



**ZETA SOLAR AND BATTERY ENERGY  
STORAGE SYSTEM PROJECT**  
Traffic Impact Analysis

July 11, 2024

Prepared for:

Longroad Energy Management, LLC  
125 High Street  
High Street Tower, Suite 1705  
Boston, Massachusetts 02210

Prepared by:

Stantec Consulting Services, Inc.  
376 Hartnell Avenue, Suite B  
Redding, California 96002

**ZETA SOLAR AND BATTERY ENERGY STORAGE SYSTEM PROJECT  
TRAFFIC IMPACT ANALYSIS**

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# ZETA SOLAR AND BATTERY ENERGY STORAGE SYSTEM PROJECT TRAFFIC IMPACT ANALYSIS

## Acronyms and Abbreviations

AC	alternating current
APN	Assessor Parcel Numbers
Applicant	Longroad Energy Management, LLC
Applicant	Longroad Energy Management, LLC
BESS	battery energy storage system
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
DC	direct current
gen-tie line	generation tie line
I-5	Interstate 5
LOS	level of service
mph	miles per hour
MW	megawatt
O&M	operations and maintenance
OPR	Governor's Office of Planning and Research
PCE	Passenger car equivalent
project	Zeta Solar and Battery Energy Storage System Project
PV	photovoltaic
SB	Senate Bill
SCS	sustainable communities strategy
SR	State Route
VMT	vehicle miles traveled



# ZETA SOLAR AND BATTERY ENERGY STORAGE SYSTEM PROJECT TRAFFIC IMPACT ANALYSIS

## 1 Introduction

Stantec Consulting Services Inc. has performed a traffic impact assessment for the Zeta Solar and Battery Energy Storage System Project (project), the proposed construction and operation of a 75-megawatt (MW) alternating current (AC) solar facility located in unincorporated Merced County, California. Longroad Energy Management, LLC (Applicant) is seeking approval of a conditional use permit for the project. The purpose of the analysis is to determine the amount of traffic generated by the project during construction and operation and to identify potential traffic-related significant impacts on the affected portions of the circulation system.

### 1.1 Proposed Project

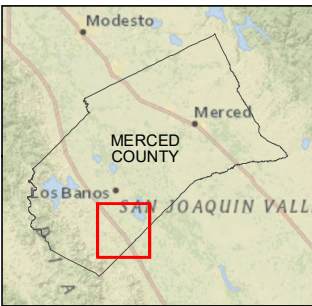
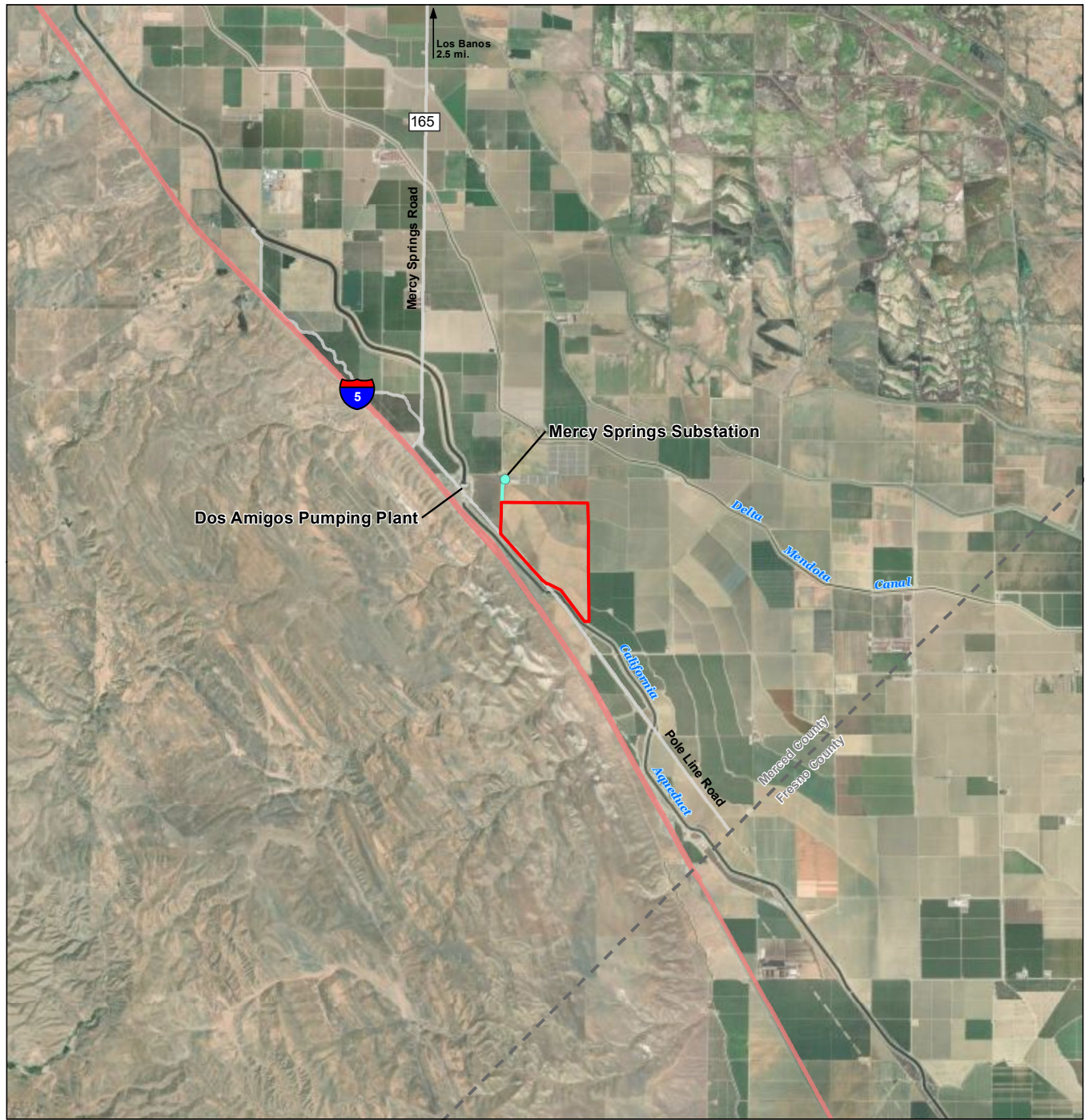
The project would consist of photovoltaic (PV) solar power generation facility and battery energy storage system (BESS), located approximately 9 miles south of Los Banos, Merced County, just 0.2 mile east of Interstate 5 (I-5). The project would generate approximately 75 MW of AC and include a storage capacity of eight hours of 75 MW of AC. The project site would be approximately 650 acres plus an additional 1,700-foot-long generation tie line (gen-tie line) to deliver power to the Mercy Springs Substation, which is owned and operated by the Pacific Gas and Electric Company. Primary access to the proposed solar facility would be via two entrance gates on First Lift Canal Road from Poleline Road, which can be accessed from Exit 391, Mercy Springs Road/State Route (SR) 165 on I-5. Alternatively, for vehicles traveling from the south, Exit 379, Shields Avenue, or Exit 385, Nees Avenue, on I-5 could be used to access the project site from Poleline Road to First Lift Canal Road. See Figure 1 for the project Location Map. See Figure 2 for the Project Site Plan.

