	0.0000	0.0000	4.2000e-004

7.0 Water Detail

Reed Rezone - Parcel 3 - Tulare County, Annual

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.1385	0.0558	3.1100e-003	8.4598
Unmitigated	7.6731	0.0697	3.8900e-003	10.5747

Reed Rezone - Parcel 3 - Tulare County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	4.97187 / 0	7.6731	0.0697	3.8900e-003	10.5747
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.6731	0.0697	3.8900e-003	10.5747

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	3.9775 / 0	6.1385	0.0558	3.1100e-003	8.4598
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		6.1385	0.0558	3.1100e-003	8.4598

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.4117	0.3198	0.0000	13.4074
Unmitigated	5.4117	0.3198	0.0000	13.4074

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	26.66	5.4117	0.3198	0.0000	13.4074
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.4117	0.3198	0.0000	13.4074

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	26.66	5.4117	0.3198	0.0000	13.4074
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.4117	0.3198	0.0000	13.4074

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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11.0 Vegetation

Reed Rezone - Parcel 3 - Tulare County, Annual

CalEEMod Report

Parcel 4

Reed Rezone - Parcel 4 - Tulare County, Annual

Reed Rezone - Parcel 4

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	20.00	1000sqft	0.46	20,000.00	0
Parking Lot	0.66	Acre	0.66	28,749.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	484.64	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Reed Rezone - Parcel 4 - Tulare County, Annual

Project Characteristics - intensity factors account for the projected RPS requirements in 2024

Land Use - site prep & grading done in phase 1; this is 1.4 acre site, but parking area assumed to be 80% of parcel size

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	484.64
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	DV_TP	19.00	65.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PR_TP	79.00	35.00
tblVehicleTrips	WD_TR	6.83	7.34
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3118	1.2791	1.3763	2.6500e-003	0.0219	0.0535	0.0754	5.9400e-003	0.0516	0.0576	0.0000	222.1804	222.1804	0.0338	0.0000	223.0242
Maximum	0.3118	1.2791	1.3763	2.6500e-003	0.0219	0.0535	0.0754	5.9400e-003	0.0516	0.0576	0.0000	222.1804	222.1804	0.0338	0.0000	223.0242

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3118	1.2791	1.3763	2.6500e-003	0.0219	0.0535	0.0754	5.9400e-003	0.0516	0.0576	0.0000	222.1801	222.1801	0.0338	0.0000	223.0240
Maximum	0.3118	1.2791	1.3763	2.6500e-003	0.0219	0.0535	0.0754	5.9400e-003	0.0516	0.0576	0.0000	222.1801	222.1801	0.0338	0.0000	223.0240

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.4510	0.4510
2	4-1-2023	6-30-2023	0.4559	0.4559
3	7-1-2023	9-30-2023	0.4609	0.4609
		Highest	0.4609	0.4609

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	0.0945	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Energy	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	56.2368	56.2368	2.1900e-003	6.9000e-004	56.4976
Mobile	0.0264	0.2093	0.2312	1.0300e-003	0.0691	6.3000e-004	0.0697	0.0186	5.9000e-004	0.0192	0.0000	95.1891	95.1891	4.2300e-003	0.0000	95.2948
Waste						0.0000	0.0000		0.0000	0.0000	5.0342	0.0000	5.0342	0.2975	0.0000	12.4720
Water						0.0000	0.0000		0.0000	0.0000	1.6363	5.5014	7.1378	0.0649	3.6200e-003	9.8370
Total	0.1223	0.2221	0.2422	1.1100e-003	0.0691	1.6000e-003	0.0707	0.0186	1.5600e-003	0.0201	6.6705	156.9277	163.5982	0.3688	4.3100e-003	174.1017

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0945	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Energy	1.3400e-003	0.0122	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.5649	50.5649	1.9500e-003	6.3000e-004	50.8008
Mobile	0.0260	0.2059	0.2223	9.8000e-004	0.0650	6.0000e-004	0.0656	0.0175	5.6000e-004	0.0180	0.0000	90.7306	90.7306	4.1300e-003	0.0000	90.8338
Waste						0.0000	0.0000		0.0000	0.0000	5.0342	0.0000	5.0342	0.2975	0.0000	12.4720
Water						0.0000	0.0000		0.0000	0.0000	1.3091	4.4011	5.7102	0.0519	2.8900e-003	7.8696
Total	0.1218	0.2181	0.2327	1.0500e-003	0.0650	1.5300e-003	0.0665	0.0175	1.4900e-003	0.0189	6.3433	145.6971	152.0403	0.3555	3.5200e-003	161.9766

	ROG	NOx	CO	SO2	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	0.36	1.81	3.90	5.41	5.95	4.38	5.91	5.98	4.49	5.86	4.91	7.16	7.06	3.61	18.33	6.96

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2023	10/6/2023	5	200	
2	Paving	Paving	10/7/2023	10/20/2023	5	10	
3	Architectural Coating	Architectural Coating	10/21/2023	11/3/2023	5	10	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.66****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped Parking Area: 1,725 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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
Building Construction	7	20.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701

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3.2 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	1.6600e-003	0.0657	0.0130	2.2000e-004	5.2900e-003	7.0000e-005	5.3600e-003	1.5300e-003	7.0000e-005	1.5900e-003	0.0000	20.5811	20.5811	6.6000e-004	0.0000	20.5977
Worker	7.4200e-003	4.4200e-003	0.0471	1.4000e-004	0.0159	1.0000e-004	0.0160	4.2400e-003	9.0000e-005	4.3300e-003	0.0000	12.3139	12.3139	3.0000e-004	0.0000	12.3214
Total	9.0800e-003	0.0701	0.0601	3.6000e-004	0.0212	1.7000e-004	0.0214	5.7700e-003	1.6000e-004	5.9200e-003	0.0000	32.8950	32.8950	9.6000e-004	0.0000	32.9191

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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698

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3.2 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	1.6600e-003	0.0657	0.0130	2.2000e-004	5.2900e-003	7.0000e-005	5.3600e-003	1.5300e-003	7.0000e-005	1.5900e-003	0.0000	20.5811	20.5811	6.6000e-004	0.0000	20.5977
Worker	7.4200e-003	4.4200e-003	0.0471	1.4000e-004	0.0159	1.0000e-004	0.0160	4.2400e-003	9.0000e-005	4.3300e-003	0.0000	12.3139	12.3139	3.0000e-004	0.0000	12.3214
Total	9.0800e-003	0.0701	0.0601	3.6000e-004	0.0212	1.7000e-004	0.0214	5.7700e-003	1.6000e-004	5.9200e-003	0.0000	32.8950	32.8950	9.6000e-004	0.0000	32.9191

3.3 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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	8.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.0800e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	8.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.0800e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

3.4 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	0.1451					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	0.1460	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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3.4 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	7.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1232
Total	7.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1232

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	0.1451					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	0.1460	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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3.4 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	7.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1232
Total	7.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1232

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

Improve Destination Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0260	0.2059	0.2223	9.8000e-004	0.0650	6.0000e-004	0.0656	0.0175	5.6000e-004	0.0180	0.0000	90.7306	90.7306	4.1300e-003	0.0000	90.8338
Unmitigated	0.0264	0.2093	0.2312	1.0300e-003	0.0691	6.3000e-004	0.0697	0.0186	5.9000e-004	0.0192	0.0000	95.1891	95.1891	4.2300e-003	0.0000	95.2948

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	146.80	49.80	14.60	182,943	172,058
Parking Lot	0.00	0.00	0.00		
Total	146.80	49.80	14.60	182,943	172,058

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	35	65	0
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
Industrial Park	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622
Parking Lot	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	37.2639	37.2639	1.6900e-003	3.8000e-004	37.4208
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.3088	42.3088	1.9200e-003	4.4000e-004	42.4869
NaturalGas Mitigated	1.3400e-003	0.0122	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3010	13.3010	2.5000e-004	2.4000e-004	13.3801
NaturalGas Unmitigated	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9280	13.9280	2.7000e-004	2.6000e-004	14.0107

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	261000	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9280	13.9280	2.7000e-004	2.6000e-004	14.0107
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		1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9280	13.9280	2.7000e-004	2.6000e-004	14.0107

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	249252	1.3400e-003	0.0122	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3010	13.3010	2.5000e-004	2.4000e-004	13.3801
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		1.3400e-003	0.0122	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3010	13.3010	2.5000e-004	2.4000e-004	13.3801

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	182400	40.0968	1.8200e-003	4.1000e-004	40.2656
Parking Lot	10062.4	2.2120	1.0000e-004	2.0000e-005	2.2213
Total		42.3088	1.9200e-003	4.3000e-004	42.4869

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	162470	35.7155	1.6200e-003	3.7000e-004	35.8659
Parking Lot	7043.65	1.5484	7.0000e-005	2.0000e-005	1.5549
Total		37.2639	1.6900e-003	3.9000e-004	37.4208

6.0 Area Detail**6.1 Mitigation Measures Area**

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Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive 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	0.0945	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Unmitigated	0.0945	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0800					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Total	0.0945	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0800					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Total	0.0945	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004

7.0 Water Detail

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7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.7102	0.0519	2.8900e-003	7.8696
Unmitigated	7.1378	0.0649	3.6200e-003	9.8370

Reed Rezone - Parcel 4 - Tulare County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	4.625 / 0	7.1378	0.0649	3.6200e-003	9.8370
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.1378	0.0649	3.6200e-003	9.8370

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	3.7 / 0	5.7102	0.0519	2.8900e-003	7.8696
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		5.7102	0.0519	2.8900e-003	7.8696

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Reed Rezone - Parcel 4 - Tulare County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.0342	0.2975	0.0000	12.4720
Unmitigated	5.0342	0.2975	0.0000	12.4720

8.2 Waste by Land UseUnmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	24.8	5.0342	0.2975	0.0000	12.4720
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.0342	0.2975	0.0000	12.4720

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	24.8	5.0342	0.2975	0.0000	12.4720
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.0342	0.2975	0.0000	12.4720

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

Boilers

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

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Reed Rezone - Parcel 4 - Tulare County, Annual

CalEEMod Report

Parcel 5

Reed Rezone - Parcel 5 - Tulare County, Annual

Reed Rezone - Parcel 5

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	28.50	1000sqft	0.65	28,500.00	0
Parking Lot	0.87	Acre	0.87	37,897.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	484.64	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Reed Rezone - Parcel 5 - Tulare County, Annual

Project Characteristics - intensity factors account for the projected RPS requirements in 2024

Land Use - site prep & grading done in phase 1; this is 1.9 acre site, but parking area assumed to be 80% of parcel size

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

Reed Rezone - Parcel 5 - Tulare County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	484.64
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	DV_TP	19.00	65.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PR_TP	79.00	35.00
tblVehicleTrips	WD_TR	6.83	7.34
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3767	1.3055	1.4003	2.7800e-003	0.0303	0.0536	0.0839	8.2300e-003	0.0517	0.0599	0.0000	234.8854	234.8854	0.0341	0.0000	235.7385
Maximum	0.3767	1.3055	1.4003	2.7800e-003	0.0303	0.0536	0.0839	8.2300e-003	0.0517	0.0599	0.0000	234.8854	234.8854	0.0341	0.0000	235.7385

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3767	1.3055	1.4003	2.7800e-003	0.0303	0.0536	0.0839	8.2300e-003	0.0517	0.0599	0.0000	234.8852	234.8852	0.0341	0.0000	235.7383
Maximum	0.3767	1.3055	1.4003	2.7800e-003	0.0303	0.0536	0.0839	8.2300e-003	0.0517	0.0599	0.0000	234.8852	234.8852	0.0341	0.0000	235.7383

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.4608	0.4608
2	4-1-2023	6-30-2023	0.4656	0.4656
3	7-1-2023	9-30-2023	0.4708	0.4708
		Highest	0.4708	0.4708

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	0.1344	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.6000e-004
Energy	2.0100e-003	0.0182	0.0153	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	79.9011	79.9011	3.1100e-003	9.8000e-004	80.2718
Mobile	0.0376	0.2983	0.3295	1.4600e-003	0.0985	9.0000e-004	0.0994	0.0264	8.4000e-004	0.0273	0.0000	135.6445	135.6445	6.0200e-003	0.0000	135.7950
Waste						0.0000	0.0000		0.0000	0.0000	7.1737	0.0000	7.1737	0.4240	0.0000	17.7725
Water						0.0000	0.0000		0.0000	0.0000	2.3318	7.8395	10.1713	0.0925	5.1500e-003	14.0177
Total	0.1740	0.3165	0.3451	1.5700e-003	0.0985	2.2900e-003	0.1008	0.0264	2.2300e-003	0.0287	9.5055	223.3856	232.8911	0.5255	6.1300e-003	247.8577

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1344	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Energy	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	71.8897	71.8897	2.7700e-003	8.9000e-004	72.2251
Mobile	0.0370	0.2933	0.3167	1.3900e-003	0.0926	8.6000e-004	0.0935	0.0249	8.0000e-004	0.0257	0.0000	129.2912	129.2912	5.8800e-003	0.0000	129.4382
Waste						0.0000	0.0000		0.0000	0.0000	7.1737	0.0000	7.1737	0.4240	0.0000	17.7725
Water						0.0000	0.0000		0.0000	0.0000	1.8654	6.2716	8.1370	0.0740	4.1200e-003	11.2141
Total	0.1733	0.3108	0.3316	1.4900e-003	0.0926	2.1800e-003	0.0948	0.0249	2.1200e-003	0.0270	9.0391	207.4529	216.4921	0.5066	5.0100e-003	230.6506

	ROG	NOx	CO	SO2	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	0.36	1.81	3.90	5.10	5.95	4.80	5.92	5.94	4.93	5.86	4.91	7.13	7.04	3.61	18.27	6.94

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2023	10/6/2023	5	200	
2	Paving	Paving	10/7/2023	10/20/2023	5	10	
3	Architectural Coating	Architectural Coating	10/21/2023	11/3/2023	5	10	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.87****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 42,750; Non-Residential Outdoor: 14,250; Striped Parking Area: 2,274 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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
Building Construction	7	28.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701

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3.2 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	2.2800e-003	0.0904	0.0179	3.0000e-004	7.2700e-003	9.0000e-005	7.3600e-003	2.1000e-003	9.0000e-005	2.1900e-003	0.0000	28.2991	28.2991	9.1000e-004	0.0000	28.3219
Worker	0.0104	6.1900e-003	0.0659	1.9000e-004	0.0223	1.4000e-004	0.0224	5.9300e-003	1.3000e-004	6.0600e-003	0.0000	17.2395	17.2395	4.2000e-004	0.0000	17.2499
Total	0.0127	0.0965	0.0839	4.9000e-004	0.0296	2.3000e-004	0.0298	8.0300e-003	2.2000e-004	8.2500e-003	0.0000	45.5385	45.5385	1.3300e-003	0.0000	45.5718

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	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698
Total	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698

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3.2 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	2.2800e-003	0.0904	0.0179	3.0000e-004	7.2700e-003	9.0000e-005	7.3600e-003	2.1000e-003	9.0000e-005	2.1900e-003	0.0000	28.2991	28.2991	9.1000e-004	0.0000	28.3219
Worker	0.0104	6.1900e-003	0.0659	1.9000e-004	0.0223	1.4000e-004	0.0224	5.9300e-003	1.3000e-004	6.0600e-003	0.0000	17.2395	17.2395	4.2000e-004	0.0000	17.2499
Total	0.0127	0.0965	0.0839	4.9000e-004	0.0296	2.3000e-004	0.0298	8.0300e-003	2.2000e-004	8.2500e-003	0.0000	45.5385	45.5385	1.3300e-003	0.0000	45.5718

3.3 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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.3600e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.3600e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

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3.3 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	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004
Total	2.4000e-004	1.4000e-004	1.5300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4002	0.4002	1.0000e-005	0.0000	0.4004

3.4 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	0.2061					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	0.2070	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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3.4 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	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848
Total	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848

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	0.2061					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	0.2070	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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3.4 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	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848
Total	1.1000e-004	7.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1847	0.1847	0.0000	0.0000	0.1848

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

Improve Destination Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0370	0.2933	0.3167	1.3900e-003	0.0926	8.6000e-004	0.0935	0.0249	8.0000e-004	0.0257	0.0000	129.2912	129.2912	5.8800e-003	0.0000	129.4382
Unmitigated	0.0376	0.2983	0.3295	1.4600e-003	0.0985	9.0000e-004	0.0994	0.0264	8.4000e-004	0.0273	0.0000	135.6445	135.6445	6.0200e-003	0.0000	135.7950

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	209.19	70.97	20.81	260,693	245,182
Parking Lot	0.00	0.00	0.00		
Total	209.19	70.97	20.81	260,693	245,182

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	35	65	0
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
Industrial Park	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622
Parking Lot	0.541226	0.031357	0.176167	0.121135	0.017229	0.004544	0.020399	0.079136	0.001813	0.001177	0.004121	0.001075	0.000622

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	52.9357	52.9357	2.4000e-003	5.5000e-004	53.1585
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	60.0538	60.0538	2.7300e-003	6.2000e-004	60.3066
NaturalGas Mitigated	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	18.9540	18.9540	3.6000e-004	3.5000e-004	19.0666
NaturalGas Unmitigated	2.0100e-003	0.0182	0.0153	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.8473	19.8473	3.8000e-004	3.6000e-004	19.9653

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	371925	2.0100e-003	0.0182	0.0153	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.8473	19.8473	3.8000e-004	3.6000e-004	19.9653
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		2.0100e-003	0.0182	0.0153	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.8473	19.8473	3.8000e-004	3.6000e-004	19.9653

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	355184	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	18.9540	18.9540	3.6000e-004	3.5000e-004	19.0666
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		1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	18.9540	18.9540	3.6000e-004	3.5000e-004	19.0666

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	259920	57.1380	2.5900e-003	5.9000e-004	57.3785
Parking Lot	13264	2.9158	1.3000e-004	3.0000e-005	2.9281
Total		60.0538	2.7200e-003	6.2000e-004	60.3066

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	231519	50.8946	2.3100e-003	5.3000e-004	51.1089
Parking Lot	9284.81	2.0411	9.0000e-005	2.0000e-005	2.0497
Total		52.9357	2.4000e-003	5.5000e-004	53.1585

6.0 Area Detail**6.1 Mitigation Measures Area**

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Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive 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	0.1344	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Unmitigated	0.1344	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.6000e-004

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0206					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1138					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.6000e-004
Total	0.1344	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.6000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0206					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1138					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Total	0.1344	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004

7.0 Water Detail

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7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.1370	0.0740	4.1200e-003	11.2141
Unmitigated	10.1713	0.0925	5.1500e-003	14.0177

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7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	6.59063 / 0	10.1713	0.0925	5.1500e-003	14.0177
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		10.1713	0.0925	5.1500e-003	14.0177

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	5.2725 / 0	8.1370	0.0740	4.1200e-003	11.2141
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		8.1370	0.0740	4.1200e-003	11.2141

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.1737	0.4240	0.0000	17.7725
Unmitigated	7.1737	0.4240	0.0000	17.7725

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	35.34	7.1737	0.4240	0.0000	17.7725
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		7.1737	0.4240	0.0000	17.7725

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	35.34	7.1737	0.4240	0.0000	17.7725
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		7.1737	0.4240	0.0000	17.7725

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

Boilers

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

Equipment Type	Number
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11.0 Vegetation

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CalEEMod Report

Parcel 6

Reed Rezone - Parcel 6 - Tulare County, Annual

Reed Rezone - Parcel 6

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	50.00	1000sqft	1.15	50,000.00	0
Parking Lot	2.05	Acre	2.05	89,298.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	541.19	CH4 Intensity (lb/MW hr)	0.024	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Reed Rezone - Parcel 6 - Tulare County, Annual

Project Characteristics - intensity factors account for the projected RPS requirements in 2020

Land Use - site prep & grading done in phase 1; this is 4.0 acre site, but parking area assumed to be 80% of parcel size

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	541.19
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	DV_TP	19.00	65.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PR_TP	79.00	35.00
tblVehicleTrips	WD_TR	6.83	7.34
tblWater	AerobicPercent	87.46	96.49
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4892	2.1854	2.2372	4.5200e-003	0.0735	0.0990	0.1726	0.0200	0.0931	0.1131	0.0000	397.4359	397.4359	0.0728	0.0000	399.2547
2023	0.1228	3.9900e-003	6.2800e-003	1.0000e-005	2.9000e-004	2.1000e-004	5.0000e-004	8.0000e-005	2.1000e-004	2.9000e-004	0.0000	0.9876	0.9876	5.0000e-005	0.0000	0.9889
Maximum	0.4892	2.1854	2.2372	4.5200e-003	0.0735	0.0990	0.1726	0.0200	0.0931	0.1131	0.0000	397.4359	397.4359	0.0728	0.0000	399.2547

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4892	2.1854	2.2372	4.5200e-003	0.0735	0.0990	0.1726	0.0200	0.0931	0.1131	0.0000	397.4356	397.4356	0.0728	0.0000	399.2544
2023	0.1228	3.9900e-003	6.2800e-003	1.0000e-005	2.9000e-004	2.1000e-004	5.0000e-004	8.0000e-005	2.1000e-004	2.9000e-004	0.0000	0.9876	0.9876	5.0000e-005	0.0000	0.9889
Maximum	0.4892	2.1854	2.2372	4.5200e-003	0.0735	0.0990	0.1726	0.0200	0.0931	0.1131	0.0000	397.4356	397.4356	0.0728	0.0000	399.2544

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.6497	0.6497
2	4-1-2022	6-30-2022	0.6560	0.6560
3	7-1-2022	9-30-2022	0.6632	0.6632
4	10-1-2022	12-31-2022	0.7127	0.7127
5	1-1-2023	3-31-2023	0.1359	0.1359
		Highest	0.7127	0.7127

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	0.2377	0.0000	4.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.3000e-004	9.3000e-004	0.0000	0.0000	9.9000e-004
Energy	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	154.4309	154.4309	5.9700e-003	1.7400e-003	155.0997
Mobile	0.0707	0.5392	0.6259	2.6500e-003	0.1728	1.6400e-003	0.1745	0.0464	1.5300e-003	0.0480	0.0000	245.2737	245.2737	0.0109	0.0000	245.5453
Waste						0.0000	0.0000		0.0000	0.0000	12.5854	0.0000	12.5854	0.7438	0.0000	31.1799
Water						0.0000	0.0000		0.0000	0.0000	4.0908	15.3584	19.4492	0.1622	9.0400e-003	26.1987
Total	0.3120	0.5712	0.6533	2.8400e-003	0.1728	4.0700e-003	0.1769	0.0464	3.9600e-003	0.0504	16.6763	415.0639	431.7402	0.9229	0.0108	458.0245

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2377	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.2000e-004	9.2000e-004	0.0000	0.0000	9.8000e-004
Energy	3.3600e-003	0.0306	0.0257	1.8000e-004		2.3200e-003	2.3200e-003		2.3200e-003	2.3200e-003	0.0000	138.3306	138.3306	5.3000e-003	1.5800e-003	138.9340
Mobile	0.0697	0.5300	0.6018	2.5200e-003	0.1626	1.5600e-003	0.1641	0.0437	1.4600e-003	0.0451	0.0000	233.7570	233.7570	0.0106	0.0000	234.0220
Waste						0.0000	0.0000		0.0000	0.0000	12.5854	0.0000	12.5854	0.7438	0.0000	31.1799
Water						0.0000	0.0000		0.0000	0.0000	3.2727	12.2867	15.5594	0.1298	7.2300e-003	20.9589
Total	0.3108	0.5605	0.6280	2.7000e-003	0.1626	3.8800e-003	0.1664	0.0437	3.7800e-003	0.0474	15.8581	384.3753	400.2334	0.8895	8.8100e-003	425.0958

	ROG	NOx	CO	SO2	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	0.37	1.87	3.87	4.93	5.95	4.67	5.92	5.97	4.55	5.85	4.91	7.39	7.30	3.62	18.27	7.19

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2022	11/18/2022	5	230	
2	Paving	Paving	11/19/2022	12/14/2022	5	18	
3	Architectural Coating	Architectural Coating	12/15/2022	1/9/2023	5	18	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 2.05****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000; Striped Parking Area: 5,358 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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
Building Construction	9	59.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4840	266.4840	0.0638	0.0000	268.0801
Total	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4840	266.4840	0.0638	0.0000	268.0801

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-003	0.2780	0.0515	7.3000e-004	0.0175	7.4000e-004	0.0182	5.0500e-003	7.1000e-004	5.7700e-003	0.0000	69.6880	69.6880	2.9900e-003	0.0000	69.7629
Worker	0.0272	0.0169	0.1767	4.8000e-004	0.0541	3.5000e-004	0.0544	0.0144	3.2000e-004	0.0147	0.0000	43.3824	43.3824	1.1400e-003	0.0000	43.4110
Total	0.0351	0.2949	0.2282	1.2100e-003	0.0715	1.0900e-003	0.0726	0.0194	1.0300e-003	0.0205	0.0000	113.0704	113.0704	4.1300e-003	0.0000	113.1739

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	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4837	266.4837	0.0638	0.0000	268.0798
Total	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4837	266.4837	0.0638	0.0000	268.0798

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-003	0.2780	0.0515	7.3000e-004	0.0175	7.4000e-004	0.0182	5.0500e-003	7.1000e-004	5.7700e-003	0.0000	69.6880	69.6880	2.9900e-003	0.0000	69.7629
Worker	0.0272	0.0169	0.1767	4.8000e-004	0.0541	3.5000e-004	0.0544	0.0144	3.2000e-004	0.0147	0.0000	43.3824	43.3824	1.1400e-003	0.0000	43.4110
Total	0.0351	0.2949	0.2282	1.2100e-003	0.0715	1.0900e-003	0.0726	0.0194	1.0300e-003	0.0205	0.0000	113.0704	113.0704	4.1300e-003	0.0000	113.1739

3.3 Paving - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7900e-003	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540
Paving	2.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0115	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540

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3.3 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	7.2000e-004	4.5000e-004	4.6900e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1509	1.1509	3.0000e-005	0.0000	1.1517
Total	7.2000e-004	4.5000e-004	4.6900e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1509	1.1509	3.0000e-005	0.0000	1.1517

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	8.7900e-003	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540
Paving	2.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0115	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540

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3.3 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	7.2000e-004	4.5000e-004	4.6900e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1509	1.1509	3.0000e-005	0.0000	1.1517
Total	7.2000e-004	4.5000e-004	4.6900e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1509	1.1509	3.0000e-005	0.0000	1.1517

3.4 Architectural Coating - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2300e-003	8.4500e-003	0.0109	2.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	1.5320	1.5320	1.0000e-004	0.0000	1.5345
Total	0.2454	8.4500e-003	0.0109	2.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	1.5320	1.5320	1.0000e-004	0.0000	1.5345

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3.4 Architectural Coating - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.8000e-004	1.8700e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4604	0.4604	1.0000e-005	0.0000	0.4607
Total	2.9000e-004	1.8000e-004	1.8700e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4604	0.4604	1.0000e-005	0.0000	0.4607

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	0.2442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2300e-003	8.4500e-003	0.0109	2.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	1.5320	1.5320	1.0000e-004	0.0000	1.5344
Total	0.2454	8.4500e-003	0.0109	2.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	1.5320	1.5320	1.0000e-004	0.0000	1.5344

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3.4 Architectural Coating - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.8000e-004	1.8700e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4604	0.4604	1.0000e-005	0.0000	0.4607
Total	2.9000e-004	1.8000e-004	1.8700e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4604	0.4604	1.0000e-005	0.0000	0.4607

3.4 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	0.1221					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	3.9100e-003	5.4300e-003	1.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7671
Total	0.1227	3.9100e-003	5.4300e-003	1.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7671

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3.4 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	1.3000e-004	8.0000e-005	8.5000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2217	0.2217	1.0000e-005	0.0000	0.2218
Total	1.3000e-004	8.0000e-005	8.5000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2217	0.2217	1.0000e-005	0.0000	0.2218

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	0.1221					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	3.9100e-003	5.4300e-003	1.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7671
Total	0.1227	3.9100e-003	5.4300e-003	1.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7671

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3.4 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	1.3000e-004	8.0000e-005	8.5000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2217	0.2217	1.0000e-005	0.0000	0.2218
Total	1.3000e-004	8.0000e-005	8.5000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2217	0.2217	1.0000e-005	0.0000	0.2218

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

Improve Destination Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0697	0.5300	0.6018	2.5200e-003	0.1626	1.5600e-003	0.1641	0.0437	1.4600e-003	0.0451	0.0000	233.7570	233.7570	0.0106	0.0000	234.0220
Unmitigated	0.0707	0.5392	0.6259	2.6500e-003	0.1728	1.6400e-003	0.1745	0.0464	1.5300e-003	0.0480	0.0000	245.2737	245.2737	0.0109	0.0000	245.5453

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	367.00	124.50	36.50	457,357	430,144
Parking Lot	0.00	0.00	0.00		
Total	367.00	124.50	36.50	457,357	430,144

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	35	65	0
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
Industrial Park	0.533627	0.031932	0.174885	0.126979	0.018773	0.004811	0.020615	0.079394	0.001826	0.001217	0.004186	0.001092	0.000663
Parking Lot	0.533627	0.031932	0.174885	0.126979	0.018773	0.004811	0.020615	0.079394	0.001826	0.001217	0.004186	0.001092	0.000663

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	105.0781	105.0781	4.6600e-003	9.7000e-004	105.4839
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.6110	119.6110	5.3000e-003	1.1100e-003	120.0729
NaturalGas Mitigated	3.3600e-003	0.0306	0.0257	1.8000e-004		2.3200e-003	2.3200e-003		2.3200e-003	2.3200e-003	0.0000	33.2525	33.2525	6.4000e-004	6.1000e-004	33.4501
NaturalGas Unmitigated	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	34.8199	34.8199	6.7000e-004	6.4000e-004	35.0268

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	652500	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	34.8199	34.8199	6.7000e-004	6.4000e-004	35.0268
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		3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	34.8199	34.8199	6.7000e-004	6.4000e-004	35.0268

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	623129	3.3600e-003	0.0306	0.0257	1.8000e-004		2.3200e-003	2.3200e-003		2.3200e-003	2.3200e-003	0.0000	33.2525	33.2525	6.4000e-004	6.1000e-004	33.4501
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		3.3600e-003	0.0306	0.0257	1.8000e-004		2.3200e-003	2.3200e-003		2.3200e-003	2.3200e-003	0.0000	33.2525	33.2525	6.4000e-004	6.1000e-004	33.4501

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	456000	111.9387	4.9600e-003	1.0300e-003	112.3710
Parking Lot	31254.3	7.6723	3.4000e-004	7.0000e-005	7.7019
Total		119.6110	5.3000e-003	1.1000e-003	120.0729

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	406174	99.7075	4.4200e-003	9.2000e-004	100.0925
Parking Lot	21878	5.3706	2.4000e-004	5.0000e-005	5.3914
Total		105.0781	4.6600e-003	9.7000e-004	105.4839

6.0 Area Detail**6.1 Mitigation Measures Area**

Reed Rezone - Parcel 6 - Tulare County, Annual

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive 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	0.2377	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.2000e-004	9.2000e-004	0.0000	0.0000	9.8000e-004
Unmitigated	0.2377	0.0000	4.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.3000e-004	9.3000e-004	0.0000	0.0000	9.9000e-004

Reed Rezone - Parcel 6 - Tulare County, Annual

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0366					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2011					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.3000e-004	9.3000e-004	0.0000	0.0000	9.9000e-004
Total	0.2377	0.0000	4.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.3000e-004	9.3000e-004	0.0000	0.0000	9.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0366					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2011					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.2000e-004	9.2000e-004	0.0000	0.0000	9.8000e-004
Total	0.2377	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.2000e-004	9.2000e-004	0.0000	0.0000	9.8000e-004

7.0 Water Detail

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7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.5594	0.1298	7.2300e-003	20.9589
Unmitigated	19.4492	0.1622	9.0400e-003	26.1987

Reed Rezone - Parcel 6 - Tulare County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	11.5625 / 0	19.4492	0.1622	9.0400e-003	26.1987
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		19.4492	0.1622	9.0400e-003	26.1987

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	9.25 / 0	15.5594	0.1298	7.2300e-003	20.9589
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		15.5594	0.1298	7.2300e-003	20.9589

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Reed Rezone - Parcel 6 - Tulare County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.5854	0.7438	0.0000	31.1799
Unmitigated	12.5854	0.7438	0.0000	31.1799

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	62	12.5854	0.7438	0.0000	31.1799
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		12.5854	0.7438	0.0000	31.1799

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	62	12.5854	0.7438	0.0000	31.1799
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		12.5854	0.7438	0.0000	31.1799

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Reed Rezone - Parcel 6 - Tulare County, Annual

CalEEMod Report

Parcel 6 Expansion

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

Reed Rezone - Parcel 6 expansion

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	28.00	1000sqft	0.64	28,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	444.26	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

Project Characteristics - intensity factors account for the projected RPS requirements in 2027

Land Use - site prep & grading done in phase 1; no parking included as it's assumed the entire parcel included parking in Parcel 6

Construction Phase - site prep and grading completed in phase 1 so not included in this phase

Trips and VMT -

Grading -

Vehicle Trips - changes based on the traffic impact study prepared

Energy Use -

Water And Wastewater - Project connects to the SKF Sanitation District

Construction Off-road Equipment Mitigation - Regulation VIII requirements

Mobile Land Use Mitigation -

Area Mitigation - electric equipment per Air District approved defaults

Energy Mitigation - 2016 Building Standards use 4.6% less electricity than 2013 standards; 2019 Building Standards results in 30% less lighting energy than 2016 standards

Water Mitigation - Title 24 & Building Code requirements; County Model Water Efficient Landscaping Ordinance

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	641.35	444.26
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	DV_TP	19.00	65.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PR_TP	79.00	35.00
tblVehicleTrips	WD_TR	6.83	7.43
tblWater	AerobicPercent	87.46	96.49
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.51
tblWater	SepticTankPercent	10.33	0.00

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.2264	0.3100	0.3879	7.1000e-004	6.8300e-003	0.0128	0.0196	1.8500e-003	0.0118	0.0136	0.0000	62.8255	62.8255	0.0172	0.0000	63.2562
Maximum	0.2264	0.3100	0.3879	7.1000e-004	6.8300e-003	0.0128	0.0196	1.8500e-003	0.0118	0.0136	0.0000	62.8255	62.8255	0.0172	0.0000	63.2562

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.2264	0.3100	0.3879	7.1000e-004	6.8300e-003	0.0128	0.0196	1.8500e-003	0.0118	0.0136	0.0000	62.8255	62.8255	0.0172	0.0000	63.2562
Maximum	0.2264	0.3100	0.3879	7.1000e-004	6.8300e-003	0.0128	0.0196	1.8500e-003	0.0118	0.0136	0.0000	62.8255	62.8255	0.0172	0.0000	63.2562

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2027	3-31-2027	0.2087	0.2087
2	4-1-2027	6-30-2027	0.3278	0.3278
		Highest	0.3278	0.3278

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	0.1288	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Energy	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	70.9575	70.9575	2.6900e-003	8.2000e-004	71.2693
Mobile	0.0295	0.2685	0.2511	1.3000e-003	0.0977	7.4000e-004	0.0984	0.0262	6.9000e-004	0.0269	0.0000	121.0535	121.0535	5.7600e-003	0.0000	121.1976
Waste						0.0000	0.0000		0.0000	0.0000	7.0479	0.0000	7.0479	0.4165	0.0000	17.4607
Water						0.0000	0.0000		0.0000	0.0000	2.2909	7.0603	9.3511	0.0908	5.0500e-003	13.1245
Total	0.1603	0.2864	0.2664	1.4100e-003	0.0977	2.1000e-003	0.0998	0.0262	2.0500e-003	0.0283	9.3387	199.0718	208.4105	0.5158	5.8700e-003	223.0527

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

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	0.1288	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e-004	4.9000e-004	0.0000	0.0000	5.3000e-004
Energy	1.8800e-003	0.0171	0.0144	1.0000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	64.4570	64.4570	2.4200e-003	7.5000e-004	64.7423
Mobile	0.0290	0.2647	0.2411	1.2400e-003	0.0919	7.0000e-004	0.0926	0.0247	6.6000e-004	0.0253	0.0000	115.4464	115.4464	5.6600e-003	0.0000	115.5879
Waste						0.0000	0.0000		0.0000	0.0000	7.0479	0.0000	7.0479	0.4165	0.0000	17.4607
Water						0.0000	0.0000		0.0000	0.0000	1.8327	5.6482	7.4809	0.0726	4.0400e-003	10.4996
Total	0.1598	0.2818	0.2558	1.3400e-003	0.0919	2.0000e-003	0.0939	0.0247	1.9600e-003	0.0266	8.8805	185.5522	194.4327	0.4972	4.7900e-003	208.2910

	ROG	NOx	CO	SO2	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	0.32	1.61	3.99	4.96	5.95	4.76	5.92	5.91	4.39	5.84	4.91	6.79	6.71	3.59	18.40	6.62

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2027	5/20/2027	5	100	
2	Paving	Paving	5/21/2027	5/27/2027	5	5	
3	Architectural Coating	Architectural Coating	5/28/2027	6/3/2027	5	5	

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 42,000; Non-Residential Outdoor: 14,000; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
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

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Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2027**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	0.0276	0.2741	0.3514	5.7000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	50.1479	50.1479	0.0162	0.0000	50.5533
Total	0.0276	0.2741	0.3514	5.7000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	50.1479	50.1479	0.0162	0.0000	50.5533

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3.2 Building Construction - 2027**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	4.7000e-004	0.0198	3.3400e-003	7.0000e-005	1.6500e-003	2.0000e-005	1.6700e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	6.2775	6.2775	2.3000e-004	0.0000	6.2832
Worker	1.7100e-003	8.8000e-004	0.0103	3.0000e-005	4.7800e-003	3.0000e-005	4.8100e-003	1.2700e-003	2.0000e-005	1.2900e-003	0.0000	3.1492	3.1492	6.0000e-005	0.0000	3.1507
Total	2.1800e-003	0.0207	0.0136	1.0000e-004	6.4300e-003	5.0000e-005	6.4800e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	9.4267	9.4267	2.9000e-004	0.0000	9.4338

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	0.0276	0.2741	0.3514	5.7000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	50.1478	50.1478	0.0162	0.0000	50.5533
Total	0.0276	0.2741	0.3514	5.7000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	50.1478	50.1478	0.0162	0.0000	50.5533

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

3.2 Building Construction - 2027**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	4.7000e-004	0.0198	3.3400e-003	7.0000e-005	1.6500e-003	2.0000e-005	1.6700e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	6.2775	6.2775	2.3000e-004	0.0000	6.2832
Worker	1.7100e-003	8.8000e-004	0.0103	3.0000e-005	4.7800e-003	3.0000e-005	4.8100e-003	1.2700e-003	2.0000e-005	1.2900e-003	0.0000	3.1492	3.1492	6.0000e-005	0.0000	3.1507
Total	2.1800e-003	0.0207	0.0136	1.0000e-004	6.4300e-003	5.0000e-005	6.4800e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	9.4267	9.4267	2.9000e-004	0.0000	9.4338

3.3 Paving - 2027**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	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673

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3.3 Paving - 2027**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	7.0000e-005	7.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2362	0.2362	0.0000	0.0000	0.2363
Total	1.3000e-004	7.0000e-005	7.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2362	0.2362	0.0000	0.0000	0.2363

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	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

3.3 Paving - 2027**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	7.0000e-005	7.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2362	0.2362	0.0000	0.0000	0.2363
Total	1.3000e-004	7.0000e-005	7.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2362	0.2362	0.0000	0.0000	0.2363

3.4 Architectural Coating - 2027**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	0.1947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
Total	0.1951	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

3.4 Architectural Coating - 2027**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0262	0.0262	0.0000	0.0000	0.0263
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0262	0.0262	0.0000	0.0000	0.0263

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	0.1947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
Total	0.1951	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

3.4 Architectural Coating - 2027**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0262	0.0262	0.0000	0.0000	0.0263
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0262	0.0262	0.0000	0.0000	0.0263

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

Improve Destination Accessibility

Improve Pedestrian Network

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

	ROG	NOx	CO	SO2	Fugitive 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	0.0290	0.2647	0.2411	1.2400e-003	0.0919	7.0000e-004	0.0926	0.0247	6.6000e-004	0.0253	0.0000	115.4464	115.4464	5.6600e-003	0.0000	115.5879
Unmitigated	0.0295	0.2685	0.2511	1.3000e-003	0.0977	7.4000e-004	0.0984	0.0262	6.9000e-004	0.0269	0.0000	121.0535	121.0535	5.7600e-003	0.0000	121.1976

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	208.04	69.72	20.44	259,007	243,596
Total	208.04	69.72	20.44	259,007	243,596

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	35	65	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562865	0.029971	0.180026	0.104875	0.012618	0.003777	0.019465	0.078138	0.001780	0.001045	0.003922	0.001011	0.000507

5.0 Energy Detail

Historical Energy Use: N

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	45.8356	45.8356	2.0600e-003	4.1000e-004	46.0102
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51.4584	51.4584	2.3200e-003	4.6000e-004	51.6543
NaturalGas Mitigated	1.8800e-003	0.0171	0.0144	1.0000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	18.6214	18.6214	3.6000e-004	3.4000e-004	18.7321
NaturalGas Unmitigated	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4991	19.4991	3.7000e-004	3.6000e-004	19.6150

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	365400	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4991	19.4991	3.7000e-004	3.6000e-004	19.6150
Total		1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4991	19.4991	3.7000e-004	3.6000e-004	19.6150

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	348952	1.8800e-003	0.0171	0.0144	1.0000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	18.6214	18.6214	3.6000e-004	3.4000e-004	18.7321
Total		1.8800e-003	0.0171	0.0144	1.0000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	18.6214	18.6214	3.6000e-004	3.4000e-004	18.7321

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	255360	51.4584	2.3200e-003	4.6000e-004	51.6543
Total		51.4584	2.3200e-003	4.6000e-004	51.6543

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	227457	45.8356	2.0600e-003	4.1000e-004	46.0102
Total		45.8356	2.0600e-003	4.1000e-004	46.0102

6.0 Area Detail**6.1 Mitigation Measures Area**

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Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive 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	0.1288	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e-004	4.9000e-004	0.0000	0.0000	5.3000e-004
Unmitigated	0.1288	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0195					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1094					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Total	0.1288	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0195					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1094					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e-004	4.9000e-004	0.0000	0.0000	5.3000e-004
Total	0.1288	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e-004	4.9000e-004	0.0000	0.0000	5.3000e-004

7.0 Water Detail

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.4809	0.0726	4.0400e-003	10.4996
Unmitigated	9.3511	0.0908	5.0500e-003	13.1245

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	6.475 / 0	9.3511	0.0908	5.0500e-003	13.1245
Total		9.3511	0.0908	5.0500e-003	13.1245

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	5.18 / 0	7.4809	0.0726	4.0400e-003	10.4996
Total		7.4809	0.0726	4.0400e-003	10.4996

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.0479	0.4165	0.0000	17.4607
Unmitigated	7.0479	0.4165	0.0000	17.4607

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	34.72	7.0479	0.4165	0.0000	17.4607
Total		7.0479	0.4165	0.0000	17.4607

Reed Rezone - Parcel 6 expansion - Tulare County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	34.72	7.0479	0.4165	0.0000	17.4607
Total		7.0479	0.4165	0.0000	17.4607

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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11.0 Vegetation

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ATTACHMENT “B”

Biological Resources



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Aaron R. Bock Economic Development and Planning
Reed Schenke Public Works
Sherman Dix Fiscal Services

TECHNICAL MEMORANDUM BIOLOGICAL SPECIES EVALUATION

DATE: January 4, 2021
TO: Hector Guerra, Chief Environmental Planner
FROM: Jessica Willis, Planner IV
SUBJECT: Biological Species Evaluation for the Reed Rezone Project (GPA 20-005, PZC 19-015)

PROJECT DESCRIPTION

The entire ±15.71-acre project site is currently being used for agricultural purposes (grape vineyards). The project applicant proposes to rezone the project site from AE-20 (Exclusive Agriculture-20 Acre Minimum) to C-2 (Commercial) and M-1 (Light Industrial), for the future development of an ±167,500 square foot (sf) industrial park with possibility of a 28,000 sf future expansion, with six (6) various sized lots to accommodate commercial, retail and industrial uses. The project will be developed in phases:

- Lot 1: ±17,500 sf (consisting of ±3,000 sf gas station and mini mart, ±3,500 sf fast food, and ±11,000 sf retail) on ±3.0 acres;
- Lot 2: ±30,000 sf commercial/light industrial on ±2.0 acres;
- Lot 3: ±21,500 sf commercial/light industrial on ±1.7 acres;
- Lot 4: ±20,000 sf commercial/light industrial on ±1.4 acres;
- Lot 5: ±28,500 sf commercial/light industrial on ±1.9 acres;
- Lot 6: ±50,000 sf commercial/light industrial, plus a potential future ±28,000 sf expansion, on ±4.0 acres.

The property owner proposes to develop Lot 6 (the southernmost lot) as Phase 1, with each of the remaining lots to be developed individually as the economy dictates. Future developments of each industrial parcel will conform to the M-1 allowed uses.

PROJECT LOCATION

The Project site is located at the northwest corner of Avenue 392 and Road 12, west of State Route 99, south of the City of Kingsburg in Fresno County. The Project is located on Tulare County Assessor Parcel Number (APN) 028-360-009 and is found within the Selma United States Geological Survey 7.5-minute Quadrangle. The Project is located in the Public Land Survey System Section 26, Township 16 South, Range 22 East, Mount Diablo Base and Meridian. The Project Latitude/Longitude coordinates are 36° 30' 12" N / 119° 32' 52" W. (See Figures 1 and 2)

BIOLOGICAL SPECIES EVALUATION

The most recent California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), RareFind 5 and Biogeographic Information and Observation System (BIOS) was accessed between December 31, 2020, and January 4, 2021.¹ These databases were utilized in the identification of the historic range of special status plant and animal species within the Project vicinity, evaluation of potential impacts on biological species, and determination of applicability of mitigation measures, if needed.

- *9-Quad Area:* The 9-quadrangle Project vicinity includes the Malaga, Sanger, Wahtoke, Conejo, Selma, Reedley, Laton, Burris Park, and Traver quadrangles, and includes portions of Tulare, Kings, and Fresno Counties (see Attachment 1). Review of BIOS (which includes both mapped and unprocessed data) indicates that there are three (3) natural communities, thirty-three (33) special status animal species, and twenty-one (21) special status plant species recorded within the 9-quadrangle Project vicinity. Of the fifty-four (54) species identified in BIOS, twenty-two (22) animal species and four (4) plant species are classified as threatened, endangered, candidate, and/or species of special concern under federal and/or state ranking; and fourteen (14) plant species are classified by the California Native Plant Society as rare, threatened, or endangered in California, but not classified by the United States Fish and Wildlife Service (USFWS) or CDFW as threatened, endangered, or candidate species. (See Attachment 2)
- *Project Quad:* The Project is located within the Selma quadrangle. There are three (3) special status animal species recorded within the Selma quadrangle in which the Project is located. These species include: *Buteo swainsoni* (Swainson's hawk); *Coccyzus americanus occidentalis* (western yellow-billed cuckoo); and *Bombus crotchii* (Crotch bumble bee). The Swainson's hawk and Crotch bumble bee are presumed extant while the western yellow-billed cuckoo is possibly extirpated. There have been no special status plant species recorded within the Selma quadrangle. (See Attachment 3)
- *5-Mile Radius:* There are six (6) special status animal species recorded within a 5-mile radius of the Project site: *Buteo swainsoni* (Swainson's hawk); *Ambystoma californiense* (California tiger salamander); *Antrozous pallidus* (pallid bat); *Eumops perotis californicus* (western mastiff bat); *Coccyzus americanus occidentalis* (western yellow-billed cuckoo); and *Bombus crotchii* (Crotch bumble bee). The California tiger salamander has been determined to be extirpated; the western yellow-billed cuckoo is possibly extirpated; and the Swainson's hawk, pallid bat, western mastiff bat, and Crotch bumble bee are presumed extant. There have been no special status plant species recorded within the 5-mile radius. (See Attachment 4)
- *1-Mile Radius:* There is one (1) special status animal species recorded within a 1-mile radius of the Project site: *Buteo swainsoni* (Swainson's hawk). The Swainson's hawk is presumed extant. There have been no special status plant species recorded within the 1-mile radius. (See Attachment 5)
- *Project Site:* The Project site is within a recorded historic range of one (1) special status animal species, *Buteo swainsoni* (Swainson's hawk). The Swainson's hawk is presumed extant. The Project site is not within any recorded historic range of any special status plant species (See Figure 3).

¹ CDFW. CNDDDB Maps and Data. <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>

Based on the information provided in the CNDDDB and BIOS, there have been no special status plant species recorded within a 5-mile radius of the Project site, and no special status plant species, riparian habitat, or other natural community recorded within a 1-mile radius. However, Mitigation Measure BIO-1 will be required prior to any construction-related activities to ensure the Project will have a less than significant impact on special status plant species.

Mitigation Measures for Special Status Plant Species

BIO-1: (*Pre-construction Survey – Special Status Plant Species*) A qualified biologist/botanist shall conduct pre-construction surveys for special status plant species in accordance with the California Department of Fish and Wildlife (CDFW) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). This protocol includes identification of reference populations to facilitate the likelihood of field investigation occurring during the appropriate floristic period. Surveys should be timed to coincide with flowering periods for species that could occur (March-May). In the absence of protocol-level surveys being performed, additional surveys may be necessary.

- If special status plant species are not identified during pre-construction surveys, no further action is required.
- If special status plant species are detected during pre-construction surveys, the biologist/botanist will supervise establishment of a minimum 50-foot no disturbance buffer from the outer edge of the plant population. If buffers cannot be maintained, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate minimization actions to be taken as appropriate for the species identified and to determine permitting needs.

Based on the information provided in the CNDDDB and BIOS, there have been six (6) special status animal species recorded within a 5-mile radius of the Project site, with one (1) of these species, the Swainson's hawk, having historical range located with the Project site.

The California tiger salamander was recorded approximately 1.1 mile south of the Project site and its presence is classified as extirpated. The the western yellow-billed cuckoo and Crotch bumble bee were recorded approximately 4.7 miles northwest of the Project site. The western yellow-billed cuckoo presence is classified as possibly extirpated. The Crotch bumble bee presence is classified as presumed extant. The pallid bat was recorded approximately 4.4 miles northeast of the Project site and western mastiff bat was recorded approximately 4.3 miles southeast of the Project site. The Project site is currently used as a vineyard and does not provide suitable habitat for these bat species. To ensure the Project will have a less than significant impact on these five (5) special status species, as well as any other special status animal species, Mitigation Measure BIO-2 will be required prior to any construction-related activities.

Mitigation Measures for Special Status Animal Species

BIO-2: (*Pre-construction Survey – Special Status Animal Species*) A qualified biologist will conduct pre-construction surveys during the appropriate periods for special status animal species in accordance with CDFW guidance and recommendations. In the absence of protocol-level surveys being performed, additional surveys may be necessary.

- If special status animal species are not identified during pre-construction surveys, no further action is required.
- If special status animal species are detected during pre-construction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate avoidance and minimization actions to be taken as applicable for the species identified and to determine permitting needs.

In the event that any special status plant or animal species are identified during pre-construction surveys, Mitigation Measure BIO-3 will be required prior to the start of construction to reduce potential impacts during construction-related activities.

Mitigation Measures for Special Status Species Identified in Pre-construction Surveys

BIO-3: (*Employee Education Program*) Prior to the start of construction, the applicant shall retain a qualified biologist/botanist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the special status species that occur, or may occur, on the project site. This training will include a description of the species and its habitat needs; a report of the occurrence of the species in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

Measures for Nesting Raptors and Migratory Birds (Including Loggerhead Shrike)

BIO-4: (*Avoidance*) In order to avoid impacts to nesting raptors and migratory birds, individual Projects within the Project will be constructed, where possible, outside the nesting season (between September 1st and January 31st).

BIO-5: (*Pre-construction Survey*) If Project activities must occur during the nesting season (February 1-August 31), the proponent is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code. A qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds; with the exception of Swainson's hawk. The Swainson's hawk survey will utilize the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000) methodology which will extend to ½-mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-6: (*Pre-construction Survey*) A qualified biologist will conduct pre-construction surveys in accordance with the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000) which employs the following:

Survey Period	Survey Dates	Survey Time	Number of Surveys Needed
I	January – March 20	All day	1
II	March 20 – April 5	Sunrise – 1000; 1600 to Sunset	3
III	April 5 – April 20	Sunrise – 1200; 1630 – Sunset	3
IV	April 21 – June 10	Monitoring sites only	Initiating surveys is not recommended
V	June 10 – July 30	Sunrise – 1200; 1600 – Sunset	3

If project activities must occur during the nesting season (February 1-August 31), the project proponent and/or their contractor is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code, and a qualified biologist will conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-7: (*Buffers*) Should any active nests be discovered near proposed work areas, a qualified biologist will determine appropriate construction setback distances and a behavioral baseline of all identified nests based on applicable CDFW guidelines and/or the biology of the affected species. Within these buffers, the biologist will continue monitoring to detect behavioral changes. If adverse behavioral changes occur, the activity causing the changes will cease and CDFW will be consulted to determine if avoidance and minimization measures need to be modified to adequately protect the impacted birds. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged (i.e., when a bird's feathers and wing muscles are sufficiently developed for flight). Unless a variance is approved by CDFW, the buffer shall not be less than 250 feet around active nests of non-listed bird species and not less than 500 feet around active nests of non-listed raptor species until the birds have fledged. Unless a variance is approved by CDFW, a ½ mile distance shall be used for SWHA, until the birds have "fledged".

JURISDICTIONAL WATERS

The most recent United States Geological Survey (USGS) National Water Information System (NWIS) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping applications were accessed between December 31, 2020, and January 4, 2021.^{2, 3} Based on the information provided in the NWIS and NWI mappers, and the Tulare County GIS system, Bishop Canal is located approximately 0.4 mile south/southeast of the Project site and the Kings River is located

² USGS NWIS Mapper. <https://maps.waterdata.usgs.gov/mapper/index.html>

³ USFWS NWI Mapper. <https://www.fws.gov/wetlands/data/mapper.html>

approximately 1.2 miles southeast of the Project site. However, jurisdictional waters of the State and United States are absent from the site itself (see Figure 3 and Attachments 6 and 7).

Best management practices, including compliance with all applicable Regional Water Quality Control Board requirements, which includes a storm water pollution prevention plan (SWPPP), will be required during construction activities. A grading and drainage plan will be submitted and approved by the Tulare County RMA Engineering Branch. As such, the Project will not result in significant impact to any riparian habitats or other protected wetlands. Therefore, mitigation measures that would reduce impacts have not been proposed, nor would any measures be warranted.

Figure 1. Project Vicinity

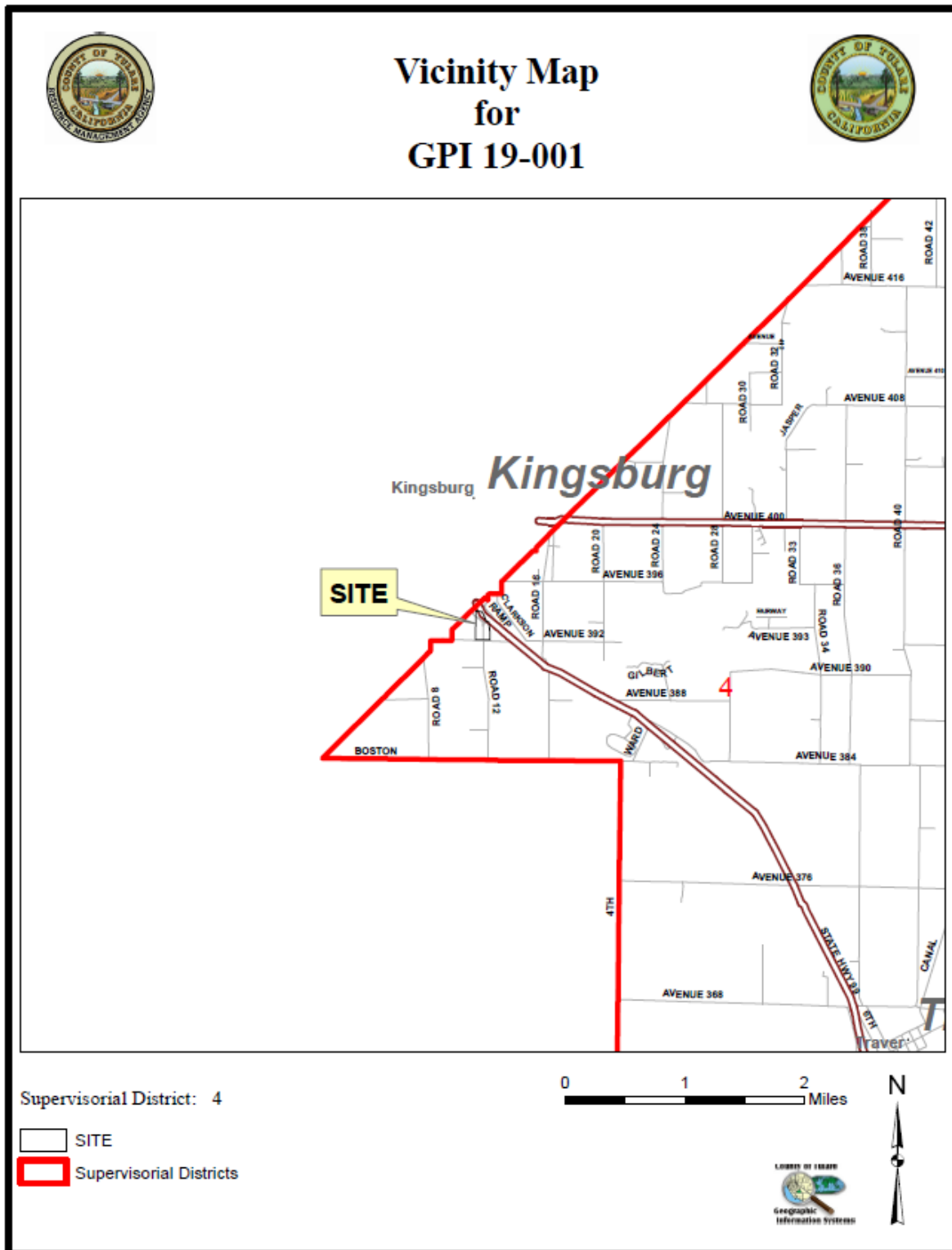
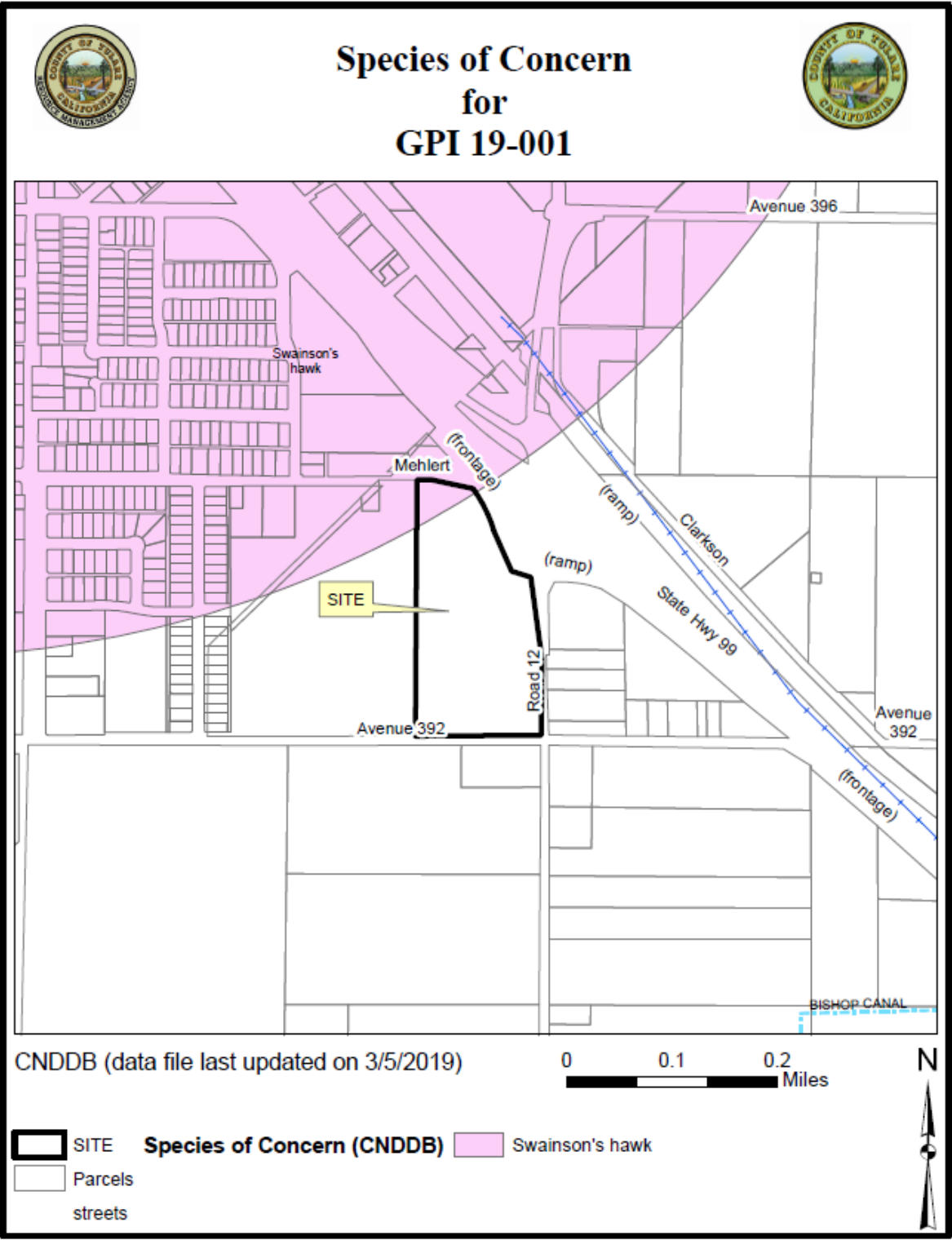


Figure 2. Project Vicinity (Aerial View)



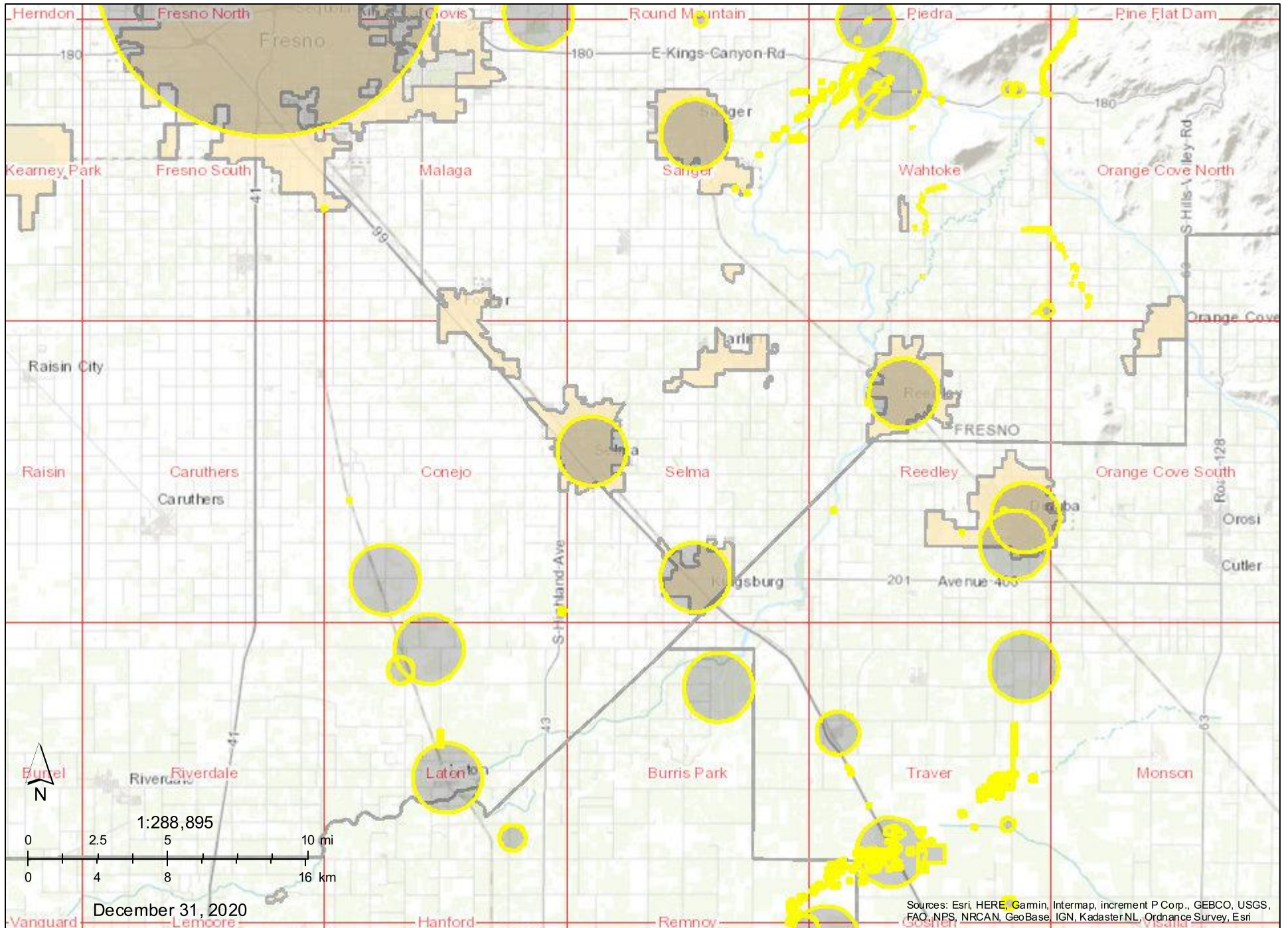
Figure 3. Species of Concern within Project Site



Attachment 1

9-Quad Project Vicinity

9-Quad Map of Project Area



Attachment 2

9-Quad Species List

SUMMARY OF BIOS DATA WITHIN THE 9-QUADRANGLE PROJECT VICINITY
(Malaga, Sanger, Wahtoke, Conejo, Selma, Reedley, Laton, Burris Park, and Traver Quadrangles)
(including mapped and unprocessed data)

Notes	Element_Type	Scientific_Name	Common_Name	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank
1	Plants - Vascular	Lasthenia chrysantha	alkali-sink goldfields	None	None	-	1B.1
1	Animals - Insects	Efferia antiochi	Antioch efferian robberfly	None	None	-	-
	Plants - Vascular	Carex comosa	bristly sedge	None	None	-	2B.1
1	Plants - Vascular	Atriplex depressa	brittlescale	None	None	-	1B.2
1	Animals - Birds	Athene cunicularia	burrowing owl	None	None	SSC	-
1	Plants - Vascular	Puccinellia simplex	California alkali grass	None	None	-	1B.2
1	Animals - Reptiles	Arizona elegans occidentalis	California glossy snake	None	None	SSC	-
1	Plants - Vascular	Caulanthus californicus	California jewelflower	Endangered	Endangered	-	1B.1
1	Animals - Crustaceans	Linderiella occidentalis	California linderiella	None	None	-	-
	Animals - Amphibians	Rana draytonii	California red-legged frog	Threatened	None	SSC	-
1	Plants - Vascular	Imperata brevifolia	California satintail	None	None	-	2B.1
1, 2	Animals - Amphibians	Ambystoma californiense	California tiger salamander	Threatened	Threatened	WL	-
1	Plants - Vascular	Tropidocarpum capparideum	caper-fruited tropidocarpum	None	None	-	1B.1
1	Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	None	None	SSC	-
1, 2, 3	Animals - Insects	Bombus crotchii	Crotch bumble bee	None	Candidate Endangered	-	-
1	Plants - Vascular	Atriplex cordulata var. erecticaulis	Earlilmart orache	None	None	-	1B.2
1	Animals - Amphibians	Rana boylei	foothill yellow-legged frog	None	Endangered	SSC	-
	Animals - Mammals	Dipodomys nitratoides exilis	Fresno kangaroo rat	Endangered	Endangered	-	-
	Animals - Birds	Ardea herodias	great blue heron	None	None	-	-
	Animals - Birds	Ardea alba	great egret	None	None	-	-
1	Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	None	None	-	-
1	Plants - Vascular	Tuctoria greenei	Greene's tuctoria	Endangered	Rare	-	1B.1
	Plants - Vascular	Atriplex cordulata var. cordulata	heartscale	None	None	-	1B.2
1	Animals - Mammals	Lasiurus cinereus	hoary bat	None	None	-	-
1	Animals - Insects	Metapogon hurdi	Hurd's metapogon robberfly	None	None	-	-
	Plants - Vascular	Erythranthe acutidens	Kings River monkeyflower	None	None	-	3
1	Plants - Vascular	Atriplex minuscula	lesser saltscall	None	None	-	1B.1
1	Animals - Birds	Lanius ludovicianus	loggerhead shrike	None	None	SSC	-
1	Plants - Vascular	Leptosiphon serrulatus	Madera leptosiphon	None	None	-	1B.2
1	Animals - Insects	Lytta molesta	molestan blister beetle	None	None	-	-
1	Animals - Insects	Bombus morrisoni	Morrison bumble bee	None	None	-	-
1	Animals - Reptiles	Anniella pulchra	Northern California legless lizard	None	None	SSC	-
1	Community - Terrestrial	Northern Claypan Vernal Pool	Northern Claypan Vernal Pool	None	None	-	-
1, 2	Animals - Mammals	Antrozous pallidus	pallid bat	None	None	SSC	-
1	Plants - Vascular	Pseudobahia peirsonii	San Joaquin adobe sunburst	Threatened	Endangered	-	1B.1
1	Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	Endangered	Threatened	-	-
	Animals - Mammals	Mustela frenata xanthogenys	San Joaquin long-tailed weasel	None	None	-	-
1	Plants - Vascular	Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Threatened	Endangered	-	1B.1
1	Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	None	None	-	1B.2
	Plants - Vascular	Convolvulus simulans	small-flowered morning-glory	None	None	-	4.2
1	Plants - Vascular	Eryngium spinosum	spiny-sealed button-celery	None	None	-	1B.2
	Plants - Vascular	Atriplex subtilis	subtle orache	None	None	-	1B.2
1, 2, 3, 4, 5	Animals - Birds	Buteo swainsoni	Swainson's hawk	None	Threatened	-	-
1	Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Threatened	None	-	-
1	Community - Terrestrial	Valley Sacaton Grassland	Valley Sacaton Grassland	None	None	-	-
1	Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None	-	-
1	Animals - Crustaceans	Lepidurus packardii	vernal pool tadpole shrimp	Endangered	None	-	-
	Plants - Vascular	Amaranthus watsonii	Watson's amaranth	None	None	-	4.3
1, 2	Animals - Mammals	Eumops perotis californicus	western mastiff bat	None	None	SSC	-
1	Animals - Reptiles	Emys marmorata	western pond turtle	None	None	SSC	-
1	Animals - Amphibians	Spea hammondi	western spadefoot	None	None	SSC	-
1, 2, 3	Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened	Endangered	-	-
	Animals - Birds	Elanus leucurus	white-tailed kite	None	None	FP	-
1	Plants - Vascular	Helianthus winteri	Winter's sunflower	None	None	-	1B.2
	Animals - Birds	Pica nuttalli	yellow-billed magpie	None	None	-	-
	Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	None	None	SSC	-
	Animals - Mammals	Myotis yumanensis	Yuma myotis	None	None	-	-

Notes:

- 1 Species is included in the CNDDDB and RareFind 5 reports.
- 2 Species is recorded within a 5-mile radius of the Project site.
- 3 Species is recorded within the Project quadrangle (Selma).
- 4 Species is recorded within a 1-mile radius of the Project site.
- 5 Species range occurs within the Project site.



