

1 **5.16 Transportation and Traffic**  
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3 This section describes the environmental and regulatory setting and discusses impacts associated with the  
4 construction and operation of the Sanger Substation Expansion Project (proposed project) proposed by  
5 Pacific Gas and Electric Company (PG&E, or the applicant) with respect to transportation and traffic.  
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7 **5.16.1 Environmental Setting**  
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9 **Existing Roadway Network**

10 The roadway network in the region of the proposed project consists of state highways and local roads  
11 within unincorporated Fresno County, as shown in Figure 4-1. The proposed project site is located on the  
12 northwest corner of the intersection of South McCall and East Jensen Avenues, with an existing  
13 substation access driveway off of South McCall Avenue. The installation of two dishes on an existing  
14 tower at the Fence Meadow Repeater Station would use SR 168 and two local roads in the Sierra National  
15 Forest.  
16

17 **State Routes**

18 A number of major highways serve the area surrounding the proposed project, including State Route (SR)  
19 180 and SR 99, and are listed in Table 5.16-1. The largest traffic volumes on these highways are on SR  
20 168 in Fresno, with average daily traffic of 73,000 vehicles.  
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Table 5.16-1 State Routes and Local Roadways Impacted by Project-Related Traffic

Road	Description	Average Daily Traffic (vehicles)
<b>State Routes</b>		
SR 180 <sup>1</sup>	<ul style="list-style-type: none"> <li>• Four-lane divided highway</li> <li>• At grade intersections with turning lanes north of proposed project</li> <li>• Limited access, with ramp access in Fresno</li> <li>• No sidewalks present</li> <li>• No street parking allowed</li> </ul>	16,300–25,800
SR 168 <sup>1</sup>	<ul style="list-style-type: none"> <li>• Eight-lane principal arterial</li> <li>• Interchange with SR 180, providing access from central and north Fresno area</li> <li>• No sidewalks present</li> <li>• No street parking allowed</li> </ul>	73,000
<b>Local Roadways</b>		
East Jensen Ave <sup>2</sup>	<ul style="list-style-type: none"> <li>• Four-lane minor arterial</li> <li>• Center median with turning lanes</li> <li>• No sidewalks present</li> <li>• No parking lane present.</li> </ul>	27,080–32,255

Table 5.16-1 State Routes and Local Roadways Impacted by Project-Related Traffic

Road	Description	Average Daily Traffic (vehicles)
South McCall Ave <sup>2</sup>	<ul style="list-style-type: none"> <li>• Two-lane roadway with center turning lanes</li> <li>• No sidewalks present</li> <li>• No parking lane present</li> </ul>	9,262–13,086

<sup>(1)</sup> Source: Caltrans 2014a

<sup>(2)</sup> PG&E 2015

Key:

SR State Route  
Ave Avenue  
n/a not applicable

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**Local Roadways**

Local roadways in the vicinity of the proposed project area include East Jensen Avenue and South McCall Avenue, which are both adjacent to the existing Sanger Substation. Local roadways are listed in Table 5.16-1. The greatest traffic volumes near the proposed project are on East Jensen Avenue, ranging from 27,080 vehicles per day east of South McCall Avenue to 32,255 vehicles per day west of South McCall Avenue. Other unpaved private access roads are located near the proposed project site and are used primarily for farm equipment. Two local roads in the Sierra National Forest, Dinkey Creek Road and Ross Crossing Road, lead to the Fence Meadow Repeater Station.

**Public Transit**

Orange Cove Transit provides intercity transit service between the cities of Orange Cove and Fresno. The fixed route service runs along East Jensen Avenue between the City of Fresno and the City of Sanger, passing by the proposed project area. The route does not include scheduled stops near the proposed project (Fresno County Rural Transit Agency n.d.). No rail lines would be crossed by the proposed project.

**Parking**

On-street parking is not available on roadways near the proposed project. Road shoulders on South McCall and East Jensen Avenues provide space for vehicles to pull over. No public parking lots are located in close proximity to the proposed project. Parking is available at the Fence Meadow Repeater Station for staff and workers.

**Air Transportation**

The Del Rey Juice Airstrip—a private airstrip not subject to Federal Aviation Administration (FAA) notification requirements for encroachment on imaginary surfaces per 14 Code of Federal Regulations (CFR) 77—is located approximately 3.6 miles south of the proposed project site. The Turner Field and Fresno Yosemite International Airport are both located within approximately 6.5 miles of the proposed project and outside of any imaginary slope extending from the runways, as defined by the FAA (14 Code of CFR 77).

**Pedestrian and Bicycle Trails**

There are currently no sidewalks, bicycle lanes, or other pedestrian or bicycle facilities near the proposed project site. The Fresno County Regional Bicycle & Recreational Trails Master Plan proposes a future Class II rural bikeway on East Jensen Avenue that would run from South McCall Avenue east to Academy Avenue. The bikeway would also be located along South McCall Avenue south of its intersection with East Jensen Avenue (Fresno County 2013).