The project generation facility would occupy all or portions of three parcels identified by Merced County as Assessor Parcel Numbers (APN) 090-130-018, 090-130-044, and 090-130-060. The gen-tie line would extend north through APN 088-180-063 to the point of interconnection in APN 090-103-059. The project site consists of fallow agricultural lands. Land uses surrounding the project site mostly consist of undeveloped agricultural lands to the north, south, and east, and a small developed (0.15 acre) site. Poleline Road abuts the southwestern project site boundary. The California Aqueduct and I-5 run parallel to the southwest project boundary about 300 feet and 800 feet to the west, respectively. First Lift Canal Road lies along the western boundary of the Project site, and the eastern boundary abuts an unnamed dirt/gravel road. The Vega Solar Project site and Dos Amigos Pumping Plant are located 1,200 feet north and 0.5 mile northwest, respectively.

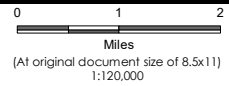
The project would include a solar array area surrounded by an up to 8-foot-tall chain-link security fence. Rows of solar PV modules mounted on single-axis trackers and racking equipment would occupy most of the project site. The project would also include an underground DC collector system, up to 21 electrical equipment pads with inverters and transformers, a 15-acre BESS, underground or above-ground AC collector system, an approximately 5-acre substation, an approximately 1,700-foot-long 70 kilovolt (kV) gen-tie line, an operation and maintenance (O&M) office, and an adjacent O&M warehouse. As part of construction, an approximately 10-acre staging area/laydown yard would be located within the project site



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- Project Site Boundary
- Gen-tie
- Point of Interconnection