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Query Criteria: Quad IS (Selma (3611955) OR Malaga (3611966) OR Sanger (3611965) OR Wahtoke (3611964) OR Conejo (3611956) OR Reedley (3611954) OR Laton (3611946) OR Burris Park (3611945) OR Traver (3611944))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Ambystoma californiense</i> California tiger salamander	G2G3 S2S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	260 500	1306 S:4	0	0	1	0	2	1	4	0	2	0	2
<i>Anniella pulchra</i> Northern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	300 300	375 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Antrozous pallidus</i> pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	300 300	420 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Arizona elegans occidentalis</i> California glossy snake	G5T2 S2	None None	CDFW_SSC-Species of Special Concern	300 300	260 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Athene cunicularia</i> burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	263 325	2011 S:6	0	2	1	0	0	3	1	5	6	0	0
<i>Atriplex cordulata var. erecticaulis</i> Earlimart orache	G3T1 S1	None None	Rare Plant Rank - 1B.2	285 287	23 S:2	0	2	0	0	0	0	0	2	2	0	0
<i>Atriplex depressa</i> brittlescale	G2 S2	None None	Rare Plant Rank - 1B.2		60 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Atriplex minuscula</i> lesser saltscale	G2 S2	None None	Rare Plant Rank - 1B.1	265 290	52 S:6	4	1	1	0	0	0	1	5	6	0	0
<i>Bombus crotchii</i> Crotch bumble bee	G3G4 S1S2	None Candidate Endangered		300 300	369 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Bombus morrisoni</i> Morrison bumble bee	G4G5 S1S2	None None	IUCN_VU-Vulnerable	350 350	86 S:1	0	0	0	0	0	1	1	0	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	261 470	791 S:8	2	1	2	0	0	3	3	5	8	0	0
<i>Buteo swainsoni</i> Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	250 300	2535 S:12	0	4	4	1	0	3	4	8	12	0	0
<i>Caulanthus californicus</i> California jewelflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley		67 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	300 345	165 S:2	0	0	0	0	2	0	2	0	0	1	1
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	G3T2 S3	Threatened None		256 400	271 S:13	1	1	1	0	0	10	10	3	13	0	0
<i>Efferia antiochi</i> Antioch efferian robberfly	G1G2 S1S2	None None		300 300	4 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Emys marmorata</i> western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	500 500	1398 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Eryngium spinosepalum</i> spiny-sepaled button-celery	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	463 463	108 S:1	0	0	1	0	0	0	0	1	1	0	0
<i>Eumops perotis californicus</i> western mastiff bat	G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority		296 S:1	0	0	0	0	0	1	1	0	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Great Valley Mixed Riparian Forest Great Valley Mixed Riparian Forest	G2 S2.2	None None		380 380	68 S:2	0	0	0	0	0	2	2	0	2	0	0
Helianthus winteri Winter's sunflower	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	400 400	55 S:1	0	0	0	0	0	1	0	1	1	0	0
Imperata brevifolia California satintail	G4 S3	None None	Rare Plant Rank - 2B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	300 400	32 S:3	0	0	0	0	0	3	3	0	3	0	0
Lanius ludovicianus loggerhead shrike	G4 S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	285 285	110 S:1	0	1	0	0	0	0	1	0	1	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia chrysantha alkali-sink goldfields	G2 S2	None None	Rare Plant Rank - 1B.1	255 270	55 S:3	0	0	0	0	2	1	2	1	1	2	0
Lepidurus packardii vernal pool tadpole shrimp	G4 S3S4	Endangered None	IUCN_EN-Endangered	263 288	324 S:7	0	4	3	0	0	0	1	6	7	0	0
Leptosiphon serrulatus Madera leptosiphon	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive		27 S:1	0	0	0	0	0	1	1	0	1	0	0
Linderiella occidentalis California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	263 271	508 S:4	0	4	0	0	0	0	0	4	4	0	0
Lytta molesta molestan blister beetle	G2 S2	None None		360 360	17 S:1	0	0	0	0	0	1	1	0	0	1	0
Metapogon hurdi Hurd's metapogon robberfly	G1G2 S1S2	None None		325 325	3 S:1	0	0	0	0	0	1	1	0	0	1	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	G1 S1.1	None None		270 270	21 S:1	0	0	0	0	0	1	1	0	1	0	0
Orcuttia inaequalis San Joaquin Valley Orcutt grass	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	380 380	47 S:1	0	0	0	0	1	0	1	0	0	0	1
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	300 300	784 S:1	0	0	0	0	1	0	1	0	0	1	0
Pseudobahia peirsonii San Joaquin adobe sunburst	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	440 440	51 S:2	0	0	1	0	1	0	1	1	1	0	1
Puccinellia simplex California alkali grass	G3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	270 285	80 S:2	0	2	0	0	0	0	0	2	2	0	0
Rana boylei foothill yellow-legged frog	G3 S3	None Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	400 400	2468 S:1	0	0	0	0	1	0	1	0	0	0	1
Sagittaria sanfordii Sanford's arrowhead	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	330 417	126 S:11	0	4	5	2	0	0	0	11	11	0	0
Spea hammondi western spadefoot	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	263 285	1409 S:13	4	9	0	0	0	0	0	13	13	0	0
Tropidocarpum capparideum caper-fruited tropidocarpum	G1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive		18 S:1	0	0	0	0	0	1	1	0	1	0	0
Tuctoria greenei Greene's tuctoria	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1	385 385	50 S:1	0	0	0	0	1	0	1	0	0	0	1
Valley Sacaton Grassland Valley Sacaton Grassland	G1 S1.1	None None		260 260	9 S:1	0	0	0	1	0	0	1	0	1	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	G4T2 S2	Endangered Threatened		260 365	1018 S:6	0	0	1	0	0	5	5	1	6	0	0

Query Summary:

Quad **IS** (Selma (3611955) **OR** Malaga (3611966) **OR** Sanger (3611965) **OR** Wahtoke (3611964) **OR** Conejo (3611956) **OR** Reedley (3611954) **OR** Laton (3611946) **OR** Burris Park (3611945) **OR** Traver (3611944))

Print

Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Ambystoma californiense	California tiger salamander	Amphibians	AAAAA01180	1306	4	Threatened	Threatened	G2G3	S2S3	null	CDFW_WL-Watch List, IUCN_VU-Vulnerable	Cismontane woodland, Meadow & seep, Riparian woodland, Valley & foothill grassland, Vernal pool, Wetland
Anniella pulchra	Northern California legless lizard	Reptiles	ARACC01020	375	1	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Chaparral, Coastal dunes, Coastal scrub
Antrozous pallidus	pallid bat	Mammals	AMACC10010	420	1	None	None	G5	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Arizona elegans occidentalis	California glossy snake	Reptiles	ARADB01017	260	1	None	None	G5T2	S2	null	CDFW_SSC-Species of Special Concern	null
Athene cunicularia	burrowing owl	Birds	ABNSB10010	2011	6	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Atriplex cordulata var. erecticaulis	Earlismart orache	Dicots	PDCH042V0	23	2	None	None	G3T1	S1	1B.2	null	Valley & foothill grassland
Atriplex depressa	brittlescale	Dicots	PDCH042L0	60	2	None	None	G2	S2	1B.2	null	Alkali playa, Chenopod scrub, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Atriplex minuscule	lesser saltscall	Dicots	PDCH042M0	52	6	None	None	G2	S2	1B.1	null	Alkali playa, Chenopod scrub, Valley & foothill grassland
Bombus crotchii	Crotch bumble bee	Insects	IIHYM24480	369	2	None	Candidate Endangered	G3G4	S1S2	null	null	null
Bombus morisoni	Morrison bumble bee	Insects	IIHYM24460	86	1	None	None	G4G5	S1S2	null	IUCN_VU-Vulnerable	null
Branchinecta lynchi	vernal pool fairy shrimp	Crustaceans	ICBRA03030	791	8	Threatened	None	G3	S3	null	IUCN_VU-Vulnerable	Valley & foothill grassland, Vernal pool, Wetland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2535	12	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Caulanthus californicus	California jewelflower	Dicots	PDBRA31010	67	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Chenopod scrub, Pinon & juniper woodlands, Valley & foothill grassland
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Birds	ABNRB02022	165	2	Threatened	Endangered	G5T2T3	S1	null	BLM_S-Sensitive, NABCI_RWL-Red Watch List, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern	Riparian forest
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	271	13	Threatened	None	G3T2	S3	null	null	Riparian scrub
Efferia antiochi	Antioch efferian robberfly	Insects	IIDIP07010	4	1	None	None	G1G2	S1S2	null	null	Interior dunes
Emys	western pond	Reptiles	ARAD02030	1398	1	None	None	G3G4	S3	null	BLM_S-Sensitive,	Aquatic, Artificial flowing waters,

marmorata	turtle										CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Eryngium spinosepalum	spiny-sealed button-celery	Dicots	PDAP10Z0Y0	108	1	None	None	G2	S2	1B.2	BLM_S-Sensitive	Valley & foothill grassland, Vernal pool, Wetland
Eumops perotis californicus	western mastiff bat	Mammals	AMACD02011	296	1	None	None	G5T4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, WBWG_H-High Priority	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland
Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	Riparian	CTT61420CA	68	2	None	None	G2	S2.2	null	null	Riparian forest
Helianthus winteri	Winter's sunflower	Dicots	PDAST4N260	55	1	None	None	G2?	S2?	1B.2	BLM_S-Sensitive	Cismontane woodland, Valley & foothill grassland
Imperata brevifolia	California satintail	Monocots	PMPOA3D020	32	3	None	None	G4	S3	2B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Chaparral, Coastal scrub, Meadow & seep, Mojavean desert scrub, Riparian scrub, Wetland
Lanius ludovicianus	loggerhead shrike	Birds	ABPBR01030	110	1	None	None	G4	S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Broadleaved upland forest, Desert wash, Joshua tree woodland, Mojavean desert scrub, Pinon & juniper woodlands, Riparian woodland, Sonoran desert scrub
Lasiurus cinereus	hoary bat	Mammals	AMACC05030	238	1	None	None	G5	S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
Lasthenia chrysantha	alkali-sink goldfields	Dicots	PDAST5L030	55	3	None	None	G2	S2	1B.1	null	Vernal pool
Lepidurus packardii	vernal pool tadpole shrimp	Crustaceans	ICBRA10010	324	7	Endangered	None	G4	S3S4	null	IUCN_EN-Endangered	Valley & foothill grassland, Vernal pool, Wetland
Leptosiphon serrulatus	Madera leptosiphon	Dicots	PDPLM09130	27	1	None	None	G3	S3	1B.2	BLM_S-Sensitive, USFS_S-Sensitive	Cismontane woodland, Lower montane coniferous forest
Linderiella occidentalis	California linderiella	Crustaceans	ICBRA06010	508	4	None	None	G2G3	S2S3	null	IUCN_NT-Near Threatened	Vernal pool
Lytta molesta	molestan blister beetle	Insects	IICOL4C030	17	1	None	None	G2	S2	null	null	Vernal pool, Wetland
Metapogon hurdi	Hurd's metapogon robberfly	Insects	IIDIP08010	3	1	None	None	G1G2	S1S2	null	null	Interior dunes
Northern Claypan Vernal Pool	Northern Claypan Vernal Pool	Herbaceous	CTT44120CA	21	1	None	None	G1	S1.1	null	null	Vernal pool, Wetland
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Monocots	PMPOA4G060	47	1	Threatened	Endangered	G1	S1	1B.1	null	Vernal pool, Wetland
Phrynosoma blainvillii	coast horned lizard	Reptiles	ARACF12100	784	1	None	None	G3G4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub, Desert wash, Pinon & juniper woodlands, Riparian scrub, Riparian woodland, Valley & foothill grassland
Pseudobahia peirsonii	San Joaquin adobe sunburst	Dicots	PDAST7P030	51	2	Threatened	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Cismontane woodland, Valley & foothill grassland
Puccinellia simplex	California alkali grass	Monocots	PMPOA53110	80	2	None	None	G3	S2	1B.2	BLM_S-Sensitive	Chenopod scrub, Meadow & seep, Valley & foothill grassland, Vernal pool
Rana boylei	foothill yellow-legged frog	Amphibians	AAABH01050	2468	1	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters
Sagittaria sanfordii	Sanford's arrowhead	Monocots	PMALI040Q0	126	11	None	None	G3	S3	1B.2	BLM_S-Sensitive	Marsh & swamp, Wetland
Spea hammondi	western spadefoot	Amphibians	AAABF02020	1409	13	None	None	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Tropidocarpum capparideum	caper-fruited tropidocarpum	Dicots	PDBRA2R010	18	1	None	None	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho	Valley & foothill grassland

											Santa Ana Botanic Garden, USFS_S-Sensitive	
Tuctoria greenei	Greene's tuctoria	Monocots	PMPOA6N010	50	1	Endangered	Rare	G1	S1	1B.1	null	Vernal pool, Wetland
Valley Sacaton Grassland	Valley Sacaton Grassland	Herbaceous	CTT42120CA	9	1	None	None	G1	S1.1	null	null	Valley & foothill grassland
Vulpes macrotis mutica	San Joaquin kit fox	Mammals	AMAJA03041	1018	6	Endangered	Threatened	G4T2	S2	null	null	Chenopod scrub, Valley & foothill grassland

Attachment 3

Selma Quad Species List

RareFind Selection 3 results found.

Scientific Name	Common Name	Element Code	Occ Number	MAPNDX	EONDX	Key Quad Code	Key Quad Name	Key County	Accuracy	Presence	Occ Type	Occ Rank	Sensitive	Site Date	Elm Date	Owner Management	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank	CDFW Status	Other Status	Symbology	Taxon Group	Shape	Shape.STArea()	Shape.STLength()
Buteo swainsoni	Swainson's hawk	ABNKC19070	2506	90264	91297	3611955	Selma	FRE	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19260404	19260404	UNKNOWN	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	204	Birds	null	12471429.24609375	12520.138457669209
Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	198	95841	96985	3611955	Selma	FRE	1 mile	Possibly Extirpated	Natural/Native occurrence	None	N	18980708	18980708	UNKNOWN	Threatened	Endangered	G5T2T3	S1			BLM_S; NABCI_RWL; USFS_S; USFWS_BCC	804	Birds	null	12488216.91015625	12528.562032892274
Bombus crotchii	Crotch bumble bee	IIHYM24480	312	95841	119370	3611955	Selma	FRE	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19120526	19120526	UNKNOWN	None	Candidate Endangered	G3G4	S1S2				804	Insects	null	12488216.91015625	12528.562032892274

Attachment 4

5-Mile Radius Species List

California Natural Diversity Database (CNDDB) Government [ds45]

Scientific Name	Common Name	Element Code	Occ Number	MAPNDX	EONDX	Key Quad Code	Key Quad Name	Key County Code	Accuracy	Presence	Occ Type	Occ Rank	Sensitive	Site Date	Elm Date	Owner Management	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank	CDFW Status	Other Status	Symbology	Taxon Group
Buteo swainsoni	Swainson's hawk	ABNKC19070	829	43431	43431	3611956	Conejo	FRE	1/10 mile	Presumed Extant	Natural/Native occurrence	Poor	N	20000710	20000710	PVT	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	204	Birds
Ambystoma californiense	California tiger salamander	AAAAA01180	612	46426	46426	3611945	Burris Park	KNG	1 mile	Extirpated	Natural/Native occurrence	None	N	XXXXXXXX	XXXXXXXX	UNKNOWN	Threatened	Threatened	G2G3	S2S3		WL	IUCN_VU	204	Amphibians
Antrozous pallidus	pallid bat	AMACC10010	75	50366	50366	3611954	Reedley	TUL	80 meters	Presumed Extant	Natural/Native occurrence	Good	N	20011017	20011017	TUL COUNTY	None	None	G5	S3		SSC	BLM_S; IUCN_LC; USFS_S; WBWG_H	201	Mammals
Eumops perotis californicus	western mastiff bat	AMACD02011	91	66331	66424	3611944	Traver	TUL	3/5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	18990301	18990301	UNKNOWN	None	None	G5T4	S3S4		SSC	BLM_S; WBWG_H	204	Mammals
Buteo swainsoni	Swainson's hawk	ABNKC19070	2506	90264	91297	3611955	Selma	FRE	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19260404	19260404	UNKNOWN	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	204	Birds
Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	198	95841	96985	3611955	Selma	FRE	1 mile	Possibly Extirpated	Natural/Native occurrence	None	N	18980708	18980708	UNKNOWN	Threatened	Endangered	G5T2T3	S1			BLM_S; NABCI_RWL; USFS_S; USFWS_BCC	804	Birds
Bombus crotchii	Crotch bumble bee	HHYM24480	312	95841	119370	3611955	Selma	FRE	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19120526	19120526	UNKNOWN	None	Candidate Endangered	G3G4	S1S2				804	Insects

Attachment 5

1-Mile Radius Species List

California Natural Diversity Database (CNDDB) Government [ds45]

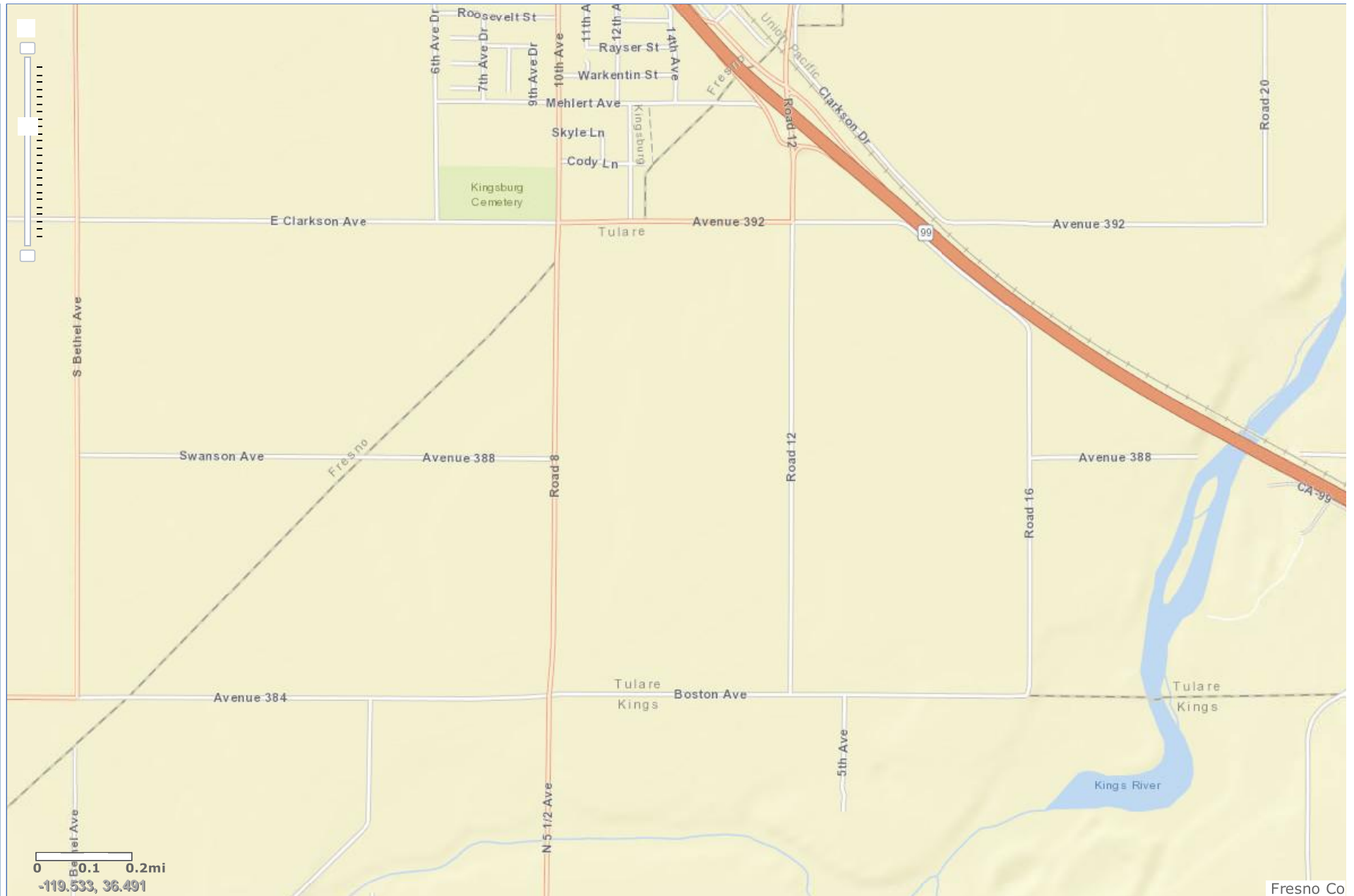
Scientific Name	Common Name	Element Code	Occ Number	MAPNDX	EONDX	Key Quad Code	Key Quad Name	Key County Code	Accuracy	Presence	Occ Type	Occ Rank	Sensitive	Site Date	Elm Date	Owner Management	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank	CDFW Status	Other Status	Symbology	Taxon Group
Buteo swainsoni	Swainson's hawk	ABNKC19070	2506	90264	91297	3611955	Selma	FRE	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19260404	19260404	UNKNOWN	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	204	Birds

Attachment 6

United States Geologic Survey National Water Information System (NWIS) Mapper



National Water Information System: Mapper



Attachment 7

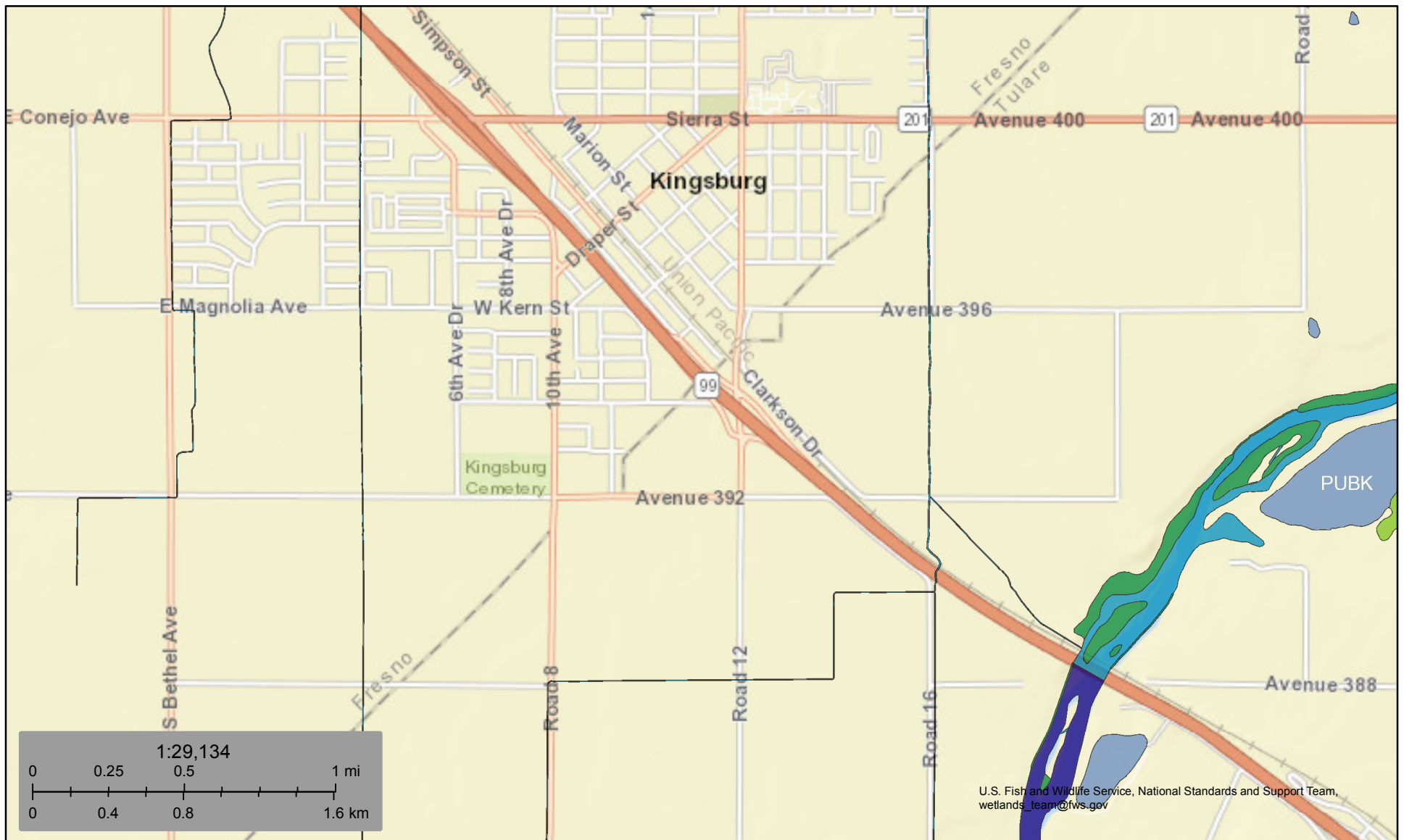
United States Fish and Wildlife Service National Wetland Inventory (NWI) Mapper



U.S. Fish and Wildlife Service

National Wetlands Inventory

Reed Rezone Project Area



January 4, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

ATTACHMENT “C”

Cultural and Tribal Cultural Resources



To: Hector Guerra
Tulare County Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Record Search 20-278

Date: August 11, 2020

Re: General Plan Amendment No. GPA 19-004 – Kingsburg Area 2020 Community Plan

County: Tulare

Map(s): Selma 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, the OHP Built Environment Resources Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the OHP are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been three previous cultural resource studies conducted within the project area. There have been five additional studies conducted within the one-half mile radius. A list is enclosed.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There is one recorded resource within the project area. There are 61 recorded resource within the one-half mile radius. These resources primarily consist of historic buildings and include an historic railroad.

41 resources have been given a National Register status of 2S2, indicating these resources have been determined eligible for listing in the National Register of Historic places by consensus through the Section 106 process. They are all listed in the California Register of Historical Resources. A list of these resources is enclosed. There are no other recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of a General Plan Amendment for the community of Kingsburg. Further, we understand no immediate ground disturbance will take place as a result of this update. Therefore, no further cultural resource investigation is recommended at this time. However, prior to any future ground disturbance project activities, we recommend a new record search be conducted so our office can then make project specific recommendations for further cultural resources study, if needed. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Celeste M. Thomson, Coordinator

Date: August 11, 2020

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Reports in PA:	Reports in .25 Mi:	Resources in PA:	Resources in .25 Mi:	
FR-00135 (TU-00102)	FR-00669	P-54-004626 (P-10-003930)	P-10-004801	P-10-004870
FR-01940 (TU-01158)	FR-00670		P-10-004802	P-10-004871
FR-02287 (TU-01324)	FR-00671		P-10-004803	P-10-004872
	FR-02168		P-10-004809	P-10-004873
	TU-01498		P-10-004810	P-10-004874
			P-10-004811	P-10-004875
			P-10-004812	P-10-004876
			P-10-004813	P-10-004877
			P-10-004814	P-10-004878
			P-10-004815	P-10-004879
			P-10-004816	P-10-004880
			P-10-004817	P-10-004881
			P-10-004818	P-10-004882
			P-10-004819	P-10-004883
			P-10-004820	P-54-004611
			P-10-004821	
			P-10-004822	
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			P-10-004866	
			P-10-004867	
			P-10-004868	
			P-10-004869	

Number	Name	Location	NR Status Code
P-10-004809	No Name	1801 20th Street	2S2
P-10-004810	No Name	1781 20th Street	2S2
P-10-004811	No Name	1741 20th Street	2S2
P-10-004812	Banks House	1721 20th Street	2S2
P-10-004813	Wilson House	1701 20th Street	2S2
P-10-004814	Bartel House	1661 20th Street	2S2
P-10-004815	Johnson House	1981 Plumas Street	2S2
P-10-004816	Freeman House	1949 Plumas Street	2S2
P-10-004817	Whitemore House	1579 20th Street	2S2
P-10-004818	Matic House	1516 20th Street	2S2
P-10-004819	Heineman House	1524 20th Street	2S2
P-10-004820	Jensen House	1548 20th Street	2S2
P-10-004821	McCreary House	1560 20th Street	2S2
P-10-004822	No Name	1580 20th Street	2S2
P-10-004823	Amorino House	2033 Plumas Street	2S2
P-10-004826	Brady House	1660 20th Street	2S2
P-10-004829	Carlson House	1780 20th Street	2S2
P-10-004836	Harris House	1891 21st Street	2S2
P-10-004837	Sanchez/Escovedo House	1873 21st Street	2S2
P-10-004838	No Name	1849 21st Street	2S2
P-10-004839	Havenstein House	1831 21st Street	2S2
P-10-004840	Adams House	1801 21st Street	2S2
P-10-004841	Malek House	1771 21st Street	2S2
P-10-004842	Hussey House	1731 21st Street	2S2
P-10-004843	Apperson House	1701 21st Street	2S2
P-10-004863	Britton House	1549 21st Street	2S2
P-10-004865	Sorenson House	1490 21st Street	2S2
P-10-004867	Cauwels House	1536 21st Street	2S2
P-10-004869	Shoebridge House	1578 21st Street	2S2
P-10-004870	Morton House	1584 21st Street	2S2
P-10-004871	Horton House	1600 21st Street	2S2
P-10-004872	Atchley House	1640 21st Street	2S2
P-10-004874	Nielsen House	1680 21st Street	2S2
P-10-004875	Grandal House	1730 21st Steet	2S2
P-10-004876	Horiachi House	1770 21st Street	2S2
P-10-004878	Jacobson House	1812 21st Street	2S2
P-10-004879	Plagenza House	1830 21st Street	2S2
P-10-004880	Havenstein House (2)	1842 21st Street	2S2
P-10-004881	Perry House	1854 21st Street	2S2
P-10-004882	No Name	1872 21st Street	2S2
P-10-004883	Cronin House	1890 21st Street	2S2



NATIVE AMERICAN HERITAGE COMMISSION

July 30, 2020

Jessica Willis

Tulare County Resource Management Agency

Via Email to: jwillis@co.tulare.ca.u

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
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PARLIAMENTARIAN
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Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, Kingsburg Area 2020 Community Plan, Tulare County

Dear Ms. Willis:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
 - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
 - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
 - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
 - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
 - Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.
3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission was negative.
4. Any ethnographic studies conducted for any area including all or part of the potential APE; and
5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,



Nancy Gonzalez-Lopez

Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Tribal Consultation List
7/30/2020**

Kern Valley Indian Community
Julie Turner. Secretary
P.O. Box 1010
Lake Isabella, CA 93240
(661) 340-0032 Cell

Kawaiisu
Tubatulabal

Tule River Indian Tribe
Neil Peyron. Chairperson
P.O. Box 589
Porterville, CA 93258
neil.peyron@tulerivertribe-nsn.gov
(559) 781-4271
Yokuts

Kern Valley Indian Community
Robert Robinson. Chairperson
P.O. Box 1010
Lake Isabella, CA 93240
bbutterbredt@gmail.com
(760) 378-2915 Cell

Tubatulabal
Kawaiisu

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow. Chairperson
1179 Rock Haven Ct.
Salinas, CA 93906
kwood8934@aol.com
(831) 443-9702
Foothill Yokuts
Mono
Wuksache

Kern Valley Indian Community
Brandi Kendricks
30741 Foxridge Court
Tehachapi, CA 93561
krazykendricks@hotmail.com
(661) 821-1733

Kawaiisu
Tubatulabal

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco. Chairperson
P.O. Box 8
Lemoore, CA 93245
(559) 924-1278

Tache
Tachi
Yokut

Tubatulabals of Kern Valley
Robert L. Gomez. Jr., Tribal Chairperson
P.O. Box 226
Lake Isabella, CA 93240
(760) 379-4590

Tubatulabal

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.
Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.
This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65362.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed:
Kingsburg Area 2020 Community Plan, Tulare County.

Consultation Notice – REED REZONE_KINGSBURG PROJECT (GPI 19-001) CHRIS & SLF REQUESTS COMPLETED FOR THE ENTIRE KINGSBURG COMMUNITY AREA (AB52 & SB18)														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
SACRED LAND FILE (SLF) REQUEST														
Native American Heritage Commission	X			X	X				7/28/20					7/30/20 SLF was requested for entire Kingsburg Area and Specific Plan (KASP; formerly the Kingsburg Area 2020 Community Plan); NAHC SLF records search returned with “negative” results and listing of tribal representatives
CONSULTATION REQUEST LETTERS														
Kern Valley Indian Community Robert Robinson, Co-Chairperson P.O. Box 1010 Lake Isabella, CA 93240 bbutterbredt@gmail.com	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2463	---	12/20/20	9/12/20 Return to sender, unclaimed, unable to forward 9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Kern Valley Indian Community Julie Turner, Secretary P. Box 1010 Lake Isabella, CA 93240 meindiangirl@sbcglobal.net	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2388	---	12/20/20	9/10/20 Return to sender, unclaimed, unable to forward 9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Kern Valley Indian Community Brandi Kendricks 30741 Foxridge Court Tehachapi, CA 93561 krazykendricks@hotmail.com	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2470	9/10/20	12/20/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Santa Rosa Rancheria Tachi Yokut Tribe Leo Sisco, Chairperson P. O. Box 8 Lemoore, CA 93245 LSisco@tachi-yokut-nsn.gov	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2395	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Santa Rosa Rancheria Tachi Yokut Tribe Robert Jeff, Vice-Chair P. O. Box 8 Lemoore, CA 93245 RGJeff@tachi-yokut-nsn.gov	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2456	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Santa Rosa Rancheria Tachi Yokut Tribe Bianca Arias, Admin. Assistant. P. O. Box 8 Lemoore, CA 93245 BArias@tachi-yokut-nsn.gov	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2449	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan

Consultation Notice – REED REZONE_KINGSBURG PROJECT (GPI 19-001) CHRIS & SLF REQUESTS COMPLETED FOR THE ENTIRE KINGSBURG COMMUNITY AREA (AB52 & SB18)														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
Santa Rosa Rancheria Cultural Department Shana Powers, Director P. O. Box 8 Lemoore, CA 93245 SPowers@tachi-yokut-nsn.gov	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2401	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Greg Cuara, Cultural Specialist P. O. Box 8 Lemoore, CA 93245 GCuara@tachi-yokut-nsn.gov	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2432	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P.O. Box 226 Lake Isabella, CA 93240 rgomez@tubatulabal.org	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2371	---	---	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan 9/15/20 Return to sender, unclaimed, unable to forward
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258 neil.peyron@tulerivertribe-nsn.gov	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2418	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258 tuleriverenv@yahoo.com	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2364	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan
Tule River Indian Tribe Dept. of Environmental Protection Felix Christman, Archaeological Monitor P. O. Box 589 Porterville, CA 93258 tuleriverarchmon1@gmail.com	X			X	X	X	X		8/24/20		8/21/20 7014 0150 0001 1537 2357	8/24/20	11/24/20	9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan

Consultation Notice – REED REZONE_KINGSBURG PROJECT (GPI 19-001) CHRIS & SLF REQUESTS COMPLETED FOR THE ENTIRE KINGSBURG COMMUNITY AREA (AB52 & SB18)														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
Wuksache Indian Tribe/ Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906 kwood8934@aol.com	X			X	X	X	X		8/24/20		8/21/20 7014 0150 00011537 2425	unknown	---	9/1/20 Receipt signed “COVID-19” by Agent; the USPS website status as of 8/30/20 at 1:22 am states “Alert” and “Awaiting Delivery Scan” 9/14/20, email sent requesting consult on the Kingsburg Area and Specific Plan



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Santa Rosa Rancheria
Cultural Department
Shana Powers, Director
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Ms. Powers,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing Negative Declaration (Neg. Dec.) to evaluate the environmental effects associated with the Project.

The Project site lies within the Kingsburg Community Plan Area, and the Sacred Lands File (SLF) and California Historical Resources Information System (CHRIS) search requests were completed for the entire Kingsburg Community Plan Area. The enclosed map shows the Project location in relation to the Kingsburg Community Area.

Sacred Lands File Search

The County requested a SLF search through the Native American Heritage Commission (NAHC) on July 28, 2020, for the **Kingsburg Community Plan Area**, which included the Reed Rezone Project site. The SLF search returned with negative results on July 30, 2020. As such, the SLF search results

will be made available upon the release of the Neg. Dec. for public review. However, the results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

A CHRIS search for the **Kingsburg Community Plan Area**, which included the Reed Rezone Project site, was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on July 28, 2020. The CHRIS search dated August 11, 2020, indicated that there is one (1) recorded resource within the project area and sixty one (61) recorded resources within the ½ mile radius of the **Kingsburg Community Plan Area**, which included the Reed Rezone Project site. These resources primarily consist of historic buildings and include an historic railroad. The CHRIS search also indicated that there are no recorded cultural resources within the project area; however, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present on the project site. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search may be made available to your Tribal Representatives if a written request for consultation is received. Should the County not receive a response to this request within thirty (30) days of receipt of this letter, it will be presumed that there are no cultural resources of concern and a Cultural Resources Study will not be required.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@co.tulare.ca.us.

Sincerely,



Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Wuksache Indian Tribe/
Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA 93906

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Chairperson Woodrow,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing Negative Declaration (Neg. Dec.) to evaluate the environmental effects associated with the Project.

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be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

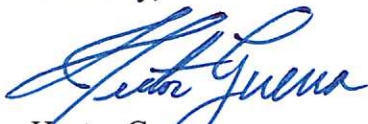
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Sincerely,



Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Kern Valley Indian Community
Brandi Kendricks
30741 Foxridge Court
Tehachapi, CA 93561

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Ms. Kendricks,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
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In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing Negative Declaration (Neg. Dec.) to evaluate the environmental effects associated with the Project.

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be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

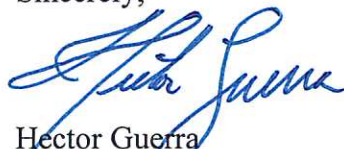
A CHRIS search for the **Kingsburg Community Plan Area**, which included the Reed Rezone Project site, was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on July 28, 2020. The CHRIS search dated August 11, 2020, indicated that there is one (1) recorded resource within the project area and sixty one (61) recorded resources within the ½ mile radius of the **Kingsburg Community Plan Area**, which included the Reed Rezone Project site. These resources primarily consist of historic buildings and include an historic railroad. The CHRIS search also indicated that there are no recorded cultural resources within the project area; however, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present on the project site. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search may be made available to your Tribal Representatives if a written request for consultation is received. Should the County not receive a response to this request within thirty (30) days of receipt of this letter, it will be presumed that there are no cultural resources of concern and a Cultural Resources Study will not be required.

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If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@co.tulare.ca.us.

Sincerely,



Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Tule River Indian Tribe
Environmental Department
Kerri Vera, Director
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Ms. Vera,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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California Historical Resources Information System

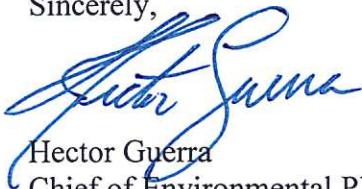
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If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@co.tulare.ca.us.

Sincerely,



Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Tule River Indian Tribe
Neil Peyron, Chairperson
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Chairperson Peyron,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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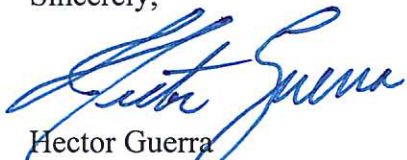
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Hector Guerra
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hguerra@co.tulare.ca.us

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Aaron R. Bock

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Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Tule River Indian Tribe
Dept. of Environmental Protection
Felix Christman, Archaeological Monitor
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Mr. Christman,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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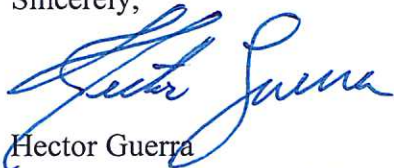
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Aaron R. Bock	Economic Development and Planning
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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Chairperson
P.O. Box 226
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Chairperson Gomez,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Chairperson Sisco,

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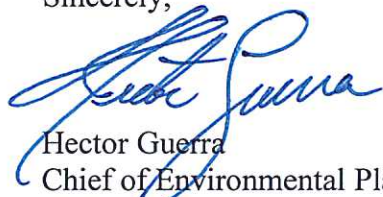
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Aaron R. Bock

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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Santa Rosa Rancheria Tachi Yokut Tribe
Robert Jeff, Vice-Chair
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Vice-Chair Jeff,

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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Santa Rosa Rancheria Tachi Yokut Tribe
Cultural Department
Greg Cuara, Cultural Specialist
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Mr. Cuara,

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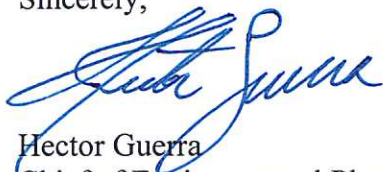
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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Kern Valley Indian Community
Robert Robinson, Co-Chairperson
P.O. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

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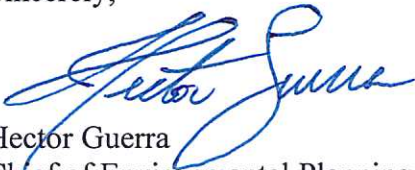
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Sincerely,



Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Ms. Turner,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing Negative Declaration (Neg. Dec.) to evaluate the environmental effects associated with the Project.

The Project site lies within the Kingsburg Community Plan Area, and the Sacred Lands File (SLF) and California Historical Resources Information System (CHRIS) search requests were completed for the entire Kingsburg Community Plan Area. The enclosed map shows the Project location in relation to the Kingsburg Community Area.

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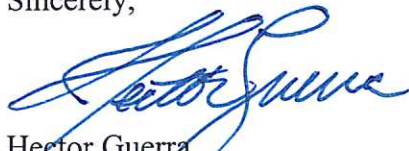
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Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Aaron R. Bock	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

August 20, 2020

Santa Rosa Rancheria Tachi Yokut Tribe
Bianca Arias, Admin. Assistant
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Reed Rezone_Kingsburg Project (GPI 19-001)

Dear Ms. Arias,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Reed Rezone_Kingsburg Project (GPI 19-001) in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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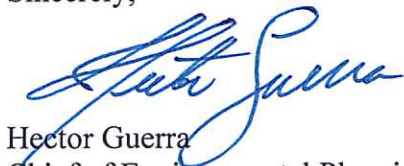
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Sincerely,



Hector Guerra
Chief of Environmental Planning
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: Tribal Consultation Notice
Project Location Map

From: Cheng Chi
To: bbuterbredt@gmail.com ; meindiagirl@sbcglobal.net ; crazykendricks@hotmail.com
CC: Jessica Willis
Date: 8/24/2020 3:44 PM
Subject: AB 52 Consultation Notice for Reed Rezone Project (GPI 19-001)_within Kingsburg Community Plan Area
Attachments: Project Notification and Consult Request_Reed Rezone_Kingsburg.docx; Project Location Map_Reed Rezone GPI 19-001.pdf; Reed Rezone_Consultation Letter-Kern Valley_Robinson.docx

Good afternoon all.

Please be informed that the physical copies of tribal consultation notice for Reed Rezone Project (GPI 19-001) were mailed out to you respectively last Friday 8/21/20 through certified mails.

Allow me to attach the project notification and consultation request, project location map, and the consultation letter in the attachments for your review.

Sincerely,

Cheng (Tim) Chi
Planner II
County Of Tulare
Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

From: Cheng Chi
To: LSisco@tachi-yokut-nsn.gov ; RGJeff@tachi-yokut-nsn.gov; BArias@tachi-yokut-nsn.gov; SPowers@tachi-yokut-nsn.gov; GCuara@tachi-yokut-nsn.gov
CC: Jessica Willis
Date: 8/24/2020 3:54 PM
Subject: AB 52 Consultation Notice for Reed Rezone Project (GPI 19-001)_within Kingsburg Community Plan Area
Attachments: Reed Rezone_Consultation Letter-Santa Rosa Rancheria_Sisco.docx; Project Notification and Consult Request_Reed Rezone_Kingsburg.docx; Project Location Map_Reed Rezone GPI 19-001.pdf

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County Of Tulare
Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

From: Cheng Chi
To: Jessica Willis
Date: 8/24/2020 4:10 PM
Subject: Fwd: AB 52 Consultation Notice for Reed Rezone Project (GPI 19-001)_within Kingsburg Community Plan Area
Attachments: Reed Rezone_Consultation Letter-Tubatulabals_Gomez.docx; Project Notification and Consult Request_Reed Rezone_Kingsburg.docx; Project Location Map_Reed Rezone GPI 19-001.pdf

Forgot to copy you on this one Jess.

Let me forward this to you too.

Best Regards,

Cheng (Tim) Chi
Planner II
County Of Tulare
Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

>>> Cheng Chi 8/24/2020 4:01 PM >>>

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Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

From: Cheng Chi
To: neil.peyron@tulerivertribe-nsn.gov ; tuleriverenv@yahoo.com ; tuleriverarchmon1@gmail.com
CC: Jessica Willis
Date: 8/24/2020 4:05 PM
Subject: AB 52 Consultation Notice for Reed Rezone Project (GPI 19-001)_within Kingsburg Community Plan Area
Attachments: Reed Rezone_Consultation Letter-Tule_Peyron.docx; Project Notification and Consult Request_Reed Rezone_Kingsburg.docx; Project Location Map_Reed Rezone GPI 19-001.pdf

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5961 South Mooney Blvd.
Visalia, CA 93277
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cchi@co.tulare.ca.us

From: Cheng Chi
To: kwood8934@aol.com
CC: Jessica Willis
Date: 8/24/2020 4:09 PM
Subject: AB 52 Consultation Notice for Reed Rezone Project (GPI 19-001)_within Kingsburg Community Plan Area
Attachments: Reed Rezone_Consultation Letter-Wuksache_Woodrow.docx; Project Notification and Consult Request_Reed Rezone_Kingsburg.docx; Project Location Map_Reed Rezone GPI 19-001.pdf

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cchi@co.tulare.ca.us

From: Cheng Chi
To: bbuterbredt@gmail.com; meindiagirl@sbcglobal.net; krazykendricks@hotmail.com
CC: Jessica Willis
Date: 9/14/2020 10:31 AM
Subject: Kingsburg Area and Specific Plan_AB 52 & SB 18 Project Notification and Tribal Consultation Request
Attachments: Kingsburg Specific Plan_Consultation Letter-Kern Valley_Robinson.docx; 2020 Kingsburg_Project Notification and Consult Request_AB52+SB18.docx

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Please take a look and let us know if you have any concerns.

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Planner II
County Of Tulare
Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

From: Cheng Chi
To: Jessica Willis
Date: 9/28/2020 11:30 AM
Subject: Fwd: Kingsburg Area and Specific Plan_AB 52 & SB 18 Project Notification and Tribal Consultation Request
Attachments: Kingsburg Specific Plan_Consultation Letter-Santa Rosa_Sisco.docx; 2020 Kingsburg_Project Notification and Consult Request_AB52+SB18.docx

Hi Jess,

Here is the email to Santa Rosa on Kingsburg Area and Specific Plan tribal letters.

Best Regards,

Cheng (Tim) Chi
Planner II
County Of Tulare
Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277
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>>> Cheng Chi 9/14/2020 10:37 AM >>>
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County Of Tulare
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5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

From: Cheng Chi
To: rgomez@tubatulabal.org
CC: Jessica Willis
Date: 9/14/2020 10:40 AM
Subject: Kingsburg Area and Specific Plan_AB 52 & SB 18 Project Notification and Tribal Consultation Request
Attachments: Kingsburg Specific Plan_Consultation Letter-Tubatulabals_Gomez.docx; 2020 Kingsburg_Project Notification and Consult Request_AB52+SB18.docx

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CC: Jessica Willis
Date: 9/14/2020 10:50 AM
Subject: Kingsburg Area and Specific Plan_AB 52 & SB 18 Project Notification and Tribal Consultation Request
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Planner II
County Of Tulare
Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7086
cchi@co.tulare.ca.us

ATTACHMENT “D”

Traffic Impact Study

General Plan Initiation (GPI) No. 19-001

Traffic Impact Study April 2020

Prepared for:

Tulare County Resource Management Agency (RMA)
5961 South Mooney Boulevard
Visalia, California 93277

Prepared by:

VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722
Project Manager: Jason Ellard



General Plan Initiation (GPI) No. 19-001

Traffic Impact Study

Study Team

- ✓ Georgiena Vivian, President, VRPA Technologies, Inc., gvivian@vrpatechnologies.com, (559) 259-9257
 - ✓ Erik Ruehr, Dir. of Traffic Engineering, VRPA Technologies, Inc., eruehr@vrpatechnologies.com, (858) 566-1766
 - ✓ Jason Ellard, Transportation Engineer, VRPA Technologies, Inc., jellard@vrpatechnologies.com, (559) 271-1200
-

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Executive Summary

This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the General Plan Initiation (GPI) which proposes to re-designate a 15.71-acre parcel from Agricultural to Commercial/Industrial. The northern 3-acre portion of the parcel will be rezoned to allow a mixed-use development (fast food, gas station, and a retail outlet) with the remainder 12.71-acres to be rezoned for industrial park type uses. The Project is located on the northwest corner of Avenue 392 and Road 12.

PROJECT ACCESS

The entrance/exit to access/egress the site is proposed to be located along Mehlert Street and Road 12. It should be noted that California Department of Transportation (Caltrans) representatives have indicated that a driveway along Mehlert Street will not be permitted since the driveway would be located within 500 feet of the SR 99 SB Off-Ramp at the SR 99 and 18th Avenue interchange.

STUDY SCENARIOS

The TIS completed for the proposed Project includes level of service (LOS) analysis for the following traffic scenarios:

- ✓ Existing
- ✓ Existing Plus Project
- ✓ Near-Term Plus Project
- ✓ Cumulative Year 2042 Without Project
- ✓ Cumulative Year 2042 Plus Project

IMPACTS

Intersections

Table E-1 shows intersections that are expected to fall short of desirable operating conditions for various scenarios. Results of the analysis show that the Project will contribute to an unacceptable LOS at five (5) of the six (6) study intersections when comparing the Cumulative Year 2042 Without Project and Cumulative Year 2042 Plus Project scenarios.

Segments

Results of the segment analysis along the existing street and highway system are reflected in Table E-2. Results of the analysis show that the Project will contribute to an unacceptable LOS at one (1) of the two (2) study roadway segments when comparing the Cumulative Year 2042 Without Project and Cumulative Year 2042 Plus Project scenarios.

Table E-1
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
				DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
1. 18th Avenue / Avenue 396	Two-Way Stop Sign	D	AM	35.9	E +	48.5	E +	217.4	F +	>300.0	F ++	>300.0	F ++
			PM	22.4	C	26.1	D	77.5	F +	>300.0	F ++	>300.0	F ++
2. 18th Avenue / SR 99 NB Off-Ramp-Frontage Road	Two-Way Stop Sign	C	AM	47.0	E *+	>300.0	F ++	>300.0	F ++	>300.0	F ++	>300.0	F ++
			PM	22.5	C	80.8	F ++	152.1	F ++	131.6	F ++	>300.0	F ++
3. SR 99 SB Off-Ramp-Avenue 394 / Mehlert Street	Two-Way Stop Sign	C	AM	13.4	B	23.6	C	27.9	D +	17.5	C	32.1	D +
			PM	12.2	B	15.2	C	19.0	C	17.1	C	22.5	C
4. 18th Avenue-Road 12 / Avenue 394-SR 99 SB On-Ramp	One-Way Stop Sign	C	AM	141.2	F *+	>300.0	F ++	>300.0	F ++	>300.0	F ++	>300.0	F ++
			PM	35.5	E *+	163.2	F +	>300.0	F ++	>300.0	F ++	>300.0	F ++
5. Road 12 / Avenue 392	Two-Way Stop Sign	D	AM	19.2	C	21.1	C	23.4	C	27.6	D	30.1	D
			PM	14.0	B	14.3	B	14.9	B	20.2	C	21.0	C
6. Road 12 / Project Driveway 1	One-Way Stop Sign	D	AM			20.7	C	21.8	C			53.5	F +
			PM			17.9	C	18.7	C			38.1	E +

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.

* Existing State highway facility is operating at less than the target LOS; the existing MOE shall be maintained.

+ Does not meet peak hour signal warrants.

++ Meets peak hour signal warrants.

Table E-2
Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	DIRECTION	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
					VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS
18th Avenue / Road 12														
Avenue 396 to SR 99 NB Off-Ramp	2 Lanes Undivided	D	NB	AM	440	D	475	D	518	E	778	E	813	E
			NB	PM	451	C	490	C	588	D	851	E	891	E
			SB	AM	445	C	500	C	589	D	832	E	887	E
			SB	PM	316	C	348	C	409	C	589	D	621	D
SR 99 SB On-Ramp to Avenue 392	2 Lanes Undivided	D	NB	AM	274	C	438	D	452	D	472	D	636	D
			NB	PM	253	B	440	C	453	C	436	C	623	D
			SB	AM	199	B	460	D	470	D	343	C	604	D
			SB	PM	173	A	327	C	336	C	298	B	452	C

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

MITIGATION

This section describes potential improvements to mitigate the traffic impacts of the Project. Described below are potential improvements at study area intersections for various scenarios. The proposed Project will be required to contribute a fair share towards the costs of improvements that are identified for the Cumulative Year 2042 scenario.

Recommended Improvements

Intersections

✓ 18th Avenue at Avenue 396

Recommended improvements to achieve acceptable levels of service:

- Existing Plus Project scenario:
 - No Improvements Recommended
- Near-Term Plus Project scenario:
 - Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane)
- Cumulative Year 2042 Plus Project scenario:
 - Install Traffic Signal
 - Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane)

The improvements identified above for the Cumulative Year 2042 Plus Project scenario are sufficient to meet the City of Kingsburg's and Tulare County's acceptable level of service criteria. This intersection is forecasted to operate at unacceptable LOS 'E' or worse under the Existing Plus Project and Near-Term Plus Project; however, this intersection does not meet the peak hour traffic signal warrant because the minor approach does not carry enough traffic to justify signalization. Therefore, no improvements are recommended for the Project's contribution of traffic at the intersection under the Existing Plus Project scenario. A dedicated westbound left turn is recommended for the Near-Term scenario given the projected westbound left turn volumes at the intersection.

✓ Road 12 at Project Driveway 1

Recommended improvements to achieve acceptable levels of service:

- Cumulative Year 2042 Plus Project scenario:
 - Prohibit eastbound left turn movements from the Project site
 - Install Four-Way Stop at the Road 12 and Avenue 392 intersection in addition to a dedicated southbound left with adequate spacing to provide U-Turn movements

The improvements identified above for the Cumulative Year 2042 Plus Project scenario are sufficient to meet Tulare County's acceptable level of service criteria

✓ 18th Avenue at SR 99 NB Off-Ramp-Frontage Road, SR 99 SB Off-Ramp-Avenue 394 at Mehlert Street, and 18th Avenue-Road 12 at SR 99 SB On-Ramp-Avenue 394

Caltrans' recently completed feasibility study (Appendix E) for the 18th Avenue at SR 99 interchange has identified numerous alternatives for the interchange, designed to alleviate projected level of service deficiencies in the future. The proposed Project shall contribute its fair share towards the recommended improvements. As noted in the feasibility study, the alternatives that include either the signalization or installation of roundabouts at the SR 99 ramp intersections are sufficient to meet Caltrans' acceptable level of service criteria. The improvements are identified below:

- Alternative 2 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the signalization of SR 99 SB and NB Off-Ramp terminals
- Alternative 3 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the installation of roundabouts at SR 99 SB and NB Off-Ramp terminals
- Alternative 5 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehlert Street just west of the SR 99 SB Off-Ramp. Provide for the signalization of the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.
- Alternative 6 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehlert Street just west of the SR 99 SB Off-Ramp. Provide for the installation of roundabouts at the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.

Roadway Segments

✓ 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp
Recommended improvements to achieve acceptable levels of service:

- Near-Term Plus Project scenario:
 - Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane)
- Cumulative Year 2042 Plus Project scenario:
 - Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane)
 - Widen the southbound travel lane from 1 to 2 lanes (adding 1 travel lane)

The improvements identified above for the Near-Term Plus Project and Cumulative Year 2042

Plus Project scenarios are sufficient to meet Tulare County's and the City of Kingsburg's acceptable level of service criteria.

Post-Mitigation Level of Service

The level of service resulting from the potential improvements identified above is shown in Table E-3 for study area intersections and Table E-4 for study area roadway segments.

Table E-3
Intersection Operations with Mitigation

INTERSECTION	TARGET LOS	PEAK HOUR	EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
			DELAY	LOS	DELAY	LOS	DELAY	LOS
1. 18th Avenue / Avenue 396	D	AM	48.5	E +	183.8	F +	24.8	C
		PM	26.1	D	69.3	F +	27.1	C
2. 18th Avenue / SR 99 NB Off-Ramp-Frontage Road *	C	AM	9.0	A	9.0	A	15.0	B
		PM	11.0	B	11.0	B	18.0	B
3. SR 99 SB Off-Ramp-Avenue 394 / Mehlert Street *	C	AM	10.0	A	10.0	A	12.0	B
		PM	10.0	A	10.0	A	10.0	A
4. 18th Avenue-Road 12 / Avenue 394-SR 99 SB On-Ramp *	C	AM	17.0	B	17.0	B	25.0	C
		PM	15.0	B	15.0	B	21.0	C
5. Road 12 / Avenue 392 **	D	AM					13.9	B
		PM					12.1	B
6. Road 12 / Project Driveway 1	D	AM					14.7	B
		PM					13.4	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

* Alternative 2 Results from the Caltrans Feasibility Study Mendocino (18th Avenue)/SR 99 Safety and Capacity Study - May 2019

** Improvements recommended at this location are the result of improvements at Project Driveway.

+ Does not meet peak hour signal warrants.

Table E-4

Segment Operations with Mitigation

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	DIRECTION	PEAK HOUR	NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
					VOLUME	LOS	VOLUME	LOS
18th Avenue / Road 12								
Avenue 396 to SR 99 NB Off-Ramp	2 Lanes Undivided	D	NB	AM	518	A	813	B
			NB	PM	588	A	891	B
			SB	AM			887	B
			SB	PM			621	A

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

CEQA ENVIRONMENTAL CHECKLIST

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. Implementation of the Project would result in a significant impact if it would:

- ✓ Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact After Mitigation - An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County RMA, the City of Kingsburg, and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs. Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of "D" on the County roadway system (both segments and intersections). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

Results of the analysis show that the Project will exceed Tulare County's, City of Kingsburg, and Caltrans minimum LOS standard as shown in Tables E-1 and E-2. Described below are mitigation measures at Tulare County, City of Kingsburg, and Caltrans facilities that address future transportation and circulation issues in the study area. The improvements identified would result in acceptable levels of service as shown in Tables E-3 and E-4.

Intersections

18th Avenue at Avenue 396

Recommended improvements to achieve acceptable levels of service:

- Existing Plus Project scenario:
 - No Improvements Recommended
- Near-Term Plus Project scenario:
 - Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane)
- Cumulative Year 2042 Plus Project scenario:
 - Install Traffic Signal
 - Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane)

The improvements identified above for the Cumulative Year 2042 Plus Project scenario are sufficient to meet the City of Kingsburg's and Tulare County's acceptable level of service

criteria. This intersection is forecasted to operate at unacceptable LOS 'E' or worse under the Existing Plus Project and Near-Term Plus Project; however, this intersection does not meet the peak hour traffic signal warrant because the minor approach does not carry enough traffic to justify signalization. Therefore, no improvements are recommended for the Project's contribution of traffic at the intersection under the Existing Plus Project scenario. A dedicated westbound left turn is recommended for the Near-Term scenario given the projected westbound left turn volumes at the intersection.

Road 12 at Project Driveway 1

Recommended improvements to achieve acceptable levels of service:

- Cumulative Year 2042 Plus Project scenario:
 - Prohibit eastbound left turn movements from the Project site
 - Install Four-Way Stop at the Road 12 and Avenue 392 intersection in addition to a dedicated southbound left with adequate spacing to provide U-Turn movements

The improvements identified above for the Cumulative Year 2042 Plus Project scenario are sufficient to meet Tulare County's acceptable level of service criteria

18th Avenue at SR 99 NB Off-Ramp-Frontage Road, SR 99 SB Off-Ramp-Avenue 394 at Mehlert Street, and 18th Avenue-Road 12 at SR 99 SB On-Ramp-Avenue 394

Caltrans' recently completed feasibility study (Appendix E) for the 18th Avenue at SR 99 interchange has identified numerous alternatives for the interchange, designed to alleviate projected level of service deficiencies in the future. The proposed Project shall contribute its fair share towards the recommended improvements. As noted in the feasibility study, the alternatives that include either the signalization or installation of roundabouts at the SR 99 ramp intersections are sufficient to meet Caltrans' acceptable level of service criteria. The improvements are identified below:

- Alternative 2 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the signalization of SR 99 SB and NB Off-Ramp terminals
- Alternative 3 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the installation of roundabouts at SR 99 SB and NB Off-Ramp terminals
- Alternative 5 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehlert Street just west of the SR 99 SB Off-Ramp. Provide for the signalization of the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.
- Alternative 6 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394

intersection, which includes a cul-de-sac along Mehler Street just west of the SR 99 SB Off-Ramp. Provide for the installation of roundabouts at the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.

Roadway Segments

18th Avenue between Avenue 396 and SR 99 NB Off-Ramp

Recommended improvements to achieve acceptable levels of service:

- Near-Term Plus Project scenario:
 - Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane)
- Cumulative Year 2042 Plus Project scenario:
 - Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane)
 - Widen the southbound travel lane from 1 to 2 lanes (adding 1 travel lane)

The improvements identified above for the Near-Term Plus Project and Cumulative Year 2042 Plus Project scenarios are sufficient to meet Tulare County's and the City of Kingsburg's acceptable level of service criteria.