1 **Methodology**

2 **Level of Service Definition**

3 Current guidelines under the California Environmental Quality Act (CEQA) for traffic impact analyses  
4 focus on analyzing the delay that vehicles experience at intersections and on roadway segments. That  
5 delay is measured using Level of Service (LOS). The Fresno County General Plan and the Fresno County  
6 Congestion Management Program contain LOS goals. Therefore, LOS is the most appropriate metric to  
7 identify potential impacts of construction activities on nearby roadway segments.

8  
9 LOS is a quantitative measure that characterizes traffic congestion on a scale of A to F, with LOS A  
10 representing a free-flow condition and LOS F representing extreme congestion. LOS standards can apply  
11 to either intersections or segments (a section of street between two intersections). Generally speaking,  
12 LOS represents the ability of a roadway or an intersection to accommodate traffic. Table 5.16-2 provides  
13 the six LOS categories for basic freeway segments.  
14

Table 5.16-2 Level of Service Criteria

Level of Service (LOS)	Description
LOS A	Describes free-flow operations. Free flow speed (FFS) prevails on the highway, and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.
LOS B	Represents reasonably free-flow operations, and FFS on the highway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.
LOS C	Provides for flow with speeds near the FFS of the highway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
LOS D	Denotes the level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited, and drivers experience reduced physical and psychological comfort levels.
LOS E	Describes operation at capacity. Operations on the highway at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. The physical and psychological comfort afforded to drivers is poor.
LOS F	Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks.

Source: TRB 2010

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16 **Level of Service Calculation**

17 This traffic analysis used the Highway Capacity Manual (TRB 2010), per guidelines from Fresno County  
18 and the California Department of Transportation (Caltrans) (Fresno County 2014; Caltrans 2002).  
19 Existing LOS was calculated for key road segments near the proposed project using generalized LOS  
20 tables presented in the Highway Capacity Manual. The daily traffic volumes from the Highway Capacity  
21 Manual that were used to determine LOS for different road types are presented in Table 5.16-3. Average  
22 daily traffic (ADT) volumes for key roadways within the project area were compared to daily traffic  
23 volumes in Table 5.16-3 to determine the existing LOS. A background growth factor of 1.1 percent based  
24 on county population growth projections from Caltrans was applied to 2014 ADT volumes to account for  
25 increases in traffic volumes between 2014 and the baseline used for the project impact analysis (2015)  
26 (Caltrans 2014b). The LOS standards in the county are presented in Table 5.16-5.  
27

Table 5.16-3 Generalized Daily Traffic Volumes for Level of Service

Road Type	Level of Service			
	B	C	D	E
Four Lane Freeway <sup>(1)</sup>	37,100	51,600	64,300	74,500
Four Lane Rural Highway <sup>(2)</sup>	25,500	36,900	48,500	56,800

Table 5.16-3 Generalized Daily Traffic Volumes for Level of Service

Road Type	Level of Service			
	B	C	D	E
Two Lane Highway <sup>(3)</sup>	4,100	7,900	12,900	25,500

Source: Highway Capacity Manual 2010 (TRB 2010)

Notes:

- (1) Highway Capacity Manual 2010, Chapter 10, Freeway Facilities, Exhibit 10-8 Generalized Daily Service Volumes for Urban Freeway Facilities
  - (2) Highway Capacity Manual 2010, Chapter 14, Multilane Highways, Exhibit 14-18 Generalized Daily Service Volumes for Rural Multilane Highways
  - (3) Highway Capacity Manual 2010, Chapter 15, Two-Lane Highways Exhibit 15-130 Generalized Daily Service Volumes for Two-Lane Highways
- K-Factor of 9% and D-Factor of 65% were assumed for Traffic Volumes from the HCM 2010 Generalized Tables based on similar evaluation criteria for LOS in Table 4-6 of the Fresno County General Plan (Fresno County 2000)
- K-factor: The proportion of average daily traffic that occurs during the peak hour.
- D-factor: The proportion of traffic moving in the peak direction of travel on a given roadway during the peak hour.

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**Existing Levels of Service**

Table 5.16-4 presents ADT and LOS results for the key roadways within the proposed project area.

Table 5.16-4 Existing Average Daily Traffic and Level of Service on State Routes and Local Roadways Impacted by Project-Related Traffic (2015)

Location	ADT	LOS <sup>(1)</sup>
<b>SR 180<sup>(2)</sup></b>		
West of South McCall Ave	26,084	B
East of South McCall Ave	17,187	B
West of Academy Ave	16,479	B
<b>SR 168<sup>(3)</sup></b>		
North of junction with SR 180	73,803	D
South of McKinley Ave	73,803	D
<b>East Jensen Ave<sup>(2)</sup></b>		
West of South McCall Ave	32,255	B
East of South McCall Ave	27,080	B
<b>South McCall Ave<sup>(4)</sup></b>		
North of East Jensen Ave	9,262	C
South of East Jensen Ave	13,086	D

Notes:

- (1) Based on LOS criteria presented in Table 5.16-3.
  - (2) Four Lane Rural Highway
  - (3) Four Lane Freeway
  - (4) Two Lane Highway
- LOS in bold represent road segments exceeding LOS standards under baseline conditions

Key:

- ADT average daily traffic
- Ave Avenue
- LOS level of service
- SR State Route

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1 **5.16.2 Regulatory Setting**