*Project Location*  
Merced County, CA

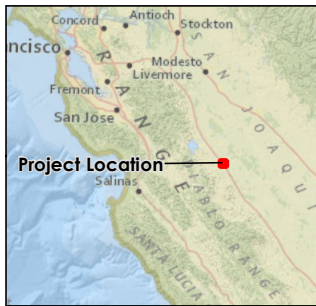
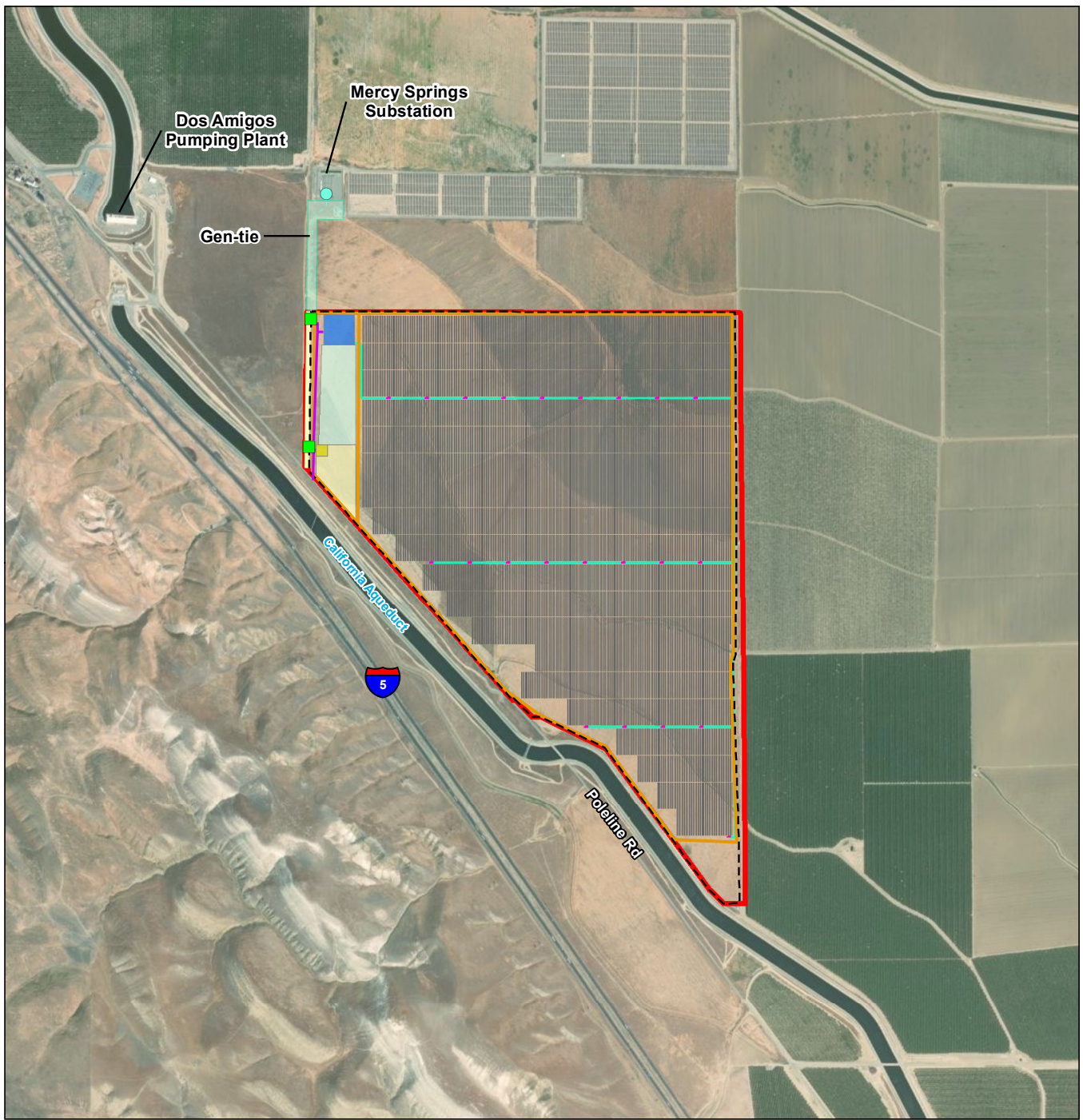
Prepared by PG on 2024-07-18  
TR by GG on 2024-07-18

*Client/Project*  
Longroad Energy Management, LLC  
Zeta Solar and Battery Energy Storage System Project

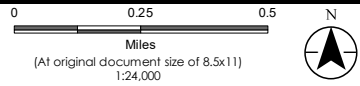
**Figure 1**  
*Title*  
**Project Location**

**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
California III FIPS 0403 Feet

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



- Project Site Boundary
- Gen-tie
- Gen-tie Corridor
- Point of Interconnection
- Zeta Substation
- Panel Layout
- Inverters
- O&M Building
- Laydown Yard
- BESS
- Mv Collectors
- Fence
- Access Road
- Perimeter Road
- Utility Lines
- Gate



Project Location: Merced County, CA  
 Prepared by PG on 2023-06-09  
 TR by TR on 2023-06-09

Client/Project: Longroad Energy Management, LLC  
 Zeta Solar and Battery Energy Storage System Project

**Figure 2**  
 Project Site — Conceptual Plan

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and accessed via internal graveled or compacted earth access roads. Construction of the project facilities would occur over 24 consecutive months.