- ✓ Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact - In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. For some parts of California (and possibly the entire state), this legislation will eventually change the way that transportation studies are conducted for environmental documents. In the areas where SB 743 is implemented, delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as vehicle miles travelled (VMT) or other similar measures will be used.

July 1, 2020 is the statewide implementation date and agencies may opt-in use of new metrics prior to that date. Therefore, the traffic analysis follows current practice regarding state and local guidance as of the date of preparation. However, an estimate of VMT associated with the Project is provided in Table E-5 for the Project. The estimated VMT for the Project is derived from CalEEMod default trip lengths for ITE land uses.

Table E-5
Estimated Project VMT

LAND USE	ADT VOLUME	RATE	AVERAGE DAILY VMT
Mini-Mart	1,643	9.5 miles/trip	15,609
Fast-Food Restaurant	1,212	9.5 miles/trip	11,514
Retail Shops	1,340	9.5 miles/trip	12,730
Industrial Park	1,159	9.5 miles/trip	11,011
TOTAL			50,864

- ✓ Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (eg., farm equipment)?

Less Than Significant Impact - The Project would not result in hazards due to design features, since all proposed improvements (Project Driveway) would be built to County design standards. The site access/egress would be located at a sufficient distance from any intersection to allow for safe vehicular access/egress to and from the site. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is required.

- ✓ Result in inadequate emergency access?

Less Than Significant Impact - The Project would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the study intersections and roadway segments will meet Tulare County's and Caltrans' level of service criteria through the year 2042 with recommended improvements. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed.

1.0 Introduction

1.1 Description of the Region/Project

This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the General Plan Initiation (GPI) which proposes to re-designate a 15.71-acre parcel from Agricultural to Commercial/Industrial. The northern 3-acre portion of the parcel will be rezoned to allow a mixed-use development (fast food, gas station, and a retail outlet) with the remainder 12.71-acres to be rezoned for industrial park type uses. The Project is located on the northwest corner of Avenue 392 and Road 12. Figures 1-1 and 1-2 graphically display the location of the Project and the surrounding roadway network.

1.1.1 Project Access

The entrance/exit to access/egress the site is proposed to be located along Mehlert Street and Road 12. It should be noted that California Department of Transportation (Caltrans) representatives have indicated that a driveway along Mehlert Street will not be permitted since the driveway would be located within 500 feet of the SR 99 SB Off-Ramp at the SR 99 and 18th Avenue interchange.

1.1.2 Study Area

The following intersections and roadway segments included in this TIS were determined in consultation with Tulare County and California Department of Transportation (Caltrans) staff and include:

Intersections

- ✓ 18th Avenue / Avenue 396
- ✓ 18th Avenue / SR 99 NB Off-Ramp-Frontage Road
- ✓ Mehlert Street-Avenue 394 / SR 99 SB Off-Ramp-Avenue 394
- ✓ 18th Avenue-Road 12 / SR 99 SB On-Ramp-Avenue 394
- ✓ Road 12 / Avenue 392
- ✓ Road 12 / Project Driveway 1

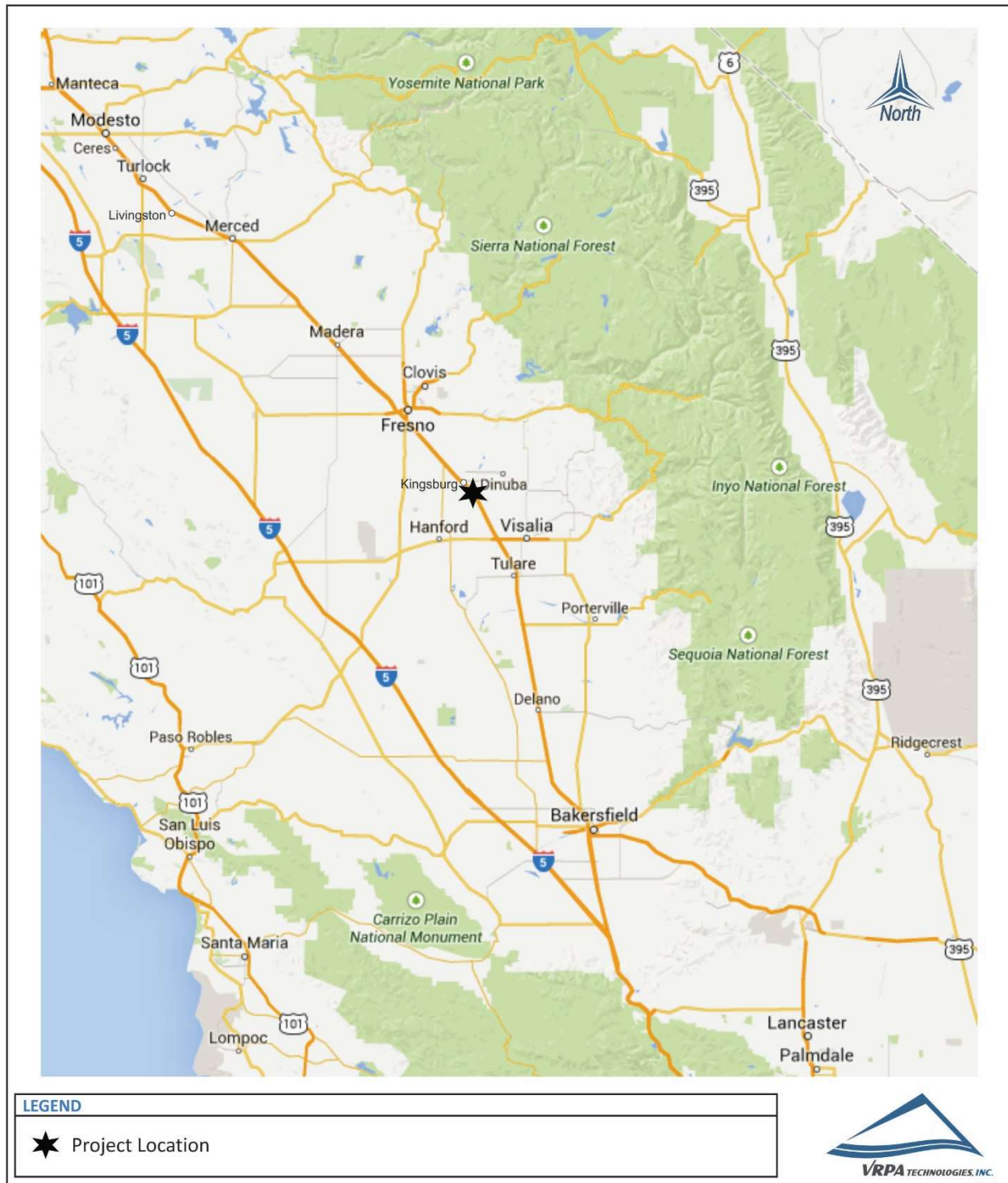
Roadway Segments

- ✓ 18th Avenue/Road 12 between:
 - Avenue 396 and SR 99 NB Off-Ramp
 - SR 99 SB On-Ramp and Avenue 392

A Preliminary Trip Generation Methodology and Trip Distribution Memorandum for the Project was provided to Tulare County and Caltrans staff for review and comment. The memorandum is provided in Appendix A.

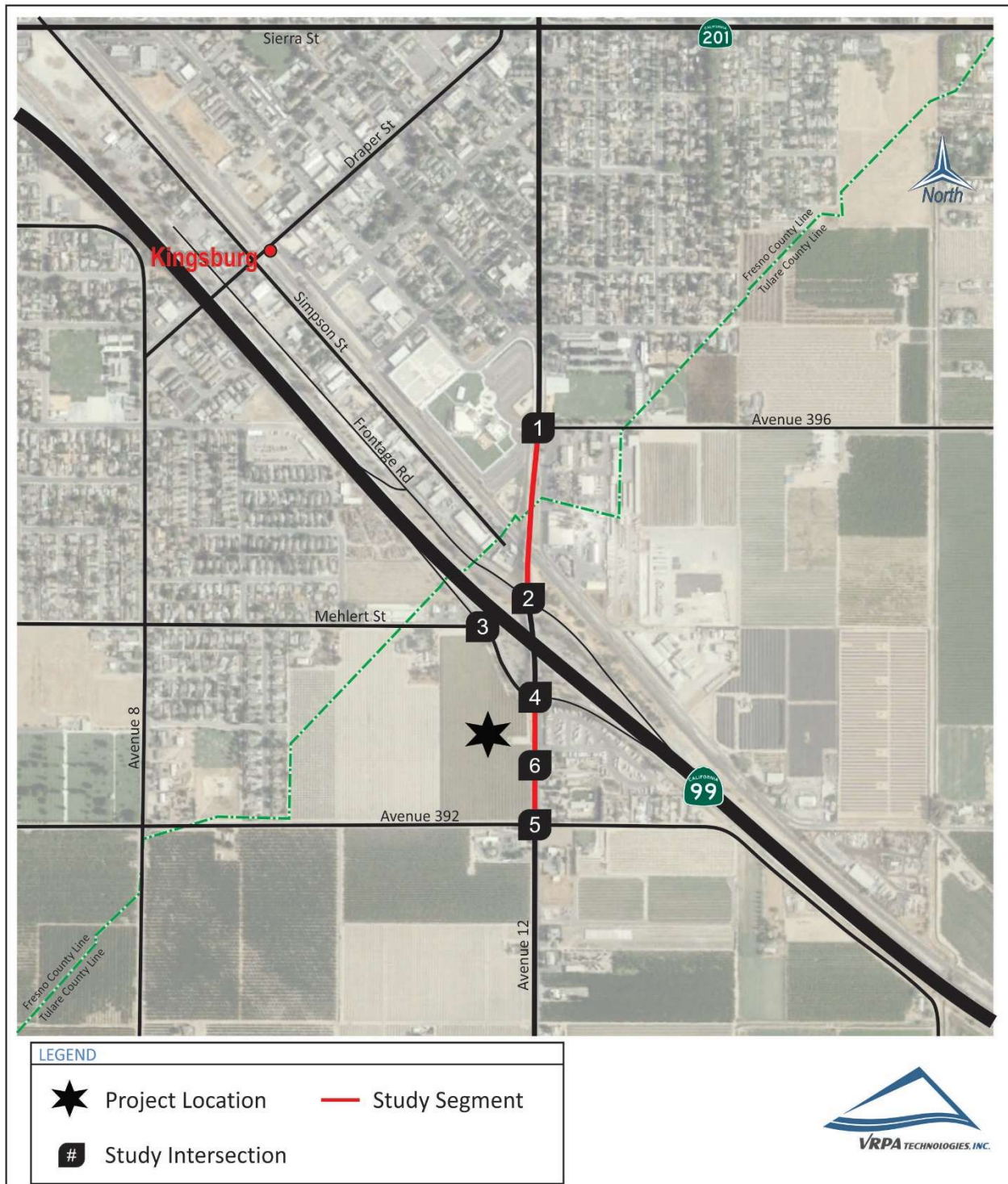
General Plan Initiation (GPI) No. 19-001
Regional Location

Figure
1-1



General Plan Initiation (GPI) No. 19-001
Project Location

Figure
1-2



1.1.3 Study Scenarios

The TIS completed for the proposed Project includes level of service (LOS) analysis for the following traffic scenarios:

- ✓ Existing
- ✓ Existing Plus Project
- ✓ Near-Term Plus Project
- ✓ Cumulative Year 2042 Without Project
- ✓ Cumulative Year 2042 Plus Project

1.2 Methodology

When preparing a TIS, guidelines set by affected agencies are followed. In analyzing street and intersection capacities the Level of Service (LOS) methodologies are applied. LOS standards are applied by transportation agencies to quantitatively assess a street and highway system's performance. In addition, safety concerns are analyzed to determine the need for appropriate mitigation resulting from increased traffic near sensitive uses and other evaluations such as the need for signalized intersections or other improvements.

1.2.1 Intersection Analysis

Intersection LOS analysis was conducted using the Synchro 10 software program. Synchro 10 supports the Highway Capacity Manual (HCM) 6th Edition methodologies and is an acceptable program by Tulare County and Caltrans staff for assessment of traffic impacts. Levels of Service can be determined for both signalized and unsignalized intersections. All of the study intersections are currently unsignalized.

Tables 1-1 and 1-2 indicate the ranges in the amounts of average delay for a vehicle at signalized and unsignalized intersections for the various levels of service ranging from LOS "A" to "F".

Intersection turning movement counts and roadway geometrics used to develop LOS calculations were obtained from field review findings and count data provided from the traffic count sources identified in Section 2.1.

When an unsignalized intersection does not meet acceptable LOS standards, the investigation of the need for a traffic signal shall be evaluated. The California Manual on Uniform Traffic Control Devices (California MUTCD) introduces standards for determining the need for traffic signals. The California MUTCD indicates that the satisfaction of one or more traffic signal warrants does not in itself require the installation of a traffic signal. In addition to the warrant analysis, an engineering study of the current or expected traffic conditions should be conducted to determine whether the installation of a traffic signal is justified. The California MUTCD Peak Hour Warrant (Warrant 3) will be used, as necessary, to determine if a traffic signal is warranted at the

unsignalized intersection that falls below current LOS standards.

1.2.2 Roadway Segment Analysis

According to the HCM, LOS is categorized by two parameters of traffic: uninterrupted and interrupted flow. Uninterrupted flow facilities do not have fixed elements such as traffic signals that cause interruptions in traffic flow. Interrupted flow facilities do have fixed elements that cause an interruption in the flow of traffic, such as stop signs and signalized intersections along arterial roads. A roadway segment is defined as a stretch of roadway generally located between signalized or controlled intersections.

Segment LOS is important in order to understand whether the capacity of a roadway can accommodate future traffic volumes. Table 1-3 provides a definition of segment LOS. The performance criteria used for evaluating volumes and capacities on the road and highway system for this study were estimated using the Highway Capacity Software (HCS) which utilizes HCM 6th Edition methodologies.

1.3 Policies to Maintain Level of Service

An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs.

Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of D on the County roadway system (both segments and intersections).

Based on guidance from Caltrans, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadways segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

The City of Kingsburg Traffic Impact Study Guidelines states that the peak hour level of service for intersections shall be no lower than LOS "D" for the existing and future scenarios.

Given the LOS standards of the various agencies in the Project area, the goal of the Project is to provide LOS results that meet the minimum LOS "C" for Caltrans facilities and LOS "D" for Tulare County and City of Kingsburg facilities for all intersections and segments.

Table 1-1
Signalized Intersections Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION		AVERAGE TOTAL DELAY (sec/veh)
A	Describes operations with very low delay. This level of service occurs when there is no conflicting traffic for a minor street.		≤ 10.0
B	Describes operations with moderately low delay. This level generally occurs with a small amount of conflicting traffic causing higher levels of average delay.		> 10.0 - 20.0
C	Describes operations with average delays. These higher delays may result from a moderate amount of minor street traffic. Queues begin to get longer.		> 20.0 - 35.0
D	Describes a crowded operation, with below average delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from shorter gaps on the mainline and an increase of minor street traffic. The queues of vehicles are increasing.		> 35.0 - 55.0
E	Describes operations at or near capacity. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor gaps for the minor street to cross and large queues.		> 55.0 - 80.0
F	Describes operations that are at the failure point. This level, considered to be unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of the intersection. Insufficient gaps of suitable size exist to allow minor traffic to cross the intersection safely.		> 80.0

Table 1-2
Unsignalized Intersections Level of Service Definitions
(Highway Capacity Manual)

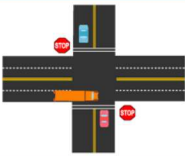
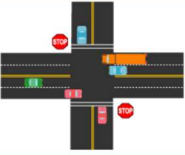
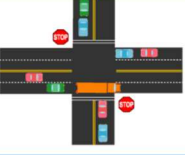
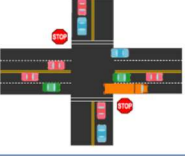
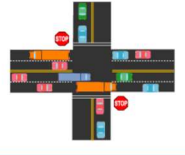






LEVEL OF SERVICE	DEFINITION		AVERAGE TOTAL DELAY (sec/veh)
A	No delay for stop-controlled approaches.		0 - 10.0
B	Describes operations with minor delay.		> 10.0 - 15.0
C	Describes operations with moderate delays.		> 15.0 - 25.0
D	Describes operations with some delays.		> 25.0 - 35.0
E	Describes operations with high delays and long queues.		> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers.		> 50.0

Table 1-3
Roadway Segment Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	
A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.	
B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.	
C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.	
D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.	
E	Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.	
F	Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point where the amount of traffic exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.	

2.0 Existing Conditions

2.1 Existing Traffic Counts and Roadway Geometrics

The first step toward assessing Project traffic impacts is to assess existing traffic conditions. Existing AM and PM peak hour turning movements were collected at study intersections by National Data and Surveying Services. Intersection turning movement counts were conducted for the peak hour periods of 7:00-9:00 AM and 4:00-6:00 PM for all study intersections on Thursday, February 13, 2020. Traffic count data worksheets are provided in Appendix B.

2.2 Existing Functional Roadway Classification System

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and highways do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads.

The current hierarchical system of roadways within the County of Tulare's sphere of influence consists of the following four (4) basic classifications:

- ✓ **State Freeways and Highways** – provide for the ability to carry large traffic volumes at high speeds for long distances. Access points are fully controlled. Freeways connect points within the County and link the County to other parts of the State.
- ✓ **Arterials** – provide for mobility within the County and its cities, carrying through traffic on continuous routes and joining major traffic generators, freeways, and other arterials. Access to abutting private property and intersecting local streets shall generally be restricted.
- ✓ **Collectors** – provide for internal traffic movement within communities and connect local roads to arterials. Direct access to abutting private property shall generally be permitted.
- ✓ **Local Streets** – Roadways which provide direct access to abutting property and connect with other local roads, collectors, and arterials. Local roads are typically developed as two-lane undivided roadways. Access to abutting private property and intersecting streets shall be permitted.

2.3 Affected Streets and Highways

Major street and highway intersections and segments in the Project Area were analyzed to determine levels of service utilizing HCM-based methodologies described previously. The study intersections and street and highway segments included in this TIS are listed below.

Intersections

- ✓ 18th Avenue / Avenue 396
- ✓ 18th Avenue / SR 99 NB Off-Ramp-Frontage Road
- ✓ Mehlert Street-Avenue 394 / SR 99 SB Off-Ramp-Avenue 394
- ✓ 18th Avenue-Road 12 / SR 99 SB On-Ramp-Avenue 394
- ✓ Road 12 / Avenue 392
- ✓ Road 12 / Project Driveway 1

Roadway Segments

- ✓ 18th Avenue/Road 12 between:
 - Avenue 396 and SR 99 NB Off-Ramp
 - SR 99 SB On-Ramp and Avenue 392

The existing lane geometry at the study area intersection is shown in Figure 2-1. All of the study intersections are currently unsignalized. Figures 2-2 and 2-3 shows existing traffic volumes for the Weekday AM and PM peak hours in the study area.

2.4 Level of Service

2.4.1 Intersection Capacity Analysis

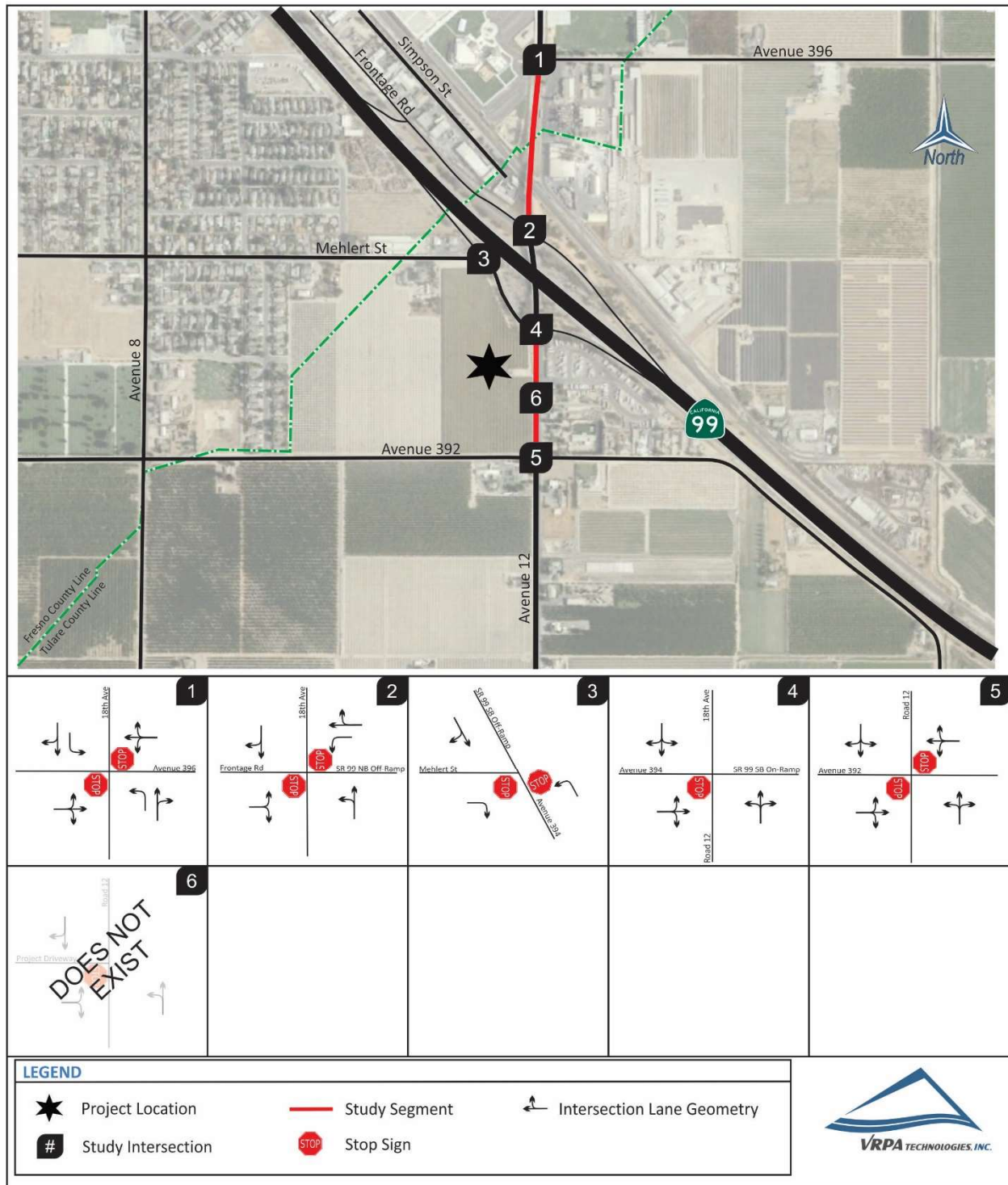
All intersection LOS analyses were estimated using the Synchro 10 software program. Various roadway geometrics, traffic volumes, and properties (peak hour factors, storage pocket length, etc.) were input into the Synchro 10 software program in order to accurately determine the travel delay and LOS for each Study scenario. The intersection LOS and delays reported represent the HCM 6th Edition outputs. Synchro assumptions, listed below, show the various Synchro inputs and methodologies used in the analysis.

✓ Traffic Conditions

- The peak hour factor (PHF) used for Existing, Existing Plus Project, and Near-Term conditions was determined from the existing counts. The HCM default value of 0.92 was used for the Cumulative Year 2042 scenarios.
 - A 3% Heavy vehicle percentage was applied in accordance with the HCM default.

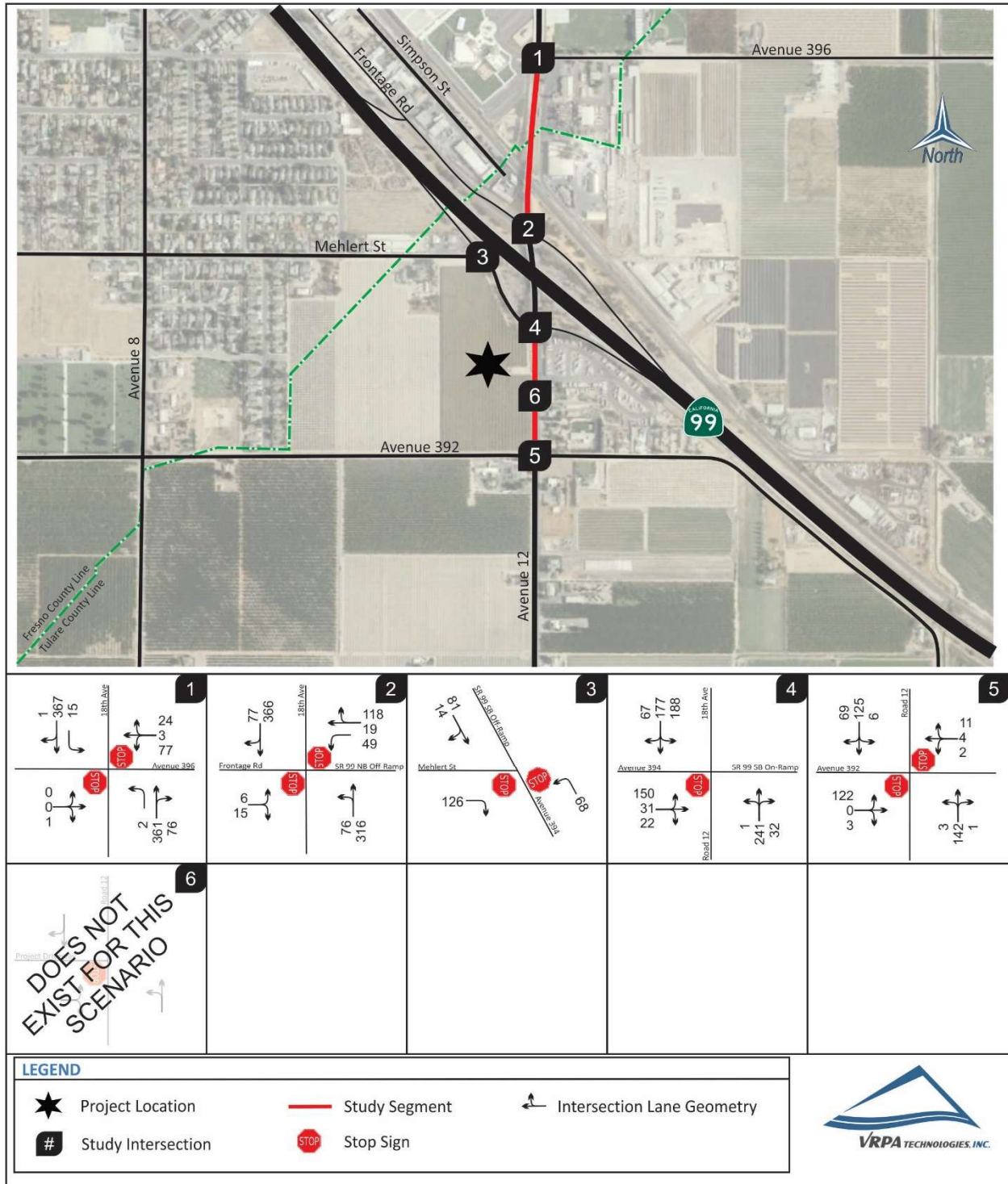
Results of the analysis show that three (3) of the study intersections currently exceed the corresponding level of service criteria. Two (2) of the locations include Caltrans facilities (18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB On-Ramp-Avenue 394). These existing State highway facilities are operating at less than the target LOS; therefore, the existing MOE shall be maintained. Table 2-1 shows the intersection LOS for the existing conditions. Synchro 10 (HCM 6th Edition) Worksheets are provided in Appendix C.

Figure 2-1



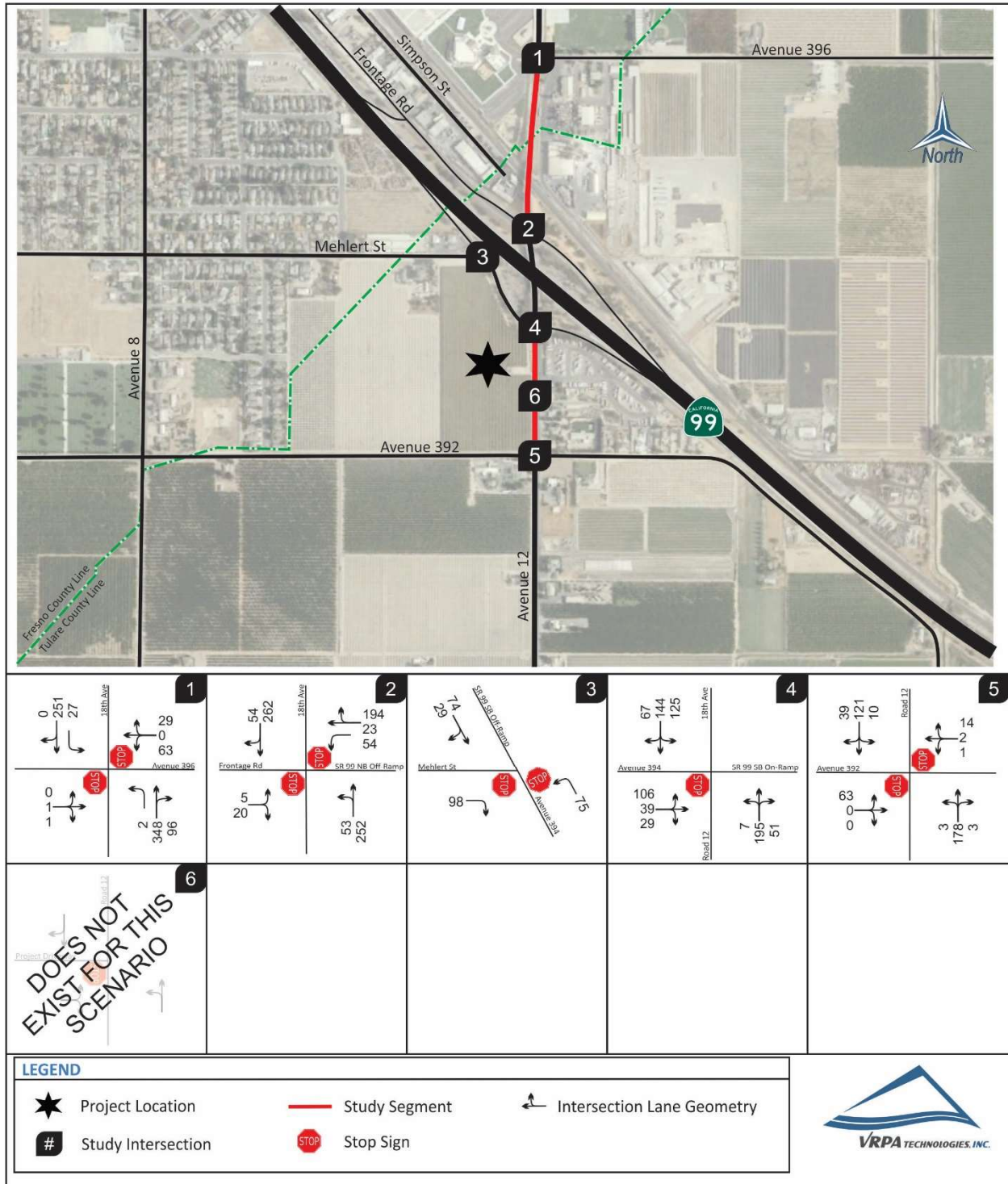
General Plan Initiation (GPI) No. 19-001
Existing AM Peak Hour Traffic

Figure
2-2



General Plan Initiation (GPI) No. 19-001
Existing PM Peak Hour Traffic

Figure
2-3



2.4.2 Queuing Analysis

Table 2-2 provides a queue length summary for study intersections for the Existing scenario. Traffic queue lengths at an intersection or along a roadway segment assist in the determination of a roadway's overall performance. Excessive queuing at an intersection increases vehicle delay and reduces capacity. If a dedicated left turn lane doesn't provide adequate storage, vehicles will queue beyond the left turn storage pocket and into other travel lanes, thus increasing vehicle delay and reducing capacity. The queuing analyses is based upon results from the Synchro modeling software.

Table 2-1
Existing Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING	
				DELAY	LOS
1. 18th Avenue / Avenue 396	Two-Way Stop Sign	D	AM	35.9	E +
			PM	22.4	C
2. 18th Avenue / SR 99 NB Off-Ramp-Frontage Road	Two-Way Stop Sign	C	AM	47.0	E *+
			PM	22.5	C
3. SR 99 SB Off-Ramp-Avenue 394 / Mehlert Street	Two-Way Stop Sign	C	AM	13.4	B
			PM	12.2	B
4. 18th Avenue-Road 12 / Avenue 394-SR 99 SB On-Ramp	One-Way Stop Sign	C	AM	141.2	F *+
			PM	35.5	E *+
5. Road 12 / Avenue 392	Two-Way Stop Sign	D	AM	19.2	C
			PM	14.0	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.

* Existing State highway facility is operating at less than the target LOS; the existing MOE shall be maintained.

+ Does not meet peak hour signal warrants.

2.4.3 Roadway Segment Capacity Analysis

Results of the segment analysis along the existing street and highway system are reflected in Table 2-3. The performance criteria used for evaluating volumes and capacities on the road and highway system for this study are discussed in Section 1.2.2. Results of the analysis show that all of the roadway segments are currently operating at acceptable levels of service. HCS Worksheets are provided in Appendix D.

Table 2-2
Existing Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING CONDITIONS	
			AM Queue	PM Queue
18th Avenue / Avenue 396	NB Left	125	0	0
	SB Left	50	25	25
18th Avenue / SR 99 NB Off-Ramp	WB Left	75	55	25

Queue is measured in feet / **BOLD** denotes exceedance

Table 2-3
Existing Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	DIRECTION	PEAK HOUR	EXISTING	
					VOLUME	LOS
18th Avenue / Road 12						
Avenue 396 to SR 99 NB Off-Ramp	2 Lanes Undivided	D	NB	AM	440	D
			NB	PM	451	C
			SB	AM	445	C
			SB	PM	316	C
SR 99 SB On-Ramp to Avenue 392	2 Lanes Undivided	D	NB	AM	274	C
			NB	PM	253	B
			SB	AM	199	B
			SB	PM	173	A

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

3.0 Traffic Impacts

This chapter provides an assessment of the traffic the Project is expected to generate and the impact of that traffic on the surrounding street system.

3.1 Trip Generation

To assess the impacts that the Project may have on the surrounding roadway network, the first step is to determine Project trip generation. Project trip generation was determined using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). Trips associated with the Project was derived from the Gasoline/Service Station With Convenience Store (945), Fast-Food Restaurant without Drive-Through Window (933), Shopping Center (820), and Industrial Park (130) Land Uses in the ITE Trip Generation Manual. The considerations described above led to the recommended trip generation for weekday AM (7:00-9:00am) and PM (4:00-6:00pm) peak hours shown in Table 3-1.

3.2 Trip Distribution

Project trip distribution is shown in Figure 3-1 and is based upon engineering judgement, prevailing traffic patterns in the study area, complementary land uses, major routes, population centers and customer base. Project traffic as shown in Table 3-1 was distributed to the roadway system using the trip distribution percentages shown in Figure 3-1. It should be noted that one (1) driveway, along Road 12, was assumed in this analysis given the comments received from Caltrans to date. The Caltrans Feasibility Study Mendocino (18th Avenue)/SR 99 Safety and Capacity Study - May 2019 (Appendix E) has identified several alternatives for the interchange which will impact driveway locations for the proposed Project.

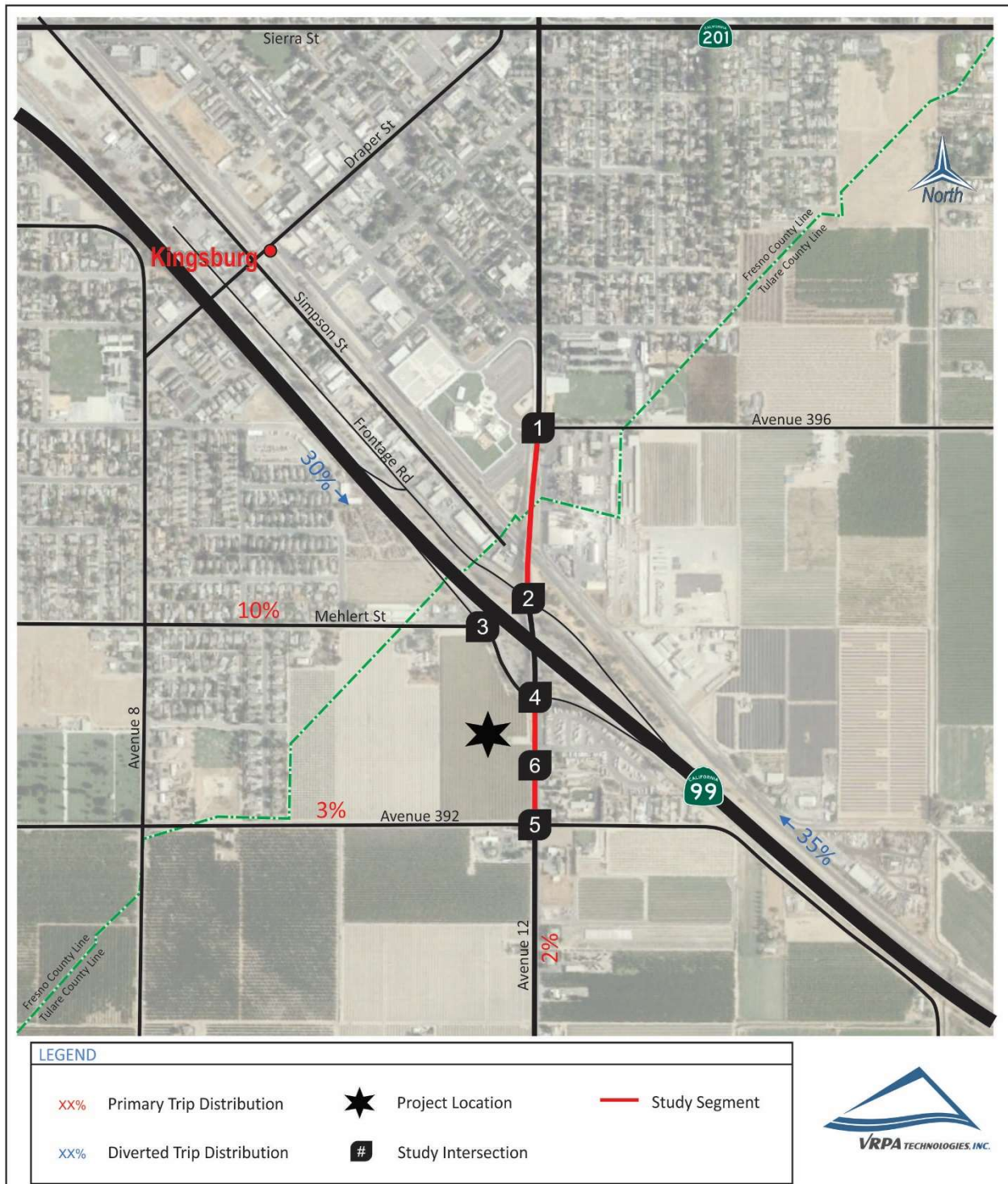
Table 3-1
Project Trip Generation

LAND USE	Quantity	DAILY TRIP ENDS (ADT)		WEEKDAY AM PEAK HOUR					WEEKDAY PM PEAK HOUR				
		RATE	VOLUME	RATE	IN:OUT SPLIT	VOLUME			RATE	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL			IN	OUT	TOTAL
Mini-Mart (945)	8 Fueling Positions	205.36	1,643	12.47	51:49	51	49	100	13.99	51:49	57	55	112
Fast-Food Restaurant (933)	3,500 s.f	346.23	1,212	$T = 89.03(X) - 157.40$	60:40	92	62	154	28.34	50:50	49	50	99
Retail Shops (820)	11,000 s.f	$\ln(T) = 0.68 \ln(X) + 5.57$	1,340	$T = 0.50(X) + 151.78$	62:38	97	60	157	$\ln(T) = 0.74 \ln(X) + 2.89$	48:52	51	55	106
Industrial Park (130)	150,000 s.f	$\ln(T) = 0.52 \ln(X) + 4.45$	1,159	0.40	81:19	49	11	60	0.40	21:79	13	47	60
Internal Capture (5%)			268			14	9	24			9	10	19
TOTAL TRIP GENERATION			5,086			275	173	447			162	197	358

Source: Generation factors from ITE Trip Generation Manual, 10th Edition.
Trip ends are one-way traffic movements, entering or leaving.
The numbers in parenthesis are ITE land use codes.

General Plan Initiation (GPI) No. 19-001
Trip Distribution

Figure
3-1



3.3 Project Traffic

Project traffic as shown in Table 3-1 was distributed to the roadway system using the trip distribution percentages shown in Figure 3-1. A graphical representation of the resulting AM and PM peak hour Project trips is shown in Figures 3-2 and 3-3.

3.4 Existing Plus Project Traffic Conditions

An Existing Plus Project Scenario was analyzed to include existing traffic plus traffic generated by the Project. The resulting traffic is shown in Figures 3-4 and 3-5.

3.5 Approved/Pending Project Traffic

Traffic impact analyses typically require the analysis of approved or pending developments that have not yet been built in the vicinity of the Project in addition to the proposed Project. Tulare County staff was consulted for approved or pending developments in the study area. The approved and/or pending projects in the study area consist of the Hash Farms Residential Development which includes the development of 185 single-family and 28 multifamily dwelling units. Traffic generated by this project was incorporated into the Near-Term and Cumulative Year 2042 analysis scenarios.

3.6 Near-Term Traffic Conditions

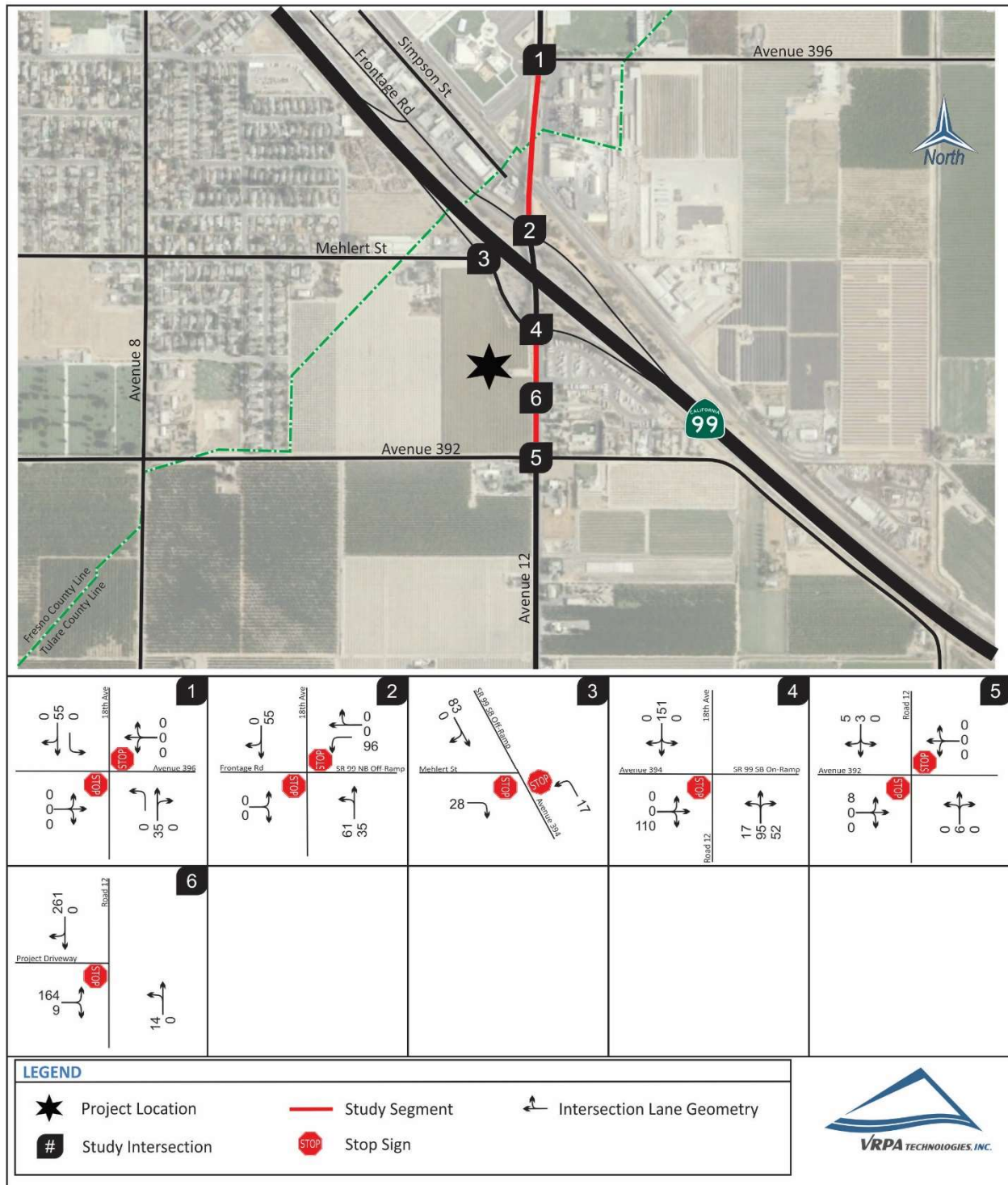
A Near-Term Scenario was analyzed to include year 2022 traffic plus traffic generated by other projects approved or being processed by Tulare County or the City of Kingsburg. Traffic conditions in the Year 2022 was estimated by using a 2.5% per year growth factor for background (ambient) growth along all intersections and roadway segments in the study area. The applied growth rate is in accordance with Tulare County Association of Governments (TCAG) Fresno Council of Governments (Fresno COG) travel model projections. The resulting traffic is shown in Figures 3-6 and 3-7.

3.7 Cumulative Year 2042 Without Project Traffic Conditions

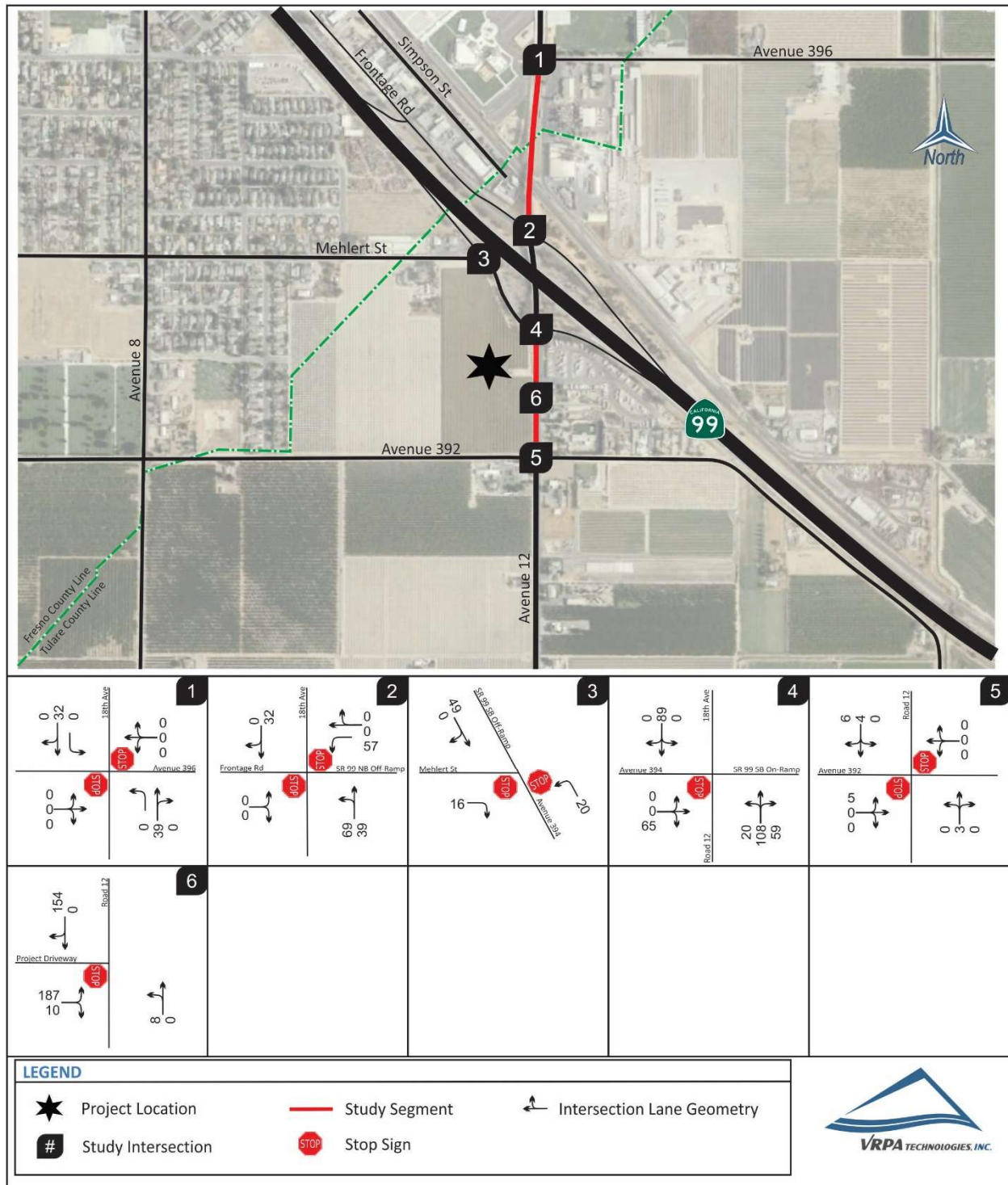
The impacts of the Project were analyzed considering future traffic conditions, approximately twenty (20) years after the assumed opening day of the Project, or in this case the year 2042. The levels of traffic expected in 2042 relate to the cumulative effect of traffic increases resulting from the implementation of the General Plans of local agencies, including Tulare County, Fresno County, and the City of Kingsburg. The Fresno COG and TCAG regional travel model and other reliable data demonstrates a growth rate 2.5% per year in the study area. Traffic conditions resulting from this scenario are shown in Figures 3-8 and 3-9.

General Plan Initiation (GPI) No. 19-001
Project AM Peak Hour Traffic

Figure 3-2

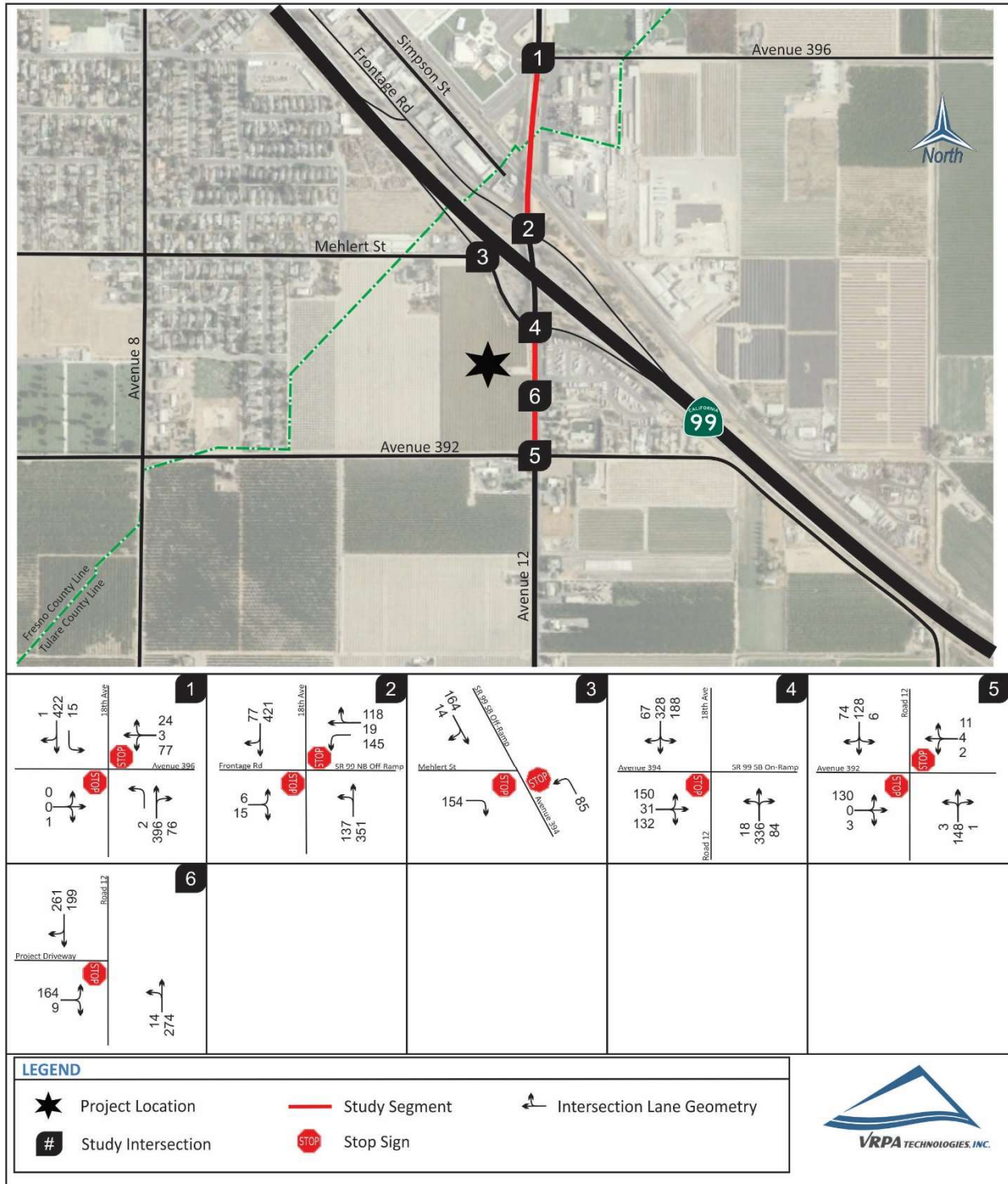


General Plan Initiation (GPI) No. 19-001
Project PM Peak Hour Traffic



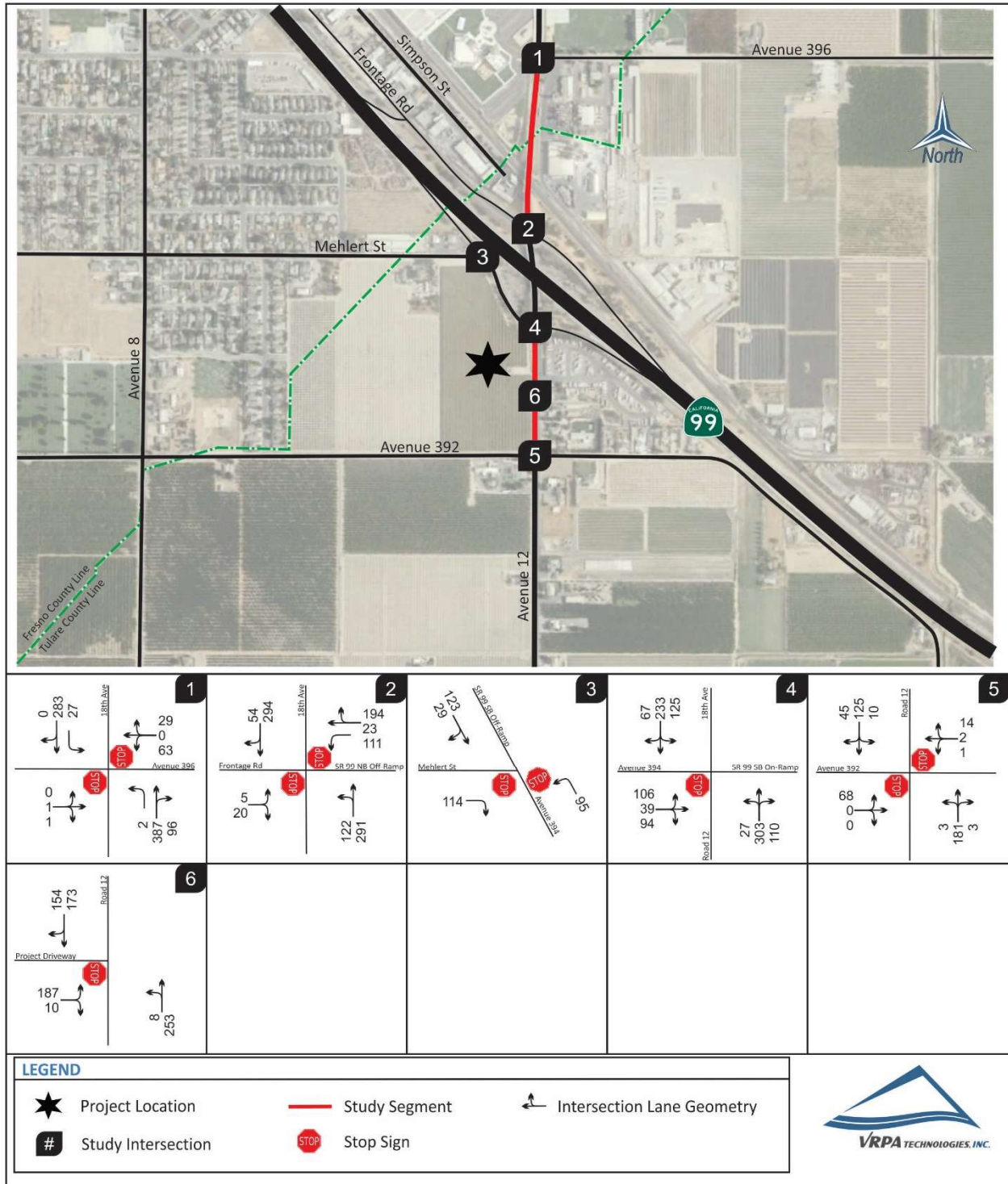
General Plan Initiation (GPI) No. 19-001
Existing Plus Project AM Peak Hour Traffic

Figure
3-4



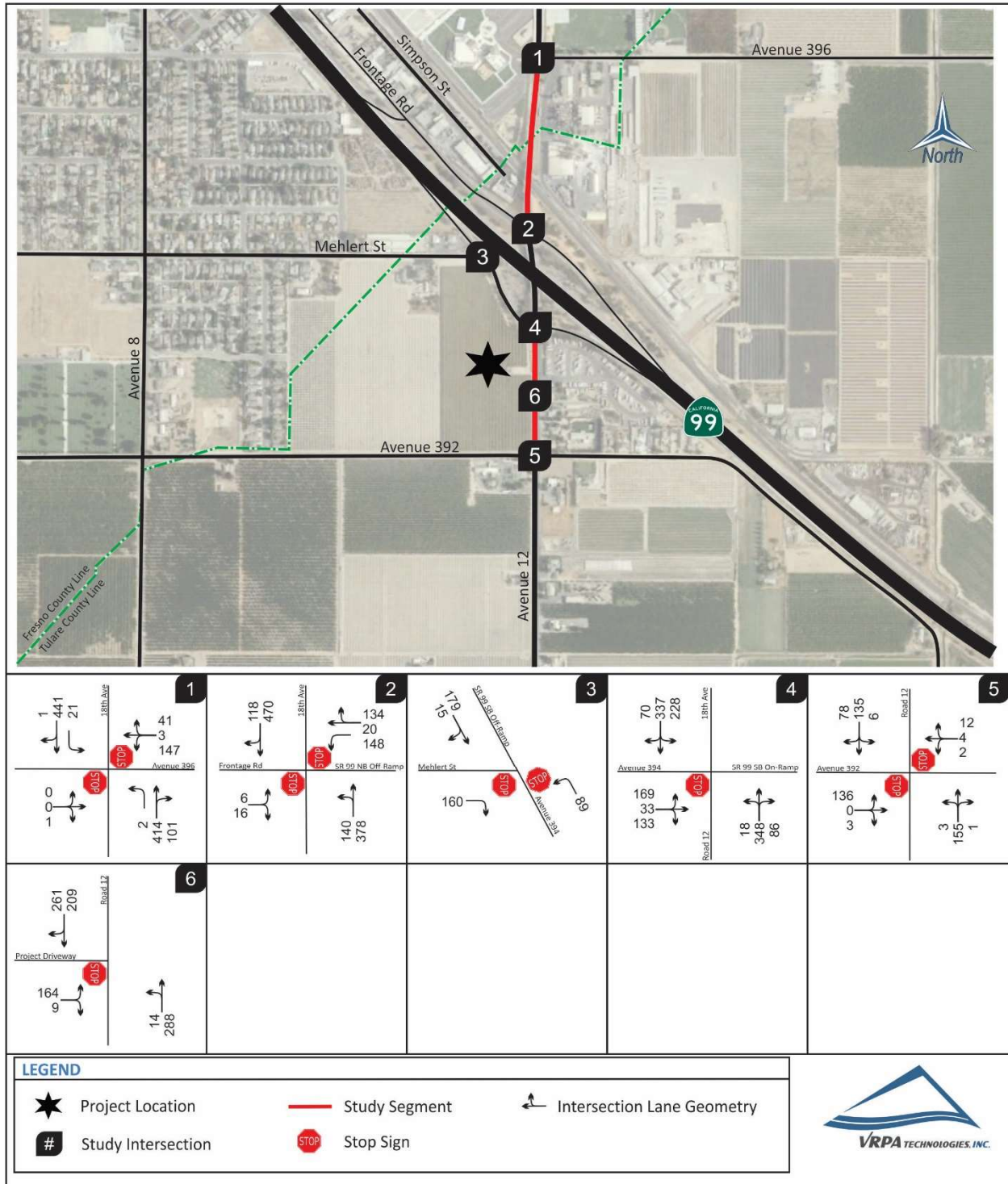
General Plan Initiation (GPI) No. 19-001
Existing Plus Project PM Peak Hour Traffic

Figure
3-5



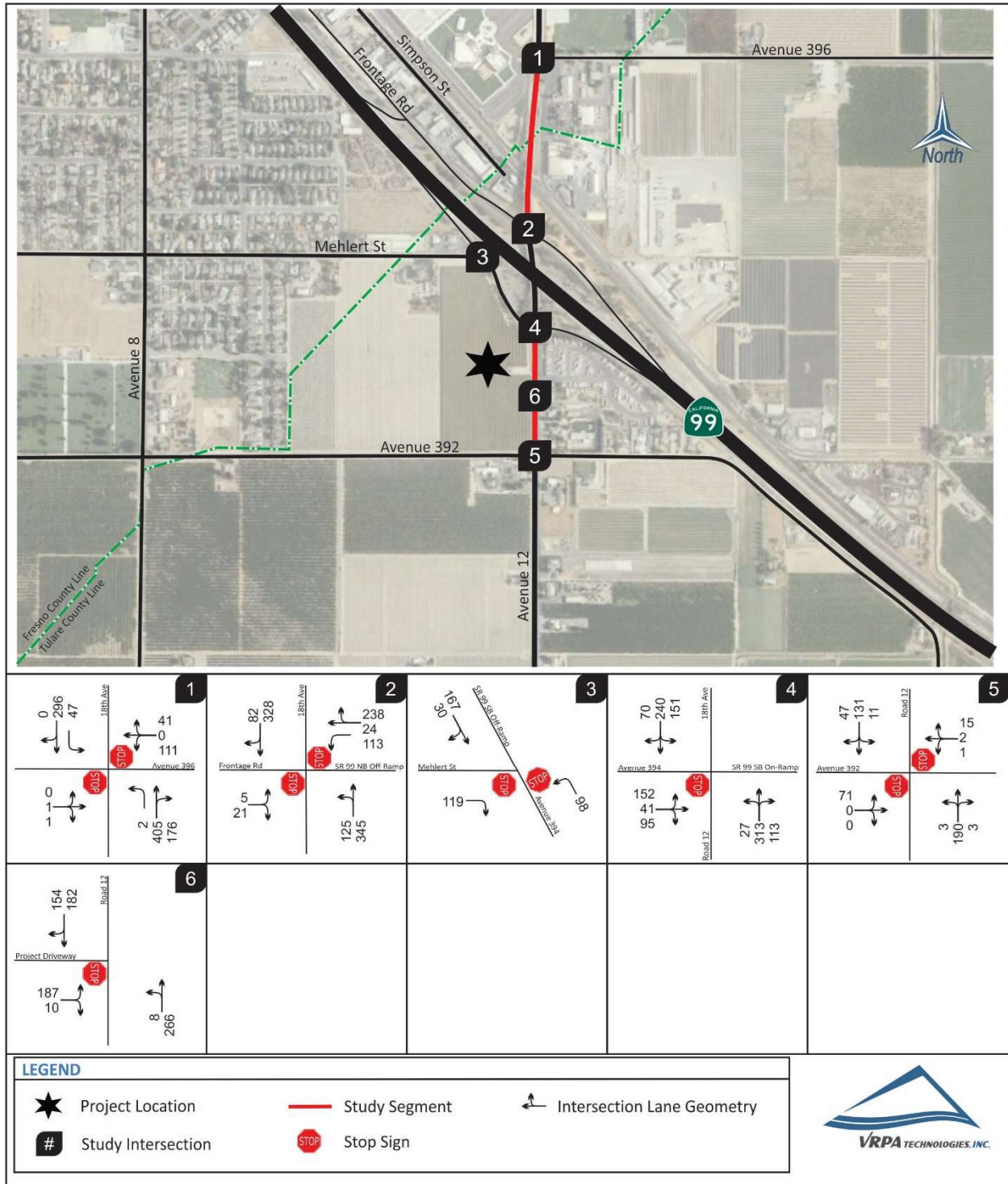
General Plan Initiation (GPI) No. 19-001
Near-Term Plus Project AM Peak Hour Traffic

Figure
3-6



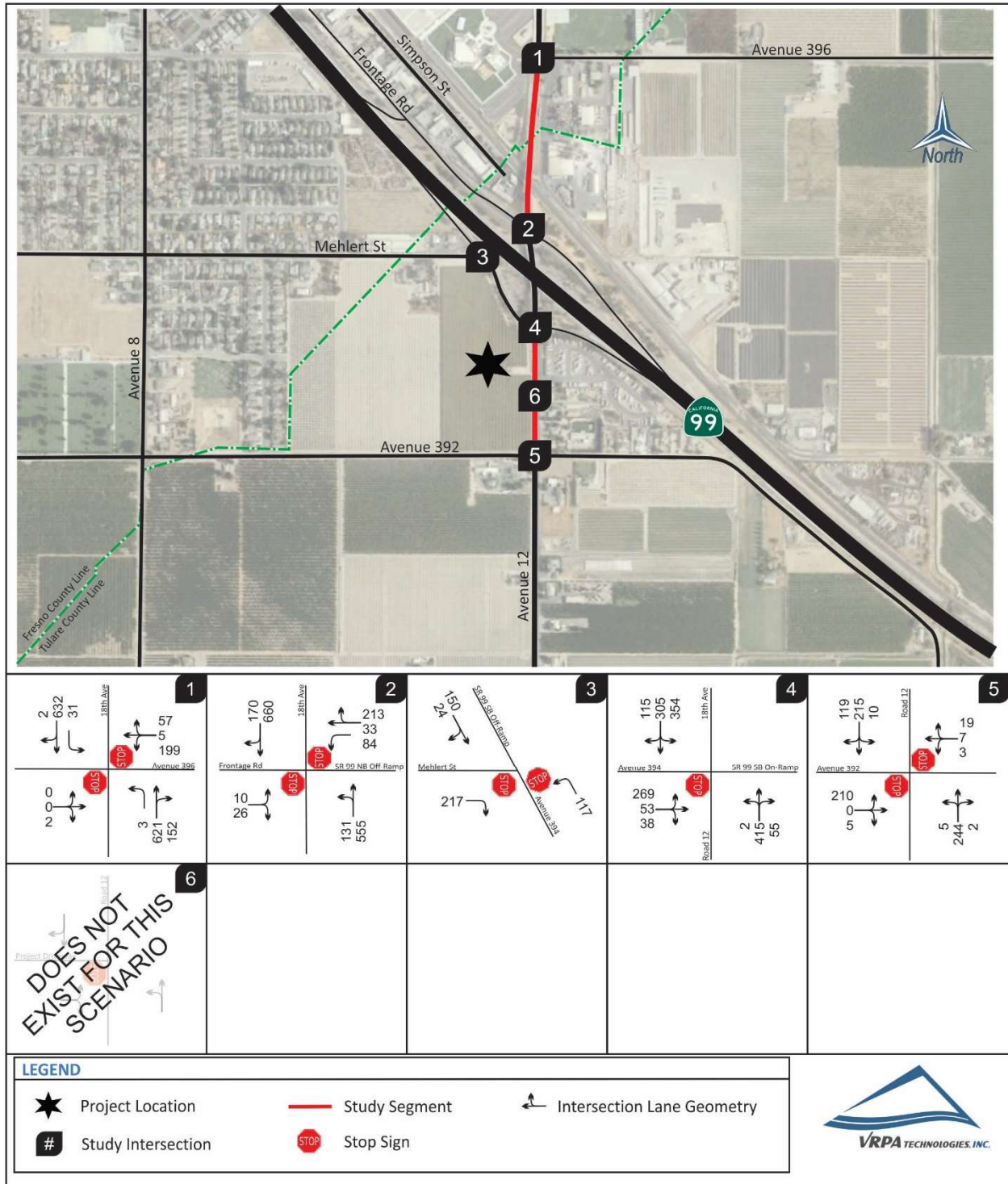
General Plan Initiation (GPI) No. 19-001
Near-Term Plus Project PM Peak Hour Traffic

Figure
3-7



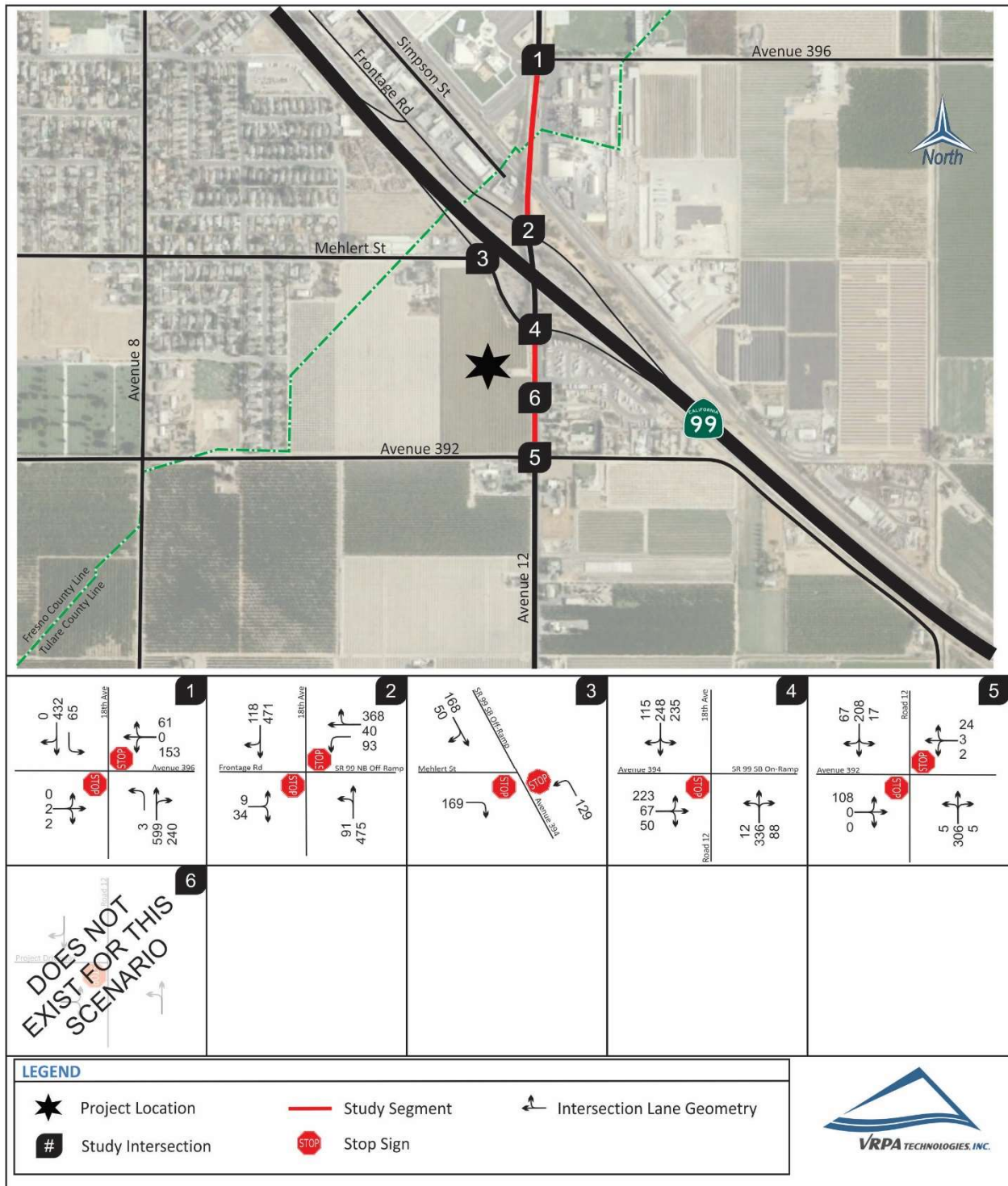
General Plan Initiation (GPI) No. 19-001
Cumulative Year 2042 Without Project AM Peak Hour Traffic

Figure 3-8



General Plan Initiation (GPI) No. 19-001
Cumulative Year 2042 Without Project PM Peak Hour Traffic

Figure
3-9



3.8 Cumulative Year 2042 Plus Project Traffic Conditions

The addition of Project trips, which were distributed to the roadway system using the trip distribution percentages shown in Figure 3-1 (Section 3.3), were added to Cumulative 2042 Without Project traffic volumes. This leads to the results shown in Figures 3-10 and 3-11.