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3 **Federal**

4 ***Airspace Restrictions***

5 FAA regulation 14 CFR 77 requires that the FAA be notified of any construction or alteration that would  
6 result in a structure being greater than 200 feet (61 meters) above ground level from its base or that would  
7 exceed a specified height from an imaginary slope extending from the nearest runway. The imaginary  
8 slope described below is measured from the nearest point of the runway nearest to the proposed structure  
9 (U.S. Government Publishing Office 2016):

- 10  
11 • For airports with runways greater than 3,200 feet (975 meters) in length, 1 vertical foot (0.3  
12 meters) for every 100 horizontal feet (30 meters) for a horizontal distance of 20,000 feet (6,096  
13 meters).
- 14 • For airports with runways 3,200 feet (975 meters) or less in length, 1 vertical foot (0.3 meters) for  
15 every 50 horizontal feet (15 meters) for a horizontal distance of 10,000 feet (3,048 meters).
- 16 • For heliports, 1 vertical foot (0.3 meters) for every 25 horizontal feet (8 meters) for a horizontal  
17 distance of 5,000 feet (1,524 meters).

18  
19 **State**

20 ***California Department of Transportation***

21 Caltrans is responsible for overseeing state highways within California. Caltrans requires that an  
22 encroachment permit be obtained for all work done within a state highway right-of-way (ROW).  
23 Encroachment permits must also be obtained for transmission lines that span or cross any state roadways  
24 (Caltrans 2016a). In addition, Caltrans has the discretionary authority to issue special permits for the  
25 movement of vehicles or loads exceeding statutory limitations on the size, weight, and loading of vehicles  
26 contained in Chapters 1–5 of Division 15 Size, Weight, and Load of the California Vehicle Code.  
27 Completion of a Transportation Permit application is required for requests for such special permits  
28 (Caltrans 2016b). Guidelines provided by Caltrans indicate LOS C as the minimum LOS target for basic  
29 freeway segments and signalized intersections. Where state facilities currently operate below LOS C, the  
30 existing measure of effectiveness should be maintained (i.e., density for freeway segments and ramps, and  
31 control delay per vehicle for signalized intersections) (Caltrans 2002). Relevant transportation policies  
32 and ordinances are presented in Table 5.16-5.

33 **Table 5.16-5 Relevant Transportation Policies and Ordinances**

Policy	Description
<b>California Department of Transportation</b>	
Work in public ROW	An encroachment permit must be obtained for all proposed activities related to the placement of encroachments within, under, or over the state highway ROW. <sup>(1)</sup>
Oversize Vehicles	A special permit must be obtained to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations on state highways. Maximum limitations are generally as follows: width = 102 inches, height = 14 feet, length = 75 feet, weight = 80,000 lbs. <sup>(1)</sup>
Target LOS Standard	LOS C <sup>(2)</sup>
<b>Fresno County</b>	
Work in public ROW	A permit from the Director of Public Works is required before excavation or installation of utilities above or under a county-maintained roadway or improved public roadway not maintained by the County. <sup>(3)</sup>

Table 5.16-5 Relevant Transportation Policies and Ordinances

Policy	Description
Oversize Vehicles	A special permit must be obtained from the director of public works to operate or move a vehicle, or combination of vehicles, or special mobile equipment of size or weight of vehicle or load exceeding the maximum specified in the California Vehicle Code. <sup>(3)</sup>
Target LOS Standard	Policy TR-A.2: The County shall plan and design its roadway system in a manner that strives to meet LOS 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. <sup>(4)</sup>
Property Access	Policy TR-A.3: The County shall require that new or modified access to property abutting a roadway and to intersecting roads conform to access specifications in the Circulation Diagram and Standards section of the Fresno County General Plan.
Congestion Management Program	SR 168, SR 160, East Jensen Ave, and South McCall Ave are part of the Congestion Management Program highway and road system. The target LOS for Congestion Management Program Roadways is LOS C in unincorporated cities and LOS D in the Cities of Fresno and Clovis. <sup>(5)</sup>

Sources:

- (1) California Vehicle Code Section 35100-35111, 35250-35252, 35400-35414, and 35550-35558 and Streets and Highways Code Section 670-695
- (2) Guide for the Preparation of Traffic Impact Studies (Caltrans 2002)
- (3) Fresno County Municipal code, Chapter 11.32
- (4) County of Fresno General Plan Chapter 4: Transportation and Circulation (Fresno County 2000)
- (5) Fresno County Congestion Management Process (CFCG 2009)

Key:

- Ave Avenue
- lbs pounds
- LOS Level of Service
- ROW right-of-way
- SR State Route

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**Local**

***Fresno County Congestion Management Program***

The Fresno County Congestion Management Program identifies SR 168, SR 160, East Jensen Avenue, and South McCall Avenue as part of the Congestion Management Program highway and road system. The LOS standard in the county is LOS C in unincorporated areas and LOS D on urban roadways in the cities of Fresno and Clovis. Relevant transportation policies from the Fresno County Congestion Management Program are presented in Table 5.16-5.

***County General Plan and Municipal Codes***

Local plans and municipal codes were reviewed for goals and policies related to the proposed project. Relevant transportation policies and ordinances are presented in Table 5.16-5.