Based on the data provided by the Applicant, during construction, the number of workers on the site would vary daily, with an average of 40 to 50 workers per day during non-peak construction, and up to 150 workers per day at the peak of construction. Crews would typically work six, 10-hour days per week. An average of 40 workers per day is expected for the commissioning period of construction. Peak construction periods are expected from construction months six to 18.

The project would require an operational staff of up to 10 full-time employees and up to 10 part-time employees. The facility will have 24 hours operation. The operational personnel are expected to be on-site weekdays from 7 a.m.– 4 p.m., and as needed after hours and on weekends.

## 2 Existing Conditions

### 2.1 Existing Roadway System

I-5 is a four-lane divided freeway. It runs parallel to the southwest project boundary about 800 feet to the west. SR-165, a two-lane undivided rural highway, is located approximately 2 miles northwest of the site and is classified as principal arterial. It provides regional access to the project site, and the posted speed limit on SR-165 is 55 miles per hour (mph).

Poleline Road is a two-lane, undivided paved roadway that runs parallel to I-5 and is classified as a major collector. There is a 30 mph speed advisory posted along this roadway, and there are no bicycle or pedestrian facilities present.

First Lift Canal Road is a local unpaved roadway that runs north–south, abutting the western boundary of the project site. The County General Plan does not provide classification for this roadway. There are no posted speed limits along this roadway and no bicycle or pedestrian facilities.

Primary access to the proposed solar facility would be via two entrance gates on First Lift Canal Road from Poleline Road, which can be accessed from Exit 391, Mercy Springs Road/State Route (SR) 165 on I-5. Alternatively, for vehicles traveling from the south, Exit 379, Shields Avenue, or Exit 385, Nees Avenue, on I-5 could be used to access the project site from Poleline Road to First Lift Canal Road.

### 2.2 Existing Traffic Data

This section summarizes existing traffic volumes on roadways that could be affected by the project. Traffic count data was obtained from the California Department of Transportation (Caltrans) Traffic Census Program for 2020, which is the most recent available year. Table 1 summarizes the annual average daily traffic for the four locations.



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**Table 1. Annual Average Daily Traffic Volumes on Potentially Affected Roadway Segments**

Roadway Segment	Average Annual Daily Traffic
1. SR-165 north of Junction Route I-5	1,550
2. I-5 north of Junction SR-165 North	41,500
3. I-5 north of Nees Avenue	39,000
4. I-5 north of Shields Avenue	37,000

Source of AADT: 2020 Traffic Volumes, Caltrans Traffic Census Program (Caltrans, 2020).  
Key: **I-5** = Interstate 5, **SR** = State Route

### 3 Level of Service Methodology

Level of service (LOS) is a qualitative index of the performance of an element of a transportation system. LOS is a rating scale from A to F, with A indicating no congestion and F indicating severe congestion and delays. The Highway Capacity Manual, a standard reference published by the Transportation Research Board, contains specific criteria and methods for assessing LOS.

The Merced County General Plan provides capacity thresholds for determining LOS of a roadway segment. LOS thresholds from the 2030 Merced County General Plan Transportation section represent the maximum daily traffic volumes that would allow roadway segments to maintain an acceptable LOS are used in this analysis (Table 2).

**Table 2. Level of Service Thresholds**

Roadway Type	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
4-Lane Rural Freeway	21,300	35,300	47,900	56,600	63,000	>63,000
2-Lane Rural Principal Arterial	2,600	5,300	8,600	13,800	22,300	>22,300
2-Lane Rural Major Collector	-	1,900	8,000	10,700	12,100	>12,100

Source: 2030 Merced County General Plan, November 2012, Transportation Section (Merced County, 2012).  
Key: **LOS** = level of service; **A-F** = a rating scale for LOS, with A indicating no congestion and F indicating severe congestion.

#### 3.1 Significance Criteria

Merced County uses a threshold of LOS C for roadways within rural areas and LOS D for roadways located within urban communities and outside of urban communities that serve as connectors between those communities as the minimum acceptable operation of County transportation facilities. Facilities under the jurisdiction of Caltrans include freeway segments, ramps, ramp terminals, and arterials. Although Caltrans has not designated an LOS standard, the Merced County threshold of LOS D for roadways outside of urban communities that serve as connectors between those communities is used here to determine the effect of the project on traffic and transportation.



## **3.2 Literature Review**

### **3.2.1 MERCED COUNTY GENERAL PLAN**

The 2030 Merced County General Plan (Merced County, 2013) is the foundation for all future land use, development, preservation, and resource conservation decisions. It contains the goals, policies, and implementation programs that guide the County's future land use and environmental decisions. It is prepared, adopted, and maintained by Merced County to govern the physical development of all land area under its jurisdiction.