3.9 Impacts

3.9.1 Intersection Capacity Analysis

Table 3-2 shows intersections that are expected to fall short of desirable operating conditions for various scenarios. Potential mitigation measures are discussed in Chapter 4 of this report. Results of the analysis show that the Project will contribute to an unacceptable LOS at five (5) of the six (6) study intersections when comparing the Cumulative Year 2042 Without Project and Cumulative Year 2042 Plus Project scenarios.

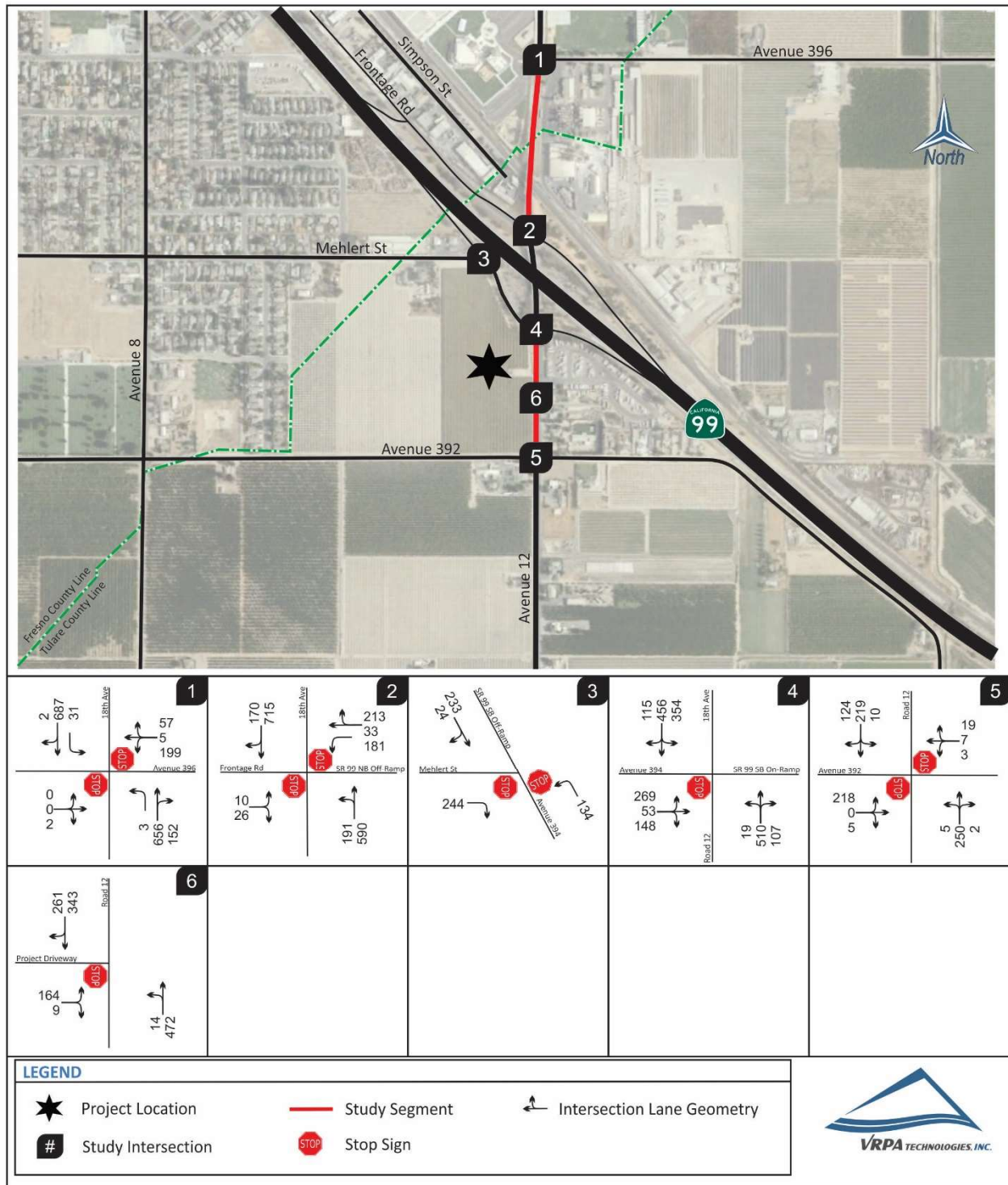
3.9.2 Queuing Analysis

Table 3-3 provides a queue length summary for left and right turn lanes at the study intersections for various study scenarios. The queuing analyses is based upon results from the Synchro modeling software.

3.9.3 Roadway Segment Capacity Analysis

Results of the segment analysis along the existing street and highway system are reflected in Table 3-4. Results of the analysis show that the Project will contribute to an unacceptable LOS at one (1) of the two (2) study roadway segments when comparing the Cumulative Year 2042 Without Project and Cumulative Year 2042 Plus Project scenarios.

General Plan Initiation (GPI) No. 19-001
Cumulative Year 2042 Plus Project AM Peak Hour Traffic



General Plan Initiation (GPI) No. 19-001
Cumulative Year 2042 Plus Project PM Peak Hour Traffic

Figure
3-11

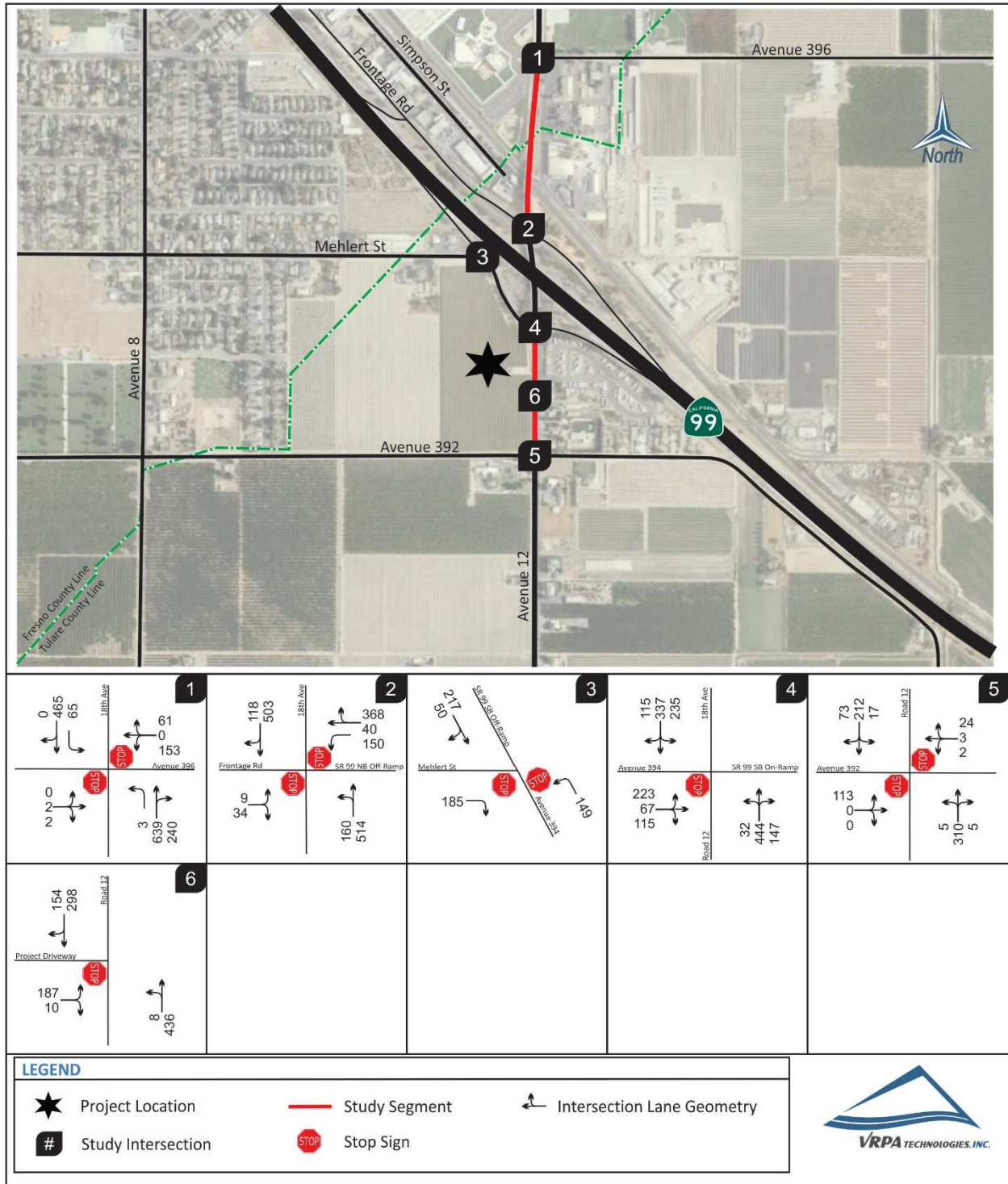


Table 3-2
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
				DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
1. 18th Avenue / Avenue 396	Two-Way Stop Sign	D	AM	48.5	E +	217.4	F +	>300.0	F ++	>300.0	F ++
			PM	26.1	D	77.5	F +	>300.0	F ++	>300.0	F ++
2. 18th Avenue / SR 99 NB Off-Ramp-Frontage Road	Two-Way Stop Sign	C	AM	>300.0	F ++	>300.0	F ++	>300.0	F ++	>300.0	F ++
			PM	80.8	F ++	152.1	F ++	131.6	F ++	>300.0	F ++
3. SR 99 SB Off-Ramp-Avenue 394 / Mehlert Street	Two-Way Stop Sign	C	AM	23.6	C	27.9	D +	17.5	C	32.1	D +
			PM	15.2	C	19.0	C	17.1	C	22.5	C
4. 18th Avenue-Road 12 / Avenue 394-SR 99 SB On-Ramp	One-Way Stop Sign	C	AM	>300.0	F ++	>300.0	F ++	>300.0	F ++	>300.0	F ++
			PM	163.2	F +	>300.0	F ++	>300.0	F ++	>300.0	F ++
5. Road 12 / Avenue 392	Two-Way Stop Sign	D	AM	21.1	C	23.4	C	27.6	D	30.1	D
			PM	14.3	B	14.9	B	20.2	C	21.0	C
6. Road 12 / Project Driveway 1	One-Way Stop Sign	D	AM	20.7	C	21.8	C			53.5	F +
			PM	17.9	C	18.7	C			38.1	E +

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.

+ Does not meet peak hour signal warrants.

++ Meets peak hour signal warrants.

Table 3-3
Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
			AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue
18th Avenue / Avenue 396	NB Left	125	0	0	0	0	0	0	0	0
	SB Left	50	25	25	25	25	25	25	25	25
18th Avenue / SR 99 NB Off-Ramp	WB Left	75	512	125	580	175	223	138	600	395

Queue is measured in feet / **BOLD** denotes exceedance

Table 3-4
Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	DIRECTION	PEAK HOUR	EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
					VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS
18th Avenue / Road 12												
Avenue 396 to SR 99 NB Off-Ramp	2 Lanes Undivided	D	NB	AM	475	D	518	E	778	E	813	E
			NB	PM	490	C	588	D	851	E	891	E
			SB	AM	500	C	589	D	832	E	887	E
			SB	PM	348	C	409	C	589	D	621	D
SR 99 SB On-Ramp to Avenue 392	2 Lanes Undivided	D	NB	AM	438	D	452	D	472	D	636	D
			NB	PM	440	C	453	C	436	C	623	D
			SB	AM	460	D	470	D	343	C	604	D
			SB	PM	327	C	336	C	298	B	452	C

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

4.0 Mitigation

This chapter describes potential improvements to mitigate the traffic impacts of the Project. Described below are potential improvements at study area intersections for various scenarios. The proposed Project will be required to contribute a fair share towards the costs of improvements that are identified for the Cumulative Year 2042 scenario.

4.1 Recommended Improvements

Intersections

✓ 18th Avenue at Avenue 396

Recommended improvements to achieve acceptable levels of service:

- Existing Plus Project scenario:
 - No Improvements Recommended
- Near-Term Plus Project scenario:
 - Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane)
- Cumulative Year 2042 Plus Project scenario:
 - Install Traffic Signal
 - Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane)

The improvements identified above for the Cumulative Year 2042 Plus Project scenario are sufficient to meet the City of Kingsburg's and Tulare County's acceptable level of service criteria. This intersection is forecasted to operate at unacceptable LOS 'E' or worse under the Existing Plus Project and Near-Term Plus Project; however, this intersection does not meet the peak hour traffic signal warrant because the minor approach does not carry enough traffic to justify signalization. Therefore, no improvements are recommended for the Project's contribution of traffic at the intersection under the Existing Plus Project scenario. A dedicated westbound left turn is recommended for the Near-Term scenario given the projected westbound left turn volumes at the intersection.

✓ Road 12 at Project Driveway 1

Recommended improvements to achieve acceptable levels of service:

- Cumulative Year 2042 Plus Project scenario:
 - Prohibit eastbound left turn movements from the Project site
 - Install Four-Way Stop at the Road 12 and Avenue 392 intersection in addition to a dedicated southbound left with adequate spacing to provide U-Turn movements

The improvements identified above for the Cumulative Year 2042 Plus Project scenario are sufficient to meet Tulare County's acceptable level of service criteria

✓ 18th Avenue at SR 99 NB Off-Ramp-Frontage Road, SR 99 SB Off-Ramp-Avenue 394 at Mehlert Street, and 18th Avenue-Road 12 at SR 99 SB On-Ramp-Avenue 394

Caltrans' recently completed feasibility study (Appendix E) for the 18th Avenue at SR 99 interchange has identified numerous alternatives for the interchange, designed to alleviate projected level of service deficiencies in the future. The proposed Project shall contribute its fair share towards the recommended improvements. As noted in the feasibility study, the alternatives that include either the signalization or installation of roundabouts at the SR 99 ramp intersections are sufficient to meet Caltrans' acceptable level of service criteria. The improvements are identified below:

- Alternative 2 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the signalization of SR 99 SB and NB Off-Ramp terminals
- Alternative 3 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the installation of roundabouts at SR 99 SB and NB Off-Ramp terminals
- Alternative 5 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehlert Street just west of the SR 99 SB Off-Ramp. Provide for the signalization of the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.
- Alternative 6 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehlert Street just west of the SR 99 SB Off-Ramp. Provide for the installation of roundabouts at the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.

Roadway Segments

✓ 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp
Recommended improvements to achieve acceptable levels of service:

- Near-Term Plus Project scenario:
 - Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane)
- Cumulative Year 2042 Plus Project scenario:
 - Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane)
 - Widen the southbound travel lane from 1 to 2 lanes (adding 1 travel lane)

The improvements identified above for the Near-Term Plus Project and Cumulative Year 2042

Plus Project scenarios are sufficient to meet Tulare County's and the City of Kingsburg's acceptable level of service criteria.

Post-Mitigation Level of Service

The level of service resulting from the potential improvements identified above is shown in Table 4-1 for study area intersections. In addition to the proposed improvements identified above, Table 4-2 identifies left turn and right turn pocket lengths required for the Cumulative Year 2042 scenario. The left turn and right turn pocket length do not include deceleration lengths. The level of service resulting from the potential improvements identified above is shown in Table 4-3 for study area roadway segments.

Table 4-1
Intersection Operations with Mitigation

INTERSECTION	TARGET LOS	PEAK HOUR	EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
			DELAY	LOS	DELAY	LOS	DELAY	LOS
1. 18th Avenue / Avenue 396	D	AM	48.5	E +	183.8	F +	24.8	C
		PM	26.1	D	69.3	F +	27.1	C
2. 18th Avenue / SR 99 NB Off-Ramp-Frontage Road *	C	AM	9.0	A	9.0	A	15.0	B
		PM	11.0	B	11.0	B	18.0	B
3. SR 99 SB Off-Ramp-Avenue 394 / Mehler Street *	C	AM	10.0	A	10.0	A	12.0	B
		PM	10.0	A	10.0	A	10.0	A
4. 18th Avenue-Road 12 / Avenue 394-SR 99 SB On-Ramp *	C	AM	17.0	B	17.0	B	25.0	C
		PM	15.0	B	15.0	B	21.0	C
5. Road 12 / Avenue 392 **	D	AM					13.9	B
		PM					12.1	B
6. Road 12 / Project Driveway 1	D	AM					14.7	B
		PM					13.4	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

* Alternative 2 Results from the Caltrans Feasibility Study Mendocino (18th Avenue)/SR 99 Safety and Capacity Study - May 2019

** Improvements recommended at this location are the result of improvements at Project Driveway.

+ Does not meet peak hour signal warrants.

Table 4-2
Left Turn and Right Turn Storage Requirements

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		CUMULATIVE YEAR 2042 PLUS PROJECT RECOMMENDED QUEUE STORAGE LENGTH (ft)
18th Avenue / Avenue 396	NB Left	125	125
	SB Left	50	50
	WB Left	--	100
18th Avenue / SR 99 NB Off-Ramp **	WB Left	75	600
Road 12 / Avenue 392	SB Left	--	100

BOLD denotes change in storage length

** Storage length recommendations will change dependent upon selected roadway improvements at the SR 99 and 18th Avenue Interchange.

Table 4-3
Segment Operations with Mitigation

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	DIRECTION	PEAK HOUR	NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
					VOLUME	LOS	VOLUME	LOS
18th Avenue / Road 12								
Avenue 396 to SR 99 NB Off-Ramp	2 Lanes Undivided	D	NB	AM	518	A	813	B
			NB	PM	588	A	891	B
			SB	AM			887	B
			SB	PM			621	A

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

4.2 Equitable Share Responsibility

The proposed Project will be required to contribute a fair share towards the costs of improvements that are identified for the Cumulative Year 2042 scenario. The intent of determining the equitable responsibility for the improvements identified above for the Cumulative Year 2042 scenario, is to provide a starting point for early discussions to address traffic mitigation equitability and to calculate the equitable share for mitigating traffic impacts.

According to the Caltrans "Guide for the Preparation of Traffic Impact Studies, " the intent of determining the equitable responsibility for mitigation measures is to provide a starting point for early discussions to address traffic mitigation equitability and to calculate the equitable share for mitigation traffic impacts. The formula used to calculate the equitable share responsibility to the study area is as follows:

$$\text{Equitable Share} = (\text{Project Trips}) / (\text{Future Year Plus Approved Project Traffic} - \text{Existing Traffic})$$

Table 4-4 shows the equitable share responsibility to the study area. The equitable share responsibility shown in Table 4-4 is the result of LOS enhancements related to capacity.

Table 4-4
Equitable Share Responsibility

INTERSECTION	PEAK HOUR	EXISTING	PROJECT TRIPS	CUMULATIVE YEAR 2042 PLUS PROJECT	FAIR SHARE PERCENTAGE
1. 18th Avenue / Avenue 396	AM	927	90	1,793	10.4%
	PM	818	71	1,629	8.8%
2. 18th Avenue / SR 99 NB Off-Ramp-Frontage Road	AM	1,042	246	2,128	22.7%
	PM	917	197	1,895	20.1%
3. SR 99 SB Off-Ramp-Avenue 394 / Mehlert Street	AM	289	128	635	37.0%
	PM	276	85	601	26.2%
4. 18th Avenue-Road 12 / Avenue 394-SR 99 SB On-Ramp	AM	909	425	2,031	37.9%
	PM	763	341	1,716	35.8%
5. Road 12 / Avenue 392	AM	488	23	862	6.1%
	PM	434	18	765	5.4%
6. Road 12 / Project Driveway 1	AM	473	448	1,262	56.8%
	PM	426	359	1,093	53.8%
ROADWAY SEGMENT					
18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	AM	885	90	1,700	11.0%
	PM	767	72	1,512	9.7%

APPENDIX A

Preliminary Trip Generation and Distribution Memorandum

January 16, 2020

Chuck Przybylski, Project Planner
Tulare County Resource Management Agency
5961 S Mooney Boulevard
Visalia, CA 93277

**Re: Preliminary Trip Generation and Trip Distribution for
General Plan Initiation (GPI) No. 19-001**

Dear Mr. Przybylski:

VRPA Technologies, Inc. (VRPA) prepared the following Trip Generation and Trip Distribution Memorandum, which includes trip generation and trip distribution for the General Plan Initiation (GPI) which proposes to re-designate a 15.71-acre parcel from Agricultural to Commercial/Industrial. The northern 3-acre portion of the parcel will be rezoned to allow a mixed-use development (fast food, gas station, and a retail outlet) with the remainder 12.71-acres to be rezoned for industrial park type uses. The Project is located on the northwest corner of Avenue 392 and Road 12. This scoping document is intended to be used by all appropriate reviewing agencies in approving a final scope of work for the required Project traffic analysis.

TRIP GENERATION METHODOLOGY

To assess the impacts that the Project may have on the surrounding roadway network, the first step is to determine Project trip generation. Project trip generation was determined using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). Trips associated with the Project was derived from the Gasoline/Service Station With Convenience Store (945), Fast-Food Restaurant without Drive-Through Window (933), Shopping Center (820), and Industrial Park (130) Land Uses in the ITE Trip Generation Manual. The considerations described above led to the recommended trip generation for weekday AM (7:00-9:00am) and PM (4:00-6:00pm) peak hours shown in Table 1.

TRIP DISTRIBUTION

Project trip distribution is shown in Figure 1 and is based upon Tulare County Association of Governments (TCAG) and Fresno Council of Government (Fresno COG) model plots, engineering judgement, prevailing traffic patterns in the study area, major routes, and population centers.

Project traffic as shown in Table 1 was distributed to the roadway system using the trip distribution percentages shown in Figure 1. Project traffic is shown in Figures 2a and 2b.

Table 1
Project Trip Generation

LAND USE	Quantity	DAILY TRIP ENDS (ADT)		WEEKDAY AM PEAK HOUR					WEEKDAY PM PEAK HOUR				
		RATE	VOLUME	RATE	IN:OUT SPLIT	VOLUME			RATE	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL			IN	OUT	TOTAL
Mini-Mart (945)	8 Fueling Positions	205.36	1,643	12.47	51:49	51	49	100	13.99	51:49	57	55	112
Fast-Food Restaurant (933)	3,500 s.f	346.23	1,212	$T = 89.03(X) - 157.40$	60:40	92	62	154	28.34	50:50	49	50	99
Retail Shops (820)	11,000 s.f	$\ln(T) = 0.68 \ln(X) + 5.57$	1,340	$T = 0.50(X) + 151.78$	62:38	97	60	157	$\ln(T) = 0.74 \ln(X) + 2.89$	48:52	51	55	106
Industrial Park (130)	150,000 s.f	$\ln(T) = 0.52 \ln(X) + 4.45$	1,159	0.40	81:19	49	11	60	0.40	21:79	13	47	60
Internal Capture (5%)			268			14	9	24			9	10	19
TOTAL TRIP GENERATION			5,086			275	173	447			162	197	358

Source: Generation factors from ITE Trip Generation Manual, 10th Edition.

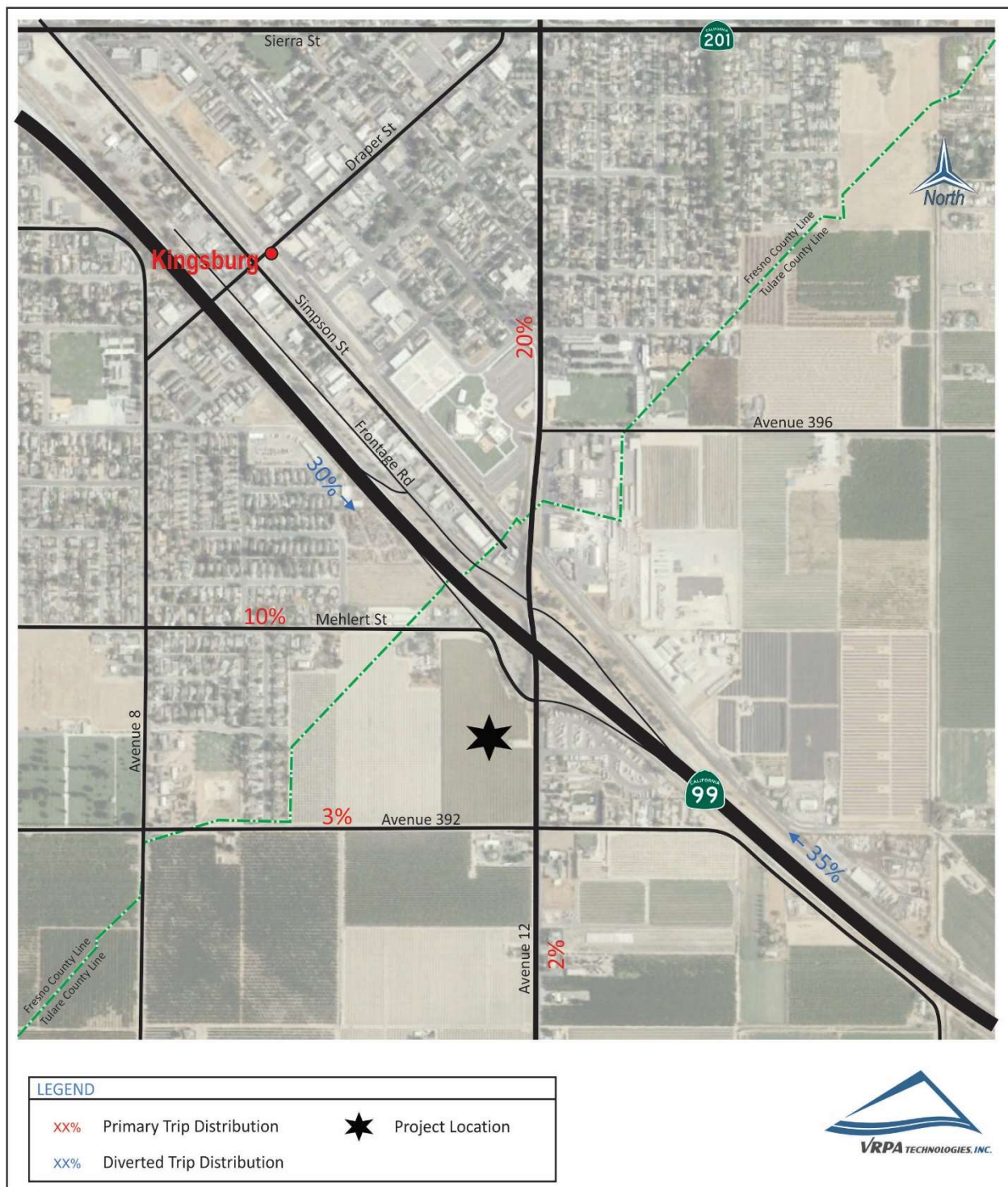
Trip ends are one-way traffic movements, entering or leaving.

The numbers in parenthesis are ITE land use codes.



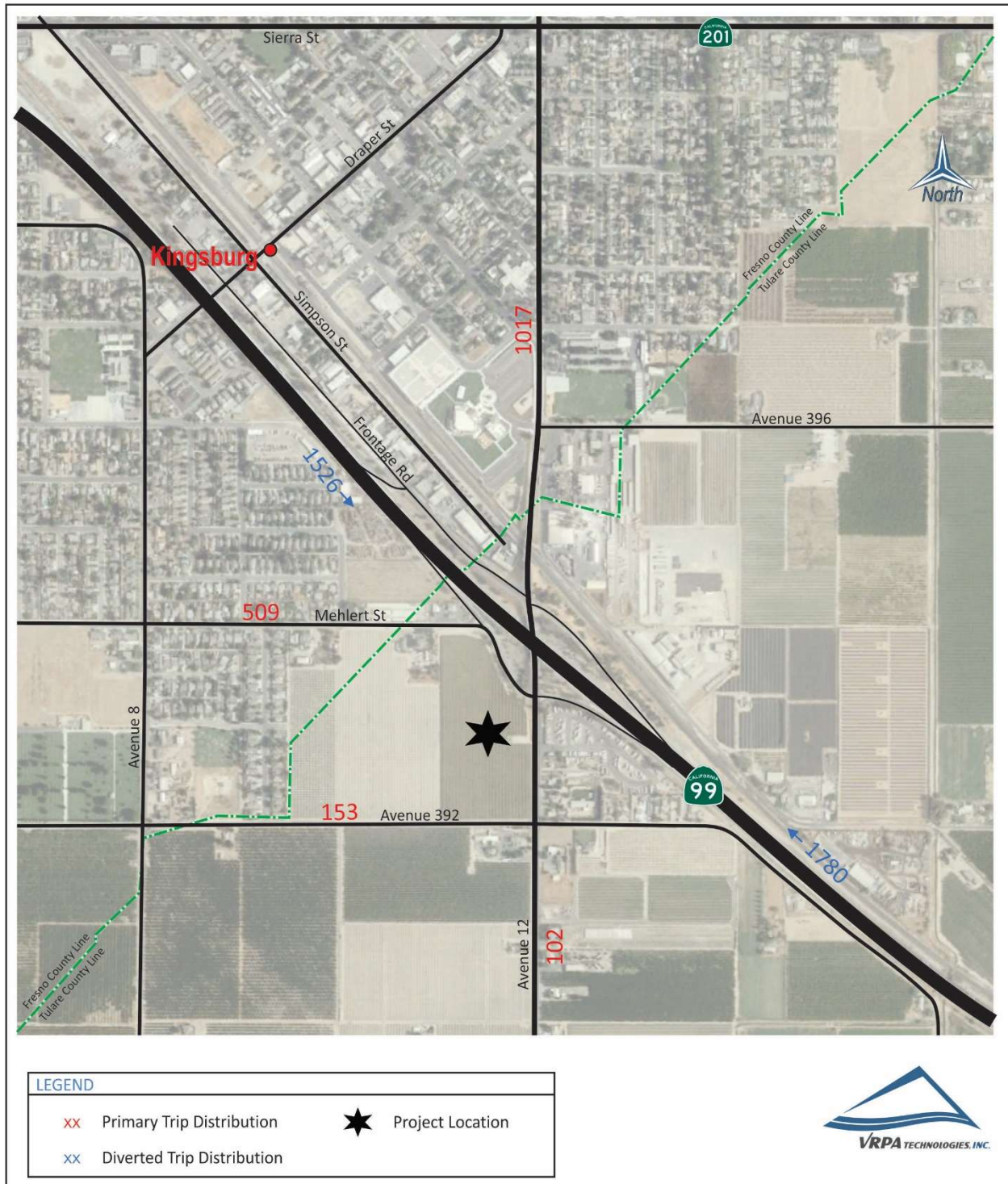
General Plan Initiation (GPI) No. 19-001
Trip Distribution

Figure
1



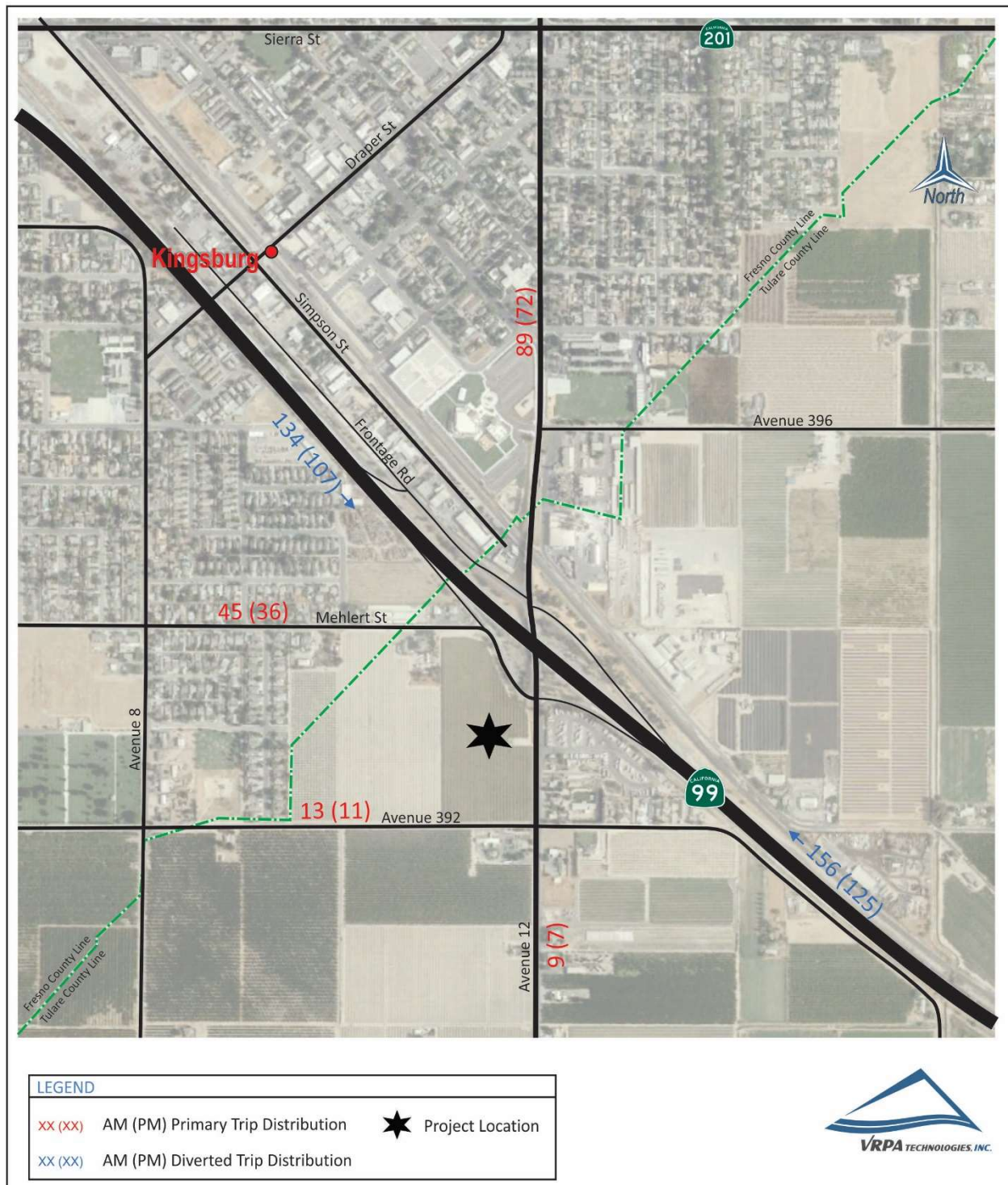
General Plan Initiation (GPI) No. 19-001
Daily Trip Distribution

Figure
2a



General Plan Initiation (GPI) No. 19-001
Peak Hour Trip Distribution

Figure
2b



Access to the site is provided along Mehlert Street, Avenue 12, and Avenue 392. Below is a list of 'potential' intersections to be included in the traffic analysis.

INTERSECTIONS

- ✓ Mehlert Street-Avenue 394 / SR 99 SB Off Ramp
- ✓ 18th Avenue / Avenue 396
- ✓ 18th Avenue / SR 99 NB Off Ramp
- ✓ 18th Avenue-Avenue 12 / SR 99 SB On Ramp
- ✓ Avenue 12 / Avenue 392
- ✓ Mehlert Street / Project Driveway 1
- ✓ Avenue 12 / Project Driveway 2
- ✓ Avenue 12 / Project Driveway 3
- ✓ Avenue 12 / Project Driveway 4

TRAFFIC ANALYSIS SCENARIOS

The study time periods for the traffic analysis will include the weekday AM and PM peak hours determined between 7:00 and 9:00 AM and between 4:00 and 6:00 PM. Level of service analysis for the AM and PM peak hours will be analyzed for the following scenarios:

- ✓ Existing Conditions
- ✓ Existing Plus Project
- ✓ Near-Term Plus Project
- ✓ Cumulative Year 2042 Without Project
- ✓ Cumulative Year 2042 Plus Project

INTERSECTION ANALYSIS

All intersection LOS analyses will be estimated using Synchro 10 Software. The following inputs and parameters will be applied in order to accurately determine the travel delay and LOS for each study intersection:

- ✓ VRPA will conduct a field study of the specified intersections and segments to verify lane geometry and intersection control as well as to obtain other pertinent data such as signal timing and phasing, where applicable.
- ✓ Peak hour factors (PHF) for each intersection approach will be obtained from existing traffic counts and utilized for Existing Conditions, Existing Plus Project, and Near-term (Opening Year 2022) Conditions. For all future scenarios, a PHF of 0.92 will be applied
- ✓ Existing left- and right-turn storage pockets will be measured from aerial photography and incorporated into the synchro analysis
- ✓ Roadway link speed limits will be observed in the field and input into the Synchro network to determine roadway link speeds
- ✓ Heavy vehicle percentages will be applied based on the Highway Capacity Manual (HCM)
- ✓ HCM 6th Edition outputs for delay and level of service will be utilized in the results



- ✓ Queuing conditions for left and right-turn lanes at all study intersections will be based upon Synchro outputs or Section 400 of Caltrans' Highway Design Manual. Synchro provides 95th percentile maximum queue lengths in feet which represents the maximum back of queue with 95th percentile traffic volumes

SB 743 ANALYSIS

In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. This legislation will eventually change the way that transportation studies are conducted for environmental documents. In the areas where SB 743 is implemented, delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as vehicle miles travelled (VMT) or other similar measures will be used.

July 1, 2020 is the statewide implementation date and agencies may opt-in use of new metrics prior to that date. The Office of Planning and Research (OPR) has determined that projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact. This scoping document assumes completion of the environmental process before July 1, 2020. If not, a new scoping document may be needed due to changes in CEQA requirements.

SIGNIFICANCE CRITERIA

An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County, Caltrans, Fresno County, and the City of Kingsburg adopt minimum levels of service in an attempt to control congestion that may result as new development occurs.

Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of D on the County roadway system (both segments and intersections).

Based on guidance from Caltrans, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadways segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

Fresno County's 2000 General Plan, policy number TR-A.2, identifies a minimum LOS standard of D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county. Given the location of the Project, a minimum LOS standard of C was utilized in assessing impacts of the proposed Project.



Chuck Przybylski

January 16, 2020

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City of Kingsburg engineering staff have previously identified a minimum LOS standard of D. The City of Kingsburg current General Plan, which was adopted in 1992, does not specifically state that the minimum LOS for the City is D.

If you have any questions or require further information, please contact me at (559) 271-1200 extension 2.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Ellard", written in a cursive style.

Mr. Jason Ellard
Transportation Engineer



APPENDIX B

Traffic Count Data Worksheets

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 12 & Ave 392
City: Kingsburg
Control: 2-Way Stop (EB/WB)

Project ID: 20-07058-005
Date: 2/13/2020

Total

NS/EW Streets:	Rd 12				Rd 12				Ave 392				Ave 392				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	25	0	0	1	31	4	0	6	0	0	0	0	0	3	0	70
7:15 AM	2	29	0	0	2	30	10	0	7	0	2	0	0	1	1	0	84
7:30 AM	0	42	0	0	0	24	12	0	31	0	0	0	1	3	2	0	115
7:45 AM	0	44	1	0	1	45	26	0	65	0	0	0	0	0	4	0	186
8:00 AM	1	27	0	0	3	26	21	0	19	0	1	0	1	0	4	0	103
8:15 AM	1	25	1	0	2	25	8	0	12	1	0	0	0	0	0	0	75
8:30 AM	0	14	0	0	3	38	10	0	8	0	0	0	0	0	2	0	75
8:45 AM	0	25	0	0	2	19	6	0	8	0	0	0	0	0	4	0	64
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	231	2	0	14	238	97	0	156	1	3	0	2	4	20	0	772
	1.69%	97.47%	0.84%	0.00%	4.01%	68.19%	27.79%	0.00%	97.50%	0.63%	1.88%	0.00%	7.69%	15.38%	76.92%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	3	142	1	0	6	125	69	0	122	0	3	0	2	4	11	0	488
PEAK HR FACTOR :	0.375	0.807	0.250	0.000	0.500	0.694	0.663	0.000	0.469	0.000	0.375	0.000	0.500	0.333	0.688	0.000	0.656
	0.811				0.694				0.481				0.708				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	68	2	0	3	29	14	0	17	0	0	0	0	0	2	0	135
4:15 PM	2	53	1	0	2	23	7	0	17	0	0	0	0	0	4	0	109
4:30 PM	1	33	0	0	3	36	12	0	14	0	0	0	0	1	5	0	105
4:45 PM	0	24	0	0	2	33	6	0	15	0	0	0	1	1	3	0	85
5:00 PM	0	47	0	0	1	28	10	0	22	0	1	0	0	0	2	0	111
5:15 PM	0	34	0	0	3	38	11	0	29	0	1	1	0	1	5	0	123
5:30 PM	0	29	0	0	6	25	7	0	28	0	0	0	0	2	1	0	98
5:45 PM	1	24	0	0	1	24	3	0	15	0	0	0	0	1	8	0	77
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	312	3	0	21	236	70	0	157	0	2	1	1	6	30	0	843
	1.25%	97.81%	0.94%	0.00%	6.42%	72.17%	21.41%	0.00%	98.13%	0.00%	1.25%	0.63%	2.70%	16.22%	81.08%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	3	178	3	0	10	121	39	0	63	0	0	0	1	2	14	0	434
PEAK HR FACTOR :	0.375	0.654	0.375	0.000	0.833	0.840	0.696	0.000	0.926	0.000	0.000	0.000	0.250	0.500	0.700	0.000	0.804
	0.657				0.833				0.926				0.708				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 12/18th Ave & Ave 394
City: Kingsburg
Control: 1-Way Stop (EB)

Project ID: 20-07058-004
Date: 2/13/2020

Total

NS/EW Streets:	Rd 12/18th Ave				Rd 12/18th Ave				Ave 394				Ave 394				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	0.5 ET	0.5 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	25	10	0	46	28	8	0	21	3	9	0	0	0	0	0	150
7:15 AM	0	29	4	0	45	37	7	0	28	7	4	0	0	0	0	0	161
7:30 AM	0	65	12	0	59	32	12	0	43	9	4	0	0	0	0	0	236
7:45 AM	0	98	13	0	31	64	28	0	44	4	8	0	0	0	0	0	290
8:00 AM	1	49	3	0	53	44	20	0	35	11	6	0	0	0	0	0	222
8:15 AM	2	29	7	0	38	31	4	0	18	2	4	0	0	0	0	0	135
8:30 AM	0	13	12	0	49	44	3	0	18	7	7	0	0	0	0	0	153
8:45 AM	1	27	7	0	30	21	6	0	20	2	6	0	0	0	0	0	120
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	335	68	0	351	301	88	0	227	45	48	0	0	0	0	0	1467
	0.98%	82.31%	16.71%	0.00%	47.43%	40.68%	11.89%	0.00%	70.94%	14.06%	15.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	241	32	0	188	177	67	0	150	31	22	0	0	0	0	0	909
PEAK HR FACTOR :	0.250	0.615	0.615	0.000	0.797	0.691	0.598	0.000	0.852	0.705	0.688	0.000	0.000	0.000	0.000	0.000	0.784
		0.617				0.878				0.906							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	0.5 ET	0.5 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	2	67	18	0	25	40	20	0	32	13	10	0	0	0	0	0	227
4:15 PM	5	54	15	0	29	26	14	0	31	7	7	0	0	0	0	0	188
4:30 PM	0	42	4	0	45	40	16	0	15	13	8	0	0	0	0	0	183
4:45 PM	0	32	14	0	26	38	17	0	28	6	4	0	0	0	0	0	165
5:00 PM	1	53	15	0	33	31	17	0	23	3	5	0	0	0	0	0	181
5:15 PM	4	44	21	0	30	41	11	0	24	2	11	0	0	0	0	0	188
5:30 PM	1	35	27	0	29	36	18	0	21	7	3	0	0	0	0	0	177
5:45 PM	0	34	11	0	25	23	11	0	28	5	7	0	0	0	0	0	144
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	13	361	125	0	242	275	124	0	202	56	55	0	0	0	0	0	1453
	2.61%	72.34%	25.05%	0.00%	37.75%	42.90%	19.34%	0.00%	64.54%	17.89%	17.57%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	7	195	51	0	125	144	67	0	106	39	29	0	0	0	0	0	763
PEAK HR FACTOR :	0.350	0.728	0.708	0.000	0.694	0.900	0.838	0.000	0.828	0.750	0.725	0.000	0.000	0.000	0.000	0.000	0.840
		0.727				0.832				0.791							

National Data & Surveying Services

Intersection Turning Movement Count

Location: 18th Ave & Frontage Rd
City: Kingsburg
Control: 2-Way Stop (EB/WB)

Project ID: 20-07058-003
Date: 2/13/2020

Total

NS/EW Streets:	18th Ave				18th Ave				Frontage Rd				Frontage Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	0	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	17	29	0	0	0	73	23	0	0	0	3	0	6	2	20	0	173
7:15 AM	15	40	0	0	0	79	26	0	1	0	6	0	5	6	25	0	203
7:30 AM	26	81	0	0	0	86	21	0	2	0	4	0	11	6	27	0	264
7:45 AM	20	124	0	1	0	102	15	0	2	0	2	0	19	5	47	0	337
8:00 AM	14	71	0	0	0	99	15	0	1	0	3	0	14	2	19	0	238
8:15 AM	14	32	0	0	0	66	11	0	1	0	2	0	7	4	21	0	158
8:30 AM	5	27	0	0	0	84	6	0	3	0	4	0	7	3	20	0	159
8:45 AM	11	36	0	0	0	43	8	0	3	0	7	0	7	0	22	0	137
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	122	440	0	1	0	632	125	0	13	0	31	0	76	28	201	0	1669
	21.67%	78.15%	0.00%	0.18%	0.00%	83.49%	16.51%	0.00%	29.55%	0.00%	70.45%	0.00%	24.92%	9.18%	65.90%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	75	316	0	1	0	366	77	0	6	0	15	0	49	19	118	0	1042
PEAK HR FACTOR :	0.721	0.637	0.000	0.250	0.000	0.897	0.740	0.000	0.750	0.000	0.625	0.000	0.645	0.792	0.628	0.000	0.773
	0.676				0.947				0.750				0.655				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	0	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	17	83	0	0	0	63	22	0	1	0	6	0	15	8	53	0	268
4:15 PM	16	70	0	0	0	52	12	0	2	0	3	1	16	8	50	0	230
4:30 PM	7	53	0	0	0	81	12	0	0	0	5	1	13	4	42	0	218
4:45 PM	13	46	0	0	0	66	8	0	0	0	6	0	10	3	49	0	201
5:00 PM	5	73	0	0	0	64	14	0	0	0	5	0	15	6	42	0	224
5:15 PM	13	52	0	0	0	56	12	0	0	0	5	0	19	5	51	0	213
5:30 PM	9	45	0	0	0	62	13	0	2	0	7	0	13	2	42	0	195
5:45 PM	15	47	0	0	0	46	10	0	2	0	5	0	8	13	43	0	189
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	95	469	0	0	0	490	103	0	7	0	42	2	109	49	372	0	1738
	16.84%	83.16%	0.00%	0.00%	0.00%	82.63%	17.37%	0.00%	13.73%	0.00%	82.35%	3.92%	20.57%	9.25%	70.19%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	53	252	0	0	0	262	54	0	3	0	20	2	54	23	194	0	917
PEAK HR FACTOR :	0.779	0.759	0.000	0.000	0.000	0.809	0.614	0.000	0.375	0.000	0.833	0.500	0.844	0.719	0.915	0.000	0.855
	0.763				0.849				0.893				0.891				

National Data & Surveying Services

Intersection Turning Movement Count

Location: 18th Ave & Kern St/Ave 396
City: Kingsburg
Control: 2-Way Stop (EB/WB)

Project ID: 20-07058-002
Date: 2/13/2020

Total

NS/EW Streets:	18th Ave				18th Ave				Kern St/Ave 396				Kern St/Ave 396				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	33	16	0	0	77	1	0	0	0	1	0	18	0	5	0	151
7:15 AM	0	46	18	0	2	81	0	0	0	0	0	0	22	0	1	0	170
7:30 AM	1	93	17	0	2	95	1	0	0	0	1	0	15	0	10	0	235
7:45 AM	1	148	19	0	6	93	0	0	0	0	0	0	22	2	6	0	297
8:00 AM	0	74	22	0	5	98	0	0	0	0	0	0	18	1	7	0	225
8:15 AM	2	41	11	0	9	71	1	0	0	0	0	0	4	0	3	0	142
8:30 AM	4	36	11	0	4	75	3	0	0	0	0	0	15	2	4	0	154
8:45 AM	12	35	14	0	7	40	3	0	0	0	2	0	9	5	3	0	130
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	20	506	128	0	35	630	9	0	0	0	4	0	123	10	39	0	1504
	3.06%	77.37%	19.57%	0.00%	5.19%	93.47%	1.34%	0.00%	0.00%	0.00%	100.00%	0.00%	71.51%	5.81%	22.67%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	361	76	0	15	367	1	0	0	0	1	0	77	3	24	0	927
PEAK HR FACTOR :	0.500	0.610	0.864	0.000	0.625	0.936	0.250	0.000	0.000	0.000	0.250	0.000	0.875	0.375	0.600	0.000	0.780
			0.653				0.930				0.250				0.867		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	108	27	0	7	62	0	0	0	0	0	0	21	0	9	0	234
4:15 PM	1	95	28	0	6	56	0	0	0	0	0	0	7	0	6	0	199
4:30 PM	1	70	23	0	9	73	0	0	0	1	1	0	24	0	5	0	207
4:45 PM	0	75	18	0	5	60	0	0	0	0	0	0	11	0	9	0	178
5:00 PM	0	99	18	0	5	65	0	0	0	0	0	0	14	0	6	0	207
5:15 PM	0	92	13	0	11	58	0	0	0	0	0	0	12	0	3	0	189
5:30 PM	0	77	13	0	6	56	0	0	0	1	0	0	18	1	11	0	183
5:45 PM	1	75	14	0	8	42	1	0	2	0	1	0	12	0	10	0	166
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	3	691	154	0	57	472	1	0	2	2	2	0	119	1	59	0	1563
	0.35%	81.49%	18.16%	0.00%	10.75%	89.06%	0.19%	0.00%	33.33%	33.33%	33.33%	0.00%	66.48%	0.56%	32.96%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	2	348	96	0	27	251	0	0	0	1	1	0	63	0	29	0	818
PEAK HR FACTOR :	0.500	0.806	0.857	0.000	0.750	0.860	0.000	0.000	0.000	0.250	0.250	0.000	0.656	0.000	0.806	0.000	0.874
			0.826				0.848				0.250				0.767		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ave 394/SR 99 SB Off Ramp & Mehler St

City: Kingsburg

Control: 2-Way Stop (NB/EB)

Project ID: 20-07058-001

Date: 2/13/2020

Total

NS/EW Streets:	Ave 394/SR 99 SB Off Ramp				Ave 394/SR 99 SB Off Ramp				Mehler St				Mehler St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	0 NR	0 NU	0 SL	1 ST	1 SR	0 SU	0 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	8	0	0	0	0	19	4	0	0	0	11	0	0	0	0	0	42
7:15 AM	7	0	0	0	0	11	6	0	0	0	31	0	0	0	0	0	55
7:30 AM	11	0	0	0	0	22	1	0	0	0	34	0	0	0	0	0	68
7:45 AM	28	0	0	0	0	32	5	0	0	0	40	0	0	0	0	0	105
8:00 AM	22	0	0	0	0	16	2	0	0	0	21	0	0	0	0	0	61
8:15 AM	6	0	0	0	0	15	3	0	0	0	10	0	0	0	0	0	34
8:30 AM	3	0	0	0	0	20	3	0	0	0	12	0	0	0	0	0	38
8:45 AM	7	0	0	0	0	16	3	0	0	0	11	0	0	0	0	0	37
TOTAL VOLUMES :	NL 92	NT 0	NR 0	NU 0	SL 0	ST 151	SR 27	SU 0	EL 0	ET 0	ER 170	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 440
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0.00%	84.83%	15.17%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	68	0	0	0	0	81	14	0	0	0	126	0	0	0	0	0	289
PEAK HR FACTOR :	0.607	0.000	0.000	0.000	0.000	0.633	0.583	0.000	0.000	0.000	0.788	0.000	0.000	0.000	0.000	0.000	0.688
	0.607				0.642				0.788								
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	0 NR	0 NU	0 SL	1 ST	1 SR	0 SU	0 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	23	0	0	0	0	22	12	0	0	0	36	0	0	0	0	0	93
4:15 PM	19	0	0	0	0	18	10	0	0	0	20	0	0	0	0	0	67
4:30 PM	16	0	0	0	0	15	4	0	0	0	25	0	0	0	0	0	60
4:45 PM	17	0	0	0	0	19	3	0	0	0	17	0	0	0	0	0	56
5:00 PM	18	0	0	0	0	17	12	0	0	0	14	0	0	0	0	0	61
5:15 PM	15	0	0	0	0	20	3	0	0	0	17	0	0	0	0	0	55
5:30 PM	19	0	0	0	0	16	7	0	0	0	16	0	0	0	0	0	58
5:45 PM	11	0	0	0	0	20	12	0	0	0	21	0	0	0	0	0	64
TOTAL VOLUMES :	NL 138	NT 0	NR 0	NU 0	SL 0	ST 147	SR 63	SU 0	EL 0	ET 0	ER 166	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 514
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0.00%	70.00%	30.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	75	0	0	0	0	74	29	0	0	0	98	0	0	0	0	0	276
PEAK HR FACTOR :	0.815	0.000	0.000	0.000	0.000	0.841	0.604	0.000	0.000	0.000	0.681	0.000	0.000	0.000	0.000	0.000	0.742
	0.815				0.757				0.681								

APPENDIX C

SYNCHRO 10 (HCM 6th Edition) Worksheets

EXISTING WORKSHEETS

HCM 6th TWSC
1: 18th Avenue & Avenue 396

04/05/2020

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	1	77	3	24	2	361	76	15	367	1
Future Vol, veh/h	0	0	1	77	3	24	2	361	76	15	367	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	87	87	87	65	65	65	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	4	89	3	28	3	555	117	16	395	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1063	1106	396	1050	1048	614	396	0	0	672	0	0
Stage 1	428	428	-	620	620	-	-	-	-	-	-	-
Stage 2	635	678	-	430	428	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	200	210	651	204	227	490	1157	-	-	914	-	-
Stage 1	603	583	-	474	478	-	-	-	-	-	-	-
Stage 2	465	450	-	601	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	184	206	651	200	222	490	1157	-	-	914	-	-
Mov Cap-2 Maneuver	184	206	-	200	222	-	-	-	-	-	-	-
Stage 1	601	573	-	473	477	-	-	-	-	-	-	-
Stage 2	435	449	-	587	573	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.6		35.9		0		0.4	
HCM LOS	B		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1157	-	-	651	232	914	-
HCM Lane V/C Ratio	0.003	-	-	0.006	0.515	0.018	-
HCM Control Delay (s)	8.1	-	-	10.6	35.9	9	-
HCM Lane LOS	A	-	-	B	E	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.7	0.1	-

Intersection												
Int Delay, s/veh	6.9											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↰			↱			↰↱		↰	↱	
Traffic Vol, veh/h	76	316	0	0	366	77	6	0	15	49	19	118
Future Vol, veh/h	76	316	0	0	366	77	6	0	15	49	19	118
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	95	95	95	75	75	75	66	66	66
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	112	465	0	0	385	81	8	0	20	74	29	179
Major/Minor	Major1	Major2		Minor2			Minor1					
Conflicting Flow All	466	0	-	-	-	0	1219	1115	426	1125	1155	465
Stage 1	-	-	-	-	-	-	426	426	-	689	689	-
Stage 2	-	-	-	-	-	-	793	689	-	436	466	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1090	-	0	0	-	-	156	207	626	181	196	595
Stage 1	-	-	0	0	-	-	604	584	-	434	445	-
Stage 2	-	-	0	0	-	-	380	445	-	597	561	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1090	-	-	-	-	-	85	178	626	157	169	595
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	178	-	157	169	-
Stage 1	-	-	-	-	-	-	520	584	-	374	383	-
Stage 2	-	-	-	-	-	-	212	383	-	578	561	-
Approach	NB	SB		SE			NW					
HCM Control Delay, s	1.7	0		23.5			27.3					
HCM LOS				C			D					
Minor Lane/Major Mvmt	NBL	NBTNWLn1	NWLn2	SELn1	SBT	SBR						
Capacity (veh/h)	1090	-	157	441	222	-						
HCM Lane V/C Ratio	0.103	-	0.473	0.471	0.126	-						
HCM Control Delay (s)	8.7	0	47	20.2	23.5	-						
HCM Lane LOS	A	A	E	C	C	-						
HCM 95th %tile Q(veh)	0.3	-	2.2	2.5	0.4	-						

Intersection





Int Delay, s/veh 28.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	150	31	22	0	0	0	1	241	32	188	177	67
Future Vol, veh/h	150	31	22	0	0	0	1	241	32	188	177	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	62	62	62	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	165	34	24	0	0	0	2	389	52	214	201	76

Major/Minor	Minor2			Major1	Major2				
Conflicting Flow All	1086	1112	239	277	0	0	441	0	0
Stage 1	667	667	-	-	-	-	-	-	-
Stage 2	419	445	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	238	208	797	1280	-	-	1114	-	-
Stage 1	508	455	-	-	-	-	-	-	-
Stage 2	661	573	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	183	0	797	1280	-	-	1114	-	-
Mov Cap-2 Maneuver	183	0	-	-	-	-	-	-	-
Stage 1	391	0	-	-	-	-	-	-	-
Stage 2	661	0	-	-	-	-	-	-	-




Approach	EB	NB	SB
HCM Control Delay, s	141.2	0	3.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	203	1114	-	-
HCM Lane V/C Ratio	0.001	-	-	1.099	0.192	-	-
HCM Control Delay (s)	7.8	0	-	141.2	9	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	10.5	0.7	-	-

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	122	0	3	2	4	11	3	142	1	6	125	69
Future Vol, veh/h	122	0	3	2	4	11	3	142	1	6	125	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	71	71	71	81	81	81	69	69	69
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	254	0	6	3	6	15	4	175	1	9	181	100
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	443	433	231	436	483	176	281	0	0	176	0	0
Stage 1	249	249	-	184	184	-	-	-	-	-	-	-
Stage 2	194	184	-	252	299	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	523	514	806	529	482	865	1276	-	-	1394	-	-
Stage 1	753	699	-	815	746	-	-	-	-	-	-	-
Stage 2	805	746	-	750	664	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	505	508	806	521	477	865	1276	-	-	1394	-	-
Mov Cap-2 Maneuver	505	508	-	521	477	-	-	-	-	-	-	-
Stage 1	751	693	-	813	744	-	-	-	-	-	-	-
Stage 2	782	744	-	738	659	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	19.2		10.5			0.2			0.2			
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1276	-	-	510	682	1394	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.511	0.035	0.006	-	-				
HCM Control Delay (s)	7.8	0	-	19.2	10.5	7.6	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	2.9	0.1	0	-	-				

HCM 6th TWSC
6: Road 12 & Project Driveway 1

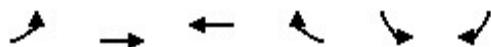
04/05/2020

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	274	199	0
Future Vol, veh/h	0	0	0	274	199	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	298	216	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	514	216	216	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	519	821	1348	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	519	821	1348	-	-	-
Mov Cap-2 Maneuver	519	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1348	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

HCM Unsignalized Intersection Capacity Analysis

3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (veh/h)	0	126	68	0	81	14
Future Volume (Veh/h)	0	126	68	0	81	14
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.61	0.61	0.64	0.64
Hourly flow rate (vph)	0	159	111	0	127	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	320	265	276	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	265	276	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	73	81	100	92	
cM capacity (veh/h)	506	589	580	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	159	111	149			
Volume Left	0	0	127			
Volume Right	0	0	22			
cSH	589	580	1617			
Volume to Capacity	0.27	0.19	0.08			
Queue Length 95th (ft)	27	18	6			
Control Delay (s)	13.4	12.7	6.4			
Lane LOS	B	B	A			
Approach Delay (s)	13.4	12.7	6.4			
Approach LOS	B	B				
Intersection Summary						
Average Delay		10.7				
Intersection Capacity Utilization		18.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM 6th TWSC
1: 18th Avenue & Avenue 396