**5.16.3 Environmental Impacts and Assessment**

**Applicant Proposed Measures**

The applicant has incorporated the following applicant proposed measure (APM) into the proposed project to specifically minimize or avoid impacts on transportation and traffic. A list of all project APMs is included in Table 4-5.

**APM TRAN-1: Traffic Planning.** PG&E will follow its standard safety practices as needed, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. PG&E is a member of the California Joint Utility Traffic Control Committee, which published the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee 1999). PG&E will follow the

1 recommendations in this manual regarding basic standards for the safe movement of traffic on  
 2 highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for  
 3 obtaining a local encroachment permit, PG&E will establish a Traffic Management Plan (TMP) to  
 4 address haul routes, timing of heavy equipment and building material deliveries, potential street  
 5 and/or lane closures, signing, lighting, and traffic control device placement. Construction activities  
 6 will be coordinated with local law enforcement and fire protection agencies. Emergency service  
 7 providers will be notified as required by the local permit of the timing, location, and duration of  
 8 construction activities.

9  
 10 **Impacts on Transportation and Traffic**

11 Table 5.16-6 includes the significance criteria from Appendix G of the CEQA Guidelines’ transportation  
 12 and traffic section to evaluate the environmental impacts of the proposed project.

13 **Table 5.16-6 Transportation and Traffic Checklist**

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 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 highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Result in inadequate parking that would result in a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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1 **Methodology**

2 The analysis compared baseline traffic conditions (2015, refer to Table 5.16-4) with traffic conditions  
3 during peak construction in 2017. The following key assumptions were used in the traffic analysis:  
4

- 5 • A background growth rate of 1.1 percent, based on population projections, was used for 2014  
6 traffic volumes to account for regional growth in traffic volumes between 2014 and 2015;
- 7 • Traffic volumes under baseline conditions (2015) plus peak construction volumes from the  
8 project were considered representative of peak construction conditions in 2017 and no additional  
9 background growth rate was applied.
- 10 • Trip generation for the proposed project was based on anticipated construction vehicles and  
11 worker trips that would be needed for the various construction components to be completed  
12 during each phase of the proposed project; and
- 13 • Heavy vehicle trips were converted to passenger car equivalent trips using a multiplier of 1.5 as  
14 they are generally considered to have a greater impact on traffic than passenger vehicles (TRB  
15 2010).

16  
17 Traffic during operation and maintenance is expected to be negligible; therefore, the analysis relies on a  
18 qualitative description.  
19

20 *a, b. Would the project conflict with an applicable plan, ordinance, or policy establishing measures*  
21 *of effectiveness for the performance of the circulation system, taking into account all modes of*  
22 *transportation including mass transit and non-motorized travel and relevant components of the*  
23 *circulation system including, but not limited to, intersections, streets, highways and freeways,*  
24 *pedestrian and bicycle paths, and mass transit? Would the project conflict with an applicable*  
25 *congestion management program including, but not limited to, LOS standards and travel*  
26 *demand measures, or other standards established by the county congestion management*  
27 *agency for designated roads or highways?*  
28

29 **Level of Service Overview**

30 The analysis examined traffic conditions during peak construction in 2017. The change in LOS between  
31 baseline conditions (2015) without the project and those existing during peak construction conditions  
32 (2017) was considered significant if the project resulted in a road segment failing to meet the  
33 jurisdiction’s significance threshold. The proposed Sanger Substation would be located within  
34 unincorporated Fresno County. The significance threshold for roadways was based on the LOS goals  
35 identified in Table 5.16-5.  
36

37 **Construction**

38 *LESS THAN SIGNIFICANT WITH MITIGATION*  
39

40 The proposed project would generate trips due to worker vehicles, equipment delivery, soil import and  
41 export, and other similar activities. Trips would vary throughout the 24- to 30-month construction period  
42 but would peak during Phase 3 and Phases 4a through 4d, which would be constructed concurrently.  
43 Equipment and component installation and power line reroutes taking place during these phases would  
44 generate up to 183 (one-way) daily passenger car equivalent trips, as shown in Table 5.16-7.  
45



Table 5.16-7 Peak Daily Construction Trips

Project Component	Maximum Daily Trips	Passenger Car Equivalent	Maximum Daily Passenger Car Equivalent Trips
Construction Worker Vehicles	60	1	60
Equipment Delivery	22	1.5	33
Other Construction Support Trucks	60	1.5	90
<i>Total</i>	<b>142</b>		<b>183</b>

Source: PG&E 2015

Notes: Phase 3 would last for 261 workdays, and Phases 4a through 4d would last for shorter durations; however, it was assumed Phase 4a through 4d would happen concurrently and represents the maximum daily trips that could occur.

1  
2 Table 5.16-8 shows the maximum increase in ADT on key roadways during peak project construction and  
3 the resulting LOS. All roadways in Table 5.16-8 are also Congestion Management Program roadways.  
4 The table reflects a scenario in which all project traffic follows one route, which is the most conservative  
5 scenario. It is not expected that all construction workers and delivery vehicles would access the project  
6 site using the same route; therefore, the actual increase in traffic on individual roads is expected to be  
7 lower than what is represented in Table 5.16-8. The proposed project would not result in a decrease in  
8 LOS on the studied road segments. As shown in Table 5.16-8, South McCall Avenue, south of East  
9 Jensen Avenue, is expected to exceed the target LOS in 2015 without the proposed project; however, the  
10 proposed project would not result in any further degradation of LOS. LOS impacts to road segments  
11 would be less than significant.