The Transportation and Circulation section provides the policy context for Merced County to achieve its vision for the safe and efficient circulation of people, vehicles, and goods throughout the County. The purpose of the element was to establish goals and guiding policies for the circulation system in order to balance the varying needs of motorists, bicyclists, pedestrians, and the unique needs for movement of farm equipment and agricultural commodities.

- **Goal CIR-1:** Maintain an efficient roadway system for the movement of people and goods that enhances the physical, economic, and social environment while being safe, efficient, and cost-effective
- **Policy CIR-1.1:** Require a Countywide roadway system, consisting of interstate/principal arterial, minor arterial, major collector, minor collector, collector, and local roadways, and specific to urban and rural areas, that adequately serves existing and planned land uses based on the County's Functional Classifications and Level of Service Standards.
- **Policy CIR-1.5:** Implement a Countywide roadway system that achieves the following level of service (LOS) standards during peak traffic periods:
  - For roadways located within rural areas: LOS "C" or better.
  - For roadways located outside Urban Communities that serve as connectors between Urban Communities: LOS of "D" or better.
  - For roadways located within Urban Communities: LOS of "D" or better.

### **3.2.2 REGIONAL TRANSPORTATION PLAN**

The Merced County Association of Governments (MCAG) is responsible for regional transportation planning in Merced County. The Regional Transportation Plan (RTP) for Merced County was adopted in 2011 by MCAG and is the federally mandated long-range, fiscally constrained transportation plan for the county. A project is considered to have an undesirable effect on traffic operations if the project would result in a roadway that is currently operating at LOS D or better to deteriorate to an undesirable LOS E or worse.



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## 3.3 Existing Traffic Operations

Existing traffic conditions for the study roadway segments were evaluated based on the LOS thresholds from the 2030 Merced County General Plan Transportation section provided in Table 2. The roadway capacities for the target LOS C for the county rural roadway segment and LOS D for the freeway segment were compared to the observed traffic volumes noted above in Table 1.

As shown in Table 3, all roadway segments currently operate at an acceptable LOS C or better. Accordingly, under existing conditions all roadway segments meet the Merced County target of LOS D for roadways located outside urban communities that serve as connectors between urban communities.

**Table 3. Existing Level of Service of Study Segments**

Roadway Segment	Roadway Type	Allowable Daily Service Volume (LOS D)	ADT	LOS
1. SR 165 north of Junction Route I-5	Two-Lane Principal Arterial	13,800	1,550	A
2. I-5 north of Junction Route 165 North	4-Lane Rural Freeway	56,600	41,500	C
3. I-5 north of Nees Avenue	4-Lane Rural Freeway	56,600	39,000	C
4. I-5 north of Shields Avenue	4-Lane Rural Freeway	56,600	37,000	C

Key: **ADT** = average daily traffic, **LOS** = level of service, **SR** = State Route, **I-5** = Interstate 5

## 4 Project Trip Generation

### 4.1 Construction Trip Generation

Trip generation is defined as the number of vehicle trips produced by a particular type of land use or project. A trip is defined as vehicle movement in one direction. The total number of trips generated by a particular land use type or project includes both inbound and outbound trips.

During construction, truck trips would be routed on I-5. Based on the information provided by the Applicant, upon exiting I-5 at SR-165/Mercy Springs Road interchange, construction traffic would access the project site from Poleline Road and First Lift Canal Road. Alternatively, the trucks could Exit I-5 at Shields Avenue or Nees Avenue to the south and access the project site from Poleline Road and First Lift Canal Road.

The project site is approximately 650 acres in size. The construction of the Project is expected to take approximately 24 months to complete in three phases:

- Phase 1: Civil work
- Phase 2: Facility Construction
- Phase 3: Testing and Commissioning



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The analysis of construction trip generation is based on the average daily volume of construction traffic. For the purposes of this analysis, the project construction trip generation estimates are calculated based on the trips generated by heavy duty trucks (that include construction material delivery and dump trucks, water delivery trucks, etc.,) and the trips generated by the construction workers. The Project is in a rural portion of California, and vendors and workers would travel from nearby urban centers to the Project site. The nearest major urban areas are Fresno (56 miles), Merced (44.8 miles), and Madera (49 miles) from the Project site. It is conservatively assumed that all worker and vendor one-way trips will be from Fresno (56 miles).

Based on the data provided by the Applicant, approximately 40 heavy duty trucks per day will be used during the peak of construction, which would generate approximately 80 average daily trips, which is equivalent to 173 passenger car equivalent (PCE) trips. A factor of 2.16 was used to convert heavy vehicles to PCE based on the average of 1.5 PCE for light duty trucks, 2.0 PCE for medium duty trucks, and 3.0 PCE for heavy duty trucks<sup>1</sup>. Heavy vehicles consist of light, medium, and heavy duty trucks, including heavy duty diesel construction trucks. Heavy vehicles are approximated as more than one passenger car due to their physical and mechanical characteristics, such as slower acceleration and stopping.