04/05/2020




Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	1	1	63	0	29	2	348	96	27	251	0
Future Vol, veh/h	0	1	1	63	0	29	2	348	96	27	251	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	77	77	77	83	83	83	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	4	82	0	38	2	419	116	32	295	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	859	898	295	844	840	477	295	0	0	535	0	0
Stage 1	359	359	-	481	481	-	-	-	-	-	-	-
Stage 2	500	539	-	363	359	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	275	278	742	282	300	586	1261	-	-	1028	-	-
Stage 1	657	625	-	564	552	-	-	-	-	-	-	-
Stage 2	551	520	-	654	625	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	251	269	742	270	290	586	1261	-	-	1028	-	-
Mov Cap-2 Maneuver	251	269	-	270	290	-	-	-	-	-	-	-
Stage 1	656	606	-	563	551	-	-	-	-	-	-	-
Stage 2	515	519	-	626	606	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.3		22.4		0		0.8	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1261	-	-	395 325	1028	-	-
HCM Lane V/C Ratio	0.002	-	-	0.02 0.368	0.031	-	-
HCM Control Delay (s)	7.9	-	-	14.3 22.4	8.6	-	-
HCM Lane LOS	A	-	-	B C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 1.6	0.1	-	-

Intersection												
Int Delay, s/veh	5.4											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↰			↱			↰↱		↰	↱	
Traffic Vol, veh/h	53	252	0	0	262	54	5	0	20	54	23	194
Future Vol, veh/h	53	252	0	0	262	54	5	0	20	54	23	194
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	85	85	85	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	70	332	0	0	308	64	6	0	22	61	26	218
Major/Minor	Major1	Major2		Minor2		Minor1						
Conflicting Flow All	372	0	-	-	-	0	934	812	340	823	844	332
Stage 1	-	-	-	-	-	-	340	340	-	472	472	-
Stage 2	-	-	-	-	-	-	594	472	-	351	372	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1181	-	0	0	-	-	245	312	700	291	299	707
Stage 1	-	-	0	0	-	-	673	637	-	571	557	-
Stage 2	-	-	0	0	-	-	490	557	-	664	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1181	-	-	-	-	-	149	289	700	266	277	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	289	-	266	277	-
Stage 1	-	-	-	-	-	-	624	637	-	529	516	-
Stage 2	-	-	-	-	-	-	298	516	-	643	617	-
Approach	NB	SB		SE		NW						
HCM Control Delay, s	1.4	0		14.6		16.4						
HCM LOS				B		C						
Minor Lane/Major Mvmt	NBL	NBT	NWLn1	NWLn2	SELn1	SBT	SBR					
Capacity (veh/h)	1181	-	266	607	402	-	-					
HCM Lane V/C Ratio	0.059	-	0.228	0.402	0.07	-	-					
HCM Control Delay (s)	8.2	0	22.5	14.9	14.6	-	-					
HCM Lane LOS	A	A	C	B	B	-	-					
HCM 95th %tile Q(veh)	0.2	-	0.9	1.9	0.2	-	-					

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	39	29	0	0	0	7	195	51	125	144	67
Future Vol, veh/h	106	39	29	0	0	0	7	195	51	125	144	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	92	92	92	73	73	73	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	134	49	37	0	0	0	10	267	70	151	173	81
Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	838	873	214				254	0	0	337	0	0
Stage 1	516	516	-				-	-	-	-	-	-
Stage 2	322	357	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	335	287	823				1305	-	-	1217	-	-
Stage 1	597	533	-				-	-	-	-	-	-
Stage 2	732	627	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	283	0	823				1305	-	-	1217	-	-
Mov Cap-2 Maneuver	283	0	-				-	-	-	-	-	-
Stage 1	504	0	-				-	-	-	-	-	-
Stage 2	732	0	-				-	-	-	-	-	-
Approach	EB						NB			SB		
HCM Control Delay, s	35.5						0.2			3.1		
HCM LOS	E											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1305	-	-	329	1217	-	-					
HCM Lane V/C Ratio	0.007	-	-	0.669	0.124	-	-					
HCM Control Delay (s)	7.8	0	-	35.5	8.4	0	-					
HCM Lane LOS	A	A	-	E	A	A	-					
HCM 95th %tile Q(veh)	0	-	-	4.6	0.4	-	-					

HCM 6th TWSC
5: Road 12 & Avenue 392

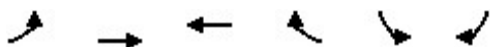
04/05/2020

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	63	0	0	1	2	14	3	178	3	10	121	39
Future Vol, veh/h	63	0	0	1	2	14	3	178	3	10	121	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	71	71	71	66	66	66	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	68	0	0	1	3	20	5	270	5	12	146	47
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	488	479	170	477	500	273	193	0	0	275	0	0
Stage 1	194	194	-	283	283	-	-	-	-	-	-	-
Stage 2	294	285	-	194	217	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	488	484	871	497	471	763	1374	-	-	1282	-	-
Stage 1	805	738	-	722	675	-	-	-	-	-	-	-
Stage 2	712	674	-	805	721	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	468	477	871	492	464	763	1374	-	-	1282	-	-
Mov Cap-2 Maneuver	468	477	-	492	464	-	-	-	-	-	-	-
Stage 1	802	730	-	719	672	-	-	-	-	-	-	-
Stage 2	688	671	-	796	713	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14		10.4		0.1		0.5					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1374	-	-	468	688	1282	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.145	0.035	0.009	-	-				
HCM Control Delay (s)	7.6	0	-	14	10.4	7.8	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-				

HCM Unsignalized Intersection Capacity Analysis

3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (veh/h)	0	98	75	0	74	29
Future Volume (Veh/h)	0	98	75	0	74	29
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.68	0.68	0.82	0.82	0.76	0.76
Hourly flow rate (vph)	0	144	91	0	97	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	258	213	232	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	258	213	232	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	78	85	100	94	
cM capacity (veh/h)	588	642	626	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	144	91	135			
Volume Left	0	0	97			
Volume Right	0	0	38			
cSH	642	626	1617			
Volume to Capacity	0.22	0.15	0.06			
Queue Length 95th (ft)	21	13	5			
Control Delay (s)	12.2	11.7	5.4			
Lane LOS	B	B	A			
Approach Delay (s)	12.2	11.7	5.4			
Approach LOS	B	B				
Intersection Summary						
Average Delay		9.6				
Intersection Capacity Utilization		17.7%		ICU Level of Service		A
Analysis Period (min)		15				

EXISTING PLUS PROJECT WORKSHEETS

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	1	77	3	24	2	396	76	15	422	1
Future Vol, veh/h	0	0	1	77	3	24	2	396	76	15	422	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	87	87	87	65	65	65	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	4	89	3	28	3	609	117	16	454	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1176	1219	455	1163	1161	668	455	0	0	726	0	0
Stage 1	487	487	-	674	674	-	-	-	-	-	-	-
Stage 2	689	732	-	489	487	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	167	179	603	171	194	456	1100	-	-	872	-	-
Stage 1	560	549	-	443	452	-	-	-	-	-	-	-
Stage 2	434	425	-	559	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	152	175	603	167	190	456	1100	-	-	872	-	-
Mov Cap-2 Maneuver	152	175	-	167	190	-	-	-	-	-	-	-
Stage 1	558	539	-	442	451	-	-	-	-	-	-	-
Stage 2	404	424	-	545	539	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	48.5	0	0.3
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1100	-	-	603	196	872	-
HCM Lane V/C Ratio	0.003	-	-	0.007	0.61	0.018	-
HCM Control Delay (s)	8.3	-	-	11	48.5	9.2	-
HCM Lane LOS	A	-	-	B	E	A	-
HCM 95th %tile Q(veh)	0	-	-	0	3.4	0.1	-

Intersection

Int Delay, s/veh 106.9

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↰			↰			↰		↰	↰	
Traffic Vol, veh/h	137	351	0	0	421	77	6	0	15	145	19	118
Future Vol, veh/h	137	351	0	0	421	77	6	0	15	145	19	118
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	95	95	95	75	75	75	66	66	66
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	201	516	0	0	443	81	8	0	20	220	29	179

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	524	0	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.227	-	-	-
Pot Cap-1 Maneuver	1038	-	0	0
Stage 1	-	-	0	0
Stage 2	-	-	0	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1038	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	2.6	0	43.1	\$ 417.5
HCM LOS			E	F

Minor Lane/Major Mvmt	NBL	NBTNWLn1NWLn2	SELn1	SBT	SBR
Capacity (veh/h)	1038	-	88	334	122
HCM Lane V/C Ratio	0.194	-	2.497	0.621	0.23
HCM Control Delay (s)	9.3	\$ 781.8	31.9	43.1	-
HCM Lane LOS	A	A	F	D	E
HCM 95th %tile Q(veh)	0.7	-	20.5	3.9	0.8

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	139.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔			↔	
Traffic Vol, veh/h	150	31	132	0	0	0	18	336	84	188	328	67
Future Vol, veh/h	150	31	132	0	0	0	18	336	84	188	328	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	62	62	62	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	165	34	145	0	0	0	29	542	135	214	373	76
Major/Minor	Minor2						Major1		Major2			
Conflicting Flow All	1507	1574	411				449	0	0	677	0	0
Stage 1	839	839	-				-	-	-	-	-	-
Stage 2	668	735	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 132	109	639				1106	-	-	910	-	-
Stage 1	422	380	-				-	-	-	-	-	-
Stage 2	508	424	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 86	0	639				1106	-	-	910	-	-
Mov Cap-2 Maneuver	~ 86	0	-				-	-	-	-	-	-
Stage 1	276	0	-				-	-	-	-	-	-
Stage 2	508	0	-				-	-	-	-	-	-
Approach	EB						NB		SB			
HCM Control Delay, s\$	687.6						0.3		3.3			
HCM LOS	F											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1106	-	-	145	910	-	-					
HCM Lane V/C Ratio	0.026	-	-	2.372	0.235	-	-					
HCM Control Delay (s)	8.3	0	-	\$ 687.6	10.2	0	-					
HCM Lane LOS	A	A	-	F	B	A	-					
HCM 95th %tile Q(veh)	0.1	-	-	29.3	0.9	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

HCM 6th TWSC
5: Road 12 & Avenue 392

04/05/2020

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	130	0	3	2	4	11	3	148	1	6	128	74
Future Vol, veh/h	130	0	3	2	4	11	3	148	1	6	128	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	71	71	71	81	81	81	69	69	69
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	271	0	6	3	6	15	4	183	1	9	186	107




Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	460	450	240	453	503	184	293	0	0	184	0	0
Stage 1	258	258	-	192	192	-	-	-	-	-	-	-
Stage 2	202	192	-	261	311	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	510	503	796	515	469	856	1263	-	-	1385	-	-
Stage 1	744	692	-	807	740	-	-	-	-	-	-	-
Stage 2	798	740	-	742	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	492	497	796	506	463	856	1263	-	-	1385	-	-
Mov Cap-2 Maneuver	492	497	-	506	463	-	-	-	-	-	-	-
Stage 1	741	686	-	804	737	-	-	-	-	-	-	-
Stage 2	774	737	-	730	651	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.1		10.6		0.2		0.2	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1263	-	-	496	668	1385	-
HCM Lane V/C Ratio	0.003	-	-	0.559	0.036	0.006	-
HCM Control Delay (s)	7.9	0	-	21.1	10.6	7.6	0
HCM Lane LOS	A	A	-	C	B	A	A
HCM 95th %tile Q(veh)	0	-	-	3.4	0.1	0	-

HCM 6th TWSC
6: Road 12 & Project Driveway 1

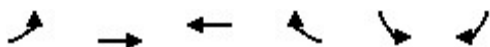
04/05/2020

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	164	9	14	274	199	261
Future Vol, veh/h	164	9	14	274	199	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	178	10	15	298	216	284
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	686	358	500	0	-	0
Stage 1	358	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	412	684	1059	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	405	684	1059	-	-	-
Mov Cap-2 Maneuver	405	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.7	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1059	-	414	-	-	
HCM Lane V/C Ratio	0.014	-	0.454	-	-	
HCM Control Delay (s)	8.4	0	20.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	2.3	-	-	

HCM Unsignalized Intersection Capacity Analysis

3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (veh/h)	0	154	85	0	164	14
Future Volume (Veh/h)	0	154	85	0	164	14
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.61	0.61	0.64	0.64
Hourly flow rate (vph)	0	195	139	0	256	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	592	523	534	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	592	523	534	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	49	63	100	84	
cM capacity (veh/h)	264	385	379	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	195	139	278			
Volume Left	0	0	256			
Volume Right	0	0	22			
cSH	385	379	1617			
Volume to Capacity	0.51	0.37	0.16			
Queue Length 95th (ft)	69	41	14			
Control Delay (s)	23.6	19.9	7.1			
Lane LOS	C	C	A			
Approach Delay (s)	23.6	19.9	7.1			
Approach LOS	C	C				
Intersection Summary						
Average Delay			15.3			
Intersection Capacity Utilization			24.7%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	1	1	63	0	29	2	387	96	27	283	0
Future Vol, veh/h	0	1	1	63	0	29	2	387	96	27	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	77	77	77	83	83	83	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	4	82	0	38	2	466	116	32	333	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	944	983	333	929	925	524	333	0	0	582	0	0
Stage 1	397	397	-	528	528	-	-	-	-	-	-	-
Stage 2	547	586	-	401	397	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	241	248	706	247	268	551	1221	-	-	987	-	-
Stage 1	627	602	-	532	526	-	-	-	-	-	-	-
Stage 2	519	495	-	624	602	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	219	240	706	236	259	551	1221	-	-	987	-	-
Mov Cap-2 Maneuver	219	240	-	236	259	-	-	-	-	-	-	-
Stage 1	626	583	-	531	525	-	-	-	-	-	-	-
Stage 2	483	494	-	596	583	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.3		26.1		0		0.8	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1221	-	-	358 288	987	-	-
HCM Lane V/C Ratio	0.002	-	-	0.022 0.415	0.032	-	-
HCM Control Delay (s)	8	-	-	15.3 26.1	8.8	-	-
HCM Lane LOS	A	-	-	C D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 1.9	0.1	-	-

Intersection												
Int Delay, s/veh	12.3											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↰			↱			↰↱		↰	↱	
Traffic Vol, veh/h	122	291	0	0	294	54	5	0	20	111	23	194
Future Vol, veh/h	122	291	0	0	294	54	5	0	20	111	23	194
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	85	85	85	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	161	383	0	0	346	64	6	0	22	125	26	218
Major/Minor	Major1	Major2		Minor2			Minor1					
Conflicting Flow All	410	0	-	-	-	0	1205	1083	378	1094	1115	383
Stage 1	-	-	-	-	-	-	378	378	-	705	705	-
Stage 2	-	-	-	-	-	-	827	705	-	389	410	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1143	-	0	0	-	-	160	216	667	191	207	662
Stage 1	-	-	0	0	-	-	642	613	-	426	438	-
Stage 2	-	-	0	0	-	-	364	438	-	633	594	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1143	-	-	-	-	-	82	177	667	159	170	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	177	-	159	170	-
Stage 1	-	-	-	-	-	-	527	613	-	350	360	-
Stage 2	-	-	-	-	-	-	186	360	-	612	594	-
Approach	NB	SB		SE			NW					
HCM Control Delay, s	2.6	0		19.6			39.6					
HCM LOS				C			E					
Minor Lane/Major Mvmt	NBL	NBTNWLn1	NWLn2	SELn1	SBT	SBR						
Capacity (veh/h)	1143	-	159	507	275	-						
HCM Lane V/C Ratio	0.14	-	0.784	0.481	0.102	-						
HCM Control Delay (s)	8.7	0	80.8	18.5	19.6	-						
HCM Lane LOS	A	A	F	C	C	-						
HCM 95th %tile Q(veh)	0.5	-	5	2.6	0.3	-						

Intersection





Int Delay, s/veh 36

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	106	39	94	0	0	0	27	303	110	125	233	67
Future Vol, veh/h	106	39	94	0	0	0	27	303	110	125	233	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	92	92	92	73	73	73	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	134	49	119	0	0	0	37	415	151	151	281	81

Major/Minor	Minor2			Major1	Major2				
Conflicting Flow All	1189	1264	322	362	0	0	566	0	0
Stage 1	624	624	-	-	-	-	-	-	-
Stage 2	565	640	-	-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	207	169	717	1191	-	-	1001	-	-
Stage 1	532	476	-	-	-	-	-	-	-
Stage 2	567	468	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	160	0	717	1191	-	-	1001	-	-
Mov Cap-2 Maneuver	160	0	-	-	-	-	-	-	-
Stage 1	411	0	-	-	-	-	-	-	-
Stage 2	567	0	-	-	-	-	-	-	-




Approach	EB	NB	SB
HCM Control Delay, s	163.2	0.5	2.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1191	-	-	252	1001	-	-
HCM Lane V/C Ratio	0.031	-	-	1.201	0.15	-	-
HCM Control Delay (s)	8.1	0	-	163.2	9.2	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	14.3	0.5	-	-

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	0	0	1	2	14	3	181	3	10	125	45
Future Vol, veh/h	68	0	0	1	2	14	3	181	3	10	125	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	71	71	71	66	66	66	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	73	0	0	1	3	20	5	274	5	12	151	54
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	500	491	178	489	516	277	205	0	0	279	0	0
Stage 1	202	202	-	287	287	-	-	-	-	-	-	-
Stage 2	298	289	-	202	229	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	480	477	862	488	461	759	1360	-	-	1278	-	-
Stage 1	798	732	-	718	673	-	-	-	-	-	-	-
Stage 2	709	671	-	798	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	460	470	862	483	454	759	1360	-	-	1278	-	-
Mov Cap-2 Maneuver	460	470	-	483	454	-	-	-	-	-	-	-
Stage 1	795	724	-	715	670	-	-	-	-	-	-	-
Stage 2	685	668	-	789	705	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.3		10.5		0.1		0.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1360	-	-	460	682	1278	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.159	0.035	0.009	-	-				
HCM Control Delay (s)	7.7	0	-	14.3	10.5	7.8	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0	-	-				

HCM 6th TWSC
6: Road 12 & Project Driveway 1

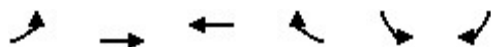
04/05/2020

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	187	10	8	253	173	154
Future Vol, veh/h	187	10	8	253	173	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	203	11	9	275	188	167
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	565	272	355	0	-	0
Stage 1	272	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	485	764	1198	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	481	764	1198	-	-	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.9	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1198	-	490	-	-	
HCM Lane V/C Ratio	0.007	-	0.437	-	-	
HCM Control Delay (s)	8	0	17.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	2.2	-	-	

HCM Unsignalized Intersection Capacity Analysis







3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘↘	
Traffic Volume (veh/h)	0	114	95	0	123	29
Future Volume (Veh/h)	0	114	95	0	123	29
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.68	0.68	0.82	0.82	0.76	0.76
Hourly flow rate (vph)	0	168	116	0	162	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	401	343	362	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	401	343	362	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	68	77	100	90	
cM capacity (veh/h)	426	520	507	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	168	116	200			
Volume Left	0	0	162			
Volume Right	0	0	38			
cSH	520	507	1617			
Volume to Capacity	0.32	0.23	0.10			
Queue Length 95th (ft)	35	22	8			
Control Delay (s)	15.2	14.2	6.2			
Lane LOS	C	B	A			
Approach Delay (s)	15.2	14.2	6.2			
Approach LOS	C	B				
Intersection Summary						
Average Delay			11.2			
Intersection Capacity Utilization			21.2%	ICU Level of Service		A
Analysis Period (min)			15			

NEAR-TERM WORKSHEETS

Intersection												
Int Delay, s/veh	31.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	147	3	41	2	414	101	21	441	1
Future Vol, veh/h	0	0	1	147	3	41	2	414	101	21	441	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	87	87	87	65	65	65	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	4	169	3	47	3	637	155	23	474	1
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1267	1319	475	1244	1242	715	475	0	0	792	0	0
Stage 1	521	521	-	721	721	-	-	-	-	-	-	-
Stage 2	746	798	-	523	521	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	145	156	588	~ 150	174	429	1082	-	-	824	-	-
Stage 1	537	530	-	417	430	-	-	-	-	-	-	-
Stage 2	404	397	-	535	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	124	151	588	~ 146	169	429	1082	-	-	824	-	-
Mov Cap-2 Maneuver	124	151	-	~ 146	169	-	-	-	-	-	-	-
Stage 1	535	515	-	416	429	-	-	-	-	-	-	-
Stage 2	356	396	-	517	515	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.2		217.4		0		0.4					
HCM LOS	B		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1082	-	-	588	171	824	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.007	1.284	0.027	-	-				
HCM Control Delay (s)	8.3	-	-	11.2	217.4	9.5	-	-				
HCM Lane LOS	A	-	-	B	F	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	12.6	0.1	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
2: 18th Avenue & SR 99 NB Off Ramp/Frontage Road

04/05/2020

Intersection												
Int Delay, s/veh	148.2											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	140	378	0	0	470	118	6	0	16	148	20	134
Future Vol, veh/h	140	378	0	0	470	118	6	0	16	148	20	134
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	95	95	95	75	75	75	66	66	66
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	206	556	0	0	495	124	8	0	21	224	30	203
Major/Minor	Major1		Major2			Minor2		Minor1				
Conflicting Flow All	619	0	-	-	-	0	1642	1525	557	1536	1587	556
Stage 1	-	-	-	-	-	-	557	557	-	968	968	-
Stage 2	-	-	-	-	-	-	1085	968	-	568	619	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	956	-	0	0	-	-	79	117	528	~ 94	107	529
Stage 1	-	-	0	0	-	-	513	511	-	304	331	-
Stage 2	-	-	0	0	-	-	261	331	-	506	479	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	956	-	-	-	-	-	26	80	528	~ 68	74	529
Mov Cap-2 Maneuver	-	-	-	-	-	-	26	80	-	~ 68	74	-
Stage 1	-	-	-	-	-	-	353	511	-	~ 209	228	-
Stage 2	-	-	-	-	-	-	96	228	-	486	479	-
Approach	NB		SB			SE		NW				
HCM Control Delay, s	2.6		0			69.3		\$ 596.3				
HCM LOS						F		F				
Minor Lane/Major Mvmt	NBL	NBT	NWLn1	NWLn2	SELn1	SBT	SBR					
Capacity (veh/h)	956	-	68	294	84	-	-					
HCM Lane V/C Ratio	0.215	-	3.298	0.794	0.349	-	-					
HCM Control Delay (s)	9.8	0	\$ 1163	51.6	69.3	-	-					
HCM Lane LOS	A	A	F	F	F	-	-					
HCM 95th %tile Q(veh)	0.8	-	23.2	6.3	1.3	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon				

Intersection												
Int Delay, s/veh	244											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	169	33	133	0	0	0	18	348	86	228	337	70
Future Vol, veh/h	169	33	133	0	0	0	18	348	86	228	337	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	62	62	62	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	186	36	146	0	0	0	29	561	139	259	383	80
Major/Minor	Minor2						Major1		Major2			
Conflicting Flow All	1630	1699	423				463	0	0	700	0	0
Stage 1	941	941	-				-	-	-	-	-	-
Stage 2	689	758	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 111	92	629				1093	-	-	892	-	-
Stage 1	378	341	-				-	-	-	-	-	-
Stage 2	497	414	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 64	0	629				1093	-	-	892	-	-
Mov Cap-2 Maneuver	~ 64	0	-				-	-	-	-	-	-
Stage 1	218	0	-				-	-	-	-	-	-
Stage 2	497	0	-				-	-	-	-	-	-
Approach	EB						NB		SB			
HCM Control Delay, \$	1197.6						0.3		3.8			
HCM LOS	F											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1093	-	-	106	892	-	-					
HCM Lane V/C Ratio	0.027	-	-	3.473	0.29	-	-					
HCM Control Delay (s)	8.4	0		\$ 1197.6	10.7	0	-					
HCM Lane LOS	A	A	-	F	B	A	-					
HCM 95th %tile Q(veh)	0.1	-	-	36.5	1.2	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon				

Intersection												
Int Delay, s/veh	8.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	136	0	3	2	4	12	3	155	1	6	135	78
Future Vol, veh/h	136	0	3	2	4	12	3	155	1	6	135	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	71	71	71	81	81	81	69	69	69
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	283	0	6	3	6	17	4	191	1	9	196	113

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	482	471	253	474	527	192	309	0	0	192	0	0
Stage 1	271	271	-	200	200	-	-	-	-	-	-	-
Stage 2	211	200	-	274	327	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	493	489	783	499	455	847	1246	-	-	1375	-	-
Stage 1	733	683	-	800	734	-	-	-	-	-	-	-
Stage 2	789	734	-	730	646	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	474	483	783	491	450	847	1246	-	-	1375	-	-
Mov Cap-2 Maneuver	474	483	-	491	450	-	-	-	-	-	-	-
Stage 1	730	678	-	797	731	-	-	-	-	-	-	-
Stage 2	764	731	-	718	641	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	23.4		10.6		0.1		0.2	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1246	-	-	478 663	1375	-	-
HCM Lane V/C Ratio	0.003	-	-	0.606 0.038	0.006	-	-
HCM Control Delay (s)	7.9	0	-	23.4 10.6	7.6	0	-
HCM Lane LOS	A	A	-	C B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	3.9 0.1	0	-	-

HCM 6th TWSC
6: Road 12 & Project Driveway 1

04/05/2020

Intersection

Int Delay, s/veh 4.1

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 164 9 14 288 209 261

Future Vol, veh/h 164 9 14 288 209 261

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 3 3 3 3 3 3

Mvmt Flow 178 10 15 313 227 284

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 712 369 511 0 - 0

Stage 1 369 - - - - -

Stage 2 343 - - - - -

Critical Hdwy 6.43 6.23 4.13 - - -

Critical Hdwy Stg 1 5.43 - - - - -

Critical Hdwy Stg 2 5.43 - - - - -

Follow-up Hdwy 3.527 3.327 2.227 - - -

Pot Cap-1 Maneuver 397 674 1049 - - -

Stage 1 697 - - - - -

Stage 2 716 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 390 674 1049 - - -

Mov Cap-2 Maneuver 390 - - - - -

Stage 1 685 - - - - -

Stage 2 716 - - - - -

Approach EB NB SB

HCM Control Delay, s 21.8 0.4 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1049 - 399 - -

HCM Lane V/C Ratio 0.015 - 0.471 - -

HCM Control Delay (s) 8.5 0 21.8 - -

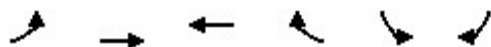
HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0 - 2.4 - -

HCM Unsignalized Intersection Capacity Analysis

3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	
Traffic Volume (veh/h)	0	160	89	0	179	15
Future Volume (Veh/h)	0	160	89	0	179	15
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.61	0.61	0.64	0.64
Hourly flow rate (vph)	0	203	146	0	280	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	644	572	583	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	644	572	583	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	43	58	100	83	
cM capacity (veh/h)	227	355	349	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	203	146	303			
Volume Left	0	0	280			
Volume Right	0	0	23			
cSH	355	349	1617			
Volume to Capacity	0.57	0.42	0.17			
Queue Length 95th (ft)	85	50	16			
Control Delay (s)	27.9	22.5	7.2			
Lane LOS	D	C	A			
Approach Delay (s)	27.9	22.5	7.2			
Approach LOS	D	C				
Intersection Summary						
Average Delay			17.1			
Intersection Capacity Utilization			25.9%		ICU Level of Service	
Analysis Period (min)			15			
			A			

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	1	1	111	0	41	2	405	176	47	296	0
Future Vol, veh/h	0	1	1	111	0	41	2	405	176	47	296	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	77	77	77	83	83	83	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	4	144	0	53	2	488	212	55	348	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1083	1162	348	1060	1056	594	348	0	0	700	0	0
Stage 1	458	458	-	598	598	-	-	-	-	-	-	-
Stage 2	625	704	-	462	458	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	194	194	693	201	224	503	1205	-	-	892	-	-
Stage 1	581	565	-	487	489	-	-	-	-	-	-	-
Stage 2	471	438	-	578	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	165	182	693	187	210	503	1205	-	-	892	-	-
Mov Cap-2 Maneuver	165	182	-	187	210	-	-	-	-	-	-	-
Stage 1	580	530	-	486	488	-	-	-	-	-	-	-
Stage 2	420	437	-	535	530	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.9		77.5		0		1.3	
HCM LOS	C		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1205	-	-	288	225	892	-
HCM Lane V/C Ratio	0.002	-	-	0.028	0.877	0.062	-
HCM Control Delay (s)	8	-	-	17.9	77.5	9.3	-
HCM Lane LOS	A	-	-	C	F	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	7	0.2	-

HCM 6th TWSC
2: 18th Avenue & SR 99 NB Off Ramp/Frontage Road

04/05/2020

Intersection												
Int Delay, s/veh	18.8											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	125	345	0	0	328	82	5	0	21	113	24	238
Future Vol, veh/h	125	345	0	0	328	82	5	0	21	113	24	238
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	85	85	85	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	164	454	0	0	386	96	6	0	24	127	27	267
Major/Minor	Major1	Major2			Minor2			Minor1				
Conflicting Flow All	482	0	-	-	-	0	1363	1216	434	1228	1264	454
Stage 1	-	-	-	-	-	-	434	434	-	782	782	-
Stage 2	-	-	-	-	-	-	929	782	-	446	482	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1075	-	0	0	-	-	124	180	620	154	169	604
Stage 1	-	-	0	0	-	-	598	579	-	386	403	-
Stage 2	-	-	0	0	-	-	320	403	-	590	552	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1075	-	-	-	-	-	50	143	620	~ 125	135	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	143	-	~ 125	135	-
Stage 1	-	-	-	-	-	-	476	579	-	307	321	-
Stage 2	-	-	-	-	-	-	130	321	-	568	552	-
Approach	NB	SB			SE			NW				
HCM Control Delay, s	2.4	0			26.8			63.9				
HCM LOS					D			F				
Minor Lane/Major Mvmt	NBL	NBTNWLn1	NWLn2	SELn1	SBT	SBR						
Capacity (veh/h)	1075	-	125	458	194	-	-					
HCM Lane V/C Ratio	0.153	-	1.016	0.643	0.151	-	-					
HCM Control Delay (s)	9	0	152.1	25.9	26.8	-	-					
HCM Lane LOS	A	A	F	D	D	-	-					
HCM 95th %tile Q(veh)	0.5	-	7	4.4	0.5	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon				

Intersection

Int Delay, s/veh 110.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	152	41	95	0	0	0	27	313	113	151	240	70
Future Vol, veh/h	152	41	95	0	0	0	27	313	113	151	240	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	92	92	92	73	73	73	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	192	52	120	0	0	0	37	429	155	182	289	84

Major/Minor	Minor2			Major1		Major2				
Conflicting Flow All	1276	1353	331		373	0	0	584	0	0
Stage 1	695	695	-		-	-	-	-	-	-
Stage 2	581	658	-		-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23		4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-		-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-		-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327		2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 183	149	708		1180	-	-	986	-	-
Stage 1	493	442	-		-	-	-	-	-	-
Stage 2	557	460	-		-	-	-	-	-	-
Platoon blocked, %						-	-		-	-
Mov Cap-1 Maneuver	~ 133	0	708		1180	-	-	986	-	-
Mov Cap-2 Maneuver	~ 133	0	-		-	-	-	-	-	-
Stage 1	358	0	-		-	-	-	-	-	-
Stage 2	557	0	-		-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	\$ 460	0.5	3.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1180	-	-	193	986	-	-
HCM Lane V/C Ratio	0.031	-	-	1.889	0.185	-	-
HCM Control Delay (s)	8.2	0	-	\$ 460	9.5	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	26.6	0.7	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: Road 12 & Avenue 392

04/05/2020

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	71	0	0	1	2	15	3	190	3	11	131	47
Future Vol, veh/h	71	0	0	1	2	15	3	190	3	11	131	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	71	71	71	66	66	66	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	0	0	1	3	21	5	288	5	13	158	57
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	526	516	187	514	542	291	215	0	0	293	0	0
Stage 1	213	213	-	301	301	-	-	-	-	-	-	-
Stage 2	313	303	-	213	241	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	461	461	852	469	446	746	1349	-	-	1263	-	-
Stage 1	787	724	-	706	663	-	-	-	-	-	-	-
Stage 2	696	662	-	787	704	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	440	454	852	463	439	746	1349	-	-	1263	-	-
Mov Cap-2 Maneuver	440	454	-	463	439	-	-	-	-	-	-	-
Stage 1	784	715	-	703	660	-	-	-	-	-	-	-
Stage 2	671	659	-	778	696	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.9		10.6		0.1		0.5					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1349	-	-	440	671	1263	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.174	0.038	0.01	-	-				
HCM Control Delay (s)	7.7	0	-	14.9	10.6	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0	-	-				

HCM 6th TWSC
6: Road 12 & Project Driveway 1

04/05/2020

Intersection

Int Delay, s/veh 4.6

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 187 10 8 266 182 154

Future Vol, veh/h 187 10 8 266 182 154

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 3 3 3 3 3 3

Mvmt Flow 203 11 9 289 198 167

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 589 282 365 0 - 0

Stage 1 282 - - - - -

Stage 2 307 - - - - -

Critical Hdwy 6.43 6.23 4.13 - - -

Critical Hdwy Stg 1 5.43 - - - - -

Critical Hdwy Stg 2 5.43 - - - - -

Follow-up Hdwy 3.527 3.327 2.227 - - -

Pot Cap-1 Maneuver 469 755 1188 - - -

Stage 1 763 - - - - -

Stage 2 744 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 465 755 1188 - - -

Mov Cap-2 Maneuver 465 - - - - -

Stage 1 756 - - - - -

Stage 2 744 - - - - -

Approach EB NB SB

HCM Control Delay, s 18.7 0.2 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1188 - 474 - -

HCM Lane V/C Ratio 0.007 - 0.452 - -

HCM Control Delay (s) 8.1 0 18.7 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0 - 2.3 - -

HCM Unsignalized Intersection Capacity Analysis







3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (veh/h)	0	119	98	0	167	30
Future Volume (Veh/h)	0	119	98	0	167	30
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.68	0.68	0.82	0.82	0.76	0.76
Hourly flow rate (vph)	0	175	120	0	220	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	520	460	479	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	520	460	479	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	59	71	100	86	
cM capacity (veh/h)	326	429	418	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	175	120	259			
Volume Left	0	0	220			
Volume Right	0	0	39			
cSH	429	418	1617			
Volume to Capacity	0.41	0.29	0.14			
Queue Length 95th (ft)	49	29	12			
Control Delay (s)	19.0	17.0	6.6			
Lane LOS	C	C	A			
Approach Delay (s)	19.0	17.0	6.6			
Approach LOS	C	C				
Intersection Summary						
Average Delay		12.8				
Intersection Capacity Utilization		24.0%		ICU Level of Service		A
Analysis Period (min)		15				

CUMULATIVE YEAR 2042 WORKSHEETS

Intersection												
Int Delay, s/veh	119.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	199	5	57	3	621	152	31	632	2
Future Vol, veh/h	0	0	2	199	5	57	3	621	152	31	632	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	2	216	5	62	3	675	165	34	687	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1553	1602	688	1521	1521	758	689	0	0	840	0	0
Stage 1	756	756	-	764	764	-	-	-	-	-	-	-
Stage 2	797	846	-	757	757	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	92	105	445	~ 97	118	405	901	-	-	791	-	-
Stage 1	399	415	-	395	411	-	-	-	-	-	-	-
Stage 2	379	377	-	398	414	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	72	100	445	~ 93	113	405	901	-	-	791	-	-
Mov Cap-2 Maneuver	72	100	-	~ 93	113	-	-	-	-	-	-	-
Stage 1	398	397	-	394	410	-	-	-	-	-	-	-
Stage 2	316	376	-	379	396	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	13.1		\$ 776.5			0			0.5			
HCM LOS	B		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	901	-	-	445	112	791	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.005	2.533	0.043	-	-				
HCM Control Delay (s)	9	-	-	13.1	\$ 776.5	9.8	-	-				
HCM Lane LOS	A	-	-	B	F	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	25.6	0.1	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon				

Intersection

Int Delay, s/veh 46.5

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↰			↱			↰↱		↰	↱	
Traffic Vol, veh/h	131	555	0	0	660	170	10	0	26	84	33	213
Future Vol, veh/h	131	555	0	0	660	170	10	0	26	84	33	213
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	142	603	0	0	717	185	11	0	28	91	36	232

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	902	0	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.227	-	-	-
Pot Cap-1 Maneuver	749	-	0	0
Stage 1	-	-	0	0
Stage 2	-	-	0	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	749	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	2.1	0	254.7	233
HCM LOS			F	F

Minor Lane/Major Mvmt	NBL	NBTNWLn1NWLn2	SELn1	SBT	SBR
Capacity (veh/h)	749	-	51	247	43
HCM Lane V/C Ratio	0.19	-	1.79	1.083	0.91
HCM Control Delay (s)	10.9	0	550.9	124.4	254.7
HCM Lane LOS	B	A	F	F	F
HCM 95th %tile Q(veh)	0.7	-	8.9	11.4	3.6

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	578.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	269	53	38	0	0	0	2	415	55	354	305	115
Future Vol, veh/h	269	53	38	0	0	0	2	415	55	354	305	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	292	58	41	0	0	0	2	451	60	385	332	125
Major/Minor	Minor2						Major1		Major2			
Conflicting Flow All	1650	1680	395				457	0	0	511	0	0
Stage 1	1165	1165	-				-	-	-	-	-	-
Stage 2	485	515	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 108	94	652				1099	-	-	1049	-	-
Stage 1	295	267	-				-	-	-	-	-	-
Stage 2	617	533	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 54	0	652				1099	-	-	1049	-	-
Mov Cap-2 Maneuver	~ 54	0	-				-	-	-	-	-	-
Stage 1	~ 147	0	-				-	-	-	-	-	-
Stage 2	617	0	-				-	-	-	-	-	-
Approach	EB						NB		SB			
HCM Control Delay, \$	2568.7						0		4.8			
HCM LOS	F											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1099	-	-	61	1049	-	-					
HCM Lane V/C Ratio	0.002	-	-	6.415	0.367	-	-					
HCM Control Delay (s)	8.3	0		\$ 2568.7	10.4	0	-					
HCM Lane LOS	A	A	-	F	B	A	-					
HCM 95th %tile Q(veh)	0	-	-	44.6	1.7	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon				

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	210	0	5	3	7	19	5	244	2	10	215	119
Future Vol, veh/h	210	0	5	3	7	19	5	244	2	10	215	119
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	228	0	5	3	8	21	5	265	2	11	234	129

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	612	598	299	599	661	266	363	0	0	267	0	0
Stage 1	321	321	-	276	276	-	-	-	-	-	-	-
Stage 2	291	277	-	323	385	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	404	414	738	412	381	770	1190	-	-	1291	-	-
Stage 1	689	650	-	728	680	-	-	-	-	-	-	-
Stage 2	715	679	-	687	609	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	382	407	738	404	375	770	1190	-	-	1291	-	-
Mov Cap-2 Maneuver	382	407	-	404	375	-	-	-	-	-	-	-
Stage 1	686	643	-	724	677	-	-	-	-	-	-	-
Stage 2	685	676	-	674	602	-	-	-	-	-	-	-

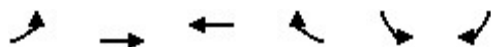
Approach	EB		WB		NB		SB	
HCM Control Delay, s	27.6		11.7		0.2		0.2	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1190	-	-	386	571	1291	-
HCM Lane V/C Ratio	0.005	-	-	0.605	0.055	0.008	-
HCM Control Delay (s)	8	0	-	27.6	11.7	7.8	0
HCM Lane LOS	A	A	-	D	B	A	A
HCM 95th %tile Q(veh)	0	-	-	3.8	0.2	0	-

HCM Unsignalized Intersection Capacity Analysis

3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	
Traffic Volume (veh/h)	0	217	117	0	150	24
Future Volume (Veh/h)	0	217	117	0	150	24
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	236	127	0	163	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	402	339	352	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402	339	352	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	55	75	100	90	
cM capacity (veh/h)	417	522	514	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	236	127	189			
Volume Left	0	0	163			
Volume Right	0	0	26			
cSH	522	514	1617			
Volume to Capacity	0.45	0.25	0.10			
Queue Length 95th (ft)	58	24	8			
Control Delay (s)	17.5	14.3	6.6			
Lane LOS	C	B	A			
Approach Delay (s)	17.5	14.3	6.6			
Approach LOS	C	B				
Intersection Summary						
Average Delay			13.0			
Intersection Capacity Utilization			27.9%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection												
Int Delay, s/veh	57.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	2	2	153	0	61	3	599	240	65	432	0
Future Vol, veh/h	0	2	2	153	0	61	3	599	240	65	432	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	2	2	166	0	66	3	651	261	71	470	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1433	1530	470	1402	1400	782	470	0	0	912	0	0
Stage 1	612	612	-	788	788	-	-	-	-	-	-	-
Stage 2	821	918	-	614	612	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	111	116	591	~ 117	140	393	1086	-	-	743	-	-
Stage 1	479	482	-	383	401	-	-	-	-	-	-	-
Stage 2	367	349	-	477	482	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	85	105	591	~ 106	126	393	1086	-	-	743	-	-
Mov Cap-2 Maneuver	85	105	-	~ 106	126	-	-	-	-	-	-	-
Stage 1	478	436	-	382	400	-	-	-	-	-	-	-
Stage 2	304	348	-	428	436	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.7	\$ 417.4	0	1.4
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1086	-	-	178 134	743	-	-
HCM Lane V/C Ratio	0.003	-	-	0.024 1.736	0.095	-	-
HCM Control Delay (s)	8.3	-	-	25.7\$ 417.4	10.4	-	-
HCM Lane LOS	A	-	-	D F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 17.4	0.3	-	-




Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	32.8											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↰			↱			↰		↱	↰	↱
Traffic Vol, veh/h	91	475	0	0	471	118	9	0	34	93	40	368
Future Vol, veh/h	91	475	0	0	471	118	9	0	34	93	40	368
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	99	516	0	0	512	128	10	0	37	101	43	400

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	640	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.227	-	-	-
Pot Cap-1 Maneuver	939	-	0	0
Stage 1	-	-	0	0
Stage 2	-	-	0	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	939	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	1.5	0	109.3	100.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBL	NBTNWLn1NWLn2	SELn1	SBT	SBR
Capacity (veh/h)	939	-	112	418	76
HCM Lane V/C Ratio	0.105	-	0.903	1.061	0.615
HCM Control Delay (s)	9.3	0	131.6	92.9	109.3
HCM Lane LOS	A	A	F	F	F
HCM 95th %tile Q(veh)	0.4	-	5.5	14.6	2.7

Intersection												
Int Delay, s/veh	187											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	223	67	50	0	0	0	12	336	88	235	248	115
Future Vol, veh/h	223	67	50	0	0	0	12	336	88	235	248	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	242	73	54	0	0	0	13	365	96	255	270	125
Major/Minor	Minor2						Major1		Major2			
Conflicting Flow All	1282	1330	333				395	0	0	461	0	0
Stage 1	843	843	-				-	-	-	-	-	-
Stage 2	439	487	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 182	154	706				1158	-	-	1095	-	-
Stage 1	420	378	-				-	-	-	-	-	-
Stage 2	648	549	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 125	0	706				1158	-	-	1095	-	-
Mov Cap-2 Maneuver	~ 125	0	-				-	-	-	-	-	-
Stage 1	288	0	-				-	-	-	-	-	-
Stage 2	648	0	-				-	-	-	-	-	-
Approach	EB						NB		SB			
HCM Control Delay, s\$	749.3						0.2		3.6			
HCM LOS	F											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1158	-	-	147	1095	-	-					
HCM Lane V/C Ratio	0.011	-	-	2.514	0.233	-	-					
HCM Control Delay (s)	8.1	0	-	\$ 749.3	9.3	0	-					
HCM Lane LOS	A	A	-	F	A	A	-					
HCM 95th %tile Q(veh)	0	-	-	32.1	0.9	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined			*: All major volume in platoon			

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	108	0	0	2	3	24	5	306	5	17	208	67
Future Vol, veh/h	108	0	0	2	3	24	5	306	5	17	208	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	117	0	0	2	3	26	5	333	5	18	226	73

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	659	647	263	645	681	336	299	0	0	338	0	0
Stage 1	299	299	-	346	346	-	-	-	-	-	-	-
Stage 2	360	348	-	299	335	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	376	388	773	384	371	704	1256	-	-	1216	-	-
Stage 1	708	664	-	668	634	-	-	-	-	-	-	-
Stage 2	656	632	-	708	641	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	353	379	773	377	362	704	1256	-	-	1216	-	-
Mov Cap-2 Maneuver	353	379	-	377	362	-	-	-	-	-	-	-
Stage 1	704	652	-	665	631	-	-	-	-	-	-	-
Stage 2	625	629	-	695	629	-	-	-	-	-	-	-

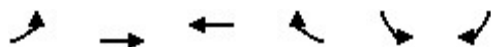
Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.2		11.2		0.1		0.5	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1256	-	-	353 608	1216	-	-
HCM Lane V/C Ratio	0.004	-	-	0.333 0.052 0.015	-	-	-
HCM Control Delay (s)	7.9	0	-	20.2 11.2 8	0	-	-
HCM Lane LOS	A	A	-	C B A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.4 0.2 0	-	-	-







HCM Unsignalized Intersection Capacity Analysis







3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020







Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (veh/h)	0	169	129	0	168	50
Future Volume (Veh/h)	0	169	129	0	168	50
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	184	140	0	183	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	463	393	420	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	463	393	420	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	62	70	100	89	
cM capacity (veh/h)	357	480	464	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	184	140	237			
Volume Left	0	0	183			
Volume Right	0	0	54			
cSH	480	464	1617			
Volume to Capacity	0.38	0.30	0.11			
Queue Length 95th (ft)	44	31	10			
Control Delay (s)	17.1	16.1	6.0			
Lane LOS	C	C	A			
Approach Delay (s)	17.1	16.1	6.0			
Approach LOS	C	C				
Intersection Summary						
Average Delay		12.1				
Intersection Capacity Utilization		27.9%		ICU Level of Service		A
Analysis Period (min)		15				

Intersection												
Int Delay, s/veh	142.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	199	5	57	3	656	152	31	687	2
Future Vol, veh/h	0	0	2	199	5	57	3	656	152	31	687	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	2	216	5	62	3	713	165	34	747	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1651	1700	748	1619	1619	796	749	0	0	878	0	0
Stage 1	816	816	-	802	802	-	-	-	-	-	-	-
Stage 2	835	884	-	817	817	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	78	92	411	~ 82	103	385	855	-	-	765	-	-
Stage 1	369	389	-	376	395	-	-	-	-	-	-	-
Stage 2	361	362	-	369	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	60	88	411	~ 79	98	385	855	-	-	765	-	-
Mov Cap-2 Maneuver	60	88	-	~ 79	98	-	-	-	-	-	-	-
Stage 1	368	372	-	374	393	-	-	-	-	-	-	-
Stage 2	298	361	-	351	372	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13.8		\$ 975.8		0		0.4					
HCM LOS	B		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	855	-	-	411	96	765	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.005	2.955	0.044	-	-				
HCM Control Delay (s)	9.2	-	-	13.8	\$ 975.8	9.9	-	-				
HCM Lane LOS	A	-	-	B	F	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	27.4	0.1	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				




Intersection												
Int Delay, s/veh	285.6											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	191	590	0	0	715	170	10	0	26	181	33	213
Future Vol, veh/h	191	590	0	0	715	170	10	0	26	181	33	213
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	208	641	0	0	777	185	11	0	28	197	36	232
Major/Minor	Major1		Major2		Minor2		Minor1					
Conflicting Flow All	962	0	-	-	-	0	2061	1927	870	1941	2019	641
Stage 1	-	-	-	-	-	-	870	870	-	1057	1057	-
Stage 2	-	-	-	-	-	-	1191	1057	-	884	962	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	711	-	0	0	-	-	40	66	349	~ 49	58	473
Stage 1	-	-	0	0	-	-	345	367	-	271	301	-
Stage 2	-	-	0	0	-	-	228	301	-	339	333	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	711	-	-	-	-	-	-	36	349	~ 29	~ 32	473
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	36	-	~ 29	~ 32	-
Stage 1	-	-	-	-	-	-	188	367	-	~ 148	164	-
Stage 2	-	-	-	-	-	-	50	164	-	312	333	-
Approach	NB		SB		SE		NW					
HCM Control Delay, s	3		0				\$ 1418.3					
HCM LOS							F					
Minor Lane/Major Mvmt	NBL	NBT	NWLn1	NWLn2	SELn1	SBT	SBR					
Capacity (veh/h)	711	-	29	166	-	-	-					
HCM Lane V/C Ratio	0.292	-	6.784	1.611	-	-	-					
HCM Control Delay (s)	12.1	\$ 2870.2	\$ 350.1		-	-	-					
HCM Lane LOS	B	A	F	F	-	-	-					
HCM 95th %tile Q(veh)	1.2	-	24	18.2	-	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	1563											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	269	53	148	0	0	0	19	510	107	354	456	115
Future Vol, veh/h	269	53	148	0	0	0	19	510	107	354	456	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	292	58	161	0	0	0	21	554	116	385	496	125
Major/Minor	Minor2						Major1		Major2			
Conflicting Flow All	1983	2041	559				621	0	0	670	0	0
Stage 1	1329	1329	-				-	-	-	-	-	-
Stage 2	654	712	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 67	~ 56	527				955	-	-	916	-	-
Stage 1	~ 246	223	-				-	-	-	-	-	-
Stage 2	515	434	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 22	0	527				955	-	-	916	-	-
Mov Cap-2 Maneuver	~ 22	0	-				-	-	-	-	-	-
Stage 1	~ 82	0	-				-	-	-	-	-	-
Stage 2	515	0	-				-	-	-	-	-	-
Approach	EB						NB		SB			
HCM Control Delay, \$	6745.1						0.3		4.5			
HCM LOS	F											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	955	-	-	33	916	-	-					
HCM Lane V/C Ratio	0.022	-	-	15.481	0.42	-	-					
HCM Control Delay (s)	8.9	0		\$ 6745.1	11.7	0	-					
HCM Lane LOS	A	A	-	F	B	A	-					
HCM 95th %tile Q(veh)	0.1	-	-	62.8	2.1	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	8.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	218	0	5	3	7	19	5	250	2	10	219	124
Future Vol, veh/h	218	0	5	3	7	19	5	250	2	10	219	124
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	237	0	5	3	8	21	5	272	2	11	238	135
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	626	612	306	613	678	273	373	0	0	274	0	0
Stage 1	328	328	-	283	283	-	-	-	-	-	-	-
Stage 2	298	284	-	330	395	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	395	407	732	403	373	763	1180	-	-	1283	-	-
Stage 1	683	645	-	722	675	-	-	-	-	-	-	-
Stage 2	709	675	-	681	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	374	400	732	395	367	763	1180	-	-	1283	-	-
Mov Cap-2 Maneuver	374	400	-	395	367	-	-	-	-	-	-	-
Stage 1	680	638	-	718	672	-	-	-	-	-	-	-
Stage 2	679	672	-	669	596	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	30.1		11.8		0.2		0.2					
HCM LOS	D		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1180	-	-	378	562	1283	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.641	0.056	0.008	-	-				
HCM Control Delay (s)	8.1	0	-	30.1	11.8	7.8	0	-				
HCM Lane LOS	A	A	-	D	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	4.3	0.2	0	-	-				

HCM 6th TWSC
6: Road 12 & Project Driveway 1

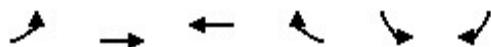
04/05/2020

Intersection						
Int Delay, s/veh	7.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	164	9	14	472	343	261
Future Vol, veh/h	164	9	14	472	343	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	178	10	15	513	373	284
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1058	515	657	0	-	0
Stage 1	515	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	248	558	926	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	242	558	926	-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	53.5	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	926	-	249	-	-	
HCM Lane V/C Ratio	0.016	-	0.755	-	-	
HCM Control Delay (s)	9	0	53.5	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.1	-	5.4	-	-	







HCM Unsignalized Intersection Capacity Analysis

3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp

04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	
Traffic Volume (veh/h)	0	244	134	0	233	24
Future Volume (Veh/h)	0	244	134	0	233	24
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	265	146	0	253	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	592	519	532	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	592	519	532	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	32	62	100	84	
cM capacity (veh/h)	260	388	381	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	265	146	279			
Volume Left	0	0	253			
Volume Right	0	0	26			
cSH	388	381	1617			
Volume to Capacity	0.68	0.38	0.16			
Queue Length 95th (ft)	123	44	14			
Control Delay (s)	32.1	20.2	7.0			
Lane LOS	D	C	A			
Approach Delay (s)	32.1	20.2	7.0			
Approach LOS	D	C				
Intersection Summary						
Average Delay			19.4			
Intersection Capacity Utilization			33.9%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection												
Int Delay, s/veh	69.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	2	153	0	61	3	639	240	65	465	0
Future Vol, veh/h	0	2	2	153	0	61	3	639	240	65	465	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	2	2	166	0	66	3	695	261	71	505	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1512	1609	505	1481	1479	826	505	0	0	956	0	0
Stage 1	647	647	-	832	832	-	-	-	-	-	-	-
Stage 2	865	962	-	649	647	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	98	104	565	~ 103	125	370	1055	-	-	715	-	-
Stage 1	458	465	-	362	383	-	-	-	-	-	-	-
Stage 2	347	333	-	457	465	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	74	93	565	~ 93	112	370	1055	-	-	715	-	-
Mov Cap-2 Maneuver	74	93	-	~ 93	112	-	-	-	-	-	-	-
Stage 1	457	419	-	361	382	-	-	-	-	-	-	-
Stage 2	284	332	-	408	419	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	28.1		\$ 527.6		0		1.3					
HCM LOS	D		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1055	-	-	160	118	715	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.027	1.971	0.099	-	-				
HCM Control Delay (s)	8.4	-	-	28.1\$	527.6	10.6	-	-				
HCM Lane LOS	A	-	-	D	F	B	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	18.9	0.3	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	114.8											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	160	514	0	0	503	118	9	0	34	150	40	368
Future Vol, veh/h	160	514	0	0	503	118	9	0	34	150	40	368
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	174	559	0	0	547	128	10	0	37	163	43	400
Major/Minor	Major1	Major2		Minor2		Minor1						
Conflicting Flow All	675	0	-	-	-	0	1740	1518	611	1537	1582	559
Stage 1	-	-	-	-	-	-	611	611	-	907	907	-
Stage 2	-	-	-	-	-	-	1129	907	-	630	675	-
Critical Hdwy	4.13	-	-	-	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	-	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	912	-	0	0	-	-	68	118	492	~ 94	108	527
Stage 1	-	-	0	0	-	-	479	483	-	329	353	-
Stage 2	-	-	0	0	-	-	247	353	-	468	452	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	912	-	-	-	-	-	~ 7	85	492	~ 68	78	527
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 7	85	-	~ 68	78	-
Stage 1	-	-	-	-	-	-	346	483	-	238	255	-
Stage 2	-	-	-	-	-	-	36	255	-	433	452	-
Approach	NB	SB		SE		NW						
HCM Control Delay, s	2.3	0		\$ 512.1		\$ 347.8						
HCM LOS				F		F						
Minor Lane/Major Mvmt	NBL	NBTNWLn1	NWLn2	SELn1	SBT	SBR						
Capacity (veh/h)	912	-	68	337	32	-	-					
HCM Lane V/C Ratio	0.191	-	2.398	1.316	1.461	-	-					
HCM Control Delay (s)	9.9	0\$ 767.4	193.5\$ 512.1		-	-						
HCM Lane LOS	A	A	F	F	F	-	-					
HCM 95th %tile Q(veh)	0.7	-	15.8	21.2	5.2	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	374											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	223	67	115	0	0	0	32	444	147	235	337	115
Future Vol, veh/h	223	67	115	0	0	0	32	444	147	235	337	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	242	73	125	0	0	0	35	483	160	255	366	125
Major/Minor	Minor2						Major1		Major2			
Conflicting Flow All	1572	1652	429				491	0	0	643	0	0
Stage 1	939	939	-				-	-	-	-	-	-
Stage 2	633	713	-				-	-	-	-	-	-
Critical Hdwy	6.43	6.53	6.23				4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327				2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 121	98	624				1067	-	-	937	-	-
Stage 1	379	341	-				-	-	-	-	-	-
Stage 2	527	434	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 71	0	624				1067	-	-	937	-	-
Mov Cap-2 Maneuver	~ 71	0	-				-	-	-	-	-	-
Stage 1	~ 222	0	-				-	-	-	-	-	-
Stage 2	527	0	-				-	-	-	-	-	-
Approach	EB						NB		SB			
HCM Control Delay, s \$ 1577							0.4		3.5			
HCM LOS	F											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1067	-	-	102	937	-	-					
HCM Lane V/C Ratio	0.033	-	-	4.316	0.273	-	-					
HCM Control Delay (s)	8.5	0	-\$ 1577	10.3	0	-						
HCM Lane LOS	A	A	-	F	B	A	-					
HCM 95th %tile Q(veh)	0.1	-	-	45.9	1.1	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	113	0	0	2	3	24	5	310	5	17	212	73
Future Vol, veh/h	113	0	0	2	3	24	5	310	5	17	212	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	123	0	0	2	3	26	5	337	5	18	230	79




Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	670	658	270	656	695	340	309	0	0	342	0	0
Stage 1	306	306	-	350	350	-	-	-	-	-	-	-
Stage 2	364	352	-	306	345	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	369	383	766	377	365	700	1246	-	-	1211	-	-
Stage 1	702	660	-	664	631	-	-	-	-	-	-	-
Stage 2	653	630	-	702	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	346	374	766	371	357	700	1246	-	-	1211	-	-
Mov Cap-2 Maneuver	346	374	-	371	357	-	-	-	-	-	-	-
Stage 1	698	648	-	661	628	-	-	-	-	-	-	-
Stage 2	622	627	-	689	623	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21	11.3	0.1	0.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1246	-	-	346 603	1211	-	-
HCM Lane V/C Ratio	0.004	-	-	0.355 0.052	0.015	-	-
HCM Control Delay (s)	7.9	0	-	21 11.3	8	0	-
HCM Lane LOS	A	A	-	C B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.6 0.2	0	-	-

HCM 6th TWSC
6: Road 12 & Project Driveway 1

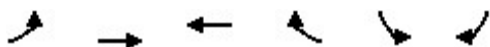
04/05/2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	187	10	8	436	298	154
Future Vol, veh/h	187	10	8	436	298	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	203	11	9	474	324	167
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	900	408	491	0	-	0
Stage 1	408	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	308	641	1067	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	305	641	1067	-	-	-
Mov Cap-2 Maneuver	305	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	38.1	0.2		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1067	-	313	-	-	
HCM Lane V/C Ratio	0.008	-	0.684	-	-	
HCM Control Delay (s)	8.4	0	38.1	-	-	
HCM Lane LOS	A	A	E	-	-	
HCM 95th %tile Q(veh)	0	-	4.7	-	-	

HCM Unsignalized Intersection Capacity Analysis








3: Mehlert Street/Avenue 394 & SR 99 SB Off Ramp








04/05/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (veh/h)	0	185	149	0	217	50
Future Volume (Veh/h)	0	185	149	0	217	50
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	201	162	0	236	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	580	499	526	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	580	499	526	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	50	58	100	85	
cM capacity (veh/h)	257	403	389	1082	1617	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	201	162	290			
Volume Left	0	0	236			
Volume Right	0	0	54			
cSH	403	389	1617			
Volume to Capacity	0.50	0.42	0.15			
Queue Length 95th (ft)	67	50	13			
Control Delay (s)	22.5	20.7	6.4			
Lane LOS	C	C	A			
Approach Delay (s)	22.5	20.7	6.4			
Approach LOS	C	C				
Intersection Summary						
Average Delay			14.9			
Intersection Capacity Utilization			31.5%	ICU Level of Service		A
Analysis Period (min)			15			

MITIGATION WORKSHEETS




















Intersection												
Int Delay, s/veh	21.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	147	3	41	2	414	101	21	441	1
Future Vol, veh/h	0	0	1	147	3	41	2	414	101	21	441	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	87	87	87	65	65	65	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	4	169	3	47	3	637	155	23	474	1
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1267	1319	475	1244	1242	715	475	0	0	792	0	0
Stage 1	521	521	-	721	721	-	-	-	-	-	-	-
Stage 2	746	798	-	523	521	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	145	156	588	~ 150	174	429	1082	-	-	824	-	-
Stage 1	537	530	-	417	430	-	-	-	-	-	-	-
Stage 2	404	397	-	535	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	124	151	588	~ 146	169	429	1082	-	-	824	-	-
Mov Cap-2 Maneuver	124	151	-	~ 146	169	-	-	-	-	-	-	-
Stage 1	535	515	-	416	429	-	-	-	-	-	-	-
Stage 2	356	396	-	517	515	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.2		145.1		0		0.4					
HCM LOS	B		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1082	-	-	588	146	388	824	-	-			
HCM Lane V/C Ratio	0.003	-	-	0.007	1.157	0.13	0.027	-	-			
HCM Control Delay (s)	8.3	-	-	11.2	183.8	15.7	9.5	-	-			
HCM Lane LOS	A	-	-	B	F	C	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	0	9.5	0.4	0.1	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	1	111	0	41	2	405	176	47	296	0
Future Vol, veh/h	0	1	1	111	0	41	2	405	176	47	296	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	125	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	77	77	77	83	83	83	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	4	144	0	53	2	488	212	55	348	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1083	1162	348	1060	1056	594	348	0	0	700	0	0
Stage 1	458	458	-	598	598	-	-	-	-	-	-	-
Stage 2	625	704	-	462	458	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	194	194	693	201	224	503	1205	-	-	892	-	-
Stage 1	581	565	-	487	489	-	-	-	-	-	-	-
Stage 2	471	438	-	578	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	165	182	693	187	210	503	1205	-	-	892	-	-
Mov Cap-2 Maneuver	165	182	-	187	210	-	-	-	-	-	-	-
Stage 1	580	530	-	486	488	-	-	-	-	-	-	-
Stage 2	420	437	-	535	530	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.9		54.1		0		1.3					
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1205	-	-	288 187 503	892	-	-					
HCM Lane V/C Ratio	0.002	-	-	0.028 0.771 0.106	0.062	-	-					
HCM Control Delay (s)	8	-	-	17.9 69.3 13	9.3	-	-					
HCM Lane LOS	A	-	-	C F B	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0.1 5.1 0.4	0.2	-	-					

HCM 6th Signalized Intersection Summary

1: 18th Avenue & Avenue 396




















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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	2	199	5	57	3	656	152	31	687	2
Future Volume (veh/h)	0	0	2	199	5	57	3	656	152	31	687	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	2	216	5	62	3	713	165	34	747	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	0	79	256	30	375	7	778	180	60	1043	3
Arrive On Green	0.00	0.00	0.05	0.15	0.25	0.25	0.00	0.53	0.53	0.03	0.56	0.56
Sat Flow, veh/h	0	0	1572	1767	119	1472	1767	1458	337	1767	1850	5
Grp Volume(v), veh/h	0	0	2	216	0	67	3	0	878	34	0	749
Grp Sat Flow(s),veh/h/ln	0	0	1573	1767	0	1591	1767	0	1795	1767	0	1855
Q Serve(g_s), s	0.0	0.0	0.1	9.1	0.0	2.5	0.1	0.0	33.9	1.4	0.0	22.5
Cycle Q Clear(g_c), s	0.0	0.0	0.1	9.1	0.0	2.5	0.1	0.0	33.9	1.4	0.0	22.5
Prop In Lane	0.00		1.00	1.00		0.93	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	79	256	0	405	7	0	959	60	0	1045
V/C Ratio(X)	0.00	0.00	0.03	0.84	0.00	0.17	0.42	0.00	0.92	0.57	0.00	0.72
Avail Cap(c_a), veh/h	0	0	372	291	0	732	116	0	1095	119	0	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	34.3	31.7	0.0	22.0	37.8	0.0	16.2	36.2	0.0	12.1
Incr Delay (d2), s/veh	0.0	0.0	0.1	17.9	0.0	0.2	34.9	0.0	10.9	8.3	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	5.0	0.0	0.9	0.1	0.0	14.5	0.7	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	34.4	49.6	0.0	22.2	72.6	0.0	27.1	44.5	0.0	14.1
LnGrp LOS	A	A	C	D	A	C	E	A	C	D	A	B
Approach Vol, veh/h	2			283			881			783		
Approach Delay, s/veh	34.4			43.1			27.2			15.5		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	7.1	45.1	15.5	8.3	4.8	47.4	23.9					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	5.1	46.4	12.5	18.0	5.0	46.5	35.0					
Max Q Clear Time (g_c+I1), s	3.4	35.9	11.1	2.1	2.1	24.5	4.5					
Green Ext Time (p_c), s	0.0	4.7	0.1	0.0	0.0	5.4	0.3					
Intersection Summary												
HCM 6th Ctrl Delay	24.8											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: 18th Avenue & Avenue 396

04/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	2	153	0	61	3	639	240	65	465	0
Future Volume (veh/h)	0	2	2	153	0	61	3	639	240	65	465	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	2	2	166	0	66	3	695	261	71	505	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	40	40	200	0	333	7	748	281	91	1168	0
Arrive On Green	0.00	0.05	0.05	0.11	0.00	0.21	0.00	0.58	0.58	0.05	0.63	0.00
Sat Flow, veh/h	0	851	851	1767	0	1572	1767	1286	483	1767	1856	0
Grp Volume(v), veh/h	0	0	4	166	0	66	3	0	956	71	505	0
Grp Sat Flow(s),veh/h/ln	0	0	1702	1767	0	1572	1767	0	1769	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.2	8.0	0.0	3.0	0.1	0.0	42.9	3.5	12.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.2	8.0	0.0	3.0	0.1	0.0	42.9	3.5	12.1	0.0
Prop In Lane	0.00		0.50	1.00		1.00	1.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	80	200	0	333	7	0	1029	91	1168	0
V/C Ratio(X)	0.00	0.00	0.05	0.83	0.00	0.20	0.42	0.00	0.93	0.78	0.43	0.00
Avail Cap(c_a), veh/h	0	0	351	231	0	611	101	0	1158	111	1226	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	39.7	37.8	0.0	28.3	43.3	0.0	16.6	40.9	8.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	19.3	0.0	0.3	35.3	0.0	12.1	24.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	4.5	0.0	1.1	0.1	0.0	18.1	2.1	4.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	40.0	57.1	0.0	28.5	78.6	0.0	28.7	65.3	8.5	0.0
LnGrp LOS	A	A	D	E	A	C	E	A	C	E	A	A
Approach Vol, veh/h	4			232			959			576		
Approach Delay, s/veh	40.0			49.0			28.8			15.5		
Approach LOS	D			D			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	9.0	55.2	14.4	8.6	4.9	59.4	23.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	5.5	57.1	11.4	18.0	5.0	57.6	33.9					
Max Q Clear Time (g_c+I1), s	5.5	44.9	10.0	2.2	2.1	14.1	5.0					
Green Ext Time (p_c), s	0.0	5.8	0.1	0.0	0.0	3.5	0.3					
Intersection Summary												
HCM 6th Ctrl Delay	27.1											
HCM 6th LOS	C											