Table 5.16-8 Peak Average Daily Traffic and Level of Service Operation During Construction

Location	2015 ADT Without Project	2015 LOS Without Project	2017 ADT	2017 LOS <sup>(1)</sup>	LOS Threshold of Significance <sup>(2)</sup>	Exceed Target LOS? <sup>(1)</sup>
<b>SR 180<sup>(3)</sup></b>						
West of South McCall Ave	26,084	B	26,267	B	C	No
East of South McCall Ave	17,187	B	17,370	B	C	No
West of Academy Ave	16,479	B	16,662	B	C	No
<b>SR 168<sup>(4)</sup></b>						
North of junction with SR 180	73,803	D	73,986	D	D	No
South of McKinley Ave	73,803	D	73,986	D	D	No
<b>East Jensen Ave<sup>(3)</sup></b>						
West of South McCall Ave	32,255	B	33,567	B	C	No
East of South McCall Ave	27,080	B	28,211	B	C	No
<b>South McCall Ave<sup>(5)</sup></b>						
North of East Jensen Ave	9,262	C	9,769	C	C	No

Table 5.16-8 Peak Average Daily Traffic and Level of Service Operation During Construction

Location	2015 ADT Without Project	2015 LOS Without Project	2017 ADT	2017 LOS <sup>(1)</sup>	LOS Threshold of Significance <sup>(2)</sup>	Exceed Target LOS? <sup>(1)</sup>
South of East Jensen Ave	13,086	D	13,727	D	C	Yes

Notes:

(1) LOS Based on Highway Capacity Manual 2010 (TRB 2010). Table 4-6 Evaluation Criteria for Level of Service in the Fresno County General Plan (Fresno County 2000)

(2) LOS Threshold of Significance based on Fresno County Congestion Management Process (CFCG 2009)

(3) Rural Multi-Lane Highway; 4 lanes

(4) Urban Freeway Group 1; 8 lanes

(5) Rural 2-Lane Highway; 2 lanes

Note: SR 180, SR 168, East Jensen Ave., and South McCall Ave. have been identified as regionally significant roadways in the Fresno County Congestion Management Process (CFCG 2009)

Note: LOS in bold represent road segments exceeding LOS standards under baseline conditions.

Key:

ADT Average Daily Traffic

Ave Avenue

LOS level of service

SR State Route

1  
2 Traffic would also increase at the intersection of South McCall and East Jensen Avenues during peak  
3 hours if construction-related traffic accesses the work area from East Jensen Avenue. However, the  
4 intersection is signalized for all approaches and includes left-turn-only lanes to facilitate traffic  
5 movement. The 183 peak construction trips would represent less than 1 percent of existing traffic volumes  
6 on East Jensen Avenue and less than 2 percent on South McCall Avenue and would not be expected to  
7 significantly increase delay at the intersection. Impacts to LOS at the intersection of South McCall and  
8 East Jensen Avenues would be less than significant.

9  
10 Trucks entering the substation site during construction from South McCall Avenue could cause a  
11 substantial delay if they were queued on South McCall Avenue, which has one lane in each direction. An  
12 internal roadway and the two access points from South McCall Avenue would allow vehicles to enter the  
13 site in one location, drive through the site, and exit from the second access driveway. This would allow  
14 multiple vehicles to be on the site at one time. However, if more vehicles arrived at the site, they would  
15 queue on South McCall Avenue and cause a backup and temporary stalling of traffic. This could be a  
16 significant impact. APM TRAN-1 requires establishing a TMP only if required for obtaining a local  
17 encroachment permit. However, APM TRAN-1 lacks sufficient commitment to establish a TMP and lacks  
18 sufficient detail in addressing truck queuing at access driveways to determine that it would reduce  
19 impacts to less than significant. Impacts would therefore still be significant. MM TRAN-1 would  
20 supersede APM TRAN-1 and require that PG&E manage deliveries and on-site vehicles to avoid queuing  
21 on South McCall Avenue. Impacts would be less than significant with mitigation.

22  
23 **MM TRAN-1: Traffic Management Plan (supersedes APM TRAN-1).** A Traffic Management  
24 Plan shall be prepared upon determination of the final construction schedule and precise locations and  
25 durations of lane closures and other project details. Measures to be included in the plan that would  
26 allow for:

- 27 • Safe vehicle passage shall adhere to the California Manual on Uniform Traffic Control Devices.
- 28 • Avoidance of truck queuing on South McCall Avenue of trucks waiting to enter the substation  
29 construction site.

Potential measures include:

- Flaggers and/or signage to halt traffic and direct traffic at lane closures and to allow traffic to pass when construction is halted.
- Scheduling lane closures at off-peak times.
- Notification of emergency services providers of the timing, location, and duration of lane closures.
- Requirement that emergency vehicle access is maintained at all times.
- Scheduling construction deliveries and employee arrival to be spread out throughout the day.
- Implementing traffic control within the substation site to move vehicles to allow arriving vehicles to enter the site.