During construction, the number of workers on the site would vary daily, with an average of 40 to 50 workers per day during non-peak construction, and up to 150 workers per day at the peak of construction. Assuming the most conservative scenario of 150 workers per day are required during peak of construction (i.e., assuming there is no carpooling), the number of trips generated by the construction workers would be a maximum of 300 trips per day.

The construction trip generation for the project is shown in Table 4. As shown, the project is expected to generate a total PCE volume of approximately 473 average daily trips, which includes 300 passenger car trips and 173 heavy vehicle PCE trips.

**Table 4. Construction Trip Generation**

Site	Acres	Passenger Cars	Heavy Vehicles (PCE)	Total PCE Trips
Zeta	650	300	173*	473

PCE Source: average of light duty trucks PCE of 1.5, medium duty trucks PCE of 2.0, and heavy duty trucks PCE of 3.0

Notes:

\*80 heavy truck trips x 2.16 PCE factor = 173 PCE

## 4.2 Operations Trip Generation

Based on information provided by the Applicant, once constructed, the solar facility would have up to 10 full-time employees and up to 10 part-time employees. To be conservative, assuming all 20 employees are present during the course of a day, there would be approximately 50 trips per day for the full facility

<sup>1</sup> Estimating Passenger Car Equivalent of Heavy Vehicles at Roundabout Entry Using Micro-Traffic Simulation, 2019, Frontiers in Built Environment



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based on an average trip rate of 2.5 trips per employee<sup>2</sup>, which is generally considered not perceptible and would have no negative or undesirable effects to the surrounding roadway network.

**4.3 Project Trip Distribution**

The geographic distribution of the project-generated trips was determined based on the project site location in relation to the surrounding uses while taking into account proposed driveway locations, existing flow patterns, and engineering judgment. For the purpose of this analysis, an assumption is made that 50 percent of the project trips would be oriented toward the north, and 50 percent toward the south of the project due to the variability in location for materials delivery and workers’ residences.

**4.4 Existing Plus Project Construction Conditions**

This section describes the potential effects of the project on traffic and transportation during construction. Project-generated construction traffic was added to existing conditions to represent “existing plus project construction conditions.” Similar to the analysis of the existing traffic conditions, the existing plus project construction conditions for the roadway segments were evaluated based on the LOS thresholds from the 2030 Merced County General Plan Transportation section provided in Table 2. The roadway capacities for the target LOS D were compared to the existing plus project construction conditions traffic volumes.

As shown in Table 5, all the roadway segments continue to operate at LOS C or better, even with the addition of construction traffic and are below Merced County’s target threshold of LOS D for roadways located outside urban communities that serve as connectors between urban communities.

**Table 5. Existing Plus Construction Traffic LOS of Study Segments**

Roadway Segment	Roadway Type	Allowable Daily Service Volume (LOS D)	Project Trips	ADT	LOS
1. SR-165 north of Junction Route I-5	Two-Lane Principal Arterial	13,800	473	2,023	A
2. I-5 north of Junction Route 165 North	4-Lane Rural Freeway	56,600	237	41,737	C
3. I-5 north of Nees Avenue	4-Lane Rural Freeway	56,600	237	39,237	C
4. I-5 north of Shields Avenue	4-Lane Rural Freeway	56,600	237	37,237	C

Notes:

Even if a trip distribution of 100 percent was assumed toward the north and south, the project trips would still be significantly under the threshold.

Key: **ADT** = average daily traffic, **LOS** = level of service, **SR** = State Route, **I-5** = Interstate 5

<sup>2</sup> The average trip rate of 2.5 trips per employee assumes that employee work during the day/night shift is two trips (one trip in and one trip out). In addition, some employees may travel an extra trip in between (e.g., lunch, errand), and there may be occasional deliveries to the site. Therefore, an average of 2.5 trips per employee is assumed.



## **5 Vehicle Miles Traveled Analysis**

The following analysis evaluates project-related vehicle miles traveled (VMT) and complies with the updated California Environmental Quality Act (CEQA) guidelines that incorporate the requirements of Senate Bill (SB) 743. SB 743 requires the Governor's Office of Planning and Research (OPR) to establish recommendations for identifying and mitigating transportation impacts under CEQA (OPR, 2018). Generally, SB 743 moves away from using delay-based LOS as the metric for identifying project impacts and uses VMT instead. The final OPR Technical Advisory, released in December 2018, provides guidance on evaluating transportation impacts and VMT and is the guidance on which this analysis is based.

Prior to undertaking a detailed VMT analysis, the OPR Technical Advisory recommends that lead agencies conduct a screening process "to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study." The OPR Technical Advisory suggests that lead agencies may screen out VMT impacts using project size criteria, maps of low VMT areas, transit availability, and provision of affordable housing. For this project, the screening criteria related to project size is applicable in regard to the amount of traffic that is generated.