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔	↔	
Traffic Vol, veh/h	218	0	5	3	7	19	5	250	2	174	219	124
Future Vol, veh/h	218	0	5	3	7	19	5	250	2	174	219	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	237	0	5	3	8	21	5	272	2	189	238	135
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	13.7	9.7	13.2	14.5
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	2%	98%	10%	100%	0%
Vol Thru, %	97%	0%	24%	0%	64%
Vol Right, %	1%	2%	66%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	223	29	174	343
LT Vol	5	218	3	174	0
Through Vol	250	0	7	0	219
RT Vol	2	5	19	0	124
Lane Flow Rate	279	242	32	189	373
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.441	0.419	0.055	0.332	0.576
Departure Headway (Hd)	5.683	6.22	6.235	6.328	5.565
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	631	579	572	567	649
Service Time	3.729	4.265	4.302	4.07	3.307
HCM Lane V/C Ratio	0.442	0.418	0.056	0.333	0.575
HCM Control Delay	13.2	13.7	9.7	12.2	15.6
HCM Lane LOS	B	B	A	B	C
HCM 95th-tile Q	2.3	2.1	0.2	1.4	3.7

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔	↔	
Traffic Vol, veh/h	113	0	0	2	3	24	5	310	5	204	212	73
Future Vol, veh/h	113	0	0	2	3	24	5	310	5	204	212	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	123	0	0	2	3	26	5	337	5	222	230	79
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	10.9	9.1	13	12
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	2%	100%	7%	100%	0%
Vol Thru, %	97%	0%	10%	0%	74%
Vol Right, %	2%	0%	83%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	320	113	29	204	285
LT Vol	5	113	2	204	0
Through Vol	310	0	3	0	212
RT Vol	5	0	24	0	73
Lane Flow Rate	348	123	32	222	310
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.49	0.212	0.051	0.365	0.442
Departure Headway (Hd)	5.17	6.225	5.79	5.927	5.141
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	703	580	621	610	691
Service Time	3.17	4.234	3.803	3.627	2.941
HCM Lane V/C Ratio	0.495	0.212	0.052	0.364	0.449
HCM Control Delay	13	10.9	9.1	12	12
HCM Lane LOS	B	B	A	B	B
HCM 95th-tile Q	2.7	0.8	0.2	1.7	2.3





HCM 6th TWSC
6: Road 12 & Project Driveway 1

04/05/2020

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	173	14	636	343	261
Future Vol, veh/h	0	173	14	636	343	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	188	15	691	373	284
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	515	657	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	0	558	926	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	558	926	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.7	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	926	-	558	-	-	
HCM Lane V/C Ratio	0.016	-	0.337	-	-	
HCM Control Delay (s)	9	0	14.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.5	-	-	

HCM 6th TWSC
6: Road 12 & Project Driveway 1

04/05/2020

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	197	8	623	298	154
Future Vol, veh/h	0	197	8	623	298	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	214	9	677	324	167
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	408	491	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	0	641	1067	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	641	1067	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.4	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1067	-	641	-	-	
HCM Lane V/C Ratio	0.008	-	0.334	-	-	
HCM Control Delay (s)	8.4	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	1.5	-	-	

APPENDIX D

HCS Worksheets

EXISTING WORKSHEETS

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing AM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	677	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.65	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	65.5
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	12.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	677	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing PM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	543	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.32

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.9

Vehicle Results

Average Speed, mi/h	36.9	Percent Followers, %	59.9
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	8.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	543	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.83	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing AM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	468	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.0

Vehicle Results

Average Speed, mi/h	37.0	Percent Followers, %	56.2
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	7.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	468	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.76	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing PM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	372	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.3

Vehicle Results

Average Speed, mi/h	37.3	Percent Followers, %	50.5
Segment Travel Time, minutes	1.61	Followers Density, followers/mi/ln	5.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	372	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing AM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	442	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.62	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.6

Vehicle Results

Average Speed, mi/h	42.6	Percent Followers, %	53.9
Segment Travel Time, minutes	1.41	Followers Density, followers/mi/ln	5.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	442	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.84	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing PM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	347	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.73	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.8

Vehicle Results

Average Speed, mi/h	42.8	Percent Followers, %	47.9
Segment Travel Time, minutes	1.40	Followers Density, followers/mi/ln	3.9
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	347	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing AM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	288	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.69	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.5

Vehicle Results

Average Speed, mi/h	37.5	Percent Followers, %	44.6
Segment Travel Time, minutes	1.60	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	288	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.51	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing PM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	208	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.7

Vehicle Results

Average Speed, mi/h	37.7	Percent Followers, %	37.6
Segment Travel Time, minutes	1.59	Followers Density, followers/mi/ln	2.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	208	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.35	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

EXISTING PLUS PROJECT WORKSHEETS

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project AM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	731	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.65	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.43

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.6

Vehicle Results

Average Speed, mi/h	36.6	Percent Followers, %	67.5
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	13.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	731	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.99	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project PM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	590	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.8

Vehicle Results

Average Speed, mi/h	36.8	Percent Followers, %	62.1
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	9.9
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	590	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.88	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project AM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	526	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.9

Vehicle Results

Average Speed, mi/h	36.9	Percent Followers, %	59.1
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	8.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	526	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.82	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project PM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	409	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.2

Vehicle Results

Average Speed, mi/h	37.2	Percent Followers, %	52.9
Segment Travel Time, minutes	1.61	Followers Density, followers/mi/ln	5.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	409	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.69	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project AM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	706	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.62	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.1

Vehicle Results

Average Speed, mi/h	42.1	Percent Followers, %	66.2
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	11.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	706	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project PM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	603	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.73	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.3

Vehicle Results

Average Speed, mi/h	42.3	Percent Followers, %	62.0
Segment Travel Time, minutes	1.42	Followers Density, followers/mi/ln	8.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	603	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.00	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project AM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	667	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.69	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.39

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	65.1
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	11.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	667	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.94	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Existing Plus Project PM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	394	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.2

Vehicle Results

Average Speed, mi/h	37.2	Percent Followers, %	51.9
Segment Travel Time, minutes	1.61	Followers Density, followers/mi/ln	5.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	394	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.67	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

NEAR-TERM WORKSHEETS

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project AM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	797	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.65	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.47

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.5

Vehicle Results

Average Speed, mi/h	36.5	Percent Followers, %	69.7
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	15.2
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	797	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.03	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project PM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	708	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.6

Vehicle Results

Average Speed, mi/h	36.6	Percent Followers, %	66.7
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	12.9
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	708	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.97	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project AM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	620	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.36

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.8

Vehicle Results

Average Speed, mi/h	36.8	Percent Followers, %	63.3
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	10.7
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	620	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.90	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project PM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	481	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.0

Vehicle Results

Average Speed, mi/h	37.0	Percent Followers, %	56.9
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	7.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	481	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.77	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project AM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	729	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.62	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.43

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.1

Vehicle Results

Average Speed, mi/h	42.1	Percent Followers, %	67.0
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	11.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	729	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.10	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project PM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	621	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.73	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.37

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.2

Vehicle Results

Average Speed, mi/h	42.2	Percent Followers, %	62.8
Segment Travel Time, minutes	1.42	Followers Density, followers/mi/ln	9.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	621	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.02	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project AM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	681	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.69	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	65.7
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	12.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	681	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project PM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	405	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.2

Vehicle Results

Average Speed, mi/h	37.2	Percent Followers, %	52.6
Segment Travel Time, minutes	1.61	Followers Density, followers/mi/ln	5.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	405	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.69	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

CUMULATIVE YEAR 2042 WORKSHEETS

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project AM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off- Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	846	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.50

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	16.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.4

Vehicle Results

Average Speed, mi/h	36.4	Percent Followers, %	71.1
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	16.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	846	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project PM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	925	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.54

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.3

Vehicle Results

Average Speed, mi/h	36.3	Percent Followers, %	73.4
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	18.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	925	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.10	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project AM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off- Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	876	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.4

Vehicle Results

Average Speed, mi/h	36.4	Percent Followers, %	72.0
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	17.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	876	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project PM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	640	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.38

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	64.1
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	11.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	640	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.92	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project AM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	674	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.70	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.1

Vehicle Results

Average Speed, mi/h	42.1	Percent Followers, %	64.9
Segment Travel Time, minutes	1.42	Followers Density, followers/mi/ln	10.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	674	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

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Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
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Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	597	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.73	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.3

Vehicle Results

Average Speed, mi/h	42.3	Percent Followers, %	61.8
Segment Travel Time, minutes	1.42	Followers Density, followers/mi/ln	8.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	597	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.00	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project AM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	490	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.70	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.29

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.0

Vehicle Results

Average Speed, mi/h	37.0	Percent Followers, %	57.3
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	7.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	490	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.78	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Without Project PM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	351	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.3

Vehicle Results

Average Speed, mi/h	37.3	Percent Followers, %	49.1
Segment Travel Time, minutes	1.61	Followers Density, followers/mi/ln	4.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	351	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.61	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project AM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	884	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.4

Vehicle Results

Average Speed, mi/h	36.4	Percent Followers, %	72.2
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	17.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	884	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project PM Peak Hour - NB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	968	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.57

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.3

Vehicle Results

Average Speed, mi/h	36.3	Percent Followers, %	74.5
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	19.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	968	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.13	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project AM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	934	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.55

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.3

Vehicle Results

Average Speed, mi/h	36.3	Percent Followers, %	73.6
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	18.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	934	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.11	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project PM Peak Hour - SB 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	675	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	65.5
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	12.0
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	675	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.94	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project AM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	691	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.41

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.1

Vehicle Results

Average Speed, mi/h	42.1	Percent Followers, %	65.6
Segment Travel Time, minutes	1.42	Followers Density, followers/mi/ln	10.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	691	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.07	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project PM Peak Hour - NB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	853	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.73	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.50

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.5
Speed Slope Coefficient	2.97208	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38932	PF Power Coefficient	0.71477
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.9

Vehicle Results

Average Speed, mi/h	41.9	Percent Followers, %	71.1
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	14.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	853	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.18	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project AM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	657	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.39

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	64.8
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	11.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	657	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.93	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

HCS7 Two-Lane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2020
Jurisdiction	City of Kingsburg/Tulare County	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project PM Peak Hour - SB SR 99 SB On-Ramp to Avenue 392	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	532	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	38.8
Speed Slope Coefficient	2.66314	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39588	PF Power Coefficient	0.69280
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.9

Vehicle Results

Average Speed, mi/h	36.9	Percent Followers, %	59.4
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	8.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	532	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.82	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

MITIGATION WORKSHEETS

HCS7 Multilane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2042
Jurisdiction	Tulare County / City of Kingsburg	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project - AM Peak 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	4.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.4		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	518	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.65	Flow Rate (Vp), pc/h/ln	410
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	9.7
Median Type Adjustment (fM)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	398	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.95
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS7 Multilane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2042
Jurisdiction	Tulare County / City of Kingsburg	Time Period Analyzed	Peak Hour
Project Description	Near-Term Plus Project - PM Peak 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	4.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.4		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	588	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.83	Flow Rate (Vp), pc/h/ln	365
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.6
Median Type Adjustment (fM)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	354	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.89
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS7 Multilane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2042
Jurisdiction	Tulare County / City of Kingsburg	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project - AM Peak 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	4.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.4		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	813	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.65	Flow Rate (Vp), pc/h/ln	644
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	15.2
Median Type Adjustment (fM)	1.6	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	625	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.17
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS7 Multilane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2042
Jurisdiction	Tulare County / City of Kingsburg	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project - AM Peak 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	4.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	887	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.95	Flow Rate (Vp), pc/h/ln	481
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	11.3
Median Type Adjustment (fM)	1.6	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	1.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	467	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.03
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS7 Multilane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2042
Jurisdiction	Tulare County / City of Kingsburg	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project - PM Peak 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	4.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.4		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	891	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.83	Flow Rate (Vp), pc/h/ln	553
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	13.0
Median Type Adjustment (fM)	1.6	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	537	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.10
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS7 Multilane Highway Report

Project Information

Analyst	VRPA Technologies, Inc.	Date	4/5/2020
Agency	Tulare County	Analysis Year	2042
Jurisdiction	Tulare County / City of Kingsburg	Time Period Analyzed	Peak Hour
Project Description	CY 2042 Plus Project - PM Peak 18th Avenue between Avenue 396 and SR 99 NB Off-Ramp	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	4.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	621	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.85	Flow Rate (Vp), pc/h/ln	376
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.9
Median Type Adjustment (fM)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

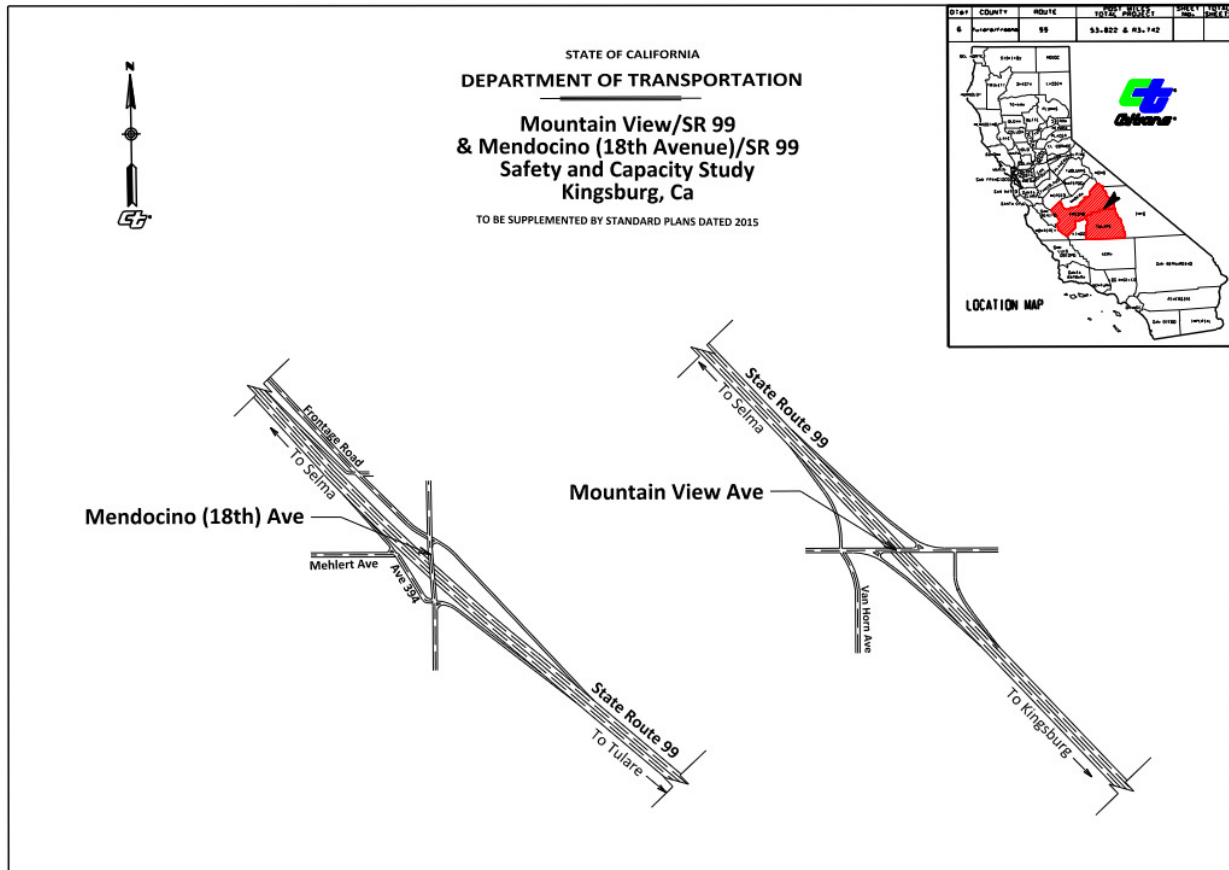
Direction 2 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	365	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.90
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

APPENDIX E

Caltrans Feasibility Study Mendocino (18th Avenue)/SR 99
Safety and Capacity Study - May 2019

Feasibility Study Volume 1 of 2



**IN FRESNO AND TULARE COUNTIES
WITHIN THE CITY OF KINGSBURG AND SELMA**
State Route 99- Mendocino (18th) Ave (PM 53.822)
State Route 99-Mountain View Ave (PM R3.742)

May 2019

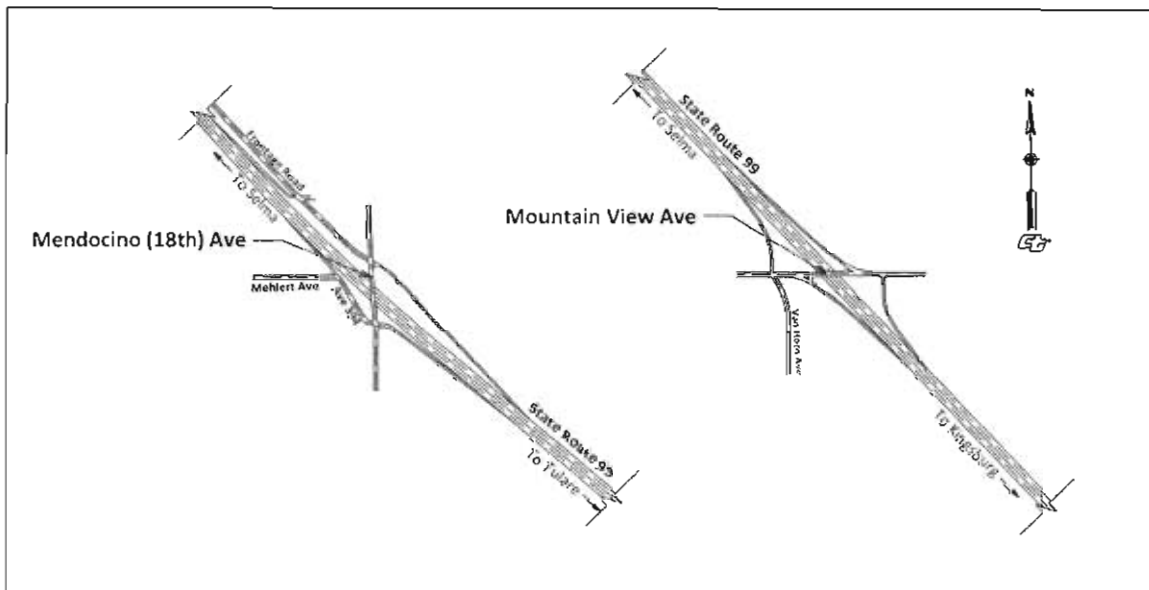


District 6

Feasibility Study

Mountain View/SR 99 & Mendocino (18th Avenue)/SR 99
Safety and Capacity Study
Kingsburg, Ca

May 2019



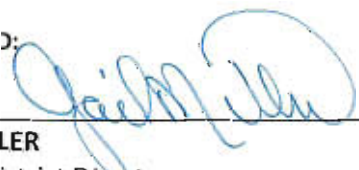
IN FRESNO/TULARE COUNTIES, WITHIN THE CITY OF KINGSBURG AND SELMA
Mountain View Ave (PM R3.742) and Mendocino Ave (PM R53.822)

APPROVAL RECOMMENDED:


CURT R. HATTON
Project Manager

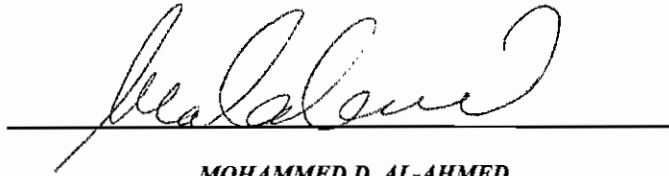

DATE

APPROVED:


GAIL MILLER
Deputy District Director
Planning, Local Programs, and Environmental Analysis - District 6


DATE

This Corridor Study has been prepared under the direction of the following Registered Engineer. The Registered Civil Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data upon which recommendations for scoping of projects and long-term planning for the corridor are based.



MOHAMMED D. AL-AHMED
REGISTERED CIVIL ENGINEER

5/7/19

DATE

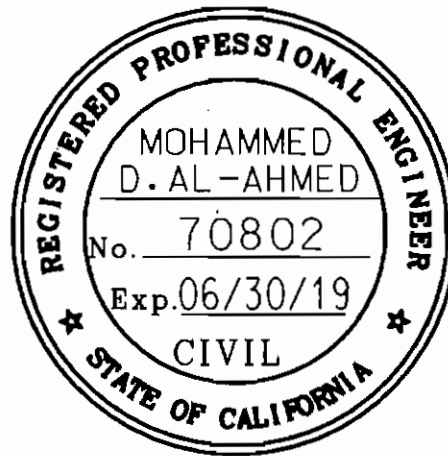


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Executive Summary

The purpose of the traffic safety/capacity study is to determine the future transportation needs on the State Route (SR) 99 / Mendocino (18th Avenue) Interchange and SR 99 / Mountain View Avenue Interchange within the areas of Kingsburg and Selma in Fresno County. The study identifies and recommends alternatives for future traffic demands and complements the Cities of Kingsburg and Selma General Plans. The study provides decision-makers with recommendations for design year 2045 and time frames when improvements are needed, as well as planning level cost estimates.

Acknowledging the role that Mountain View Avenue Interchange and Mendocino (18th Avenue) Interchange play in the transportation system in the area, the study developed a methodology to carry out an exhaustive examination of the current and future performance of both interchanges along SR 99. The methodology includes data collection to assess current operating conditions and a forecasting process to predict conditions for the year 2045. The Fresno County travel demand models were utilized as a reference to establish realistic forecasts of travel demand for the year 2045, and to ensure compatibility with relevant general plans and other transportation project appraisals.

The main metric used to assess the intersections conditions was level of service (LOS). A list of Level of Service for two-ways stop control and all-way stop control intersection are further detailed in the study.

The scope of the study includes analysis of all intersections located in the study area. Analysis of unsignalized intersection operations, particularly related to safety and access related issues, in addition to geometric deficiencies and level of service are discussed in the document. As part of the preliminary design of the proposed actions, further analysis, including updated turning movement counts and signal warrant analysis, was conducted to determine if additional traffic signals are necessary and warranted.

The study identifies existing geometric and safety deficiencies and provides a discussion of the potential operational improvements and safety benefits associated with each alternative. The study will determine a near-term, mid-term, and long-term improvements to meet transportation needs at the study locations. The study utilizes Fresno COG model, origin/destination map, and microsimulation tools to develop alternative traffic patterns.

The safety analysis conducted for the study was completed to the appropriate level of detail necessary to compare improvement alternatives. It identifies existing safety deficiencies and provided a discussion of the potential safety benefits associated with each alternative and the proposed action.

1. Introduction

1.1 Background

The Fresno Council of Governments (FCOG), the Tulare County Association of Governments (TCAG), the City of Kingsburg, and the City of Selma in cooperation with Caltrans have initiated this Feasibility Study. At a meeting in Kingsburg on February 22, 2018 all parties agreed that FCOG would serve as the lead agency representing the other local agencies in a Cooperative Agreement with Caltrans to perform traffic studies at the Mountain View Avenue and Mendocino (18th) Avenue interchanges. The purpose of the study was to identify current geometric deficiencies and to develop alternatives to improve safety and operations.

A Cooperative Agreement was approved with an effective date of May 29, 2018 and a meeting was held on July 10, 2018 to further discuss the scope of the study. The team agreed that the study should identify the current safety, geometric, and operational deficiencies and develop short term (less than 3 years), mid-term (3 – 15 years), and long term (20+ year) improvement alternatives. Alternatives at Mountain View should maintain access into the Flea Market. Additionally, planning level cost estimates will be developed for all proposed alternative improvements.

The team agreed that traffic counts should be gathered after school started in September and that traffic counts should also be taken on swap meet days to verify the peaks. The traffic counts should include truck % and forecasts at the Mountain View interchange should account for the Selma Crossings development. It was also discussed that the County has plans to widen Mountain View Avenue to four lanes.

Caltrans was also asked to look for measures that would help divert truck traffic away from 18th Avenue through Kingsburg. There is an elementary and High School that trucks pass when traveling 18th Avenue.

1.2 Study Objectives

- 1) Identify geometric deficiencies.
- 2) Perform a Safety Analysis.
- 3) Research ways to divert truck traffic along 18th Avenue in Kingsburg.
- 4) Develop short term improvements to improve safety.
- 5) Identify potential interim capacity improvements.
- 6) Analyze interim improvement alternatives.
- 7) Develop preliminary drawings and estimates for interim alternatives.
- 8) Determine failure year of interim alternatives.
- 9) Develop preliminary long term alternative drawings and estimates.
- 10) Draft report with conclusions.

2. Geometric Deficiencies

Inspection of as-built plans and reviews of available mapping has resulted in the following geometric feature deficiencies being identified.

2.1 Mountain View Avenue Interchange

Mountain View Avenue geometric deficiencies are presented in Table 2.1 (Exhibit 1).

Table 2.1 – Mountain View Avenue Interchange Geometric Deficiencies

Location	Deficiency
SR 99/Mountain View Avenue Interchange	Interchange Configuration Does Not Meet Currently Accepted Interchange Types
SR 99/Mountain View Avenue Interchange	Non-Continuous Sidewalks with Poor Pedestrian Access
Mountain View Avenue	Profile Has Non-Standard Sight Distance
Mountain View Avenue Overcrossing	Non-Standard Vertical Clearance Over State Route 99
Mountain View Avenue/SB Off-Ramp Intersection	Ramp Terminal Connects Where Grade Is Greater Than 4%
Mountain View Avenue/Van Horn Intersection	Non-Standard Intersection Skew Angle
Mountain View Avenue/Van Horn Intersection	Local Road Across from Ramp Terminal

2.2 Mendocino (18th) Avenue Interchange

Mendocino (18th) Avenue geometric deficiencies are presented in Table 2.2 (Exhibit 2).

Table 2.2 – Mendocino (18th) Avenue Interchange Geometric Deficiencies

Location	Deficiency
SR 99/Mendocino (18th) Avenue Interchange	Interchange Configuration Does Not Meet Currently Accepted Interchange Types
SR 99/Mendocino (18th) Avenue Interchange	Interchange Has Isolated Ramps
SR 99/Mendocino (18th) Avenue Interchange	Non-Continuous Sidewalks With Poor Pedestrian Access
Mendocino (18 th) Avenue Overcrossing	Non-Standard Vertical Clearance Over State Route 99
Mendocino (18th) Avenue/NB Off-Ramp Intersection	Non-Standard Intersection Skew Angle
Mendocino (18th) Avenue/NB Off-Ramp Intersection	Sight Distance at Ramp Termini Not Met
Mendocino (18th) Avenue/NB Off-Ramp Intersection	Local Road Across from Ramp Terminal
Avenue 394/SB Off-Ramp Intersection	Non-Standard Intersection Skew Angle
Avenue 394/SB Off-Ramp Intersection	Uncontrolled Termini of Ramp at Intersection
SB Off-Ramp	Deceleration Distance Along Ramp Is Not Met

3. Safety Analysis

3.1 Safety Analysis Report

A Safety Analysis report dated September 17, 2018 (Attachment A) was prepared by the Caltrans District 6 Office of Traffic Operations. Accident tables for NB and SB SR 99 mainline and for the on and off ramps at each of the interchanges were created for the 3-year period from 01/01/2014 to 12/31/2016.

The accident tables indicated some Actual Accident rates on mainline were higher than the Statewide Average for similar types of facilities. However, after a review of the varied locations, factors, and types of collisions there doesn't appear to be any correctable accident causing situations on the mainline.

Accident tables for the Mountain View Avenue interchange ramps indicate that the Actual Fatal accident rates at all ramps is lower than the Statewide Averages for similar types of facilities. The Actual Fatal plus Injury and Total accident rates is lower than the Statewide Average for the NB off-ramp but higher than the Statewide Average for the NB on-ramp, SB off-ramp, and the SB on-ramp. Speeding is indicated as the most prominent Primary Collision Factor for all locations (Exhibit 3). The report recommended replacing one missing sign at the NB off-ramp exit gore and installing another sign at the intersection of the SB off-ramp facing Van Horn Avenue.

Accident tables for the Mendocino (18th) Avenue interchange ramps indicate the Actual Fatal, Fatal plus Injury, and Total accident rates at the SB on-ramp, and NB on-ramp are lower than the Statewide Averages for similar types of facilities. For the NB off-ramp the Actual Total accident rate is higher than the Statewide Average for similar types of facilities and for the SB off-ramp both the Actual Fatal plus Injury and Total accident rates are higher than the Statewide Average for similar types of facilities. Speeding is indicated as the most prominent Primary Collision Factor for the two off-ramp locations (Exhibit 4).

3.2 All Way Stop (AWS) Traffic Warrants

Due to Speeding being identified as the most prominent Primary Collision Factor at both interchanges District 6 Traffic Operations deployed hose counting stations in November 2018 to gather traffic volumes and determine whether ramp intersections met warrants for All Way Stop (AWSC) control (Attachment B). The ramp intersections with Mendocino Avenue met the traffic volume warrants for the Major and Minor street legs. At the Mountain View Avenue interchange the SB off-ramp intersection met the traffic volume warrants for the Major and Minor street legs however the NB off-ramp intersection met the warrant for Mountain View Avenue (Major Street) but did not meet the volume warrant for the NB off-ramp (Minor Street).

3.3 Divert Truck Traffic From 18th Avenue

A review of the California State Highways Truck Networks reveals that 18th Avenue through Kingsburg is not on the National Network (STAA) or the Terminal Access (STAA). Additionally, the SR 99 Mendocino (18th) Avenue interchange is not designated for access to Truck Services. Further review of the City of Kingsburg ordinances reveals that 18th Avenue is not a designated Truck Route by City Ordinance. Caltrans does not post signage precluding truck usage for facilities that are not designated as truck routes.

There are currently City signs on the NB off-ramp, Avenue 394, and 18th Avenue north of the Avenue 396 intersection indicating 18th Avenue is not a truck route. An application should be submitted for legal truck access to the industries on Clarkson Drive. Once an application is approved an End of Truck Route sign can be posted on 18th Avenue at the intersection of Kent Street. It is also recommended that enforcement be used to dissuade truck traffic from using 18th Avenue.

4. Alternatives

4.1 Mountain View Avenue

4.1.1 Near Term

Existing

This No-Build alternative would not alter the existing conditions and will not address safety issues.

Two Way Stop Control

This alternative proposes to add all way stop control at the SB off-ramp intersection and to re-delineate the slip on-ramp intersections to create perpendicular right turns. This alternative will slow traffic down on Mountain View Avenue but will negatively affect Levels of Service (LOS) (Exhibit 5).

4.1.2 Mid-Term

Mid-term alternatives for the Mountain View Avenue interchange propose to improve interchange operations and safety with minimal right-of-way (R/W) impacts and without impacting the Mountain View overcrossing structure. Three alternatives were developed as mid-term improvement options. All mid-term alternatives propose to realign the on-ramps to create single intersection points along Mountain View Avenue. The three alternatives will consider three types of intersection control; All Way Stop (AWS), signalized, and roundabout.

Access to the flea market on the east side of SR 99 will be maintained in both the EB and WB directions. A median island would be constructed with a left turn pocket for WB access. Access to the service station

on the southwest side of the interchange would be rerouted to a new intersection approximately 400 feet west of the existing SB off-ramp intersection. Connection of South Van Horn Avenue to Mountain View Avenue would be removed.

Pedestrian and bicycle access would be improved by the elimination of the high-speed slip ramps and reducing the widths of the ramp intersections. The sidewalk on the north side of Mountain View Avenue would be extended from the overcrossing to beyond the ramp intersections and crosswalks would be constructed.

Alternative 1 (Exhibit 6)

Realigned on-ramps with AWS intersection control.

Alternative 2 (Exhibit 7)

Realigned on-ramps with signalized intersection control. This alternative would widen Mountain View Avenue on each side of the overcrossing to provide left and right turn lanes to the on-ramps.

Alternative 3 (Exhibit 8)

Realigned on-ramps with roundabout intersection control.

An alternative was considered that would add hook on-ramps and eliminate the need for left turns from Mountain View Avenue to the existing on-ramps. Because of the narrow width between the bents adjacent to the SR 99 outside shoulders and the structure abutments hook ramps are not viable. Standard freeway entrance ramp geometry cannot be constructed with the available width.

4.1.3 Ultimate Long-Term Alternative

Alternative 4 (Exhibit 9)

An L-9 interchange configuration with signalized Intersections was developed as an ultimate alternative. This alternative would require reconstruction of the Mountain View Avenue overcrossing and adjusting the roadway profile. Additionally, construction of the successive on-ramps could create the need for construction of auxiliary lanes on SR 99. This alternative would also create R/W impacts to both service stations on the west side of the interchange and the Flea Market on the east side.

4.2 Mendocino (18th) Avenue Alternatives

4.2.1 Near Term Alternative

Two Way Stop Control

This No-Build alternative would not alter the existing conditions and will not address safety issues.

All Way Stop Control

This alternative proposes to add all way stop control at the two ramp intersections on Mendocino Avenue. This alternative will slow traffic down on Mendocino Avenue but will negatively affect Levels of Service (LOS).

4.2.2 Mid Term

Mid-term alternatives for Mendocino Avenue also propose to improve interchange operations and safety with minimal right-of-way (R/W) impacts and without impacting the Mendocino overcrossing structure. For Mendocino Avenue six alternatives were developed as mid-term improvement options. Mid-term alternatives for Mendocino Avenue are separated into two groups. Each group will consider three types of intersection control; All Way Stop (AWS), signalized, and roundabout.

The first group of alternatives, alternatives 1 – 3 propose to realign Avenue 394 and improve the Avenue 394/SB off-ramp intersection with stop control for the SB off-ramp. These alternatives will improve turn movements at the intersection with Mendocino Avenue. The first group also proposes to realign the NB off-ramp and Frontage Road to create a more perpendicular intersection with Mendocino Avenue. Realignment of the NB off-ramp and the Frontage Road would require construction of retaining walls due to the height of the intersection and the proximity between the railroad and State Route 99.

Pedestrian and bicycle access would be improved by reducing the widths of the ramp intersections. The sidewalk on the north side of Mendocino Avenue would be extended and made continuous from the railroad overhead east of the interchange to west of the Avenue 394/SB on-ramp intersection and crosswalks would be constructed.

Alternative 1 (Exhibit 10)

AWSC intersection control at Mendocino Avenue intersections and Two Way Stop (TWS) control at the Avenue 394/SB off-ramp intersection.

Alternative 2 (Exhibit 11)

Signalized intersection control at Mendocino Avenue intersections and Two Way Stop (TWSC) control at the Avenue 394/SB off-ramp intersection.

Alternative 3 (Exhibit 12)

Roundabout intersection control at Mendocino Avenue intersections and at the Avenue 394/SB off-ramp intersection.

The second group of alternatives, alternatives 4 – 6, propose to reconstruct the SB off-ramp and NB on-ramp to eliminate the isolated ramps. These alternatives propose to realign Avenue 394 to connect to Avenue 392 to the south and construct a cul-de-sac approximately 100 feet west of the current Avenue 394/SB off-ramp intersection. The Frontage Road access to Mendocino Avenue would be eliminated and access to the businesses between the railroad and SR 99 would be shifted to the Sierra Street interchange.

These alternatives would require construction of retaining walls to realign the NB off-ramp and NB on-ramp.

In addition to the pedestrian and bicycle improvements provided by alternatives 1 – 3 these alternatives would further improve pedestrian safety at the intersection with the NB on-ramp. By reducing the roadway width with the removal of the SB movement from Frontage Road, the crosswalk would be significantly narrowed. A pedestrian access would be provided along the realigned SB off-ramp for access to the neighborhood along Avenue 394.

Alternative 4 (Exhibit 13)

AWS intersection control at Mendocino Avenue intersections.

Alternative 5 (Exhibit 14)

Signalized intersection control at Mendocino Avenue intersections.

Alternative 6 (Exhibit 15)

Roundabout intersection control at Mendocino Avenue intersections.

4.2.3 Ultimate Long-Term Alternative

Alternative 7 (Exhibit 16)

A combined L-1/L-2 interchange configuration with signalized Intersections was developed as an ultimate alternative for the Mendocino Avenue location because of the proximity to the railroad, see exhibit 16. This alternative would require reconstruction of the Mendocino Avenue overcrossing and the railroad overhead. The alternative would adjust the roadway profile to meet vertical clearance requirements over SR 99 and be realigned slightly north on the west side of SR 99 to improve the skew angle with the freeway. The realignment of Mendocino Avenue will improve ramp intersection angles. Because of the proximity to the railroad retaining walls would be needed for construction of the NB ramps. Additionally, Avenue 394 would need to be realigned for the ultimate interchange design.

5. Operational Analysis

5.1. Overview

This study followed certain procedures for all locations including collecting existing traffic data, describing lane configurations, evaluating deficiencies, and providing acceptable recommendations with realistic costs. The study methodology was developed to ensure an appropriate method was used for each location. A comprehensive evaluation of existing and future deficiencies on roadway networks, including interchanges and intersections was conducted. This study entails the development and evaluation of alternatives based on performance measures including conceptual designs.

5.2 Traffic Data Collection

The existing conditions analysis included researching and collecting the most current vehicle turns counts data, roadway geometry, such as number of lanes and storage lengths, pedestrian counts, vehicular queue length observations, large truck estimates, origin-destination analysis and general observations.

Traffic data was collected when schools were in session. An additional Sunday traffic count was conducted to collect Selma Flea Market traffic. Traffic data was collected on the following dates for the listed intersections:

Thursday, September 13, 2018, 6:00 - 9:00 AM, and 3:00 - 6:00 PM

- **SR 99 SB Off Ramp / Mountain View Avenue Intersection**
- **SR 99 SB On Ramp / Mountain View Avenue Intersection**
- **SR 99 NB On Ramp / Mountain View Avenue Intersection**
- **SR 99 NB Off Ramp / Mountain View Avenue Intersection**

Wednesday, September 26, 2018, 6:00-9:00 AM, and 3:00 – 6:00 PM

- **SR 99 NB Off Ramp / Mendocino (18th) Avenue Intersection**
- **SR 99 NB On Ramp / Frontage Road / Gilroy Street Intersection**
- **SR 99 SB Off Ramp / Ave 394 Intersection**
- **SR 99 SB Off Ramp / Ave 394 / 18th Avenue Intersection**

Sunday, October 28, 2018, 5:00-9:00 AM, and 2:00 – 6:00 PM

- **SR 99 SB Off Ramp / Mountain View Avenue Intersection**
- **SR 99 SB On Ramp / Mountain View Avenue Intersection**
- **SR 99 NB On Ramp / Mountain View Avenue Intersection**
- **SR 99 NB Off Ramp / Mountain View Avenue Intersection**

5.3 Analysis Years

This study used 2018 as the base year, 2025 as the construction year and 2035, 2045 as the 10 and 20-year design period. Estimated traffic volumes for the study also provides failure years and corresponding suggested project initiation years for locals to consider.

5.4 Forecasting

5.4.1 Overview

Transportation forecasting estimates the number of people or vehicles that will use a specific transportation facility in the future. Due to the lack of pedestrian and bicycle traffic observed in data collection forecasting for this study will be limited to the vehicle mode.

Traffic volumes forecasts are used as input in traffic operational analysis to identify future needs, evaluate performance measures, and serve as a basis of concept designs that will meet these needs.

5.4.2 Forecasting Tools

This study used several urban transportation planning procedures for forecasting:

- **Trip generation** uses standard trip generation rates based on land use studies. This study used the 10th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Trip generation was used for locations where insufficient traffic volume counts were available.

- **Historical trends** were analyzed, and corresponding adjusted growth rates used for study locations.
- **Travel Demand Model.** Fresno County Council of Governments (Fresno COG) is the MPO in Fresno County. Fresno COG maintains and runs travel demand models for the Fresno County region. The models predict changes in travel patterns and are used to forecast the demand for future transportation infrastructure. The model transportation network is based on adopted local general plans and reflects existing and future freeways, expressways, arterials and collectors. Input variables include population, households, employment, school enrollment, income, traffic counts, speed, and existing or planned transportation networks.

The current Fresno COG model was updated in 2013. The model was calibrated to 2008 population, employment and traffic count data and validated against socio-economic data. Fresno COG developed a new 2040 model as part of an eight county San Joaquin Valley (SJV) Model Improvement Program (MIP). This is to address SB 375, California's law requiring coordination of land use and transportation planning to support mandated greenhouse gas emission reductions.

5.4.3 2025, 2035 and 2045 Forecast Traffic Volumes

Travel demand models used to forecast future travel patterns. Socio-economic data, roadway networks, trip rates, and other factors are used by the model to calculate the current and future travel patterns. The resultant growth rate produced by the model was listed against growth rates computed by other methods such as from count trends, population growth, employment growth and trips generated from adjacent planned projects such as Selma-Crossing and Hash Project. Future land use was also used to generate the number of trips entering or exiting a site at a given time. Trip rates are functions of type of future land use, development, and square footage, number of dwelling units, or other standard measurable things, usually produced in General site plans. Origin-Destination map was produced by trip purpose, typically as a function of household demographics and land uses.

6. TRAFFIC STUDY METHODOLOGY

6.1 Operational Measures of Effectiveness (MOE)

Acceptable operations are defined, and operational needs are identified by measures of effectiveness for intersections. Intersections are evaluated using level of service (LOS) and Volume/Capacity (V/C) ratio. A detailed analysis by lane groups provides an effective way to identify operational needs and geometric design solutions to meet these needs. Improvements and the timing of improvements are proposed based on critical lane group MOEs including LOS, delay, 95% queue length, and V/C ratio.

6.2 Level of Service (LOS)

Level of Service is a qualitative measure used to gauge traffic operational performance by describing the driver's experience within a traffic stream in terms of speed and travel time, maneuverability in the traffic stream, interruptions and delay, and comfort and convenience. Six levels of service are defined by the HCM 6th edition. Letters designate each level, from LOS "A" indicating traffic flow with little to no delay to LOS "F" denoting over-saturated conditions where traffic flow exceeds capacity, resulting in excessive delays and long queues. Based on current and forecasted traffic volumes, the LOS for the various time frames was calculated using Highway Capacity Software (HCS) to analyze AWSC and TWSC intersections or the equivalent in Synchro 10 for signalized intersections and SYDRA 8 for roundabouts.

The HCM level of service criteria for signalized, un-signalized intersections and roundabouts are presented in Table 6.1.

Table 6.1 – Level of Service Definitions for Intersections

LOS	DESCRIPTION	CONTROL DELAY (Sec/Veh) WITH V/C ≤ 1		
		UNSIGNALIZED (AWSC, TWSC)	SIGNALIZED	ROUNDBABOUT
A	Traffic flows with very little delay and optimal speeds. Most vehicles do not stop at all.	0-10	<10	0-10
B	Traffic flows with very little delay and speeds may be slightly reduced. Very infrequent and short waits at traffic signals. More vehicles stop at intersections than for LOS A.	>10-15	>10-20	>10-15
C	Traffic speeds continue to slow. Some vehicles may stop at this level, although many vehicles still pass through the intersection without stopping.	>15-25	>20-35	>15-25
D	Congestion becomes more noticeable. Many vehicles stop and the proportion of vehicles not stopping declines.	>25-35	>35-55	>25-35
E	Low speeds and traffic backups at intersections. Often considered to be the limit of acceptable delay.	>35-50	>55-80	>35-50
F	Very slow speeds and congestion. Long traffic backups. Very likely to wait for multiple greens to get through an intersection. This is unacceptable for most drivers.	>50	>80	>50

Source: Highway Capacity Manual 6th edition

For this study, it was decided to perform analysis using LOS D as the failure threshold and to plan the projects for 20-year horizon.

6.3 Volume/Capacity (V/C) Ratio

The V/C ratio estimates the ability of a roadway to accommodate traffic volume demand. It compares roadway demand (vehicle volumes) with roadway supply carrying capacity. Volume refers to the number of vehicles using a roadway at the peak commute times, while capacity is its ability to support that volume based on the geometric design and number of lanes. V/C ratio is a principal measure of effectiveness for critical lane groups or the intersection. Critical lane group is that portion of the roadway whose behavioral attributes (MOE) are distinctly different and operationally deficient in comparison to the intersection. The tables listed in the study will show intersection LOS, which do not necessarily indicate acceptable operational attributes on each approach. Critical lane groups could indicate excessive delay or queuing problems representing operational deficiencies. In general, a V/C ratio greater than 0.8 is near capacity and would require further analysis of other measures of effectiveness; V/C ratios greater than 0.9 is at capacity and above 1.0 is over capacity. This is true for the whole intersection or for critical lane groups.

6.4 95th Percentile Queue Length

Caltrans design criteria includes the 95th-percentile queue length when practicable. The 95th-percentile queue is defined to be the queue length (in vehicles) that has only a five percent probability of being exceeded during the analysis period. It is a useful parameter for determining the appropriate length of turn pockets. Proper queue length sizing is critical to prevent “queue blocking.”

6.5 Delay

Delay is defined in the Highway Capacity Manual 2010 as “additional time experienced by a driver, passenger, bicyclist, or pedestrian beyond that required to travel at the desired speed.” The delay encountered by a traveler at a signalized intersection constitutes the largest part of his or her travel time on non-freeway segments. Delay can be measured for lane groups or for the intersection. While the tables provide intersection delay, critical lane groups are evaluated by the engineer when considering the performance of an intersection. In general, delay has three main components: uniform stop delay, over-saturated delay and the stop delay caused by the initial queue from the previous cycles.

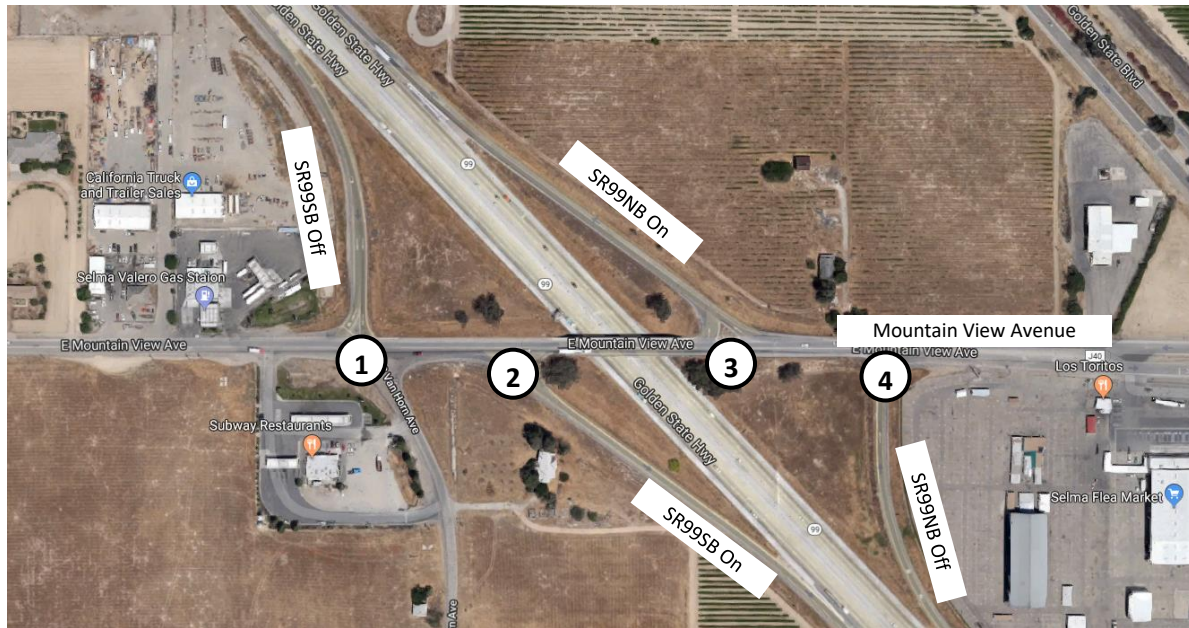
6.6 Average Delay

Average Delay for the intersection is calculated by taking a volume weighted average of all the delays.

7. Mountain View Avenue

Four intersections are located on Mountain View Avenue and SR 99 ramps.

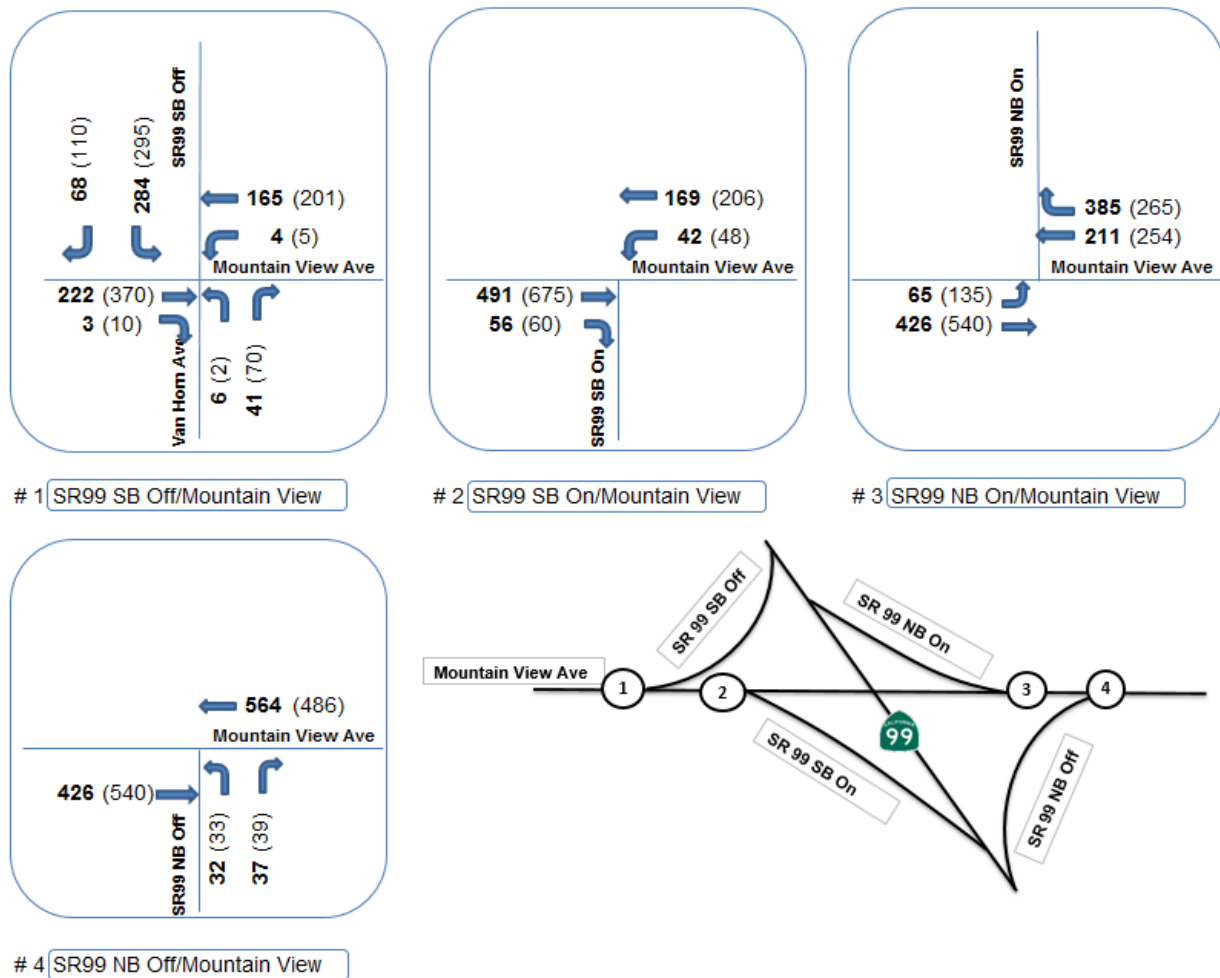
Figure 7.1 – Mountain View Avenue Existing Aerial Photo



7.2 2018 Existing Peak Hour Turning Movement Volumes

Figure 7.2 illustrates the Mountain View Avenue intersections 2018 existing AM (PM) peak hour turning movement volumes.

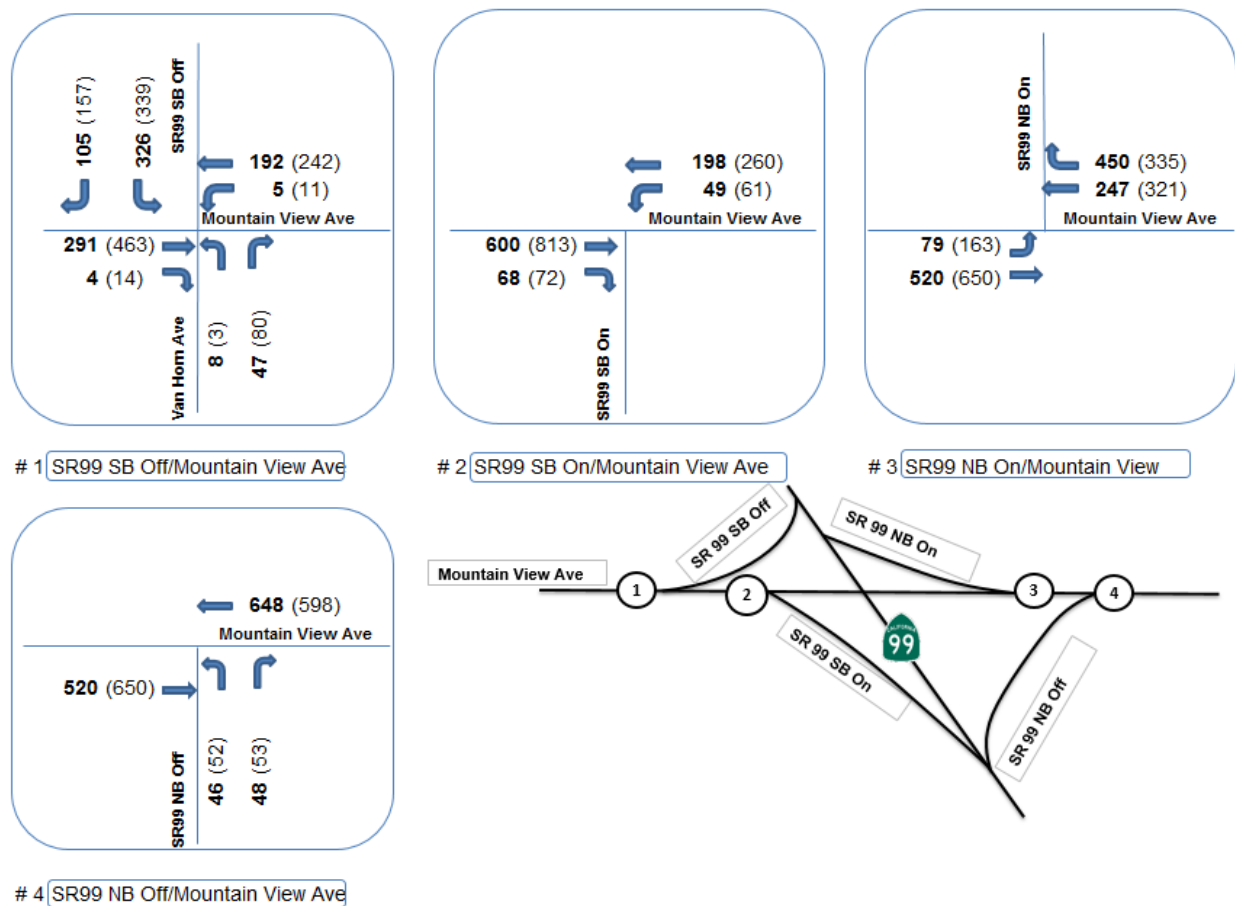
**Figure 7.2 – SR-99/ Mountain View Avenue Intersections
2018 Existing AM (PM) Peak Hour Turning Movement Volumes**



7.3 2025 Forecast Peak Hour Turning Movement Volumes

Figure 7.3 shows the SR99/Mountain View Avenue intersections 2025 forecast AM (PM) peak hour forecast turning movement volumes.

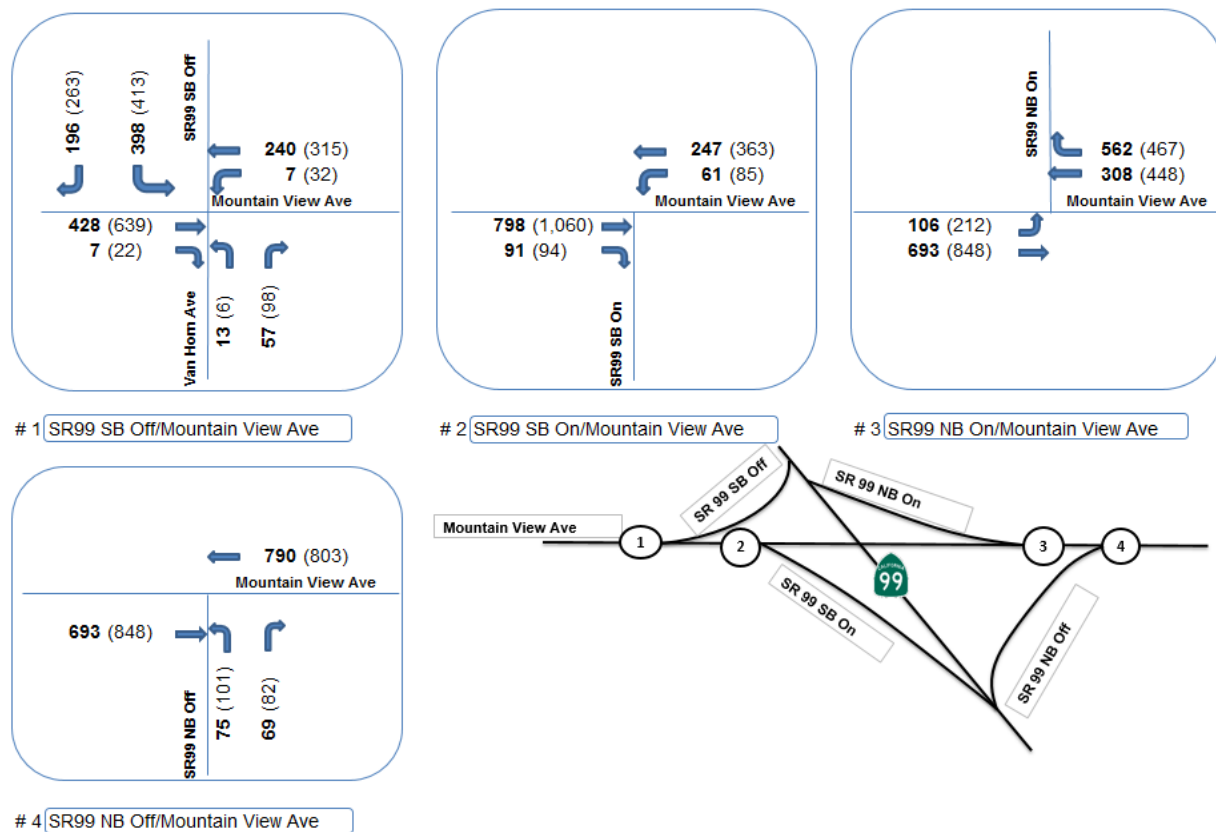
**Figure 7.3 – SR-99/ Mountain View Avenue Intersections
2025 Forecast AM (PM) Peak Hour Turning Movement Volumes**



7.4 2035 Forecast Peak Hour Turning Movement Volumes

Figure 7.4 shows the SR99/Mountain View Avenue intersections 2035 forecast AM (PM) peak hour forecast turning movement volumes.

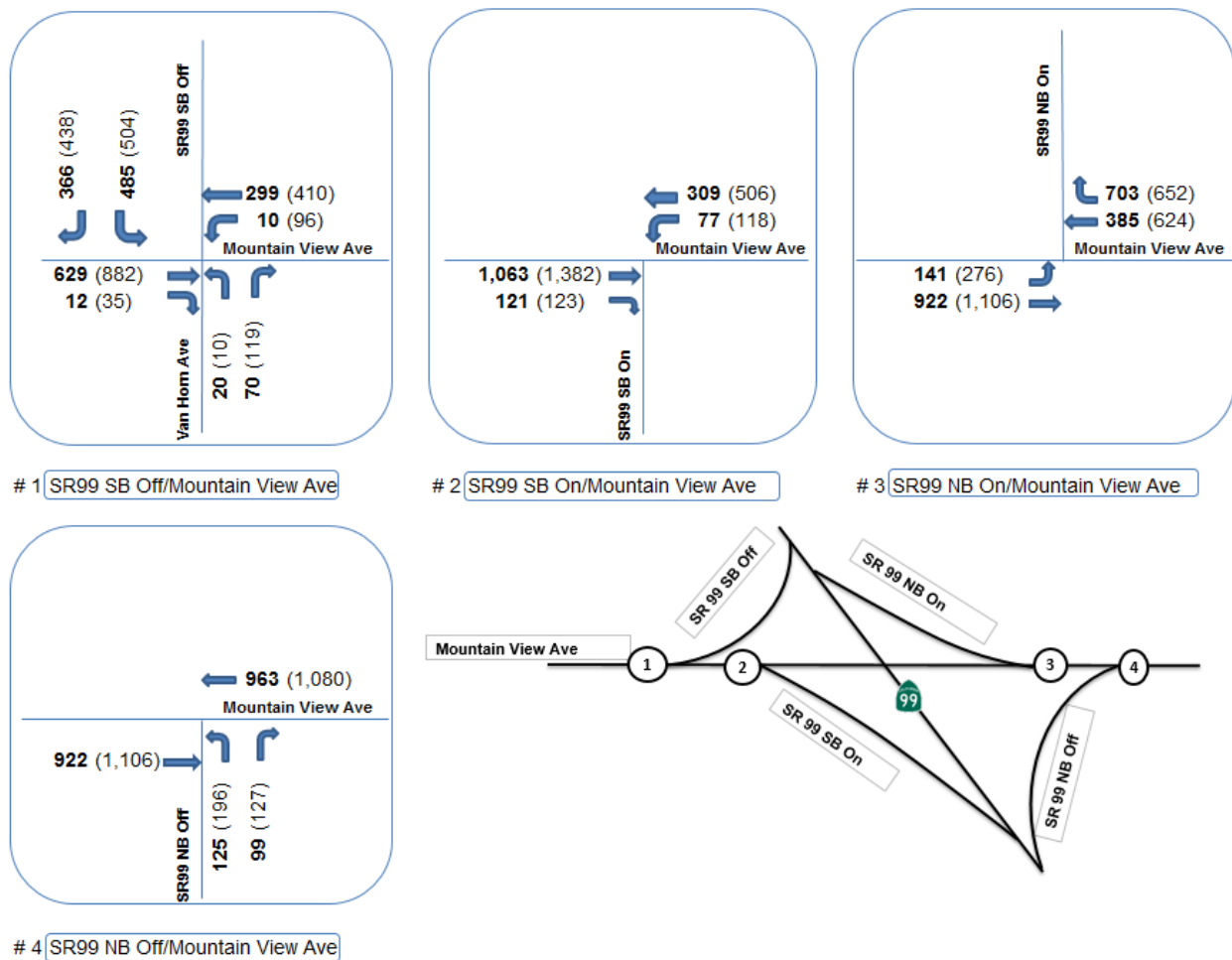
**Figure 7.4 – SR-99/ Mountain View Avenue Intersections
2035 Forecast AM (PM) Peak Hour Turning Movement Volumes**



7.5 2045 Forecast Peak Hour Turning Movement Volumes

Figure 7.5 shows the SR99/Mountain View Avenue intersections 2045 forecast AM (PM) peak hour forecast turning movement volumes.

**Figure 7.5 – SR-99/ Mountain View Avenue Intersections
2045 Forecast AM (PM) Peak Hour Turning Movement Volumes**



7.6 Existing Traffic Operational Conditions

The ramp intersections at the SR 99 and Mountain View Avenue interchange were analyzed for existing, 2035, and 2045 operating conditions (approach delay and LOS). Data for analysis was based on AM and PM peak hour turning movement counts.

Currently, the intersection at the SR 99 southbound off-ramp/Mountain View Avenue and northbound off-ramp/Mountain View Avenue interchanges are operating as TWSC, and the intersection at the SR 99 southbound on-ramp/Mountain View Avenue and northbound on-ramp/Mountain View Avenue interchanges are operating as unsignalized.

The acceptable level of service (LOS) for intersections is LOS D or better. Therefore, any intersections operating at a LOS E or F will be considered deficient. For existing traffic conditions, the SR 99 northbound ramps and Mountain View Avenue intersection is operating at LOS C, an acceptable level of service. However, the SR 99 southbound ramps and Mountain View Avenue intersection is operating at LOS E, See Table 7.1.

Queue and delay time on the southbound left turn traffic are the dominant problems. For the PM peak, the southbound left turn V/C ratio is 0.86 and delay time is 54.7 seconds with LOS F.

Table 7.1 – Mountain View Avenue Intersections, 2018 Existing Level of Service Summary .

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	-	-	C (C)	-	-	-	24 (23)	-	C (C)	18 (18)
SR 99 SB Off-Ramp	-	A (A)	C (C)	D (F)	-	8 (9)	16 (16)	28 (55)	C (E)	25 (43)

7.7 Existing Deficiencies

7.7.1 SR 99 Southbound Off Ramp Intersection (Intersection 1)

The SR99 SB off ramp left-turn queue and the associated delay time are the dominant problems. For the PM peak, the southbound left turn delay time is 55 seconds with LOS F.

7.7.2 SR 99 Northbound Off Ramp Intersection (Intersection 4)

The analysis indicates that the intersection currently operates with satisfactory levels of service during both the morning and evening peak travel periods for the year 2018.

7.8 No-Build Traffic Operation Conditions

7.8.1 Year 2025 and 2035

Traffic operational analysis for the 2025 and 2035 no-build scenario indicates that the SR99/ Mountain View Avenue intersections would likely operate with unsatisfactory level of service F with long delay times, see Table 7.2 and 7.3, respectively.