The Traffic Management Plan shall also include the following measures:

- **Limit Vehicle Speeds:** Vehicle speeds shall be limited to 15 miles per hour on unpaved roadways used to access the site during construction. PG&E shall notify owners of property on which internal access roads are located at least one week in advance that the internal access road will be used for construction traffic.
- **Slow Truck Warning:** During truck delivery and exit hours, PG&E shall post signage at appropriate locations (e.g., along South McCall and East Jensen Avenues) warning drivers when there is a possibility for slow trucks to exit the substation site onto South McCall Avenue. Signage shall adhere to the California Manual on Uniform Traffic Control Devices.
- **Road Damage Repair:** PG&E shall repair to pre-project conditions any roads damaged by project vehicle traffic. PG&E shall document roadway conditions with photographs prior to project activities along East Jensen Avenue and South McCall Avenue adjacent to the project area and extending 0.25 miles from the project area. PG&E shall also take photographs after the project is completed and after any repairs that document restoration of pre-project pavement conditions.
- **Emergency Service Provider Notification:** PG&E shall notify the provider of the location, date, time, and duration of the lane closure. PG&E shall make provisions to maintain emergency vehicle access at all times in coordination with local emergency service providers, such as allowing for bypass of slow vehicle traffic during lane closures.

To the extent that compliance with applicable permit requirements, e.g., obtaining the required encroachment permit from Fresno County, would reduce identified significant traffic impact(s) consistent with the performance standards set forth in MM TRAN-1, PG&E may submit such permit(s) in lieu of addressing that impact, subject to review and approval by CPUC prior to the start of construction.

Installation of guard structures over South McCall and East Jensen Avenues to facilitate line stringing over those roads would require temporary partial closure of South McCall and East Jensen Avenues. Lane closure along East Jensen Avenue would not cause substantial delay because there are two lanes in each direction. Lane closure along South McCall Avenue, however, could cause traffic delays given there is only one lane of travel in each direction, which would be significant if traffic were backed up into and blocked the intersection of East Jensen Avenue and South McCall Avenue and if traffic was stopped in one direction for a substantial length of time. APM TRAN-1 requires adherence to practices in the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee 1999). However, the Work Area Protection and Traffic Control Manual would not provide specific details related to the proposed project (e.g., locations of lane closures, scheduling, notification, etc.); therefore,

1 APM TRAN-1 lacks sufficient detail to determine that it would reduce impacts to less than significant.  
2 Impacts would still be significant. MM TRAN-1 would supersede APM TRAN-1 and requires  
3 implementation of measures to reduce lane closure impacts to less than significant.

4  
5 Construction work at the Fence Meadow Repeater Station would require one crane and one to two utility  
6 trucks with workers and equipment making daily trips. Construction is anticipated to take approximately  
7 one week. The maximum trips per day would include one round trip for crane delivery and two round  
8 trips for the crew vehicles. The negligible amount of trips during only one week would result in impacts  
9 that are less than significant.

### 10 11 **Applicable Plans, Ordinances, and Policies**

12 See the discussion above for an analysis of LOS standard used in the County of Fresno General Plan and  
13 Congestion Management Process.

### 14 15 **Access Driveways**

16 Two new access roads from South McCall Avenue would be created at the substation site. Policy TR-A.3  
17 of the Fresno County General Plan requires new driveways to conform to access specifications in the  
18 Circulation Diagram and Standards section of the Fresno County General Plan. Specifications for two-  
19 lane collectors require turnarounds and access restrictions for major traffic generators (i.e., recreational  
20 areas, parks of regional significance, and other major public facilities). The proposed driveways would  
21 meet the specifications that require a turnaround to prevent vehicles from backing onto a roadway. The  
22 project would not be a major traffic generator; therefore, design requirements such as limits on the  
23 number and location of access points would not be needed. No new access driveways would be created at  
24 the Fence Meadow Repeater Station. The project would not conflict with policies regarding access  
25 driveways.

### 26 27 **Operation and Maintenance**

28 *NO IMPACT*

29  
30 Operation and maintenance of the expanded substation, reconfigured transmission lines, and Fence  
31 Meadow Repeater Station would not change appreciably from current operation and maintenance  
32 activities. There would be no increase in traffic and no other changes that would occur during operation  
33 and maintenance compared to baseline. There would be no impact.

34  
35 *c. Would the project result in a change in air traffic patterns, including either an increase in traffic*  
36 *levels or a change in location that results in substantial safety risks?*

### 37 38 **Construction**

39 *NO IMPACT*

40  
41 Construction may require tall equipment such as cranes. New power line poles are expected to be between  
42 60 and 110 feet tall, and a new microwave tower is expected to be between 80 and 100 feet tall. A crane  
43 to install these would not be tall enough to trigger FAA requirements (200 feet) and would not exceed the  
44 imaginary surface described in 14 CFR Part 77. The installation of two dishes at Fence Meadow Repeater  
45 Station would occur on an existing tower and would not change its height. There would be no impact to  
46 air traffic patterns.