The OPR Technical Advisory recommends that absent substantial evidence indicating that a project would generate a potentially significant level of VMT or inconsistency with a sustainable communities strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day may generally be assumed to cause a less-than-significant transportation impact.

The project is consistent with Merced County's General Plan and SCS because the proposed Project would not change the current or planned County roadway system. As discussed in Section 4.2, a conservative estimate of the project's daily trip generation is approximately 50 trips per day for the full facility based on an average trip rate of 2.5 trips per employee. Therefore, the project would generate substantially fewer than the 110 trips per day threshold and would result in a less-than-significant transportation impact.

Construction-related VMT is addressed in the context of air quality and greenhouse gas as part of a separate study. Construction VMT is temporary and is not applicable to the transportation thresholds of significance recommended in the OPR Technical Advisory, which are based on a measurement of the operational average VMT per capita.

## **6 Cumulative Conditions**

Cumulative conditions have been considered, as construction of other developments in the vicinity during the same construction timeframe as the project could have a temporary negative cumulative impact on traffic conditions. Current environmental documents listed on the Merced County website were reviewed to ascertain whether they would be constructed in a similar timeframe and would affect the same roadways as the project. See Appendix A for the list of projects in Merced County found on the Merced



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County planning website (Merced County, 2022). This review returned no projects within a 10-mile radius. On this basis, it is assumed there will be no additional traffic impacts under cumulative conditions.

### 7 Conclusion

Under existing traffic conditions, all roadway study segments currently operate at LOS C or better, which meets the target thresholds of LOS D. As described in the project description, construction equipment and vehicles would access the project site from I-5 via Exit 391 at Mercy Springs Road/SR-165, Poleline Road, and to the two entrance gates on First Lift Canal Road. Alternatively, the project site can be accessed from Exit 379 at Shields Avenue or Exit 385 at Nees Avenue, Poleline Road, and the First Lift Canal Road. During the peak construction, the number of trips generated by the construction workers would be 300 trips per day. The overall daily trip generation (ADT with PCE) during construction is estimated to be 473 ADT using a PCE factor 2.16.

During construction, with the addition of construction traffic on the study area roadway segments, the ADT for each affected roadway would be below LOS D thresholds, which indicates that there would be no negative or undesirable effects on the roadway segments. Therefore, construction of the project is not expected to cause any negative effects to the surrounding transportation network.

After the construction, the project would have up to 10 full-time employees and up to 10 part-time employees that would generate up to approximately 50 trips per day (to be conservative, all part-time employees are considered to be present on site for any given day), which is imperceptible and would be considered to have no negative effect to the surrounding roadway network.

The project is consistent with Merced County's General Plan and SCS and generates substantially fewer daily operational trips than the 110 trips per day threshold of significance for VMT impact. Therefore, based on the OPR recommended screening criteria, the project would have a less-than-significant transportation impact.

VMT associated with construction of the project is addressed in the context of air quality and greenhouse gas as part of a separate study. Construction VMT is temporary and is not applicable to the transportation impact thresholds of significance.

### 8 References

Caltrans (California Department of Transportation). 2020. Traffic Volumes on California State Highways. Available at: [Traffic Census Program | Caltrans](#). Accessed October 24, 2022.

Merced County. 2012. 2030 Merced County General Plan. Available at: [Adopted General Plan | Merced County, CA - Official Website \(countyofmerced.com\)](#). Accessed October 24, 2022.

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Merced County Association of Governments. 2022. Regional Transportation Plan Sustainable Communities Strategy for Merced County. Available at: [MCAG-2022-RTP-SCS-Final-080922-dg-07-Clean \(mcagov.org\)](#). Accessed October 24, 2022.

OPR (Governor's Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA.



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## Appendix A Merced County Environmental Impact Report Project List

Lead Agency	Project Name/Applicant (Common Name)	Project Description	Status	Distance from the Project (miles)
Merced County	CP20-001 / GPA24-002 / ZC24-002 – Franklin-Beachwood Community Plan	This project would involve a general plan amendment to modify the land use designations in the community plan that apply to the Franklin-Beachwood area as illustrated in the community plan.	Review Period: 06/28/2024 – 07/29/2024	31.51
Merced County	PD18-001 – Bradbury Master Plan Project	This project would involve a general plan amendment to modify the land use designations in the community plan that apply to the Bradbury Master Plan area as illustrated in the community plan.	Supplemental EIR Review Period: 05/26/2023 – 07/10/2023	35.39
Merced County	CUP21-011 – Silva Dairy Expansion Project	This project would modify and expand the existing dairy to house a total of 7,300 animals, including 4,000 milk cows, 500 dry cows, and 2,800 support stock, and would merge the two existing separate dairy facility permits into a single permit.	Review Period: 07/25/2024 – 09/09/2024	27.20
Merced County	CUP20-014 – Borba Dairy Farms Expansion Project	This project would modify and expand the existing dairy farm to house 4,000 milk cows, 500 dry cows, and 2,100 support stock, for a total of 6,600.	Review Period: 01/19/2024 – 03/05/2024	31.72
Merced County	CUP20-013 – Hillcrest Dairy Expansion Project	This project would involve an expansion of an existing dairy facility on approximately 200 acres of a 2,290-acre site.	Review Period: 07/14/2022 – 08/29/2022	38.24
Merced County	GPA21-002 / ZC21-003 / PD21-001 / DA21-001 – Amendment to the University Community Plan and the Virginia Smith Trust Specific Plan Project	This project would involve an update the 2004 University Community Plan (Adopted UCP), which would remove a portion of the UCP area owned by UC Merced from the County's UCP, expand the UCP area east to align with current land ownership, and update the land uses proposed within the 654-acre Virginia Smith Trust Specific Plan that would	Review Period: 04/28/2023 – 06/12/2023	36.56