Table 7.2 Mountain View Avenue Intersections, 2025 No-Build Level of Service Summary

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	-	-	D (D)	-	-	-	34 (35)	-	C (C)	24 (25)
SR 99 SB Off-Ramp	-	A (A)	C (C)	F (F)	-	8 (9)	19 (20)	67 (202)	F (F)	54 (142)

Table 7.3 Mountain View Avenue Intersections, 2035 No-Build Level of Service Summary

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	-	-	F (F)	-	-	-	105 (188)	-	F (F)	63 (113)
SR 99 SB Off-Ramp	-	A (A)	D (E)	F (F)	-	9 (10)	30 (37)	363 (935)	F (F)	247 (577)

The SR99 SB off ramp / Mountain View Avenue intersection is currently failing and SR99 NB off ramp / Mountain View Avenue intersection will fail in the year 2030 see Table 7.4.

Table 7.4 Mountain View Avenue Intersections Failing Year for No-Build

Location Project	Failing Year
SR 99 NB Off-Ramp/Mountain View Avenue	2030
SR 99 SB Off-Ramp/Mountain View Avenue	2018

7.9 Recommended Improvements to Address Deficiencies for Design Year 2045

The following are improvements recommended for the SR99 off ramps / Mountain View Avenue intersections to address deficiencies for Design Year 2045:

Realign on Ramps for all alternatives and install the following traffic control on ramp terminals:

- **Alternative 1 – All Way Stop Control (AWSC)**
- **Alternative 2 – Signalized**
- **Alternative 3 – Roundabout**

7.9.1 Alternative 1- Realign On-Ramps with All Way Stop Control (AWSC)

Table 7.5, 7.6 and 7.7 show that with the recommended improvements, the SR99 NB & SB ramps / Mountain View Avenue intersections would likely operate worse than the no-build scenario and with an unsatisfactory LOS F for both the morning and evening peak hours in the year 2045.

Table 7.5 Mountain View Avenue Intersections, Construction Year 2025 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	E (F)	C (B)	B (B)	-	36 (84)	16 (14)	11 (12)	-	C (F)	25 (52)
SR 99 SB Off-Ramp	C (F)	B (C)	-	C (D)	19 (104)	14 (19)	-	22 (29)	C (F)	19 (59)

Table 7.6 Mountain View Avenue Intersections, Year 2035 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	F (F)	D (D)	B (B)	-	153 (275)	33 (26)	12 (13)	-	F (F)	87 (154)
SR 99 SB Off-Ramp	F (F)	C (E)	-	E (F)	57 (270)	21 (39)	-	46 (55)	E (F)	44 (139)

Table 7.7 Mountain View Avenue Intersections, Year 2045 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	F (F)	F (F)	B (C)	-	366 (576)	112 (130)	14 (19)	-	F (F)	222 (338)
SR 99 SB Off-Ramp	F (F)	D (F)	-	F (F)	170 (493)	30 (130)	-	89 (117)	F (F)	106 (267)

7.9.2 Alternative 2- Realign On-Ramps with Signalized

Table 7.8, 7.9 and 7.10 shows the recommended signalized intersections improvements. The SR99 NB ramps / Mountain View Avenue would likely operate with a satisfactory LOS C for the year 2045. The SR99 SB ramps / Mountain View Avenue would likely operate with unsatisfactory LOS F in the evening peak hour travel period with long delay times for the year 2045, see Table 7.9. The eastbound through, southbound left-turn have V/C ratios that are overcapacity with corresponding LOS F and long delay times. The SR99 SB ramps / Mountain View Avenue with the recommended signalized intersections improvements would fail in the year 2040.

Table 7.8 Mountain View Avenue Intersections, Construction Year 2025 Level of Service Summary (SIGNALIZED)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (B)	B (B)	A (A)	-	19 (19)	12 (15)	8 (9)	-	B (B)	15 (17)
SR 99 SB Off-Ramp	C (D)	A (A)	-	B (C)	32 (40)	8 (3)	-	17 (35)	C (C)	21 (30)

Table 7.9 Mountain View Avenue Intersections, Year 2035 Level of Service Summary (SIGNALIZED)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (B)	B (C)	A (C)	-	19 (11)	12 (25)	10 (28)	-	B (B)	15 (18)
SR 99 SB Off-Ramp	D (E)	A (A)	-	C (D)	39 (58)	5 (3)	-	22 (44)	C (D)	24 (40)

Table 7.10 Mountain View Avenue Intersections, Year 2045 Level of Service Summary (SIGNALIZED)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (B)	C (C)	C (D)	-	9 (16)	25 (26)	35 (50)	-	B (C)	18 (24)
SR 99 SB Off-Ramp	E (F)	A (B)	-	D (F)	61 (148)	6 (15)	-	38 (112)	D (F)	40 (103)

7.9.3 Alternative 3- Realign On-Ramps with Roundabout

Table 7.11, 7.12 and 7.13 shows the recommended roundabout intersections improvements. The SR99 NB & SB ramps / Mountain View Avenue intersections would likely operate with a LOS B and C for both the morning and evening peak hour consecutively in the year 2045.

Table 7.11 Mountain View Avenue Intersections, Construction Year 2025 Level of Service Summary (Roundabout)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (A)	A (A)	A (A)	-	7 (9)	4 (4)	8 (10)	-	A (A)	6 (7)
SR 99 SB Off-Ramp	A (A)	A (A)	-	A (A)	6 (7)	4 (4)	-	7 (8)	A (A)	6 (7)

Table 7.12 Mountain View Avenue Intersections, Year 2035 Level of Service Summary (Roundabout)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (B)	A (A)	A (B)	-	8 (11)	5 (5)	9 (14)	-	A (A)	7 (9)
SR 99 SB Off-Ramp	A (A)	A (A)	-	A (B)	7 (9)	4 (5)	-	9 (11)	A (A)	7 (9)

Table 7.13 Mountain View Avenue Intersections, Year 2045 Level of Service Summary (Roundabout)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (C)	A (A)	B (D)	-	12 (18)	6 (8)	13 (26)	-	A (B)	10 (15)
SR 99 SB Off-Ramp	A (C)	A (A)	-	B (D)	10 (19)	5 (5)	-	14 (28)	B (C)	11 (19)

7.10 Summary

Based on LOS for all the proposed improvements, Table 7.14 shows a LOS comparison of various time frames.

Table 7.14 – Mountain View Near-Term Alternatives

AM (PM) Peak Hour Level of Service Comparison Alternatives 1, 2, and 3

YEAR	LOCATION	Alternative 1* (AWSC)		Alternative 2* (SIGNALIZED)		Alternative 3* (ROUNDABOUT)	
		LOS	DELAY	LOS	DELAY	LOS	DELAY
2025	SR99 NB off Ramp / Mountain View	C (F)	25 (52)	B (B)	15 (17)	A (A)	6 (7)
	SR99 SB off Ramp / Mountain View	C (F)	19 (59)	C (C)	21 (30)	A (A)	6 (7)
2035	SR99 NB off Ramp / Mountain View	F (F)	87 (154)	B (B)	15 (18)	A (A)	7 (9)
	SR99 SB off Ramp / Mountain View	E (F)	44 (139)	C (D)	24 (40)	A (A)	7 (9)
2045	SR99 NB off Ramp / Mountain View	F (F)	222 (338)	B (C)	18 (24)	A (B)	10 (15)
	SR99 SB off Ramp / Mountain View	F (F)	106 (267)	D (F)	40 (103)	B (C)	11 (19)

*Realign on ramps on south and north bound

7.11 2045 Preliminary Cost Estimates

The preliminary cost estimates for the SR99 ramps / Mountain View Avenue intersections various alternatives are listed in Table 7.15.

Table 7.15 – Mountain View Avenue Interchange Alternatives - Preliminary Cost Estimates

ELEMENT	Alternative 1 (AWSC)	Alternative 2 (Signalized)	Alternative 3 (Roundabout)	Long Term Alternative (L-9 Interchange)
Roadway	\$3.6M-\$4.5M	\$5.4M-\$6.8M	\$5.2M-\$6.5M	\$11.3M-\$14.2M
Structures	\$0	\$0	\$0	\$12.4M-\$15.5M
Right of Way	\$1.1M-\$1.4M	\$1.1M-\$1.4M	\$1.5M-\$1.9M	\$23.8M-\$29.8M
Sub-Total	\$4.7M-\$5.9M	\$6.5M-\$8.2M	\$6.7M-\$8.4M	\$47.5M-\$59.5M
Support Cost	50%	50%	50%	30%
Total Project Capital Cost	\$7.1M-\$8.9M	\$9.8M-\$12.3M	\$10.1M-\$12.6M	\$61.8M- \$77.4M

8. Mendocino (18th) Avenue

Four intersections are located on Mendocino (18th) Avenue and SR 99 ramps.

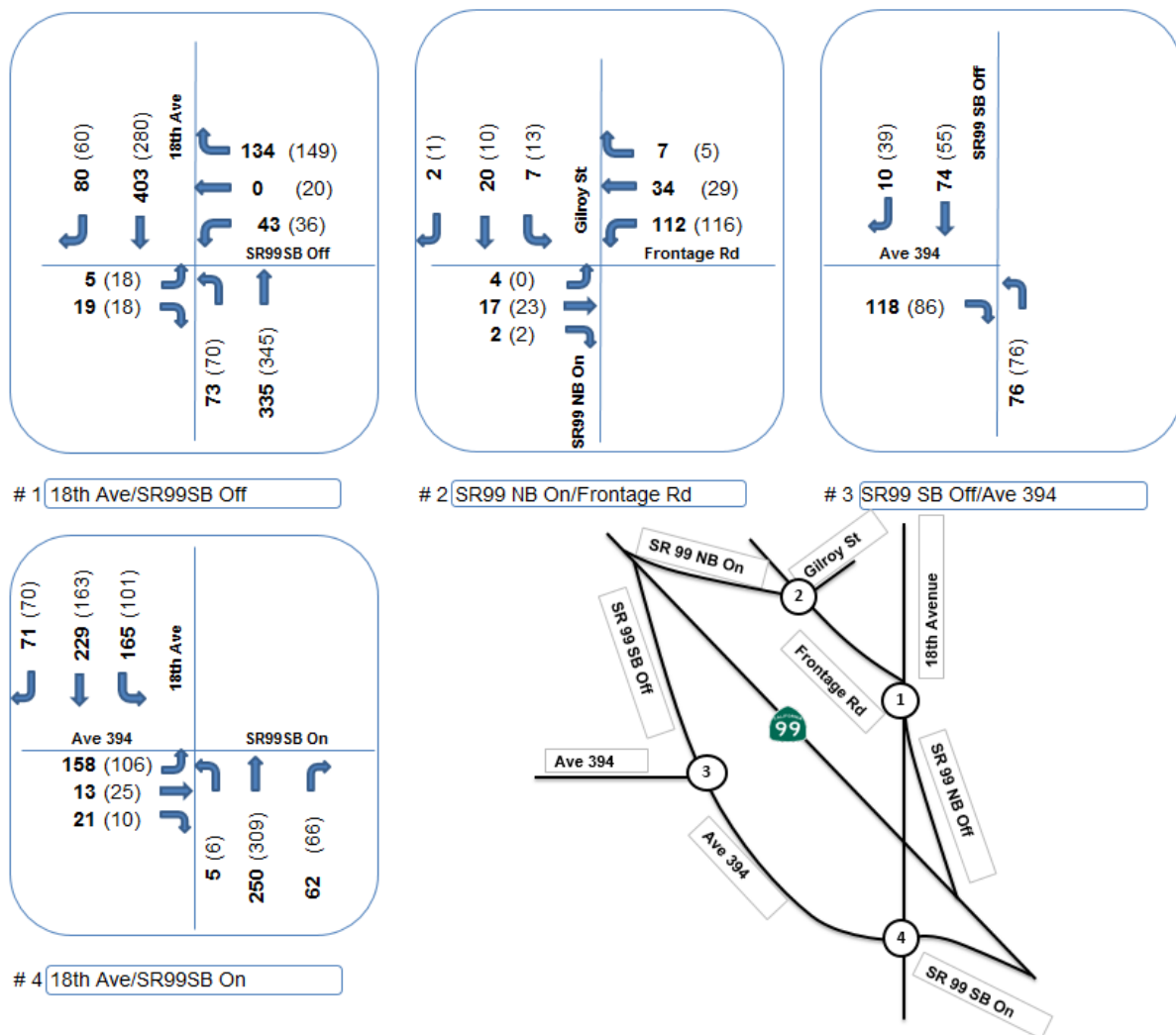
Figure 8.1 – Mountain View Avenue Existing Aerial Photo



8.2 2018 Existing Peak Hour Turning Movement Volumes

Figure 8.2 illustrates the Mendocino (18th) Avenue intersections 2018 existing AM (PM) peak hour turning movement volumes.

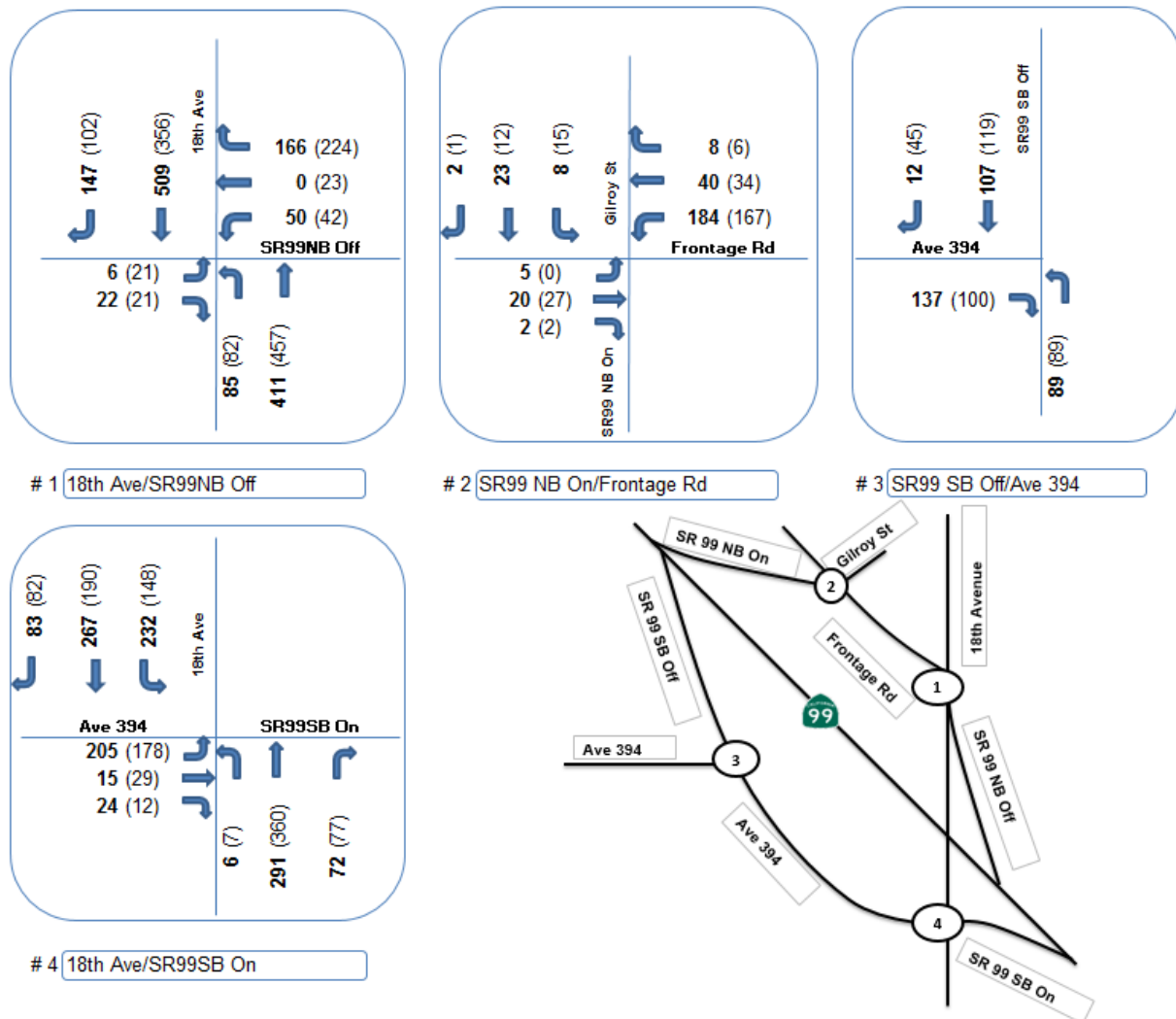
**Figure 8.2 – SR-99/ Mendocino Avenue Intersections
2018 Existing AM (PM) Peak Hour Turning Movement Volumes**



8.3 2025 Forecast Peak Hour Turning Movement Volumes

Figure 8.3 illustrates the Mendocino (18th) Avenue intersections 2025 forecast AM (PM) peak hour turning movement volumes.

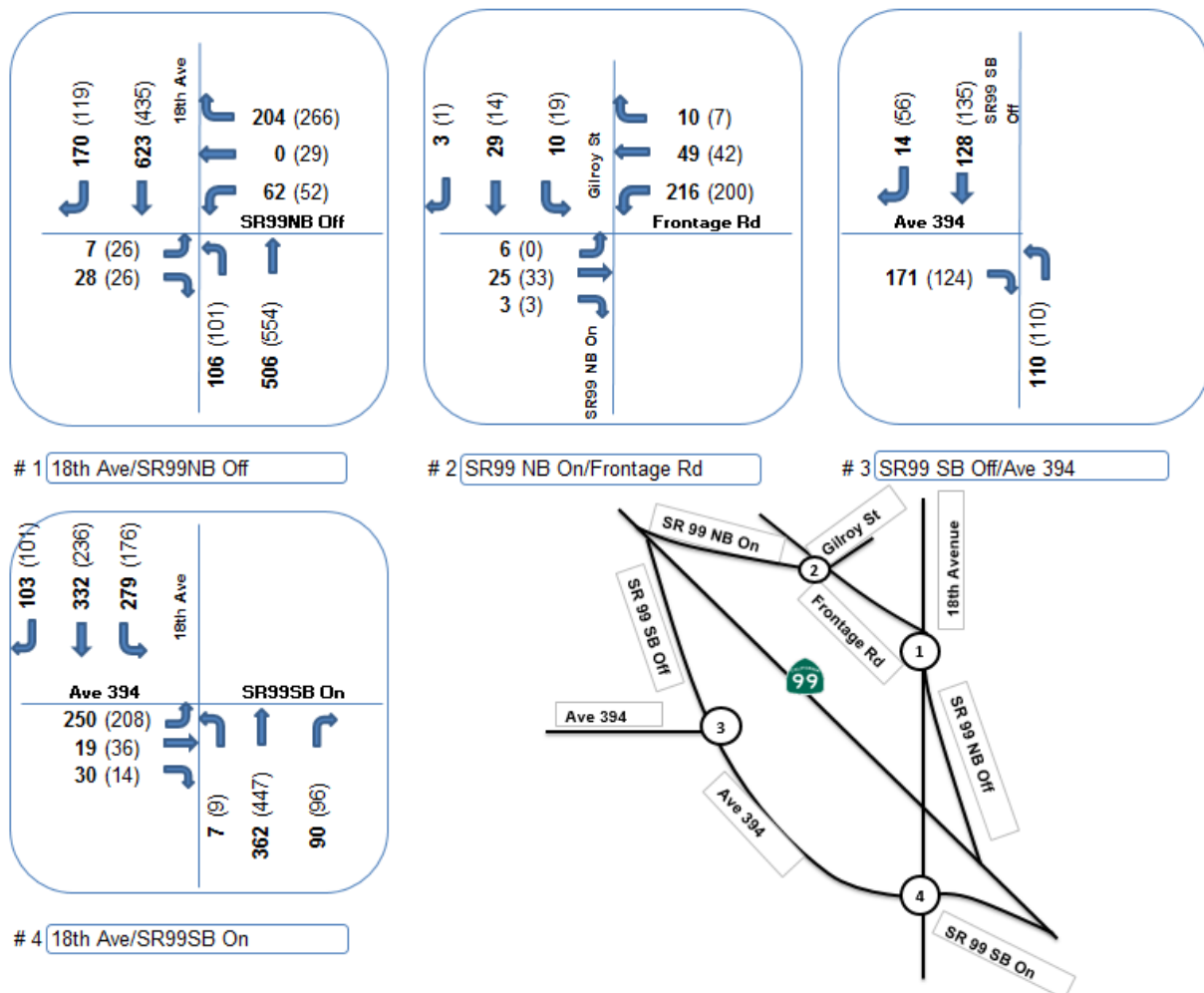
**Figure 8.3 – SR-99/ Mendocino Avenue Intersections
2025 Forecast AM (PM) Peak Hour Turning Movement Volumes**



8.4 2035 Forecast Peak Hour Turning Movement Volumes

Figure 8.4 shows the SR99/Mendocino (18th) Avenue intersections 2035 forecast AM (PM) peak hour forecast turning movement volumes.

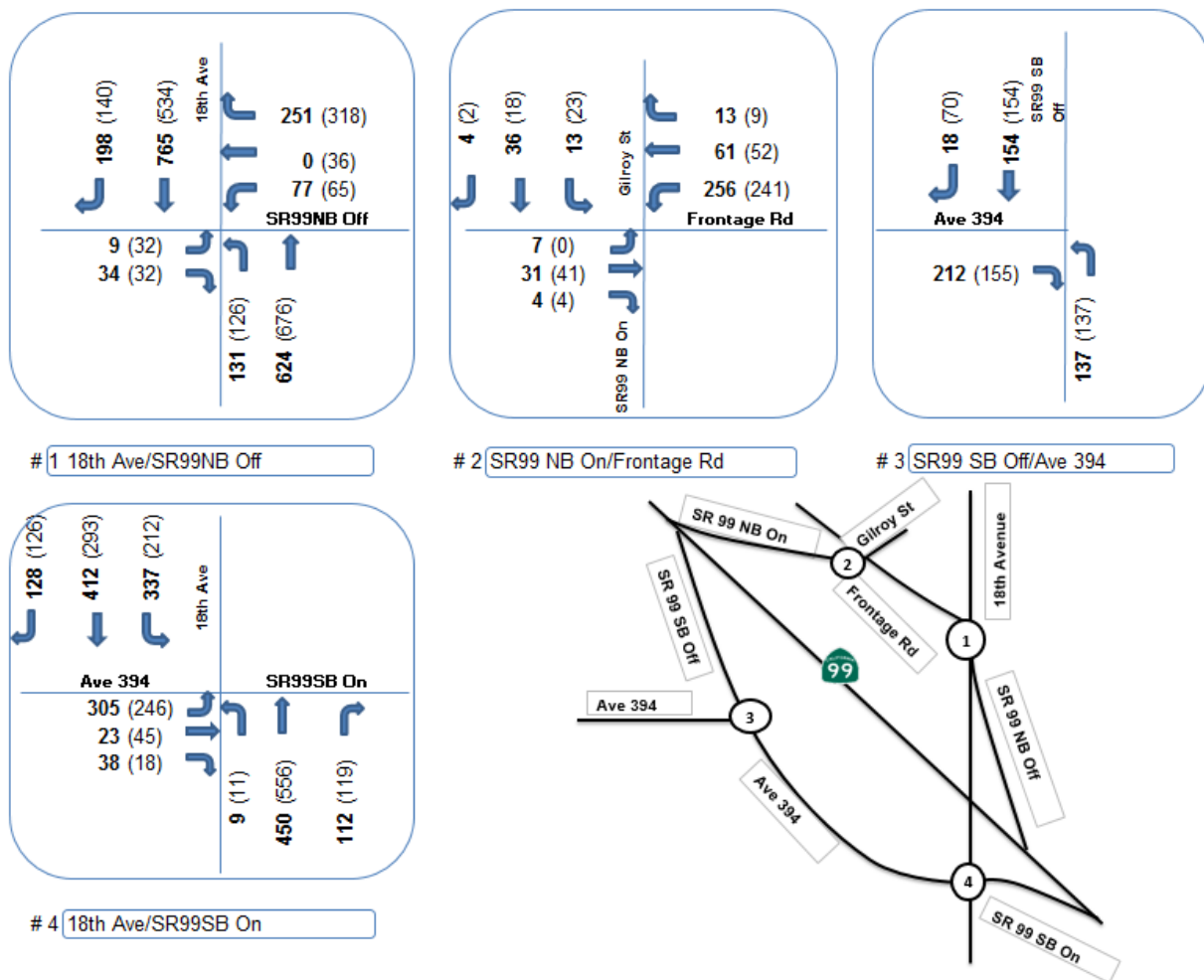
**Figure 8.4 – SR-99/ Mendocino Avenue Intersections
2035 Forecast AM (PM) Peak Hour Turning Movement Volumes**



8.5 2045 Forecast Peak Hour Turning Movement Volumes

Figure 8.5 shows the SR99/Mendocino (18th) Avenue intersections 2045 forecast AM (PM) peak hour forecast turning movement volumes.

**Figure 8.5 – SR-99/ Mendocino Avenue Intersections
2045 Forecast AM (PM) Peak Hour Turning Movement Volumes**



8.6 Existing Traffic Operational Conditions

The ramp intersections at the SR99/Mendocino (18th) Avenue interchange were analyzed for existing, 2035, and 2045 operating conditions (approach delay and LOS). Data for analysis was based on AM and PM peak hour turning movement counts.

Currently, the intersections at the Mountain View Avenue/SR 99 ramps are operating as TWSC, and the acceptable level of service (LOS) for intersections is LOS D or better. Therefore, any intersections operating at a LOS E or F will be considered deficient. For existing traffic conditions, the SR99 NB Off ramp and Mendocino (18th) Avenue intersection is operating at LOS C, an acceptable level of service. However, the SR 99 southbound ramps and Mendocino (18th) Avenue intersection is operating at LOS F, See Table 8.6.

Queue and delay time on the eastbound left turn traffic are the dominant problems. For the AM peak, the southbound left turn delay time is 144 seconds with LOS F.

Table 8.6 – Mendocino Avenue Intersections, 2018 Existing Level of Service Summary

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (C)	E (D)	A (A)	-	14 (24)	46 (30)	10 (9)	-	C (C)	21 (24)
SR 99 SB On-Ramp	F (E)	-	A (A)	A (A)	161 (44)	-	8 (8)	9 (9)	F (E)	144 (42)

8.7 Existing Deficiencies

8.7.1 SR 99 Northbound Off Ramp Intersection (Intersection 1)

The SR99 NB off ramp left-turn queue and the associated delay time are the dominant problems. For the AM peak, the SR99 NB off ramp left-turn delay time is 46 seconds with LOS E.

8.7.2 Ave 394/ Mendocino Avenue Intersection (Intersection 4)

The analysis indicates that the intersection currently operates with unsatisfactory LOS during both the morning and evening peak travel periods for the year 2018. The SR99 SB off ramp left-turn queue and the associated delay time are the dominant problems. For the AM peak, Ave 394 left-turn delay time is 161 seconds with LOS F.

8.8 No-Build Traffic Operation Conditions

8.8.1 Year 2025 and 2035

Traffic operational analysis for the 2025 and 2035 no-build scenario indicates that the SR99/ Mendocino Avenue intersections would likely operate with unsatisfactory LOS F with long delay times, see Table 8.7 and Table 8.8, respectively.

Table 8.7 Mendocino Avenue Intersections, 2025 No-Build Level of Service Summary .

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	C (F)	F (F)	B (A)	-	23 (108)	133 (60)	11 (10)	-	E (F)	43 (108)
SR 99 SB On-Ramp	F (F)	-	A (A)	A (A)	450 (201)	-	9 (8)	9 (9)	F (F)	406 (191)

Table 8.8 Mendocino Avenue Intersections, 2035 No-Build Level of Service Summary .

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	F (F)	F (F)	B (A)	-	91 (1250)	627 (195)	12 (10)	-	F (F)	163 (1250)
SR 99 SB On-Ramp	F (F)	-	A (A)	A (A)	1236 (615)	-	9 (9)	10 (10)	F (F)	1113 (582)

The SR99 SB on ramp/Ave 394/Mendocino Avenue intersection is currently failing and SR99 NB off ramp/Frontage Road/Mendocino Avenue intersection will fail on the year 2025, see Table 8.9.

Table 8.9 Mountain View Avenue Intersections Failing Year for No-Build

Location Project	Failing Year
SR 99 NB Off-Ramp/Frontage Road/Mendocino Avenue	2025
SR 99 SB On-Ramp/Ave 394/Mendocino Avenue	2018

8.9 Recommended Improvements to Address Deficiencies for Design Year 2045

The following are improvements recommended for the SR99 off ramps / Mendocino Avenue intersections to address deficiencies for Design Year 2045:

For alternative 1&2 Reconstruct a TWSC on Avenue 394/SR 99 SB Off Ramp Intersection, and roundabout for alternative 3 and install the following traffic control on SR99 SB on and SR99 NB off ramps terminals:

- **Alternative 1 – All Way Stop Control (AWSC)**
- **Alternative 2 – Signalized**
- **Alternative 3 – Roundabout**

Alternatives 4-6 propose to reconstruct the SB off-ramp and NB on-ramp to eliminate the isolated ramps. These alternatives propose to cul-de-sac Avenue 394 to eliminate access to SB off-ramp and cul-de-sac frontage Road to eliminate access to NB on-ramp. install the following traffic control on SR99 SB and SR99 NB ramps terminals:

- **Alternative 4 – All Way Stop Control (AWSC)**
- **Alternative 5 – Signalized**
- **Alternative 6 – Roundabout**

8.9.1 Alternative 1- Reconstruct the Ave 394/SB Off-Ramp intersection and install All Way Stop Control at the SB On-Ramp and NB Off-Ramps Terminals

Tables 8.10, 8.11 and 8.12 show the LOS summaries for 2025, 2035, and 2045 for AWSC. With these improvements, the SR99 NB Off-Ramp & SB On-Ramp intersections at Mendocino (18th) Avenue would continue to operate at unacceptable LOS. Both the NB Off-Ramp & SB On-Ramp intersections would operate at a LOS F in the AM peak hour in the year 2025 and will degrade to LOS F in both the AM and PM peak hours by 2035.

Table 8.10 Mendocino Avenue Intersections, Construction Year 2025 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (B)	B (C)	E (F)	F (D)	11 (12)	15 (18)	41 (57)	79 (27)	F (E)	54 (37)
SR 99 SB On-Ramp	C (C)	-	D (D)	D (C)	22 (18)	-	27 (35)	31 (20)	D (D)	28 (26)
SR 99 SB Off-Ramp & Ave 394 (TWSC)	A (A)	-	A (A)	-	10 (10)	-	8 (8)	-	A (A)	10 (10)

Table 8.11 Mendocino Avenue Intersections, Year 2035 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (B)	C (C)	F (F)	F (F)	12 (13)	17 (25)	108 (155)	187 (64)	F (F)	129 (91)
SR 99 SB On-Ramp	D (C)	-	F (F)	F (D)	34 (23)	-	62 (99)	83 (32)	F (F)	66 (58)
SR 99 SB Off-Ramp & Ave 394 (TWSC)	B (A)	-	A (A)	-	11 (10)	-	8 (8)	-	B (A)	11 (10)

Table 8.12 Mendocino Avenue Intersections, Year 2045 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (B)	C (E)	F (F)	F (F)	12 (13)	22 (38)	231 (294)	340 (156)	F (F)	244 (182)
SR 99 SB On-Ramp	F (D)	-	F (F)	F (F)	62 (32)	-	154 (223)	188 (74)	F (F)	152 (129)
SR 99 SB Off-Ramp & Ave 394 (TWSC)	B (A)	-	A (A)	-	12 (10)	-	8 (8)	-	B (A)	12 (10)

8.9.2 Alternative 2- Reconstruct Ave 394/SB Off Ramp and Signalized intersections at SB on and NB off Ramps Terminals

Table 8.13, 8.14 and 8.15 shows the recommended signalized intersections improvements. The SR99 NB and SB ramps / Mendocino Avenue would likely operate with a satisfactory LOS C for the year 2045, see Table 8.15.

Table 8.13 Mendocino Avenue Intersections, Construction Year 2025 Level of Service Summary (Signalized)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (B)	B (B)	A (A)	A (B)	7 (16)	11 (15)	9 (8)	9 (11)	A (B)	9 (11)
SR 99 SB On-Ramp	C (C)	-	B (B)	A (A)	31 (28)	-	19 (14)	9 (9)	B (B)	17 (15)
SR 99 SB Off-Ramp & Ave 394 (TWSC)	A (A)	-	A (A)	-	10 (10)	-	8 (8)	-	A (A)	10 (10)

Table 8.14 Mendocino Avenue Intersections, Year 2035 Level of Service Summary (Signalized).

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (B)	B (B)	A (A)	B (B)	7 (18)	14 (17)	10 (10)	18 (13)	B (B)	14 (13)
SR 99 SB On-Ramp	C (C)	-	C (B)	B (A)	33 (32)	-	21 (18)	11 (9)	B (B)	19 (17)
SR 99 SB Off-Ramp & Ave 394 (TWSC)	B (A)	-	A (A)	-	11 (10)	-	8 (8)	-	B (A)	11 (10)

Table 8.15 Mendocino Avenue Intersections, Year 2045 Level of Service Summary (Signalized).

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	B (C)	B (C)	A (B)	C (B)	11 (23)	17 (30)	5 (11)	21 (19)	B (B)	15 (18)
SR 99 SB On-Ramp	D (D)	-	C (C)	B (B)	48 (40)	-	28 (22)	13 (11)	C (C)	25 (21)
SR 99 SB Off-Ramp & Ave 394 (TWSC)	B (A)	-	A (A)	-	12 (10)	-	8 (8)	-	B (A)	12 (10)

8.9.3 Alternative 3- Reconstruct Ave 394/SB Off Ramp and construct Roundabouts at the intersections SB on and NB off Ramps Terminals

Table 8.16, 8.17 and 8.18 shows the recommended roundabout improvements. The SR99 ramps / Mendocino Avenue intersections would likely operate with a satisfactory LOS D and C for both the morning and evening peak hour consecutively in the year 2045.

Table 8.16 Mendocino Avenue Intersections, Construction Year 2025 Level of Service Summary (Roundabouts)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	A (A)	A (A)	A (A)	A (A)	6 (5)	7 (8)	7 (8)	7 (5)	A (A)	7 (7)
SR 99 SB On-Ramp	A (A)	-	A (A)	A (A)	10 (7)	-	8 (8)	8 (6)	A (A)	8 (7)
SR 99 SB Off-Ramp & Ave 394	A (A)	-	A (A)	A (A)	5 (4)	-	4 (4)	4 (5)	A (A)	4 (4)

Table 8.17 Mendocino Avenue Intersections, Construction Year 2035 Level of Service Summary (Roundabouts)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (A)	A (B)	A (A)	A (A)	7 (6)	9 (11)	9 (10)	9 (7)	A (A)	9 (9)
SR 99 SB On-Ramp	B (A)	-	B (B)	A (A)	14 (9)	-	11 (11)	10 (7)	B (A)	11 (9)
SR 99 SB Off-Ramp & Ave 394	A (A)	-	A (A)	A (A)	5 (5)	-	4 (4)	5 (5)	A (A)	5 (5)

Table 8.18 Mendocino Avenue Intersections, Construction Year 2045 Level of Service Summary (Roundabouts)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	A (A)	B (C)	B (B)	B (A)	9 (7)	12 (17)	11 (13)	14 (9)	B (B)	13 (12)
SR 99 SB On-Ramp	D (B)	-	C (C)	B (A)	25 (12)	-	19 (19)	14 (9)	C (B)	18 (14)
SR 99 SB Off-Ramp & Ave 394	A (A)	-	A (A)	A (A)	6 (5)	-	4 (4)	5 (5)	A (A)	5 (5)

8.9.4 Alternative 4- Reconstruct the SB Off-Ramp and the NB On-Ramp. Cul-de-sac Avenue 394 to eliminate access to the SB Off-Ramp and cul-de-sac Frontage Road to eliminate access to the NB On-Ramp and install All Way Stop Control at the SB and NB Ramp Terminals.

Tables 8.19, 8.20 and 8.21 show the LOS summaries for 2025, 2035, and 2045 for AWSC. With these improvements, the SR99 NB Ramps & SB Ramps intersections at Mendocino (18th) Avenue would operate at unacceptable LOS by the year 2035. With these improvements the NB Ramps would operate at LOS F by 2025 and the SB Ramps intersections would operate at a LOS E in the year 2035. Both intersections would operate at LOS F in the AM and PM peak hours in the horizon year 2045.

Table 8.19 Mendocino Avenue Intersections, Construction Year 2025 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	B (C)	E (E)	F (C)	-	15 (16)	39 (49)	77 (25)	F (D)	53 (33)
SR 99 SB Ramps	B (B)	-	C (C)	C (B)	13 (12)	-	22 (25)	17 (14)	C (C)	19 (20)

Table 8.20 Mendocino Avenue Intersections, Year 2035 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	C (C)	F (F)	F (F)	-	17 (20)	106 (154)	184 (56)	F (F)	129 (90)
SR 99 SB Ramps	B (B)	-	F (F)	D (C)	14 (13)	-	59 (71)	28 (17)	E (E)	40 (45)

Table 8.21 Mendocino Avenue Intersections, Year 2045 Level of Service Summary (AWSC)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	C (D)	F (F)	F (F)	-	21 (30)	237 (299)	340 (147)	F (F)	251 (186)
SR 99 SB Ramps	C (B)	-	F (F)	F (D)	16 (15)	-	159 (189)	66 (27)	F (F)	100 (110)

8.9.5 Alternative 5- cul-de-sac Avenue 394/SB off-ramp and frontage Road/ NB on-ramp and Signalized intersections at SB on and NB off Ramps Terminals

Table 8.22, 8.23 and 8.24 shows that with the recommended signalized intersections improvements, the SR99 NB and SB ramps / Mendocino Avenue would likely operate with a satisfactory level of service C for the year 2045 (Table 8.24).

Table 8.22 Mendocino Avenue Intersections, Construction Year 2025 Level of Service Summary (Signalized).

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	B (B)	A (A)	A (A)	-	15 (13)	5 (4)	8 (8)	A (A)	8 (7)
SR 99 SB Ramps	C (C)	-	B (B)	B (B)	28 (26)	-	14 (11)	13 (14)	B (B)	15 (13)

Table 8.23 Mendocino Avenue Intersections, Year 2035 Level of Service Summary (Signalized).

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	B (B)	A (A)	B (A)	-	17 (15)	6 (4)	11 (10)	A (A)	10 (9)
SR 99 SB Ramps	C (C)	-	B (B)	B (B)	33 (31)	-	17 (13)	14 (16)	B (B)	17 (16)

Table 8.24 Mendocino Avenue Intersections, Year 2045 Level of Service Summary (Signalized).

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	B (C)	A (A)	B (B)	-	20 (28)	8 (6)	14 (14)	B (B)	13 (14)
SR 99 SB Ramps	D (D)	-	C (B)	B (B)	41 (37)	-	25 (20)	19 (18)	C (C)	24 (21)

8.9.6 Alternative 6- cul-de-sac Avenue 394 to eliminate access to SB off-ramp and cul-de-sac frontage Road to eliminate access to NB on-ramp and construct Roundabouts at the intersections SB on and NB off Ramps Terminals

Table 8.25, 8.26 and 8.27 show that with the recommended improvements, the SR99 ramps / Mendocino Avenue intersections would likely operate with a satisfactory level of service D and C for both the morning and evening peak hour consecutively in the year 2045.

Table 8.25 Mendocino Avenue Intersections, Construction Year 2025 Level of Service Summary (Roundabouts)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Ramps	-	A (A)	A (A)	A (A)	-	7 (8)	7 (7)	7 (6)	A (A)	7 (7)
SR 99 SB On-Ramp	A (A)	-	A (A)	A (A)	7 (6)	-	7 (7)	8 (6)	A (A)	7 (7)

Table 8.26 Mendocino Avenue Intersections, Construction Year 2035 Level of Service Summary (Roundabouts)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	-	A (B)	A (A)	A (A)	-	8 (11)	8 (9)	9 (7)	A (A)	9 (8)
SR 99 SB On-Ramp	A (A)	-	A (A)	A (A)	10 (7)	-	10 (10)	9 (7)	A (A)	10 (8)

Table 8.27 Mendocino Avenue Intersections, Construction Year 2045 Level of Service Summary (Roundabouts)

Location	LOS by Leg				Delay (sec)				LOS	Delay
	EB	WB	NB	SB	EB	WB	NB	SB		
SR 99 NB Off-Ramp	-	B (C)	A (B)	B (A)	-	11 (17)	10 (11)	14 (8)	B (B)	12 (11)
SR 99 SB On-Ramp	B (A)	-	C (C)	B (A)	14 (9)	-	19 (17)	13 (8)	B (B)	15 (13)

8.10 Summary

Tables 8.28 and 8.29 shows LOS comparisons of the six alternatives for the construction year 2025 and forecast years 2035 and 2045.

**Table 8.28 – Mendocino Avenue Near-Term Alternatives
AM (PM) Peak Hour Level of Service Comparison Alternatives 1, 2, and 3**

YEAR	LOCATION	Alternative 1* (AWSC)		Alternative 2* (SIGNALIZED)		Alternative 3* (ROUNDAABOUT)	
		LOS	DELAY	LOS	DELAY	LOS	DELAY
2025	SR99 NB Off-Ramp / Mendocino Ave	F (E)	54 (37)	A (B)	9 (11)	A (A)	7 (7)
	SR99 SB On-Ramp / Mendocino Ave	D (D)	28 (26)	B (B)	17(15)	A (A)	8 (7)
	SR99 SB Off-Ramp / Ave 394					A (A)	4 (4)
2035	SR99 NB Off-Ramp / Mendocino Ave	F (F)	129 (91)	B (B)	14 (13)	A (A)	9 (9)
	SR99 SB On-Ramp / Mendocino Ave	F (F)	66 (58)	B (B)	19 (17)	B (A)	11 (9)
	SR99 SB Off-Ramp / Ave 394					A (A)	5 (5)
2045	SR99 NB Off-Ramp / Mendocino Ave	F (F)	244 (182)	B (B)	15 (18)	B (B)	13 (12)
	SR99 SB On-Ramp / Mendocino Ave	F (F)	152 (129)	C (C)	25 (21)	C (B)	18 (14)
	SR99 SB Off-Ramp / Ave 394					A (A)	5 (5)

*Realign on ramps on south and north bound

Table 8.29 – Mendocino Avenue Near-Term Alternatives
AM (PM) Peak Hour Level of Service Comparison Alternatives 4, 5, and 6 .

YEAR	LOCATION	Alternative 4*		Alternative 5*		Alternative 6*	
		(AWSC)		(SIGNALIZED)		(ROUNDABOUT)	
		LOS	DELAY	LOS	DELAY	LOS	DELAY
2025	SR99 NB off Ramp / Mendocino Ave	F (D)	53 (33)	A (A)	8 (7)	A (A)	7 (7)
	SR99 SB off Ramp / Mendocino Ave	C (C)	19 (20)	B (B)	15 (13)	A (A)	7 (7)
2035	SR99 NB off Ramp / Mendocino Ave	F (F)	129 (90)	A (A)	10 (9)	A (A)	9 (8)
	SR99 SB off Ramp / Mendocino Ave	E (E)	40 (45)	B (B)	17 (16)	A (A)	10 (8)
2045	SR99 NB off Ramp / Mendocino Ave	F (F)	251 (186)	B (B)	13 (14)	B (B)	12 (11)
	SR99 SB off Ramp / Mendocino Ave	F (F)	100 (110)	C (C)	24 (21)	B (B)	15 (13)

*Eliminate access of Ave394 to SR99SB Off ramp and Frontage Road to SR99NB On ramp

8.11 2045 Preliminary Cost Estimates Comparison

The preliminary cost estimates for the SR99/ Mendocino (18th) Avenue interchange alternatives are listed in Table 8.30.

Table 8.30 – Mendocino Avenue Interchange Alternatives - Preliminary Cost Estimates

ELEMENT	Alternative 1 (AWSC)	Alternative 2 (Signalized)	Alternative 3 (Roundabout)	Long Term Alternative (L-9 Interchange)
Roadway	\$3.2M-\$4M	\$4.0M-\$5M	\$3M-\$3.8M	\$10.2M-\$12.8M
Structures	\$2M-\$2.5M	\$2.1M-\$2.7M	\$3.1M-\$3.9M	\$15.6M-\$19.5M
Right of Way	\$0.5M-\$0.7M	\$0.5M-\$0.7M	\$0.6M-\$0.8M	\$4M-\$5M
Sub-Total	\$5.7M-\$7.2M	\$6.6M-\$8.4M	\$6.7M-\$8.5M	\$29.6M-\$37.3M
Support Cost	50%	50%	50%	30%
Total Project Capital Cost	\$8.6M-\$10.8M	\$9.9M-\$10.5M	\$10.1M-\$12.8M	\$38.5M-\$48.5M

Table 8.30 – Mendocino Avenue Interchange Alternatives - Preliminary Cost Estimates

ELEMENT	Alternative 4 (AWSC)	Alternative 5 (Signalized)	Alternative 6 (Roundabout)
Roadway	\$4.1M-\$5.2M	\$4.8M-\$6M	\$3.4M-\$4.3M
Structures	\$2M-\$2.5M	\$2M-\$2.5M	\$3.1M-\$3.9M
Right of Way	\$0.7M-\$0.9M	\$0.7M-\$0.9M	\$0.8M-\$1M
Sub-Total	\$6.8M-\$8.6M	\$7.5M-\$9.4M	\$7.3M-\$9.2M
Support Cost	50%	50%	50%
Total Project Capital Cost	\$10.2M-\$12.9M	\$11.3M-\$14.1M	\$11M-\$13.8M

9. PRELIMINARY COST ESTIMATES BACKGROUNDS

Preliminary cost estimates were developed for each location for near-term, interim and long-term improvements. The cost estimates use Caltrans most recent contract cost database for pricing. The right-of-way estimates were developed by consulting with Caltrans right-of-way department and determined by using costs for right-of-way from recent similar projects. All costs are in current dollars and are non-escalated values. No separate inflationary index for real estates is available or provided.

Changes in land use have a potentially greater effect on the project cost than the inflation index and as such right-of-way preservation and irrevocable offers of dedication should be used to minimize runaway pricing. Under the California Subdivision Map Act (Government Code 66410-66499.38), the land use approval agency can approve development on the condition that the developer dedicate land for the circulation element. State and local agencies should make every reasonable effort to plan in such a way to minimize purchasing private homes or businesses and develop adequate setbacks.

The cost estimates can be used to compare alternatives, to look for funding or as the basis of budgeting and to establish priorities.

10. CONCLUSION and RECOMMENDATIONS

Much of SR 99 in the study is urbanized as noted by the existing six-lane freeway and typically suburban land use characteristics. If land use changes, consistent with the General Plan, the forecast volumes along the corridor could easily be realized. The conceptual geometric designs developed and discussed in the study are based on the 2045 horizon year. If implementation of the improvements is delayed much beyond proposed years, the “design year” may move beyond 2045 and the forecast volumes would grow potentially affecting the scope and cost. As such, the near-term projects are more sensitive to changes in scope. In comparison, interim and ultimate projects will be reevaluated in the future and the concepts provided are more useful for planning rather than programming.

Listed in the comparison tables are the proposed improvements for each location and time frame based on the failure year.

This study is a roadmap for the local agencies (FCOG, TCAG, City of Kingsburg, and City of Selma) to prioritize the improvements based on funding availability. The study provides failure years, general time frames for improvements, alternatives with conceptual drawings and preliminary cost estimates. This information is sufficient for locals to plan the corridor and meet the transportation needs for the design year of 2045. The conceptual footprint of the improvements will also help the agencies preserve the right of way needed for future use, this will help avoid high cost for right of way in the future.

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SR99 SB OFF RAMP

SR99 NB ON RAMP

MOUNTAIN VIEW AVE

Non-Standard Vertical Clearance
Over State Route 99

Non Continuous Sidewalks With Poor Pedestrian Access

SR99 NB OFF RAMP

STATE ROUTE 99

SR99 SB ON RAMP

4th STREET AVE

Ramp Terminal Connects
Where Grade Is Greater Than 4%

Interchange Configuration Does Not Meet Currently
Accepted Interchange Types

Profile Has Non-Standard Sight Distance

Non-Standard Intersection
Skew Angle

Local Road Across
From Ramp Terminal

Ramp Terminal Connects
Where Grade Is Greater Than 4%

EXHIBIT 1

MOUNTAIN VIEW AVE
GEOMETRIC DEFICIENCIES LOCATIONS AND TYPES

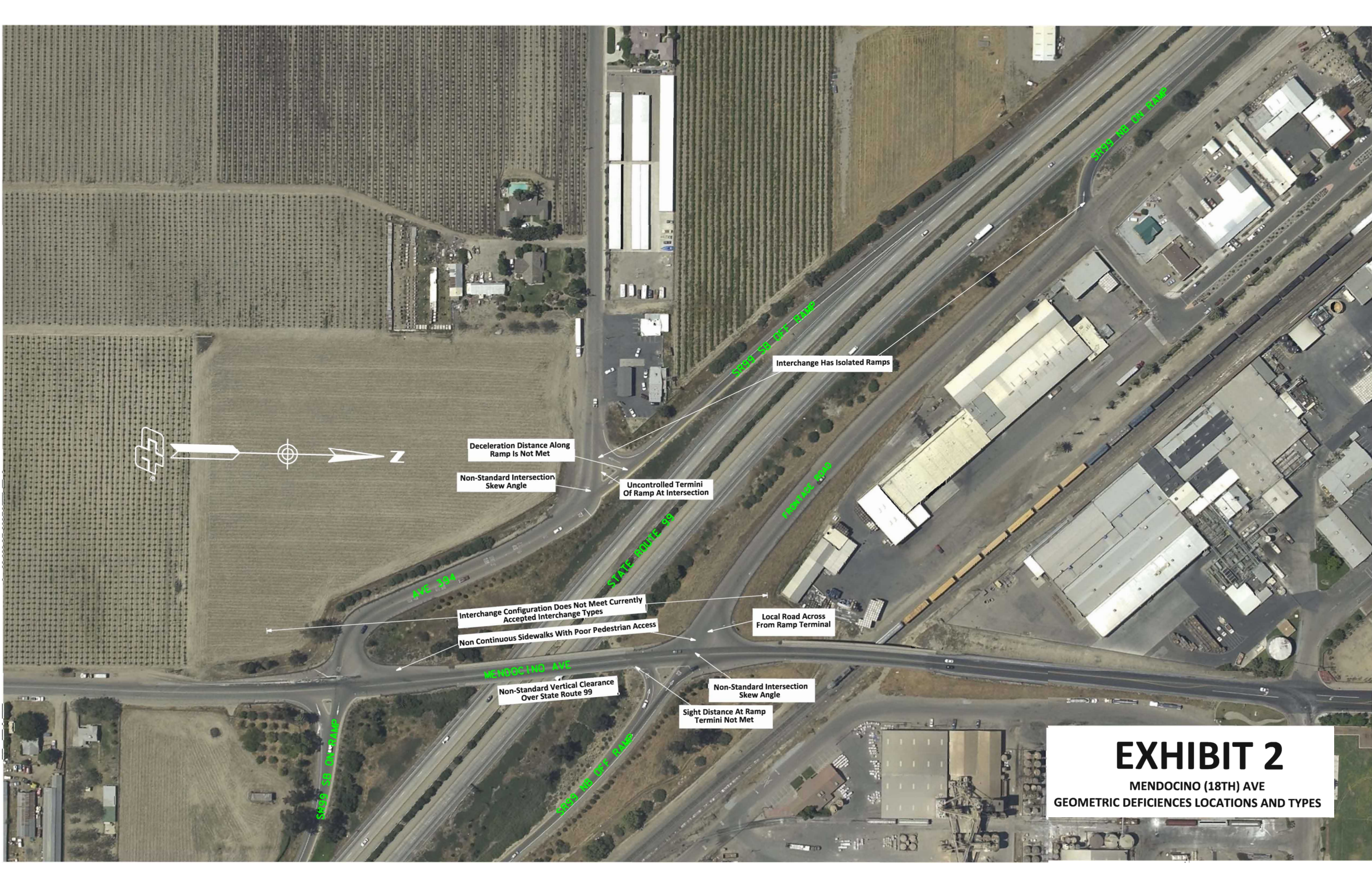



EXHIBIT 2
MENDOCINO (18TH) AVE
GEOMETRIC DEFICIENCIES LOCATIONS AND TYPES

Memorandum

To: ERIC OLSON, Senior Transportation Engineer
Technical Planning
District 6

Date: September 17, 2018

File: 06-Fre/Tul-99
PM VAR
EA 06-0X850
0618000157

From: ALBERT LEE, Chief 
District 6 - Office of Traffic Operations

Subject: SAFETY ANALYSIS

This is in response to your request dated June 27, 2018 for a Safety Analysis for the above referenced project in Fresno and Tulare County. The project is to identify existing deficiencies and to develop interim improvements that improve safety and capacity at Mendocino Avenue Interchange and Mountain View Avenue Interchange on State Route (SR) 99 within the next ten years.

Field review was conducted on September 17, 2018.

Existing Conditions:

This segment of SR 99 is an urban 6-lane divided freeway in generally level terrain. The mainline roadway consists of 12-foot freeway lanes, 10-foot inside shoulders, and 10-foot outside shoulders. The paved median is approximately 22 feet wide and divided with concrete barrier. Rumble strips exist on both inside and outside shoulders in each direction. The posted speed limit is 70 MPH. The current (2016) ADT within the project limits is 63,000. The total percentage of heavy vehicles is approximately 23% (2016).

There are eight ramps within the project limits:

<u>PM</u>	<u>Ramps</u>	<u>ADT (2016)</u>
Tul R53.599	NB off to Mendocino Avenue	2400
Tul R53.684	SB on from Mendocino Avenue	2050
Tul R0.038	SB off to Mendocino Avenue	1100
Fre R0.190	NB on from Mendocino Avenue	1050
Fre R3.541	NB off to Mountain View Avenue	820
Fre R3.588	SB on from Mountain View Avenue	110
Fre R3.891	NB on from Mountain View Avenue	3850
Fre R3.947	SB off to Mountain View Avenue	4300

The following are the bridges within the project limits:

<u>PM</u>	<u>Bridge</u>	<u>Bridge Number</u>
Fre R0.038	Mendocino Avenue Overcrossing	46 0199
Fre R3.742	Mountain View Avenue Overcrossing	42 0219

Safety-Related Observations and Recommendations:

Accident History:

The accident history for the NB and SB mainline of SR 99, and the freeway ramps will be analyzed separately.

NB SR 99 mainline between Tul PM R53.499 and Fre PM R0.289 (Mendocino):

The accident rates for this NB segment of the freeway for the most recent 3-year study period (01/01/2014 to 12/31/2016) as shown on Table B, indicate that the *Actual Fatal* and the *Actual Fatal plus Injury* accident rates are **lower** than the *Statewide Average* accident rates with comparable traffic volumes. However, the *Actual Total* accident rate is **higher** than the *Statewide Average* accident rate. The accident rates in number of accidents per million-vehicle-miles are:

NB SR 99 Section	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
Tul PM R53.499 to Fre PM R0.289	0.000	0.22	0.69	0.005	0.23	0.67

There were 16 accidents (0-Fatal, 5-Injury, 11-Property Damage Only (PDO)) at this mainline section of SR 99. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Sideswipe	Rear End	Broadside	Hit Object	Overtake	Other	Not Stated
Improper Turn	2	1		2	1		
Speeding		5					
Other Violations	1			1			
Other than driver				1		1	1
Total	3	6	0	4	1	1	1

The objects struck from the 4 Hit Object accidents are Guardrail and Cut Slope or Embankment.

Given the varied locations, factors, and types of the collisions along this northbound segment, there does not appear to be any accident concentrations that would indicate that there is a correctable accident causing situation.

SB SR 99 mainline between Tul PM R53.584 and Fre PM R0.137 (Mendocino):

The accident rates for this SB segment of the freeway for the same 3-year study period as shown on Table B, indicate that the *Actual* accident rates are **higher** than the *Statewide Average* accident rates. The accident rates in number of accidents per million-vehicle-miles are:

SB SR 99 Section	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
Tul PM R53.584 to Fre PM R0.137	0.064	0.26	0.70	0.005	0.22	0.64

There were 11 accidents (1-Fatal, 3-Injury, 7-PDO) at this mainline section of SR 99. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-on	Sideswipe	Rear End	Broadside	Hit Object	Auto-Ped	Other
Influence of Alcohol			1				
Improper Turn		1			4		
Speeding			2				
Other Violations	1	1					
Other Than Driver							1
Total	1	2	3	0	4	0	1

The objects struck from the 4 Hit Object accidents are as follows:

Object Struck	No. of Occurrences
End of Guard Rail	1
Fence	1
Tree	1
Overtaken	1
Total	4

The primary collision factor for the “Rear End” fatal accident at Tul PM R53.64 was Influence of Alcohol. The accident occurred when a vehicle traveling southbound SR 99, turned to the left, traveled into the median, collided into the back of a parked vehicle on median. It was reported that the driver of that vehicle was impaired by alcohol. The accident occurred in clear weather, dark with street light, and dry roadway conditions.

Given the varied locations, factors, and types of the collisions along this southbound segment, there does not appear to be any accident concentrations that would indicate that there is a correctable accident causing situation.

NB SR 99 mainline between Fre PM R3.441 and Fre PM R3.990 (Mountain View):

The accident rates for this NB segment of the freeway for the same 3-year study period as shown on Table B, indicate that the *Actual* accident rates are **lower** than the *Statewide Average* accident rates. The accident rates in number of accidents per million-vehicle-miles are:

NB SR 99 Section	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
Fre PM R3.441 to Fre PM R3.990	0.000	0.00	0.44	0.004	0.15	0.45

There were 9 accidents (0-Fatal, 0-Injury, 9-PDO) at this mainline section of SR 99. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-on	Sideswipe	Rear End	Broadside	Hit Object	Overtaken	Other
Improper Turn					1		
Speeding			2				
Other Violations		2					
Improper Driving		1					
Other Than Driver					1		1
Total	0	3	2	0	2	0	2

The objects struck from the 2 Hit Object accidents are Fence and Other Object on Road.

Given the varied locations, factors, and types of the collisions along this northbound segment, there does not appear to be any accident concentrations that would indicate that there is a correctable accident causing situation.

SB SR 99 mainline between Fre PM R3.488 and Fre PM R4.046 (Mountain View):

The accident rates for this SB segment of the freeway for the same 3-year study period as shown on Table B, indicate that the *Actual Fatal* accident rate is **lower** than the *Statewide Average Fatal* accident rate. However, the *Actual Fatal plus Injury* and *Actual Total* accident rates are **higher** than the *Statewide Average* accident rates. The accident rates in number of accidents per million-vehicle-miles are:

SR 99 Section	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
Fre PM R3.488 to Fre PM R4.046	0.000	0.19	0.53	0.004	0.15	0.46

There were 11 accidents (0-Fatal, 4-Injury, 7-PDO) at this mainline section of SR 99. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-on	Sideswipe	Rear End	Broadside	Hit Object	Overturn	Other
Influence of Alcohol			1				
Improper Turn		1			2	1	
Speeding			3				
Other Violations		2					
Other Than Driver							1
Total	0	3	4	0	2	1	1

The objects struck from the 2 Hit Object accidents are Barrier.

Given the varied locations, factors, and types of the collisions along this southbound segment, there does not appear to be any accident concentrations that would indicate that there is a correctable accident causing situation.

SR 99 ramps:

The accident rates for the following SR 99 freeway ramps for the most recent 3-year study period (01/01/2014 to 12/31/2016) as shown on Table B, indicate that the *Actual* accident rates are **lower** than the *Statewide Average* accident rates for similar ramps with comparable traffic volumes. The accident rates in number of accidents per million-vehicle-miles are:

SR 99 Ramps	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
SB on from Mendocino Avenue (PM R53.684)	0.000	0.00	0.39	0.002	0.21	0.60
NB on from Mendocino Avenue (PM R0.190)	0.000	0.00	0.00	0.001	0.14	0.48

SB On-ramp from Mendocino Avenue:

There was one accident (0-Fatal, 0-Injury, 1-PDO) recorded at this on-ramp. The type of accident was Sideswipe and it was caused by Other Violations.

NB On-ramp from Mendocino Avenue:

No accidents were recorded within the most recent 3-year study period.

The accident rates for the following SR 99 freeway ramps for the same 3-year study period as shown on Table B, indicate that the *Actual Fatal* and the *Actual Fatal plus Injury* accident rates are **lower** than the *Statewide Average* accident rates. However, the *Total* accident rates are **higher** than the *Statewide Average Total* accident rates. The accident rates in number of accidents per million-vehicle-miles are:

SR 99 Ramps	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
NB off to Mendocino Avenue (PM R53.599)	0.000	0.00	1.96	0.004	0.32	0.92
NB off to Mountain View Avenue (PM R3.541)	0.000	0.00	3.30	0.004	0.32	0.92

NB Off-ramp to Mendocino Avenue:

There were five accidents (0-Fatal, 0-Injury, 5-PDO) recorded at this off-ramp. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-On	Sideswipe	Rear End	Broadside	Hit Object	Overturn	Other
Failure to yield				1			
Speeding			3				
Other Violations					1		
Total	0	0	3	1	1	0	0

The object struck from the one Hit Object accident was light or signal pole.

NB Off-ramp to Mountain View Avenue:

There were three accidents (0-Fatal, 0-Injury, 3-PDO) recorded at this off-ramp. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-On	Sideswipe	Rear End	Broadside	Hit Object	Overturn	Other
Failure to yield				1			
Speeding					2		
Total	0	0	0	1	2	0	0

The object struck from the Hit Object accidents were side of bridge railing and dike or curb.

The accident rates for the following SR 99 freeway ramps for the same 3-year study period as shown on Table B, indicate that the *Actual Fatal* accident rates are **lower** than the *Statewide Average Fatal* accident rates. However, the *Actual Fatal plus Injury* and *Actual Total* accident rates are **higher** than the *Statewide Average* accident rates. The accident rates in number of accidents per million-vehicle-miles are:

SR 99 Ramps	Actual (MVM)			Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
SB off to Mendocino Avenue (PM R0.038)	0.000	1.52	1.52	0.003	0.18	0.50
SB on from Mountain View Avenue (PM R3.588)	0.000	1.68	2.53	0.002	0.21	0.60
NB on from Mountain View Avenue (PM R3.891)	0.000	1.16	4.41	0.002	0.21	0.60
SB off to Mountain View Avenue (PM R3.947)	0.000	0.62	1.24	0.004	0.32	0.92

SB Off-ramp to Mendocino Avenue:

There were two accidents (0-Fatal, 2-Injury, 0-PDO) recorded at this off-ramp. One is Rear End accident and caused by Speeding; another one is Broadside accident and caused by Failure to Yield.

SB On-ramp from Mountain View Avenue:

There were three accidents (0-Fatal, 2-Injury, 1-PDO) recorded at this on-ramp. Two of them are Hit Object accidents and both caused by Speeding; one of them is Broadside accident and caused by Failure to Yield.

NB On-ramp from Mountain View Avenue:

There were nineteen accidents (0-Fatal, 5-Injury, 14-PDO) recorded at this on-ramp. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-On	Sideswipe	Rear End	Broadside	Hit Object	Overturn	Other
Failure to yield		1		3			
Improper Turn					6		
Speeding			7		1	1	
Total	0	1	7	3	7	1	0

The objects struck from the 7 Hit Object accidents are as follows:

Object Struck	No. of Occurrences
Guardrail	6
Dike or curb	1
Total	7

SB Off-ramp to Mountain View Avenue:

There were six accidents (0-Fatal, 3-Injury, 3-PDO) recorded at this off-ramp. The types of accidents and the primary collision factors are as follows:

Primary Collision Factor	Type of Accident						
	Head-On	Sideswipe	Rear End	Broadside	Hit Object	Overturn	Other
Failure to yield	1			1			
Improper Turn				1			
Speeding			3				
Total	1	0	3	2	0	0	0

Recommendations:

Exit gore sign is missing at NB off-ramp to Mountain View Avenue. A two-post exit gore sign should be installed and placed near the back of the gore area.

Additional DO NOT ENTER (R5-1) sign and WRONG WAY (R5-1a) sign should be added facing Van Horn Avenue at SB Off-ramp termination at Mountain View Avenue to deter wrong-way entry.

If you have any questions, please call Caleb Wu at (559) 445-6982.