1 **Operation and Maintenance**

2 *NO IMPACT*

3  
4 New power line poles are expected to be between 60 and 110 feet tall, and a new microwave tower is  
5 expected to be between 80 and 100 feet tall. This would not trigger FAA noticing requirements and would  
6 not encroach on the imaginary surface described in 14 CFR Part 77. Furthermore, new poles and the  
7 microwave tower would be in close proximity to existing poles and would not be expected to pose a new  
8 safety hazard to air traffic. The height of the tower at the Fence Meadow Repeater Station would not  
9 change. There would be no impact.

10  
11 *d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or*  
12 *dangerous intersections) or incompatible uses (e.g., farm equipment)?*

13  
14 **Construction**

15 *LESS THAN SIGNIFICANT WITH MITIGATION*

16  
17 The proposed project would not require the construction of publicly accessible roads that would have a  
18 substantially hazardous design feature such as sharp curves or dangerous intersections. No road design  
19 changes or incompatible uses would occur as a result of activities at Fence Meadow Repeater Station.  
20 Construction activities at and in the vicinity of the Sanger Substation could result in hazards due to  
21 incompatible uses with farm equipment that use existing access roads, and in other hazards due to access  
22 road design, traffic flow changes from site ingress and egress, work in public roadways, and road damage.

23  
24 **Access Roads and Driveways**

25 Several types of access roads would be used for the proposed project:

- 26  
27
  - Two new access roads from South McCall Avenue;
  - 28 • An internal roadway that would allow construction vehicles to turn around before exiting the site;
  - 29 • Overland routes; and
  - 30 • Existing access roads.

31  
32 Access road locations are shown in Figure 4-3. Internal access roads include some existing farm access  
33 roads that are used by farm equipment. The use of narrow unpaved roadways during construction by  
34 construction equipment, vehicles, and farm equipment could cause a safety hazard. APM TRAN-1  
35 requires adherence to practices in the Work Area Protection and Traffic Control Manual (California Joint  
36 Utility Traffic Control Committee 1999). However, APM TRAN-1 lacks sufficient detail in addressing  
37 hazards from incompatible uses to determine that it would reduce impacts to less than significant. Impacts  
38 would still be significant. MM TRAN-1 supersedes APM TRAN-1 and requires limiting speeds to 15  
39 miles per hour (mph) and notification of farms, which would allow for avoidance of such hazards.  
40 Impacts due to incompatible uses would be less than significant with mitigation.

41  
42 The two driveways leading onto South McCall Avenue may pose safety issues as large, slow trucks enter  
43 and exit the substation site into traffic approaching and leaving the intersection with East Jensen Avenue.  
44 This would be a significant impact due to a substantial increase in hazards. APM TRAN-1 requires  
45 adherence to practices in the Work Area Protection and Traffic Control Manual (California Joint Utility  
46 Traffic Control Committee 1999). However, APM TRAN-1 lacks sufficient detail about how PG&E  
47 would address hazards from slow trucks accessing the substation site. Impacts would still be significant.  
48 MM TRAN-1 would supersede APM TRAN-1 and require posting warning signs so that motorists can be

1 prepared for slow trucks. Impacts due to design features would be less than significant with  
2 implementation of MM TRAN-1.

### 4 **Work in Public Roadways**

5 Power line reconfiguration would require crossing South McCall and East Jensen Avenues. PG&E would  
6 install temporary guard structures or take other measures (e.g., temporary halting of traffic) along  
7 roadways to prevent conductor from falling onto motorists. Installation of guard structures would require  
8 temporary closure of the lane adjacent to the guard structure location. This could cause significant safety  
9 impacts to motorists. As part of APM TRAN-1, barriers and signage would be used to minimize hazards  
10 to vehicles. APM TRAN-1 requires adherence to practices in the Work Area Protection and Traffic  
11 Control Manual (California Joint Utility Traffic Control Committee 1999). However, APM TRAN-1  
12 lacks sufficient detail to determine that it would reduce impacts to less than significant. Impacts would  
13 still be significant. MM TRAN-1 would supersede APM TRAN-1 and requires implementation of  
14 measures that would reduce lane closure hazards impacts to less than significant.

### 16 **Oversize and Overweight Vehicles**

17 Construction of the proposed project would require the use of overweight or oversized vehicles to deliver  
18 construction equipment and materials.

19  
20 The applicant would obtain the necessary permits from Fresno County prior to beginning construction.  
21 Likewise, Caltrans has the discretionary authority to issue special permits for the movement of vehicles/  
22 loads exceeding statutory limitations on the size, weight, and loading of vehicles traveling on state roads.  
23 Damage to roadways from heavy truck traffic and oversize and overweight vehicles concentrated on East  
24 Jensen Avenue and South McCall Avenue may result in hazardous conditions to motorists. APM  
25 TRAN-1 requires adherence to practices in the Work Area Protection and Traffic Control Manual  
26 (California Joint Utility Traffic Control Committee 1999). However, APM TRAN-1 does not address  
27 potential damage to roadways resulting from oversize and overweight vehicles. Impacts would still be  
28 significant. As part of MM TRAN-1, which would supersede APM TRAN-1, PG&E would repair road  
29 damage caused indirectly as a result of project vehicle traffic. Impacts would be less than significant with  
30 implementation of MM TRAN-1.