**ZETA SOLAR AND BATTERY ENERGY STORAGE SYSTEM PROJECT  
TRAFFIC IMPACT ANALYSIS**

<b>Lead Agency</b>	<b>Project Name/Applicant (Common Name)</b>	<b>Project Description</b>	<b>Status</b>	<b>Distance from the Project (miles)</b>
		comprise the northern portion of the revised UCP.		
Merced County	CUP20-009 – Vierra Dairy Expansion Project	This project would involve expansion of an existing dairy facility located approximately 2.6 miles west of the Hilmar community in unincorporated Merced County. The existing Vierra Dairy and the site of the proposed expansion are located on approximately 72 acres of a 695-acre site.	Notice of Preparation (NOP) and Initial Study; Review period: 10/01/2021 – 11/01/2021	33.02
Merced County	CUP20-005 – Antonio Azevedo Dairy #4 Expansion Project	This project would merge the existing heifer facility with the existing dairy operations and expand the existing dairy so that the modified dairy would house 2,500 milk cows, 500 dry cows, and 1,000 support stock.	Review Period: 08/31/2021 – 10/15/2021	21.98
Merced County	CUP20-011 / GPA20-001 / ZC21-002 – Las Camas Solar Project	This project includes the construction, long-term operation, and eventual decommissioning of a 200-megawatt alternating current ground-mounted solar photovoltaic power plant located on vacant lands in unincorporated Merced County.	Review Period: 05/03/2024 – 06/17/2024 NOP: August 2021	12.36
Merced County	CUP20-010 – Azevedo Dairy Farms LLC Project	This project requires a Conditional Use Permit (CUP20-010) from Merced County to construct a new dairy on approximately 220 acres of existing cropland to house 15,000 milk cows, 3,000 dry cows, and 10,000 support stock, for a total of 28,000 animals.	Review Period: 07/23/2021 – 08/24/2021; NOP: July 2021	24.57
Merced County	Vega Solar Project	This project includes the development of a 20-megawatt photovoltaic solar array on approximately 165 acres. Electricity generated by the Vega project would be transferred to the existing PG&E Los Banos-Canal-Oro Loma 70-kilovolt (kV) Line via an interconnection line directly west of the Project site.	Built in 2015	0.25



**ZETA SOLAR AND BATTERY ENERGY STORAGE SYSTEM PROJECT  
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Lead Agency	Project Name/Applicant (Common Name)	Project Description	Status	Distance from the Project (miles)
Caltrans District 10	Interstate 5 John C. Erreca Rest Area Replacement	This project proposes to demolish and replace the existing comfort station buildings and increase the capacity of the existing northbound and southbound facilities at the John "Chuck" Erreca Safety Roadside Rest Area in Merced County. The upgrade will include reconstruction, expansion, and modernization of both northbound and southbound sides, as these facilities are deteriorating and require constant repairs due to age and overuse of amenities.	Construction tentatively scheduled to start the spring of 2022. All work is currently scheduled to be complete in September 2023.	2.85
Caltrans District 10	State Route 59 Four-Lane Widening	This project proposes to widen State Route 59 from a two-lane to a four-lane conventional highway from 16th Street to Black Rascal Canal Bridge and replace Black Rascal Canal Bridge and South Fork Black Rascal Bridge with one new bridge.	Caltrans is providing oversight for the project in the Project Approval & Environmental Document phase. Level of environmental review not determined at the time of writing this Draft EIR.	31.34
Caltrans District 10	State Route 152 Merced Rescission	This project would rescind the previously adopted route for sections of State Route 152 in Merced County near Los Banos from Santa Fe Grade Road to the Merced/Madera County line. This would allow Caltrans to dispose of parcels of land under its ownership.	Written comment period closed 03/24/2024.	9.22

Source: Merced County 2023, Caltrans 2023