Attachments: Table B summary



SR99 SB OFF RAMP

SR99 NB ON RAMP

MOUNTAIN VIEW AVE

SR99 SB ON RAMP

STATE ROUTE 99

SR99 NB OFF RAMP

VAN HORN AVE

■ SPEEDING

■ IMPROPER TURN

■ YIELD

1
2
3

2
1

6
4
9

2
1

EXHIBIT 3

MOUNTAIN VIEW AVE
ACCIDENT TYPES, COUNTS, AND LOCATIONS
(JANUARY 2014 TO DECEMBER 2016)



- OTHER VIOLATIONS
- SPEEDING
- IMPROPER TURN
- YIELD

SR99 SB ON RAMP

1

AVE 394

MENDOCINO AVE

STATE ROUTE 99

1

1

SR99 SB OFF RAMP

FRONTAGE ROAD

SR99 NB OFF RAMP

3

1

1

SR99 NB ON RAMP

0

EXHIBIT 4

MENDOCINO (18TH) AVE
ACCIDENT TYPES, COUNTS, AND LOCATIONS
(JANUARY 2014 TO DECEMBER 2016)

Mountain View Ave

Near-Term Alternative

Alternative 1: Re-delineate NB & SB On Ramps---Exhibit 5

Mid-Term Alternatives

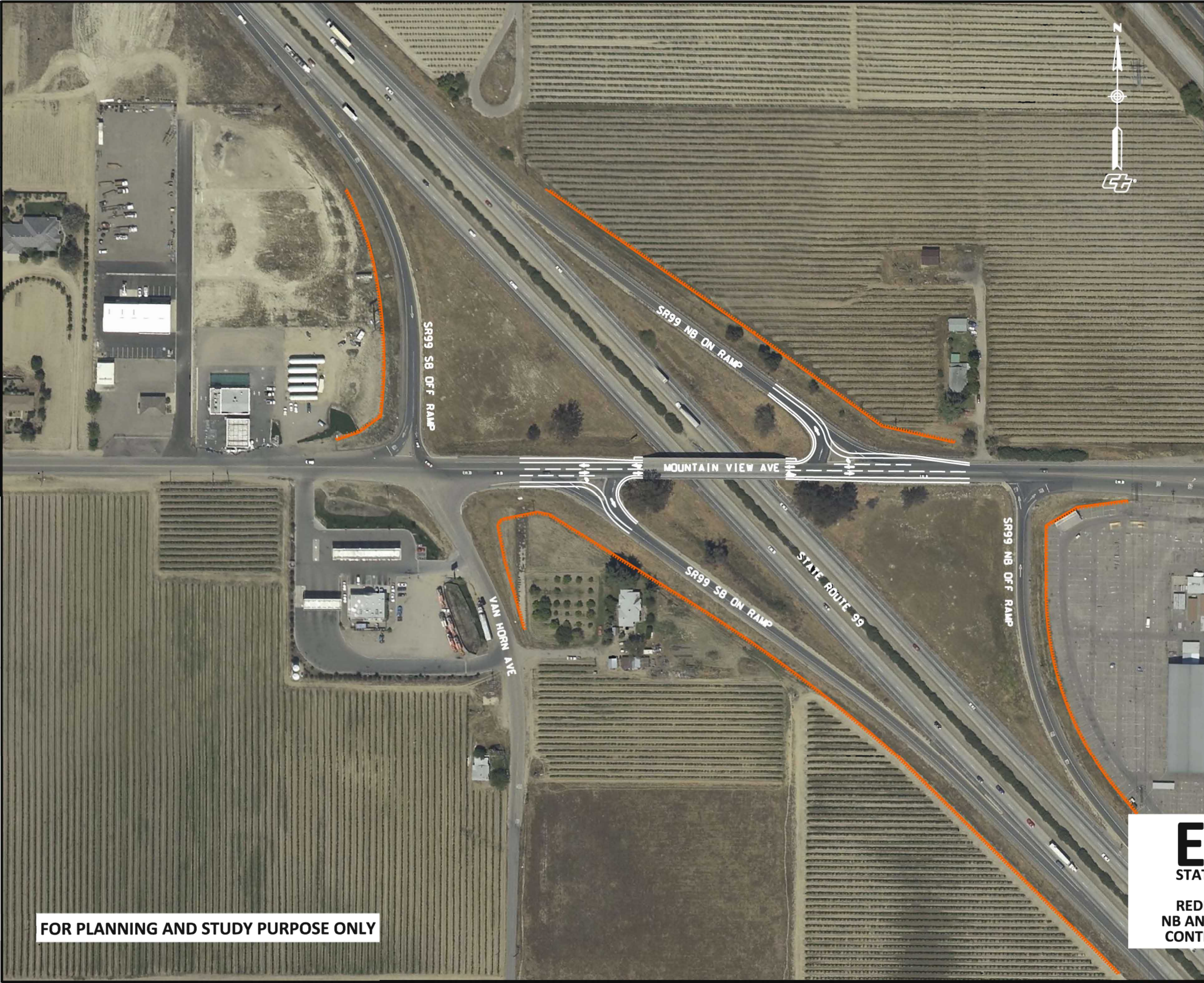
Alternative 1: All Way Stop Control (AWSC)-----Exhibit 6

Alternative 2: Signalized Intersection-----Exhibit 7

Alternative 3: Roundabout Intersection-----Exhibit 8

Long-Term Alternatives

Alternative 1: Partial Cloverleaf Interchange(L-9)-----Exhibit 9



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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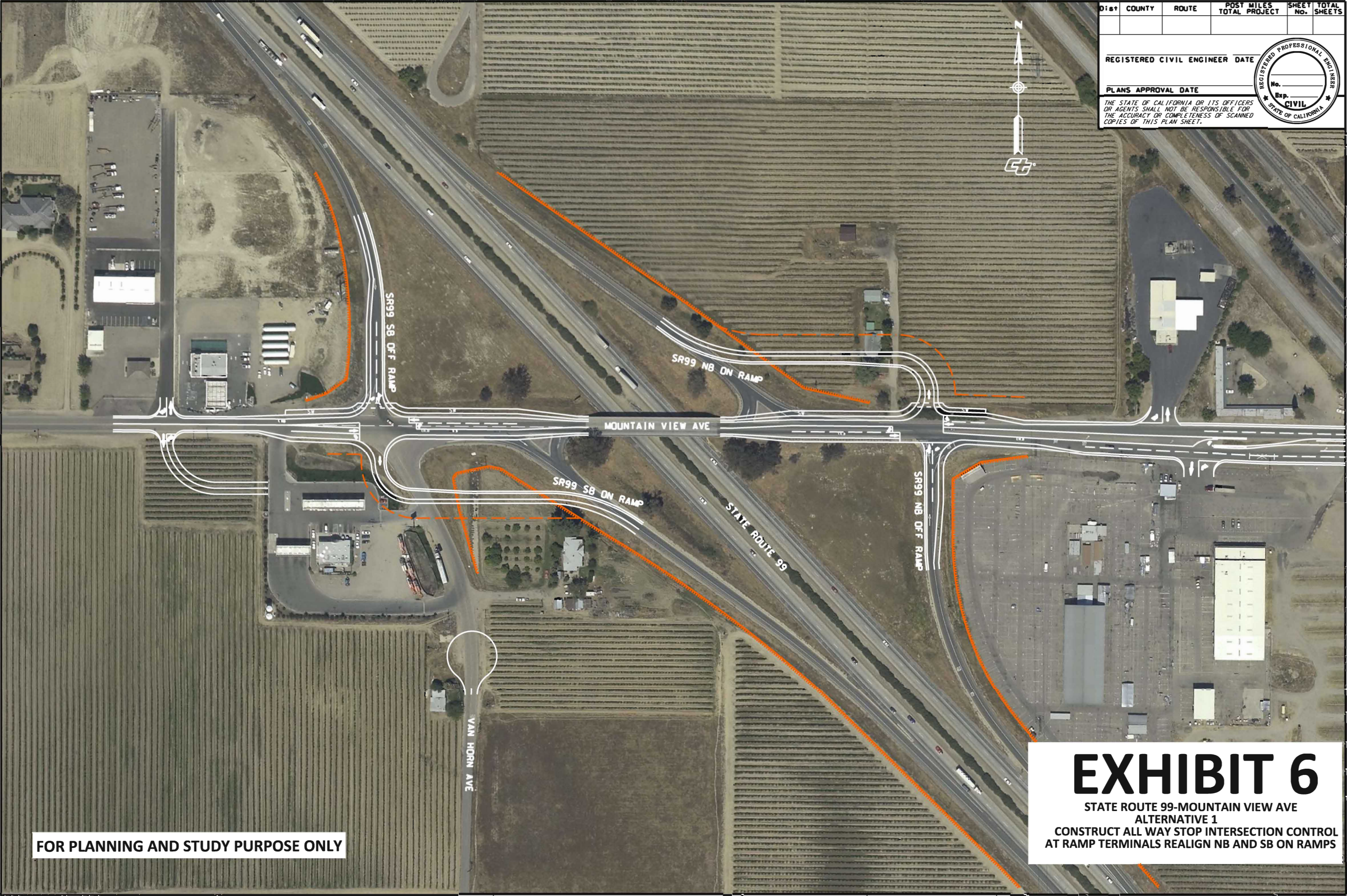
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EXHIBIT 5

STATE ROUTE 99-MOUNTAIN VIEW AVE
NEAR TERM ALTERNATIVE
REDELINEATE RIGHT TURN POCKET AT
NB AND SB ON RAMP ADD ALL WAY STOP
CONTROL AT SB OFF RAMP INTERSECTION



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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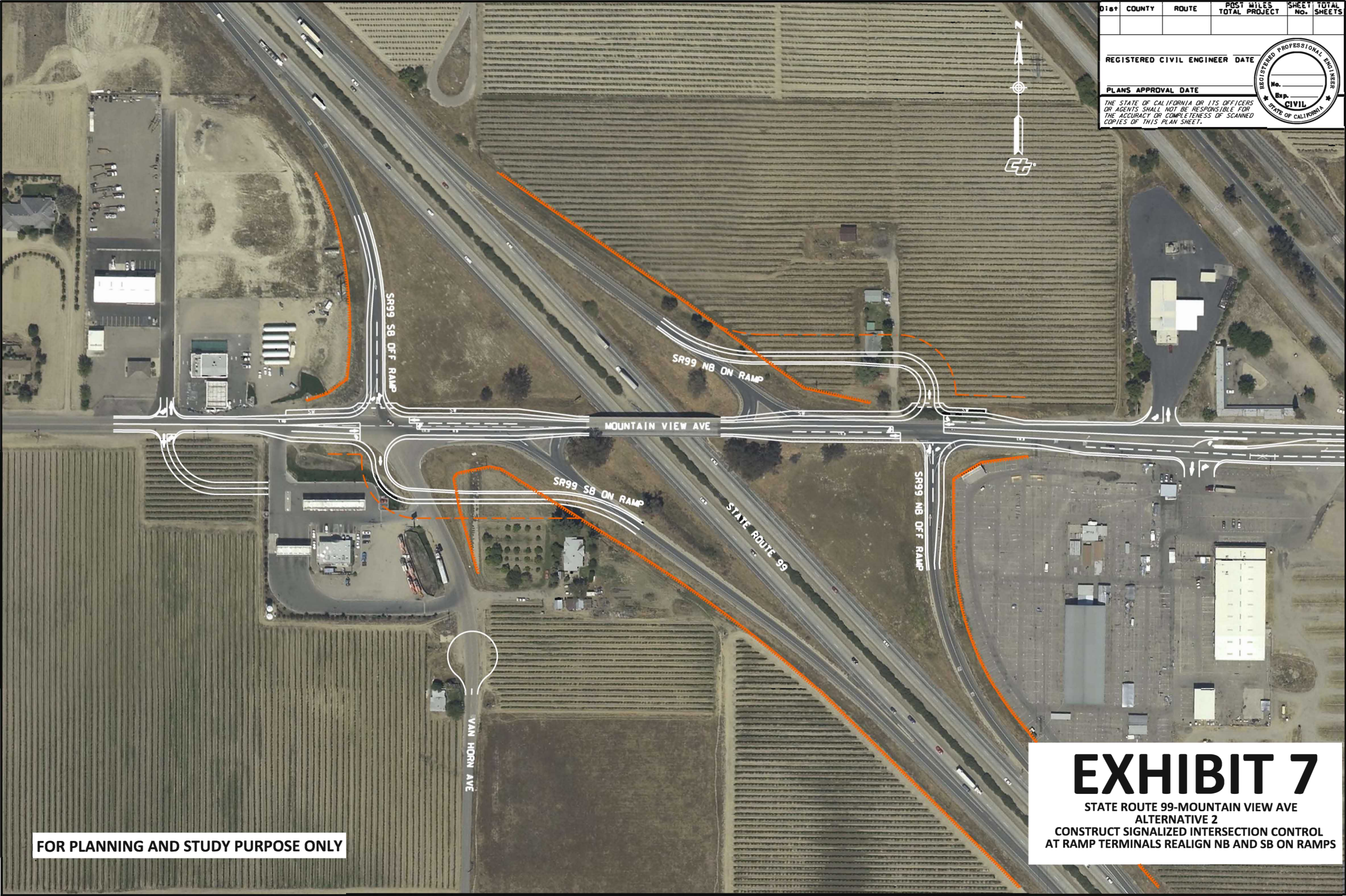
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STATE OF CALIFORNIA

EXHIBIT 6

STATE ROUTE 99-MOUNTAIN VIEW AVE
ALTERNATIVE 1
CONSTRUCT ALL WAY STOP INTERSECTION CONTROL
AT RAMP TERMINALS REALIGN NB AND SB ON RAMPS

FOR PLANNING AND STUDY PURPOSE ONLY



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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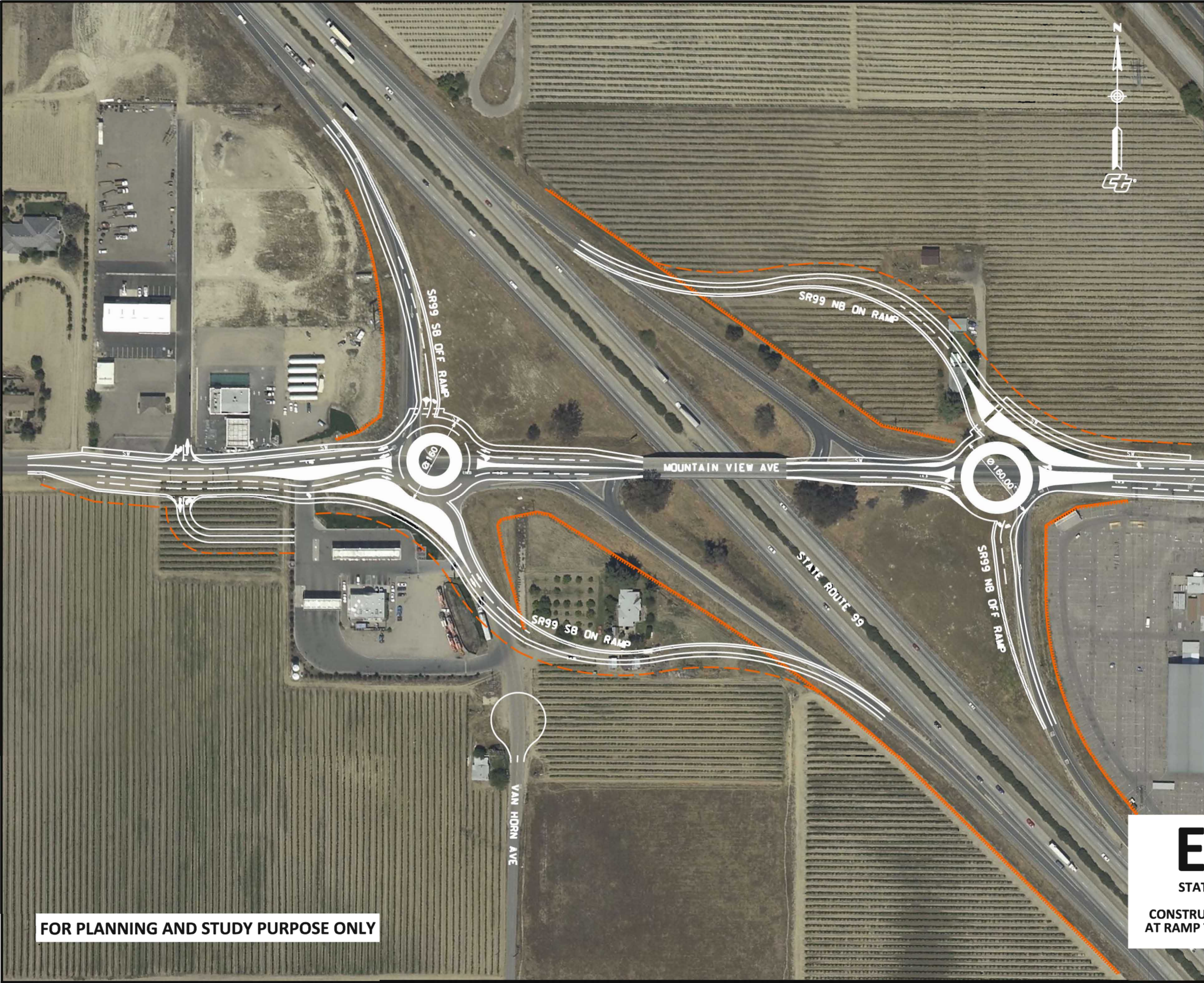
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EXHIBIT 7

STATE ROUTE 99-MOUNTAIN VIEW AVE
ALTERNATIVE 2
CONSTRUCT SIGNALIZED INTERSECTION CONTROL
AT RAMP TERMINALS REALIGN NB AND SB ON RAMPS



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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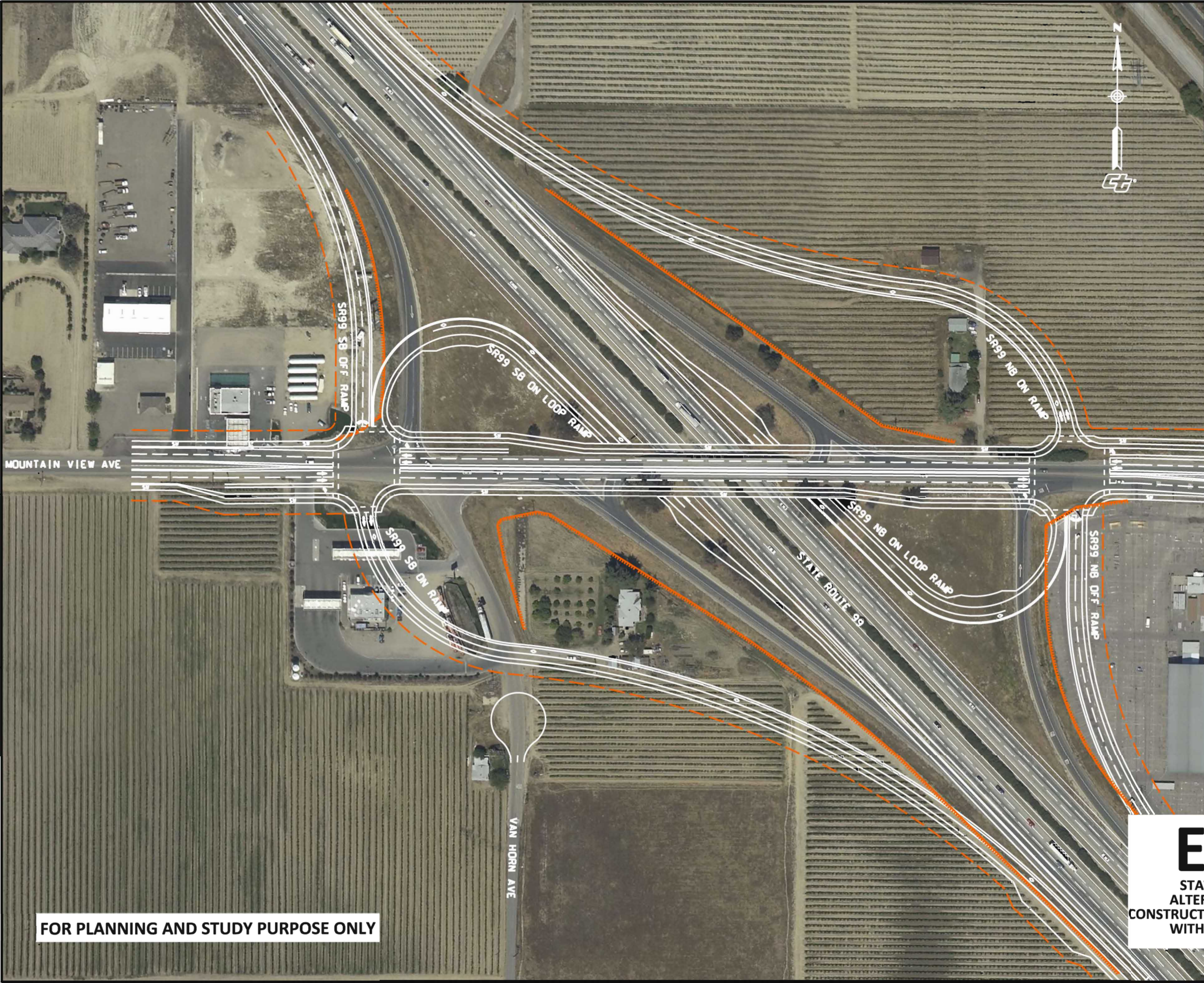
Exp.

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EXHIBIT 8

STATE ROUTE 99-MOUNTAIN VIEW AVE
ALTERNATIVE 3
CONSTRUCT ROUNDABOUT INTERSECTION CONTROL
AT RAMP TERMINALS REALIGN NB AND SB ON RAMP



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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EXHIBIT 9

STATE ROUTE 99-MOUNTAIN VIEW AVE
ALTERNATIVE 4-LONG TERM ALTERNATIVE
CONSTRUCT PARTIAL CLOVERLEAF INTERCHANGE (L-9)
WITH SIGNALIZED INTERSECTION CONTROL

Mendocino (18th) Ave

Mid-Term Alternatives

For Alt 1 & 2, reconstruct Two Way Stop Control (TWSC) on Ave 394 & SB Off Ramp. For Alt 3, construct Roundabout Intersection Control on Ave 394 & SB Off Ramp.

Alternative 1: All Way Stop Control (AWSC)-----Exhibit 10

Alternative 2: Signalized Intersection-----Exhibit 11

Alternative 3: Roundabout Intersection-----Exhibit 12

For Alt 4, 5 & 6, realign NB On Ramp & SB Off Ramp to Mendocino Ave.

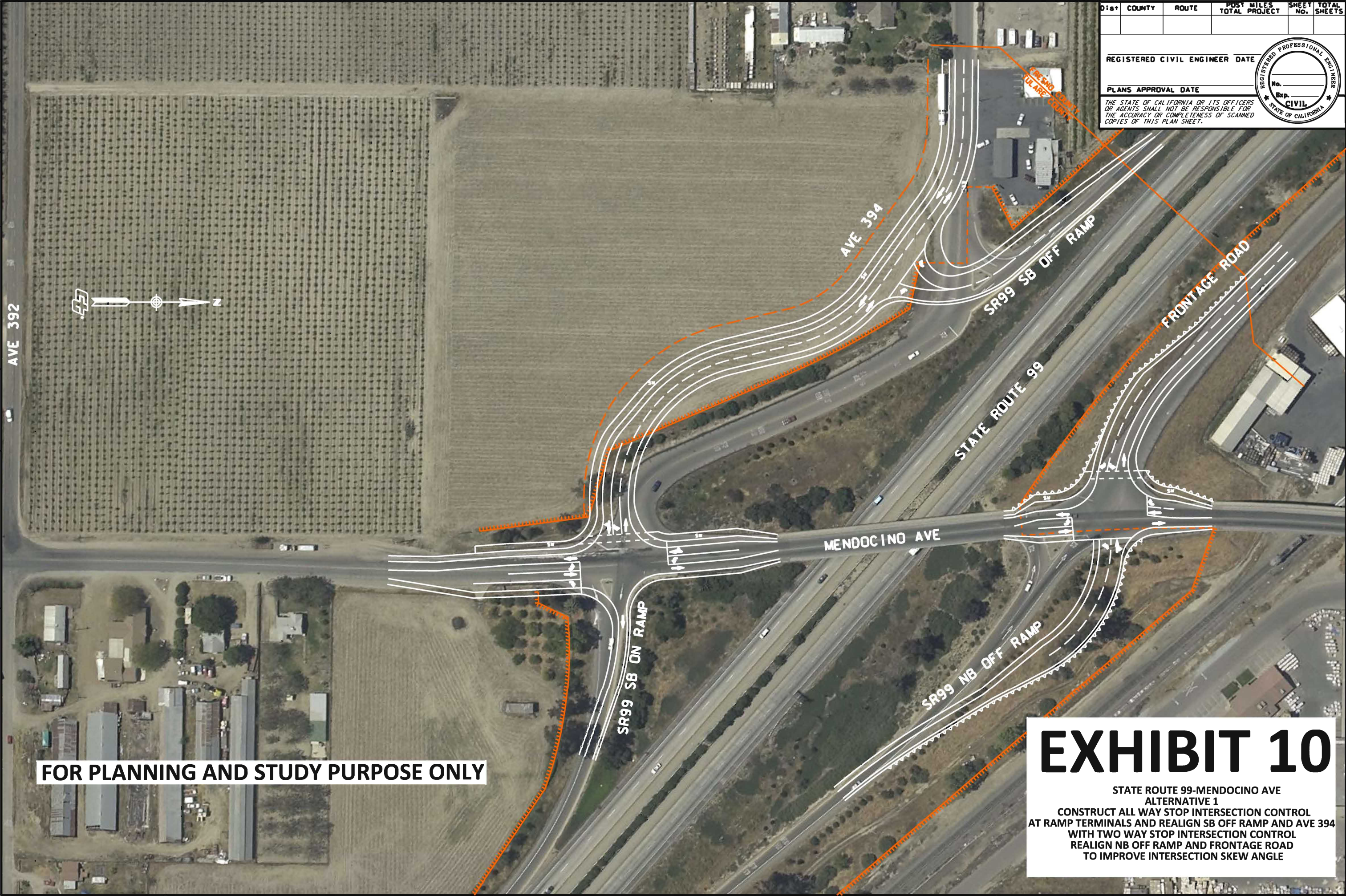
Alternative 4: All Way Stop Control (AWSC)-----Exhibit 13

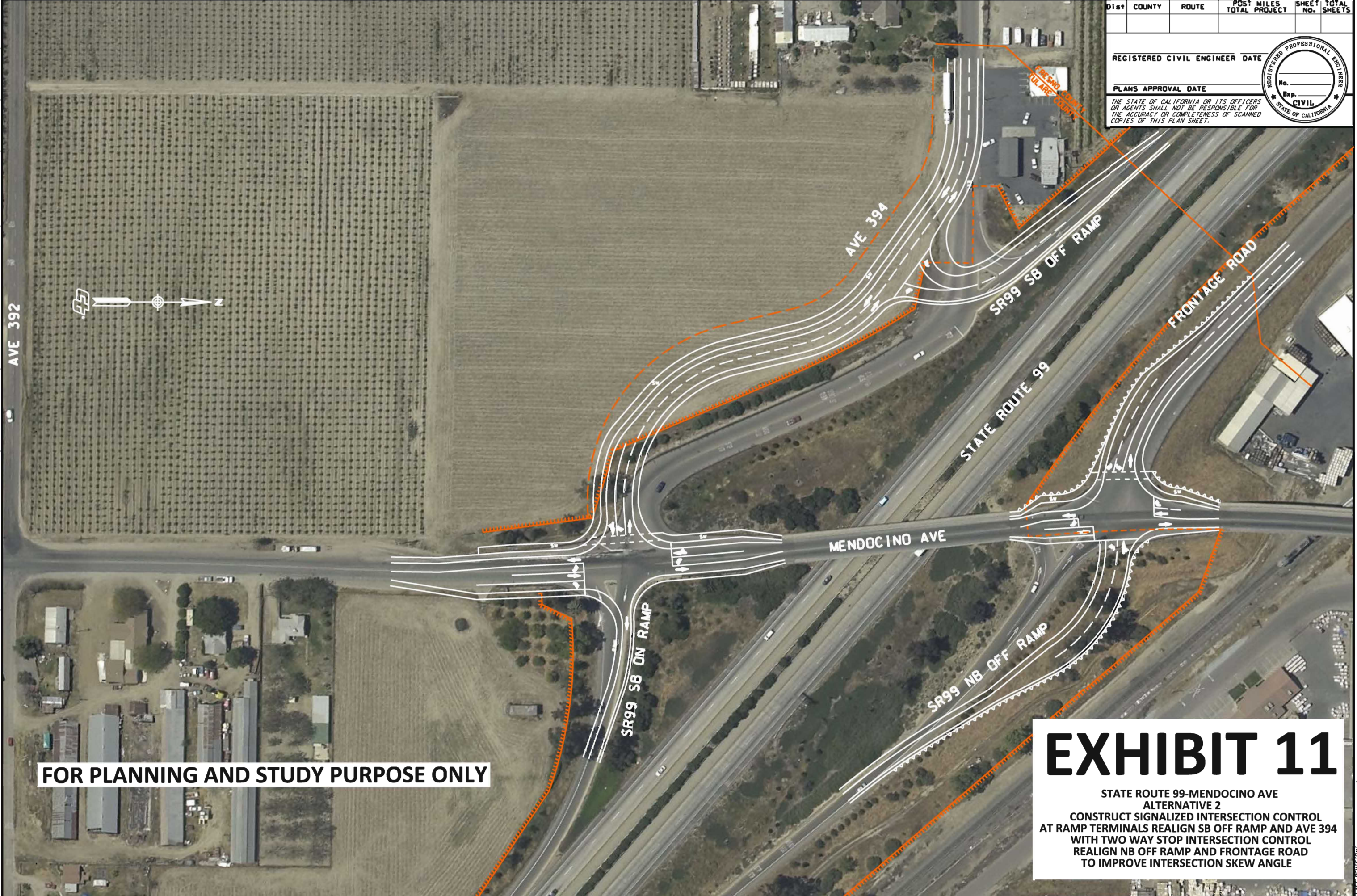
Alternative 5: Signalized Intersection-----Exhibit 14

Alternative 6: Roundabout Intersection-----Exhibit 15

Long-Term Alternatives

Alternative 1: Compact Diamond Interchange (L-1)-----Exhibit 16





DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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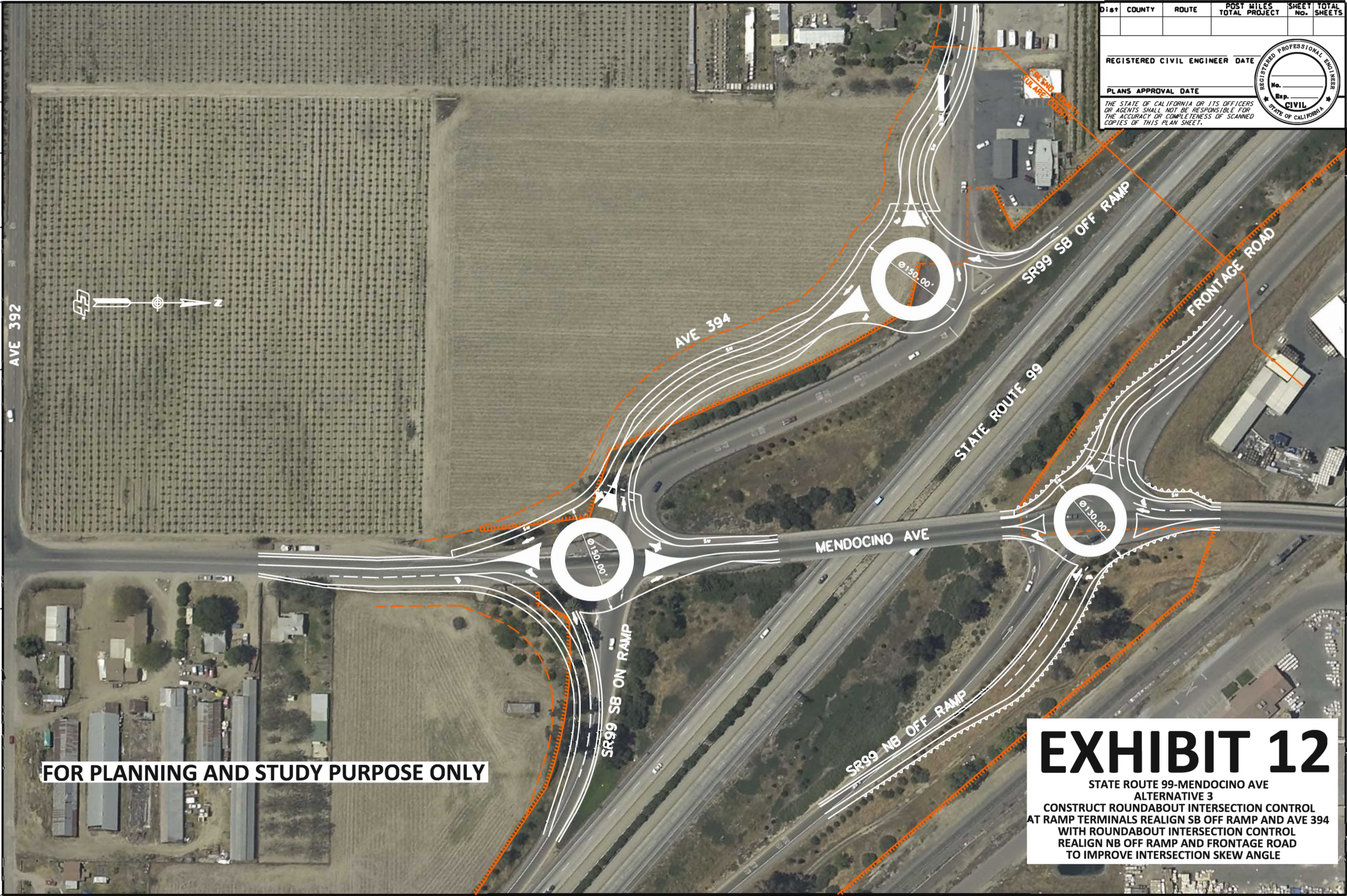
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REGISTERED CIVIL ENGINEER DATE

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EXHIBIT 12

STATE ROUTE 99-MENDOCINO AVE
ALTERNATIVE 3
CONSTRUCT ROUNDABOUT INTERSECTION CONTROL
AT RAMP TERMINALS REALIGN SB OFF RAMP AND AVE 394
WITH ROUNDABOUT INTERSECTION CONTROL
REALIGN NB OFF RAMP AND FRONTAGE ROAD
TO IMPROVE INTERSECTION SKEW ANGLE



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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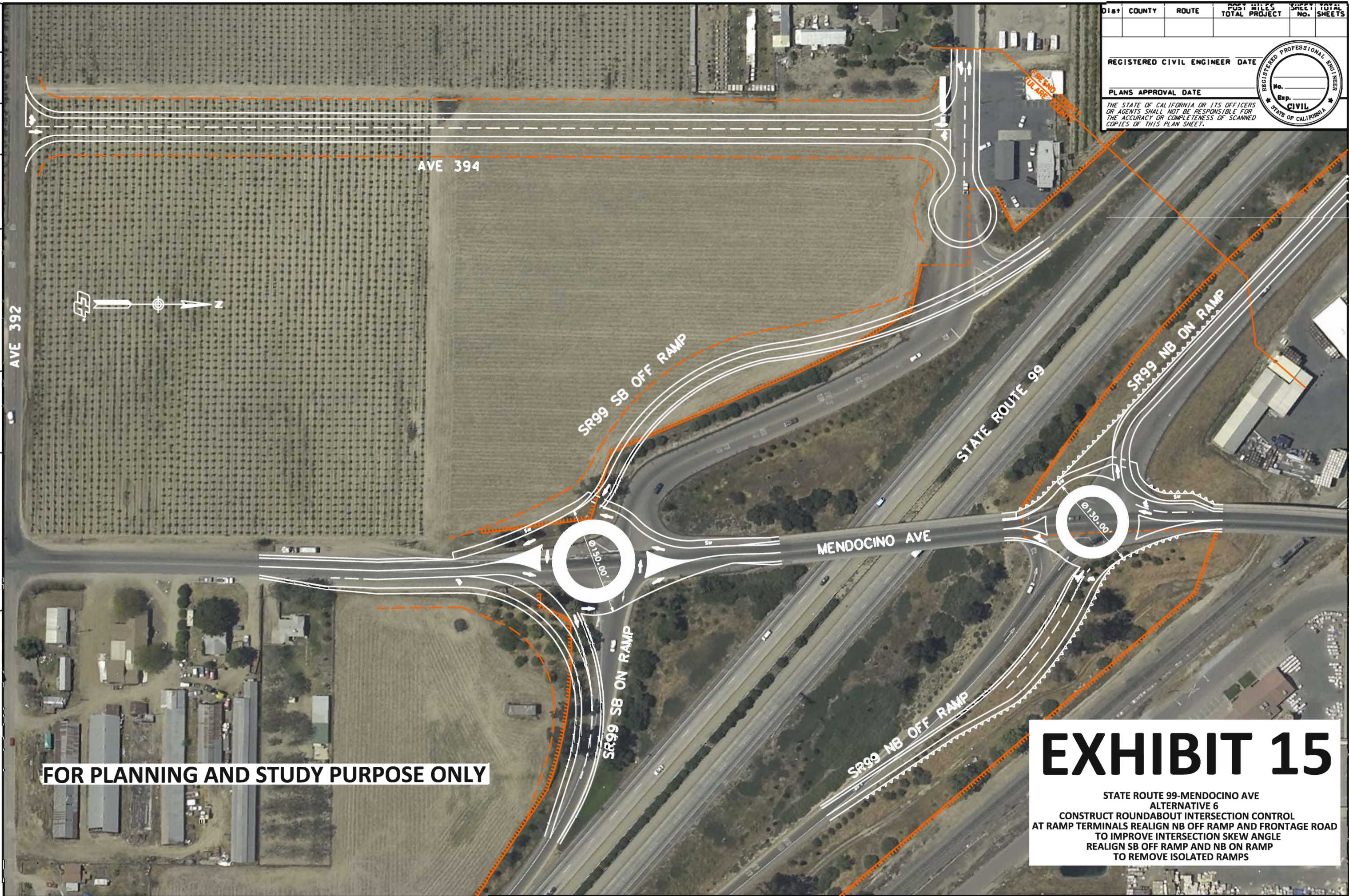
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EXHIBIT 14

STATE ROUTE 99-MENDOCINO AVE
ALTERNATIVE 5
CONSTRUCT SIGNALIZED INTERSECTION CONTROL
AT RAMP TERMINALS REALIGN NB OFF RAMP AND FRONTAGE ROAD
TO IMPROVE INTERSECTION SKEW ANGLE
REALIGN SB OFF RAMP AND NB ON RAMP
TO REMOVE ISOLATED RAMPS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION 	FUNCTIONAL SUPERVISOR	CALCULATED- DESIGNED BY	REVISED BY		




DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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A circular seal for a Registered Professional Engineer in the State of California. The outer ring contains the text 'REGISTERED PROFESSIONAL ENGINEER' at the top and 'STATE OF CALIFORNIA' at the bottom, separated by two stars. The inner circle contains the text 'No. _____' and 'Exp. _____' with horizontal lines for a signature and date. At the bottom of the inner circle, the word 'CIVIL' is printed in bold capital letters.

EXHIBIT 15

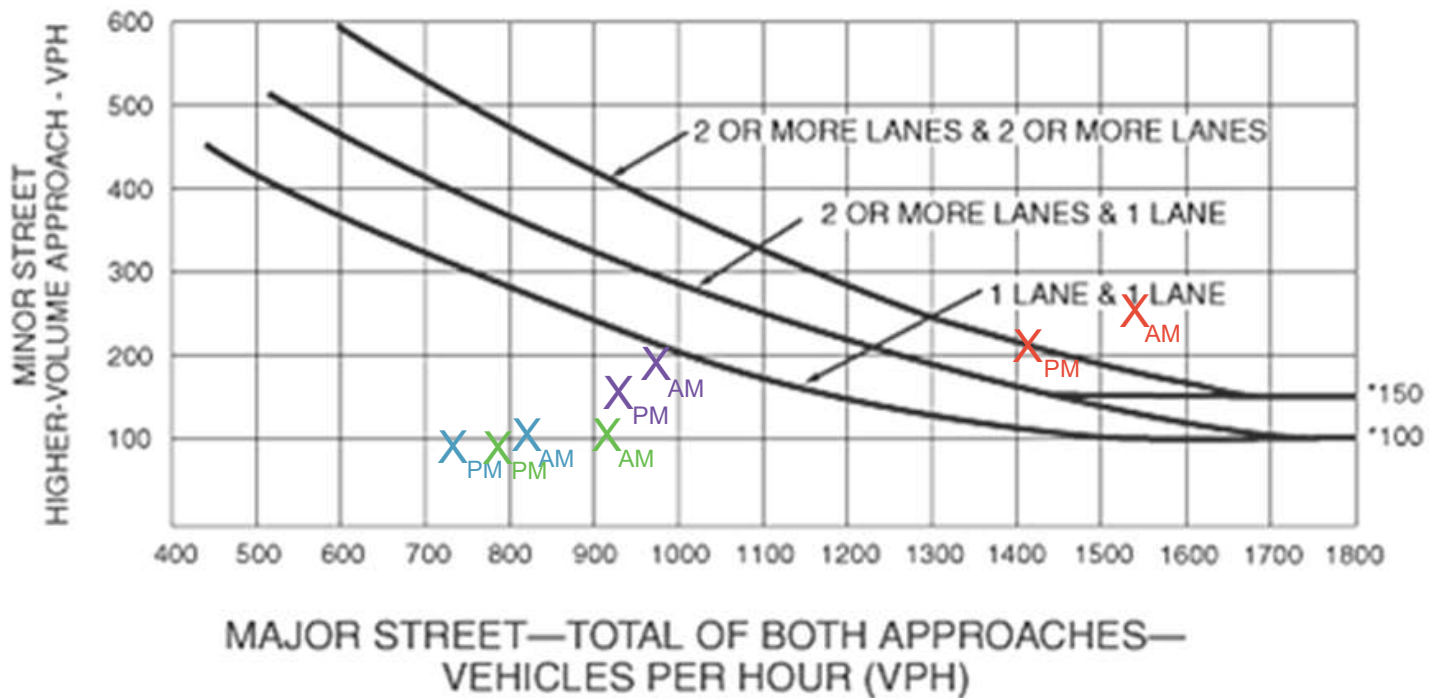
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ALTERNATIVE 6
CONSTRUCT ROUNDABOUT INTERSECTION CONTROL
AT RAMP TERMINALS REALIGN NB OFF RAMP AND FRONTAGE ROAD
TO IMPROVE INTERSECTION SKEW ANGLE
REALIGN SB OFF RAMP AND NB ON RAMP
TO REMOVE ISOLATED RAMPS

APPENDIX F

Signal Warrant Worksheets

18th Avenue / Avenue 396

Figure 4C-3. Warrant 3, Peak Hour

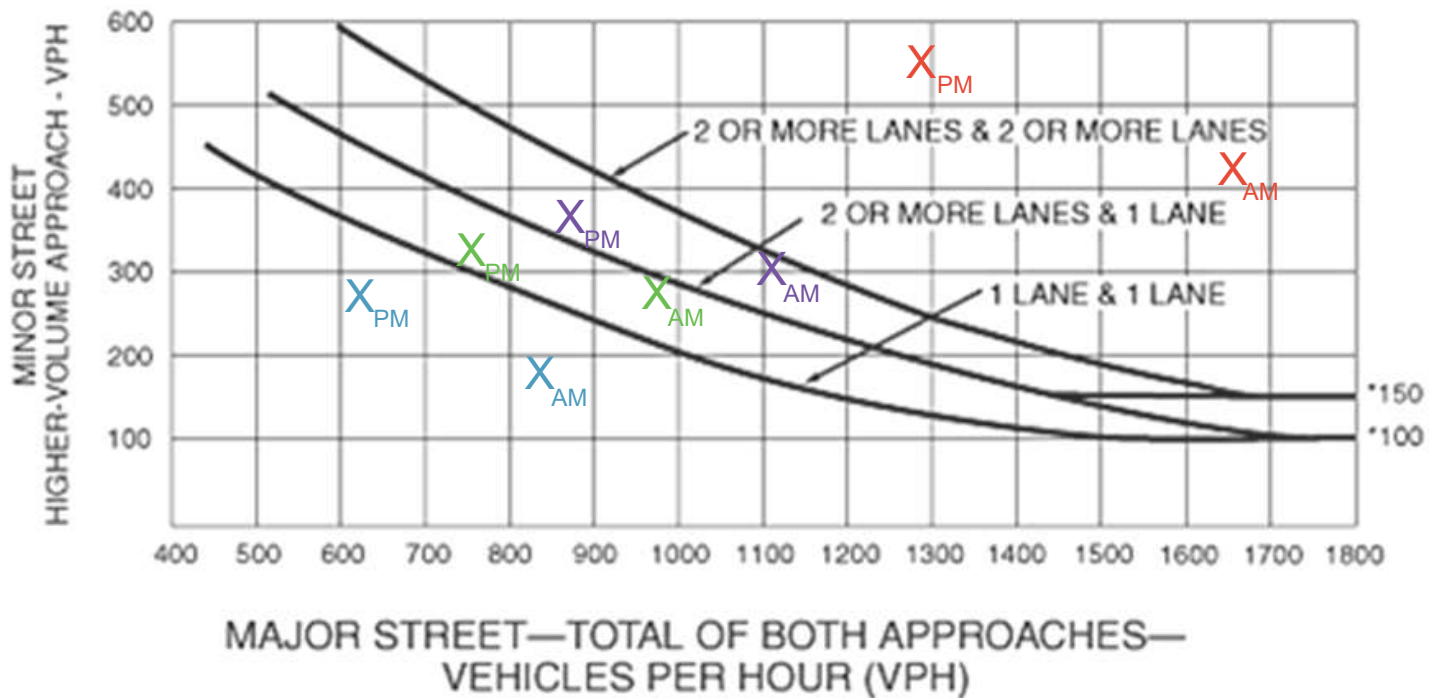


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND	
X_{AM} X_{PM}	Existing
X_{AM} X_{PM}	Existing Plus Project
X_{AM} X_{PM}	Near-Term Plus Project
X_{AM} X_{PM}	Cumulative Year 2042 Plus Project

18th Avenue / SR 99 NB Off-Ramp

Figure 4C-3. Warrant 3, Peak Hour

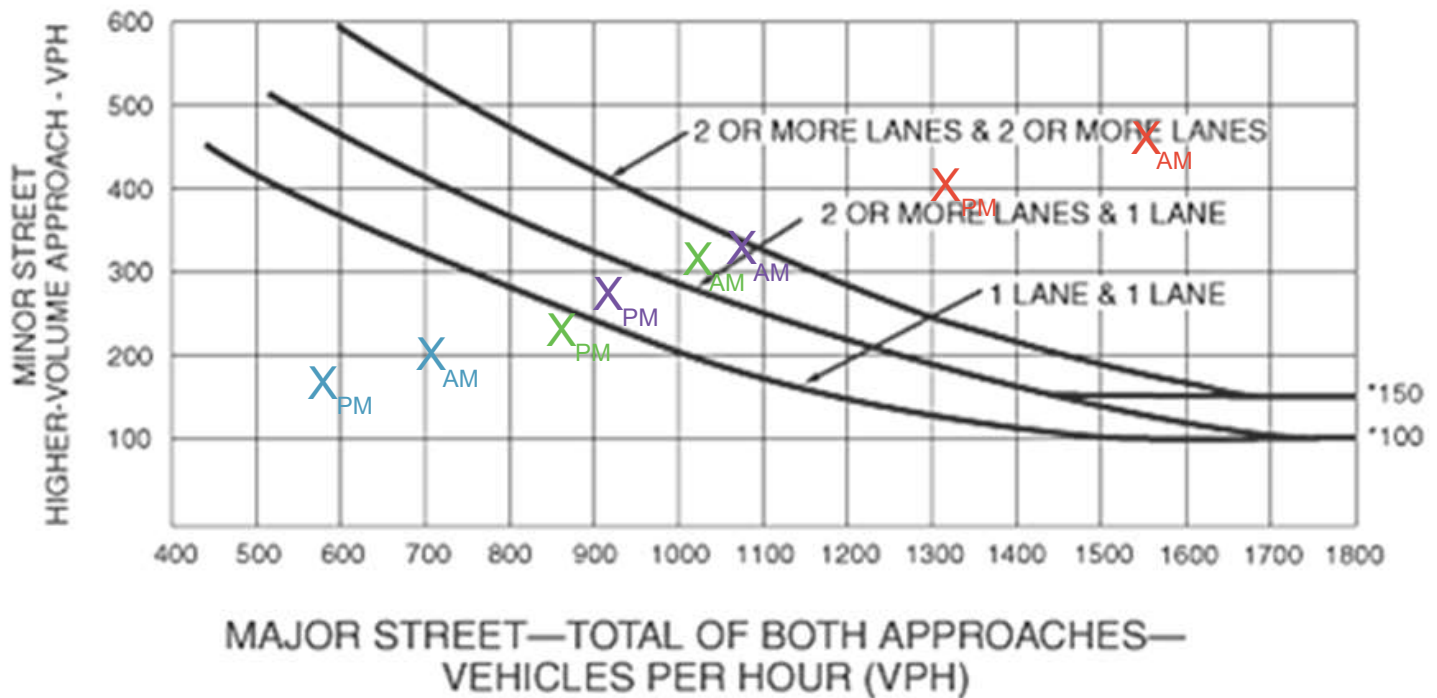


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND	
X_{AM} X_{PM}	Existing
X_{AM} X_{PM}	Existing Plus Project
X_{AM} X_{PM}	Near-Term Plus Project
X_{AM} X_{PM}	Cumulative Year 2042 Plus Project

18th Avenue / SR 99 SB On-Ramp

Figure 4C-3. Warrant 3, Peak Hour

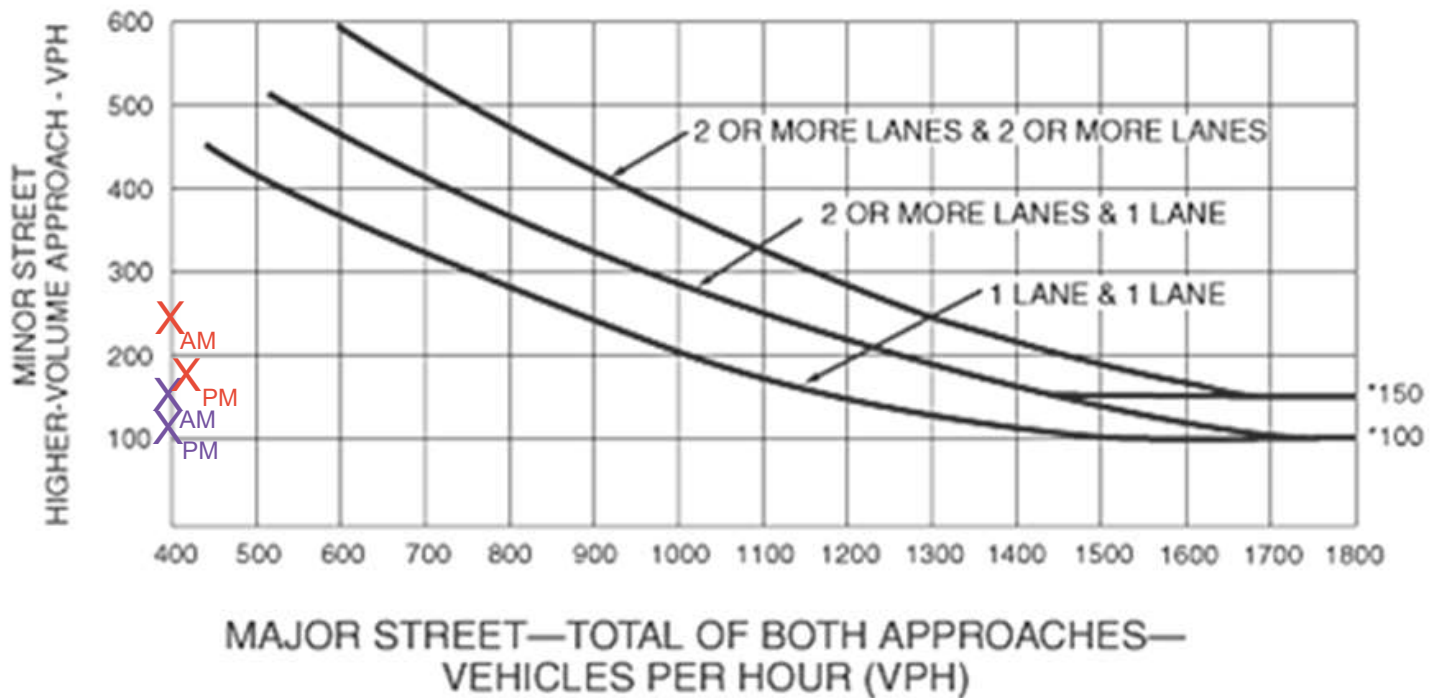


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND	
X_{AM} X_{PM}	Existing
X_{AM} X_{PM}	Existing Plus Project
X_{AM} X_{PM}	Near-Term Plus Project
X_{AM} X_{PM}	Cumulative Year 2042 Plus Project

SR 99 SB Off-Ramp / Mehlert Street

Figure 4C-3. Warrant 3, Peak Hour

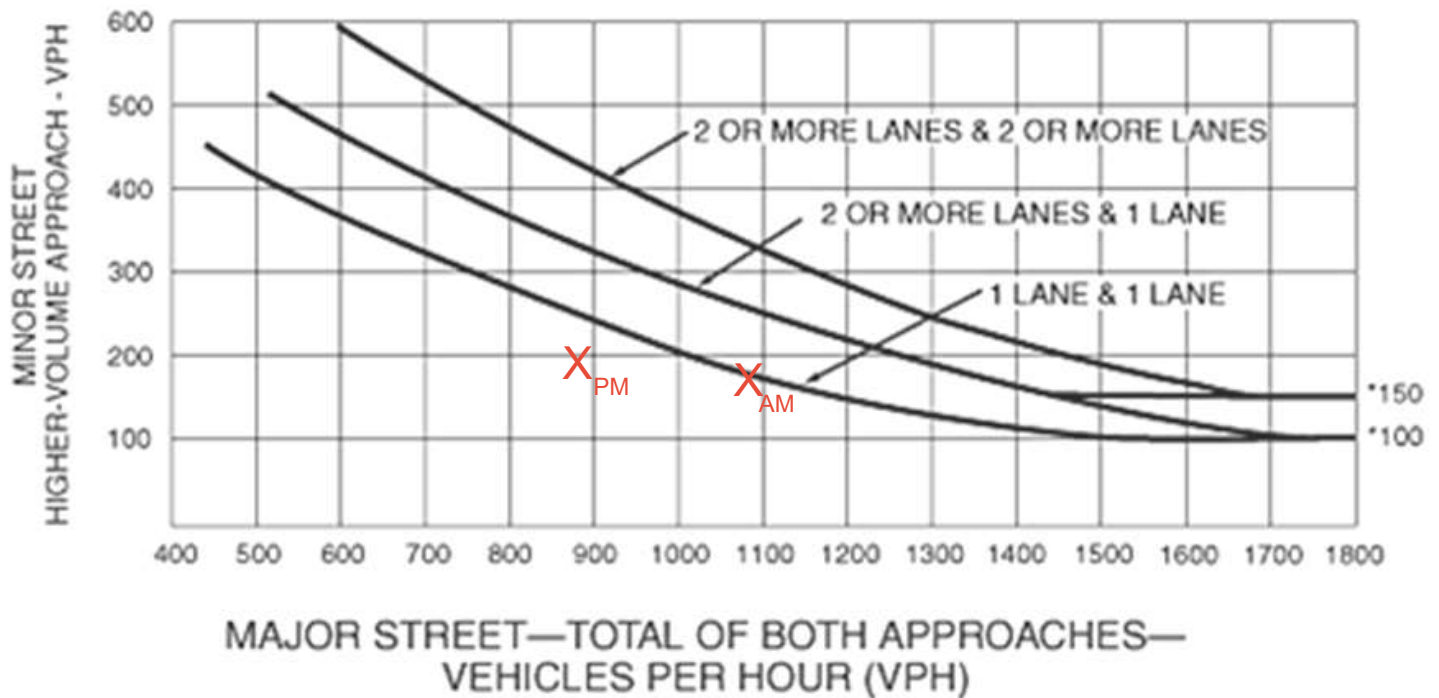


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND	
X_{AM} X_{PM}	Near-Term Plus Project
X_{AM} X_{PM}	Cumulative Year 2042 Plus Project

Road 12 / Project Driveway 1

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND

X_{AM} X_{PM} Cumulative Year 2042 Plus Project

ATTACHMENT “E”
MITIGATION MONITORING OR REPORTING PROGRAM

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
Biological Resources								
Special Status Plant Species								
BIO-1	<p>(Pre-construction Survey – Special Status Plant Species) A qualified biologist/botanist shall conduct pre-construction surveys for special status plant species in accordance with the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (2009). This protocol includes identification of reference populations to facilitate the likelihood of field investigation occurring during the appropriate floristic period. Surveys should be timed to coincide with flowering periods for species that could occur (March-May). In the absence of protocol-level surveys being performed, additional surveys may be necessary.</p> <ul style="list-style-type: none">• If special status plant species are not identified during pre-construction surveys, no further action is required.• If special status plant species are detected during pre-construction surveys, the biologist/botanist will supervise establishment of a minimum 50-foot no disturbance buffer from the outer edge of the plant population. If buffers cannot be maintained, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate minimization actions to be taken as appropriate for the species identified and to determine permitting needs.	Prior to start of construction.	Retention of professional biologist. Field survey by a qualified Biologist	County of Tulare Planning Department	Qualified Biologist			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
Special Status Animal Species								
BIO-2	<p><i>(Pre-construction Survey – Special Status Animal Species)</i> A qualified biologist will conduct pre-construction surveys during the appropriate periods for special status animal species in accordance with CDFW guidance and recommendations. In the absence of protocol-level surveys being performed, additional surveys may be necessary.</p> <ul style="list-style-type: none">• If special status animal species are not identified during pre-construction surveys, no further action is required.• If special status animal species are detected during pre-construction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate avoidance and minimization actions to be taken as applicable for the species identified and to determine permitting needs.	Prior to start of construction.	Retention of professional biologist. Field survey by a qualified Biologist	County of Tulare Planning Department	Qualified Biologist	.		
All Special Status Plant and Animal Species								
BIO-3	<p><i>(Employee Education Program)</i> Prior to the start of construction, the applicant shall retain a qualified biologist/botanist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the special status species that occur, or may occur, on the project site. This training will include a description of the species and its habitat needs; a report of the occurrence of the species in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.</p>	Prior to construction-related activities.	Retention of professional biologist. Ongoing monitoring. Submittal of Report of Findings, if applicable.	County of Tulare Planning Department	Qualified biologist.			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
Nesting Raptors and Migratory Birds, Including Loggerhead Shrike								
BIO-4	(Avoidance) In order to avoid impacts to nesting raptors and migratory birds, individual Projects within the Project will be constructed, where possible, outside the nesting season (between September 1st and January 31st).	Prior to construction-related activities.	Retention of professional biologist. Ongoing monitoring. Submittal of Report of Findings, if applicable.	County of Tulare Planning Department	Qualified biologist.			
BIO-5	(Pre-construction Survey) If Project activities must occur during the nesting season (February 1-August 31), the proponent is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code. A qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds; with the exception of Swainson’s hawk. The Swainson’s hawk survey will utilize the Swainson’s Hawk Technical Advisory Committee Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley (2000) methodology which will extend to ½-mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.	Prior to construction-related activities.	Retention of professional biologist. Ongoing monitoring. Submittal of Report of Findings, if applicable.	County of Tulare Planning Department	Qualified biologist.			
BIO-6	(Pre-construction Survey) A qualified biologist will conduct pre-construction surveys in accordance with the Swainson’s Hawk Technical Advisory Committee Recommended	Prior to construction-related activities.	Retention of professional biologist.	County of Tulare Planning Department	Qualified biologist.			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance																								
						Initials	Date	Remarks																						
	<p><i>Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley</i> (2000) which employs the following:</p> <table><tr><th>Survey Period</th><th>Survey Dates</th><th>Survey Time</th><th>Number of Surveys Needed</th></tr><tr><td>I</td><td>January – March 20</td><td>All day</td><td>1</td></tr><tr><td>II</td><td>March 20 – April 5</td><td>Sunrise – 1000; 1600 to Sunset</td><td>3</td></tr><tr><td>III</td><td>April 5 – April 20</td><td>Sunrise – 1200; 1630 – Sunset</td><td>3</td></tr><tr><td>IV</td><td>April 21 – June 10</td><td>Monitoring sites only</td><td>Initiating surveys is not recommended</td></tr><tr><td>V</td><td>June 10 – July 30</td><td>Sunrise – 1200; 1600 – Sunset</td><td>3</td></tr></table> <p>If project activities must occur during the nesting season (February 1-August 31), the project proponent and/or their contractor is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code, and a qualified biologist will conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson’s hawk; the Swainson’s hawk survey will extend to ½ mile outside of work area boundaries. If no nesting</p>	Survey Period	Survey Dates	Survey Time	Number of Surveys Needed	I	January – March 20	All day	1	II	March 20 – April 5	Sunrise – 1000; 1600 to Sunset	3	III	April 5 – April 20	Sunrise – 1200; 1630 – Sunset	3	IV	April 21 – June 10	Monitoring sites only	Initiating surveys is not recommended	V	June 10 – July 30	Sunrise – 1200; 1600 – Sunset	3		Ongoing monitoring. Submittal of Report of Findings, if applicable.			
Survey Period	Survey Dates	Survey Time	Number of Surveys Needed																											
I	January – March 20	All day	1																											
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Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
	pairs are found within the survey area, no further mitigation is required.							
BIO-7	(Buffers) Should any active nests be discovered near proposed work areas, a qualified biologist will determine appropriate construction setback distances and a behavioral baseline of all identified nests based on applicable CDFW guidelines and/or the biology of the affected species. Within these buffers, the biologist will continue monitoring to detect behavioral changes. If adverse behavioral changes occur, the activity causing the changes will cease and CDFW will be consulted to determine if avoidance and minimization measures need to be modified to adequately protect the impacted birds. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged (i.e., when a bird's feathers and wing muscles are sufficiently developed for flight). Unless a variance is approved by CDFW, the buffer shall not be less than 250 feet around active nests of non-listed bird species and not less than 500 feet around active nests of non-listed raptor species until the birds have fledged. Unless a variance is approved by CDFW, a ½ mile distance shall be used for SWHA, until the birds have "fledged."	Prior to construction-related activities.	Retention of professional biologist. Ongoing monitoring. Submittal of Report of Findings, if applicable.	County of Tulare Planning Department	Qualified biologist.			
Cultural Resources								
CUL-1	Inadvertent Discovery of Archaeological or Historical Resources. If, in the course of Project construction or operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the	Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of	County of Tulare Planning and Public Works Department	County of Tulare Planning Department and if necessary, a professional paleontologist			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
	find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to, planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in place shall be considered, and an appropriate method of achieving preservation in place shall be selected and implemented, if feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential information from and about the site. Mitigation shall be consistent with CEQA Guidelines Section 15126.4(b)(3). An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, hereafter "qualified archaeologist," should inspect the findings within 24 hours of discovery.		Report of Findings, if applicable					
CUL-2	Inadvertent Discovery of Cultural Resources. If cultural resources are encountered during construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such	Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of	County of Tulare Planning and Public Works Department	County of Tulare Planning Department and if necessary, a professional paleontologist			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
	<p>resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.</p> <p>If it is determined that the Project could damage a significant cultural resource, mitigation should be implemented with a preference for preservation in place, consistent with the priorities set forth in CEQA Guidelines Section 15126.4(b)(3). If avoidance is not feasible, a qualified archaeologist should prepare and implement a detailed treatment plan in consultation with the County of Tulare and, for prehistoric resources, the ethnographically associated Native American tribe. If the resource is determined to be a tribal cultural resource, as defined by Public Resources Code 21074, the County of Tulare, in consultation with the ethnographically associated Native American tribe, should, if feasible, minimize significant adverse impacts by avoiding the resource or treating the resource with culturally appropriate dignity, which includes protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.</p>		Report of Findings, if applicable					
CUL-3	<p>Inadvertent Discovery of Human Remains. In the unlikely event of discovery or recognition of any human remains during construction-related activities, the provisions of CEQA Guidelines Section 15064.5(e) shall be followed and such activities should cease within 50 feet of the find</p>	Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of	County of Tulare Planning and Public Works Department	County of Tulare Planning Department			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
	until the Tulare County Coroner has been contacted to determine that no investigation of the cause of death is required. If it is determined that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be contacted within 24 hours. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD would, in turn, make recommendations to the County of Tulare for the appropriate means of treating the human remains and any grave goods.		Report of Findings, if applicable					
Geology and Soils (Paleontological Resources)								
See Mitigation Measure CUL-1 through CUL-3								
Transportation								
Intersection Improvements								
TRA-1	18th Avenue at Avenue 396 – Near-Term Plus Project Scenario. <ul style="list-style-type: none"> Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane) 							
TRA-2	18th Avenue at Avenue 396 – Cumulative Year 2042 Plus Project Scenario. <ul style="list-style-type: none"> Install Traffic Signal Widen the westbound approach to 1 left turn lane and 1 through lane with a shared right (adding 1 left turn lane) 							
TRA-3	Road 12 at Project Driveway 1 – Cumulative Year 2042 Plus Project Scenario. <ul style="list-style-type: none"> Prohibit eastbound left turn movements from the Project site 							

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
	<ul style="list-style-type: none"> Install Four-Way Stop at the Road 12 and Avenue 392 intersection in addition to a dedicated southbound left with adequate spacing to provide U-Turn movements 							
State Route 99 Interchange Improvements								
TRA-4	<p>Equitable Fair-Share Responsibility for SR 99 Interchange (18th Avenue at SR 99 NB Off-Ramp-Frontage Road, SR 99 SB Off-Ramp-Avenue 394 at Mehlert Street, and 18th Avenue-Road 12 at SR 99 SB On-Ramp-Avenue 394).</p> <p>The proposed Project will be required to contribute its fair-share towards the costs of Caltrans' recommended improvements for signalization or installation of roundabouts at the SR 99 ramp intersections as identified in Caltrans' "Feasibility Study in Fresno and Tulare Counties within the City of Kingsburg and Selma, State Route 99-Mendocino (18th) Ave (PM 53.822), State State Route 99-Mountain View Ave (PM R3.742)." Alternatives for recommended improvements include:</p> <ul style="list-style-type: none"> Alternative 2 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the signalization of SR 99 SB and NB Off-Ramp terminals Alternative 3 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, including the installation of roundabouts at SR 99 SB and NB Off-Ramp terminals Alternative 5 – Reconstruct the Mehlert Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehlert Street just west of the SR 99 SB Off-Ramp. Provide for the signalization 	Ongoing	TBD	County of Tulare Planning Department	County of Tulare Planning Department			

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
						Initials	Date	Remarks
	<p>of the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections.</p> <ul style="list-style-type: none"> Alternative 6 – Reconstruct the Mehler Street and SR 99 SB Off-Ramp-Avenue 394 intersection, which includes a cul-de-sac along Mehler Street just west of the SR 99 SB Off-Ramp. Provide for the installation of roundabouts at the 18th Avenue at SR 99 NB Off-Ramp-Frontage Road and 18th Avenue-Road 12 at SR 99 SB Ramps intersections. <p>The intent of determining the equitable responsibility for the improvements identified above for the Cumulative Year 2040 scenarios, is to provide a starting point for early discussions to address traffic mitigation equitability and to calculate the equitable share for mitigating traffic impacts. According to the Caltrans "Guide for the Preparation of Traffic Impact Studies," the intent of determining the equitable responsibility for mitigation measures is to provide a starting point for early discussions to address traffic mitigation equitability and to calculate the equitable share for mitigation traffic impacts. The formula used to calculate the equitable share responsibility to the study area is as follows:</p> <p>Equitable Share = (Project Trips)/(Future Year Plus Approved Project Traffic - Existing Traffic)</p>							
Roadway Segment Improvements								
TRA-5	18 th Avenue between Avenue 396 and SR 99 NB Off-Ramp– Near-Term Plus Project Scenario.							

Mitigation Monitoring Reporting Program

Reed Rezone Kingsburg Project, GPA 20-005 & PZC 19-015

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	<i>Verification of Compliance</i>		
						Initials	Date	Remarks
	<ul style="list-style-type: none"> Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane) 							
TRA-6	18th Avenue between Avenue 396 and SR 99 NB Off-Ramp– Cumulative Year 2042 Plus Project Scenario. <ul style="list-style-type: none"> Widen the northbound travel lane from 1 to 2 lanes (adding 1 travel lane) Widen the southbound travel lane from 1 to 2 lanes (adding 1 travel lane) 							
<i>Tribal Cultural Resources (Inadvertent Discovery of Tribal Resources)</i>								
See Mitigation Measure CUL-1 through CUL-3								