### 32 **Operation and Maintenance**

33 *NO IMPACT*

34  
35 Project operation would not require construction of roads or driveways. Some slow trucks may exit from  
36 the substation site, but the volume of trucks would be negligible because the site would be unstaffed and  
37 operated remotely, and maintenance activities are expected to be generally the same as what is occurring  
38 at the existing Sanger Substation and Fence Meadow Repeater Station. Heavy truck traffic would be  
39 limited such that it would not cause acceleration in pavement degradation. There would be no safety  
40 impact.

41  
42 *e. Would the project result in inadequate emergency access?*

### 44 **Construction**

45 *LESS THAN SIGNIFICANT WITH MITIGATION*

46  
47 Construction of the substation and microwave tower and removal of existing substation equipment would  
48 take place within the existing disturbed area at the substation and within an area that is contained within  
49 the existing and expanded substation parcels. This work would not block emergency access. Power line

1 reconfiguration could require temporary, partial, or full closure of South McCall and East Jensen  
2 Avenues. Closure of lanes may significantly impact emergency access. APM TRAN-1 would require  
3 coordination with local emergency services providers so that the local emergency service providers can  
4 anticipate lane closures. Impacts would still be significant, however, because the APM requires  
5 notification to emergency services agency but does not require actions to maintain emergency access and  
6 does not specify timing for the notification to emergency service providers. MM TRAN-1 requires  
7 maintaining emergency access on roadways and to the substation site at all times. MM TRAN-1 would  
8 reduce impacts to less than significant.

9  
10 All construction at the Fence Meadow Repeater Station would take place within the existing disturbed  
11 area at the station and would not block emergency access. There would be no impact at the repeater  
12 station.

### 13 **Operation and Maintenance**

14 *NO IMPACT*

15  
16  
17 The project would not result in the permanent closure of any roads or lanes, and no temporary road or  
18 lane closures are planned during operation. Maintenance activities occurring outside of the expanded  
19 substation site that would require disturbance of public roadways would be infrequent and comparable to  
20 current operation and maintenance activities. Maintenance activities at the Fence Meadow Repeater  
21 Station would not disturb or block public roadways. There would be no impact.

22  
23 *f. Would the project conflict with adopted policies, plans or programs regarding public transit,*  
24 *bicycle, or pedestrian facilities, or an otherwise decrease in the performance or safety of such*  
25 *facilities?*

### 26 **Construction**

27 *LESS THAN SIGNIFICANT WITH MITIGATION*

28  
29  
30 Construction activities and construction traffic associated with the Sanger Substation expansion and  
31 power line reconfiguration would take place on roads that are also used by public transit and may be used  
32 by bicyclists (even though there are no bicycle routes located near the proposed project). Transit may be  
33 temporarily affected by construction activities, including utility pole installation and wire stringing or  
34 installation of fiber optics on East Jensen Avenue. No bus stops are located near the proposed project;  
35 however, lane closures may cause a minor delay to the Orange Cove Transit Line schedule if they occur  
36 while transit vehicles pass by the site. Any lane closures would not be expected to significantly impact the  
37 performance or safety of the transit service because they would be short in duration and there would be  
38 one through-lane at all times. There could be safety impacts to bicyclists traveling through the area when  
39 there are lane closures, which would be a significant impact. APM TRAN-1 requires adherence to  
40 practices in the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control  
41 Committee 1999). However, the Work Area Protection and Traffic Control Manual would not provide  
42 specific details related to the proposed project (e.g., locations of lane closures, scheduling, notification,  
43 etc.); therefore, APM TRAN-1 lacks sufficient detail to determine that it would reduce impacts to less  
44 than significant. Impacts would still be significant. MM TRAN-1 would supersede APM TRAN-1.  
45 Implementation of MM TRAN-1 for lane closures would reduce safety impacts to less than significant.

46  
47 No public transit facilities, pedestrian facilities, or bicycle facilities would be affected by construction  
48 activities at the Fence Meadow Repeater Station because all construction would take place within the  
49 existing area at the station. There would be no impact at the repeater station.

1 **Operation and Maintenance**

2 *NO IMPACT*

3

4 The proposed project would not result in any impacts to public transit, pedestrians, or bicyclists during  
5 operation. The project would not result in the permanent closure of any bus stops, sidewalks, or bicycle  
6 paths. Maintenance activities that would occur outside access roads or structure pads or require  
7 disturbance of public roadways would be infrequent, similar to current operation and maintenance, and  
8 would not result in significant safety or performance impacts.

9

10 *g. Would the project result in inadequate parking that would result in a significant impact on the*  
11 *environment?*

12

13 **Construction**

14 *NO IMPACT*

15

16 On-site vehicle parking for construction workers and construction equipment would be accommodated  
17 within parking and laydown areas for the proposed project. No public or on-street parking is located near  
18 the proposed project site. There would be no impact to parking that would result in an environmental  
19 impact.

20

21 **Operation and Maintenance**

22 *NO IMPACT*

23

24 The proposed project would have on-site parking and would require the same amount of parking as  
25 current operation and maintenance. Sufficient parking would be located at the expanded substation site  
26 and Fence Meadow Repeater Station site for periodic maintenance at the site. There would be no impact  
27 to parking that would result in an environmental impact.