

Appendix 3.17-1

Transportation Impact Analysis

TRANSPORTATION IMPACT ANALYSIS

For

LAS CAMAS SOLAR PROJECT Merced County, CA

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Las Camas Solar TIA

**TRANSPORTATION IMPACT ANALYSIS FOR
LAS CAMAS SOLAR PROJECT
Merced County, CA**

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**TRANSPORTATION IMPACT ANALYSIS FOR
LAS CAMAS SOLAR PROJECT**
Merced County, CA

INTRODUCTION

This report summarizes KDAnderson & Associates' analysis of the potential transportation impacts associated with construction and operation of the **Las Camas Solar Project** in Merced County. Figure 1 identifies the project's location.

Study Scope

The purpose of this analysis is to identify potential transportation impacts under the requirements of the California Environmental Quality Act (CEQA) as well as traffic operational effects as they relate to the introduction of project automobile and truck construction traffic on state highways. The analysis includes an evaluation of the current setting based on existing traffic operations that has been adjusted to account for the effects of COVID 19. The status of facilities serving all transportation modes (i.e., motor vehicles, pedestrians, bicycles and transit) have been described. Project effects during construction and with regular operation have been identified based on anticipated automobile and truck trip generation / distribution that reflects implementation of proposed construction traffic control measures that are consistent with the approach approved by Caltrans District 10 for a similar project. CEQA impacts relating to Vehicle Miles Traveled (VMT) with regular operation of the project has been discussed within the context of screening criteria presented in Governors' Office of Planning and Research (OPR) CEQA guidance. A traffic operations analysis was also conducted to identify the project's effects on state highway safety during construction and to assess the project's consistency with applicable County standards.

Study Area

The Las Camas Solar project covers approximately 1,741 acres (solar project site) located in the area south of State Route 152 (SR 152) and west of Interstate 5 (I-5). The project also includes transmission system improvements in and around Pacific Gas and Electric Company's (PG&E) Los Banos Substation, located approximately 0.2 mile west of the solar project site. The study area includes the project's proposed access to state highways at the SR 152 / Billy Wright Road intersection, while supporting information has also been assembled for facilities adjoining the project site, including SR 152, I-5, State Route 165 (SR 165) and Billy Wright Road.

Summary Conclusions

Access. The project will have regional access via SR 152, an expressway that links the site with I-5 to the west and with the Los Banos area and SR 165 and SR 99 to the east. During construction local access will occur on SR 152 for automobiles and oversized trucks at the unsignalized Billy

Wright Road intersection just east of I-5. That intersection was improved when the adjoining Wright Solar project was constructed to include eastbound deceleration and acceleration areas on SR 152. Billy Wright Road primarily provides access to the Merced County landfill, and because current traffic volumes on Billy Wright Road are low existing traffic operating conditions at the intersection meet minimum Merced County standards.

The project's construction truck and water truck traffic will access SR 152 via the SR 33 / SR 152 interchange near the northwest corner of the solar project site. Access to the interchange will occur via San Luis Drive, a local Merced County road that extends south from the interchange to the area of the solar project site and PG&E Substation.

Access to PG&E's Los Banos substation during construction and operation would occur from Jasper Sears Road via the SR 152 / SR 33 interchange.

Trip Generation – Regular Operations. The proposed solar project will employ 8 persons under regular operation and would generate roughly 16 daily vehicle trips by automobile. Maintenance of the facilities will generate truck traffic for roughly 30 days each year. At those times 20 round trips to and from the site will be made by water trucks.

The proposed improvements to the PG&E substation are minor in nature and would not result in additional operational trips being made at that facility, as compared to existing conditions.

Trip Generation – Construction. During construction the project could have up to 408 persons working on site, and construction employees could generate 734 vehicle trips per day with 367 trips during the a.m. and p.m. peak commute hours. During construction truck travel will consist of trucks hauling materials and equipment to and from the solar project site and PG&E substation, as well as water trucks delivering water for on-site dust control on the solar project site from an off-site location. The amount of construction truck travel caused by the project will vary throughout the duration of construction, and a maximum of 363 daily construction truck trips are anticipated with 45 construction truck trips (i.e., 23 inbound and 22 outbound) could occur during the a.m. peak hour and 2 truck trips (i.e., 1 inbound and 1 outbound) could be generated in the p.m. peak hour. Over the course of construction an average of 75 round trips could be made by water trucks or 150 daily one-way trips. On a peak day 137 round trips could occur by water trucks. Assuming that 10% of the daily activity occurred during peak hours, then 28 trips could occur in the a.m. and p.m. peak hour on a busy day.

Solar Project Construction Traffic Control Plan. The solar project will include implementation of a Construction Traffic Control Plan (CTCP) to facilitate access to SR 152. While that plan will be subject to approval by Caltrans District 10 and implemented through an encroachment permit, the preliminary CTCP for automobiles and oversized trucks will follow the travel patterns used when the adjoining Wright Solar project was constructed. While traffic to and from the county landfill will continue to have full access, construction employee travel will be limited to "right turn in and out only" access at the SR 152 / Billy Wright Road intersection. Detour routes for both automobiles and oversized trucks on that route have been identified.

Construction trucks and water trucks will be directed from the solar project site to San Luis Drive and the SR 33 / SR 152 interchange. Full access to SR 152 and to SR 33 to the north is available at the interchange and no temporary traffic controls are required at this location.

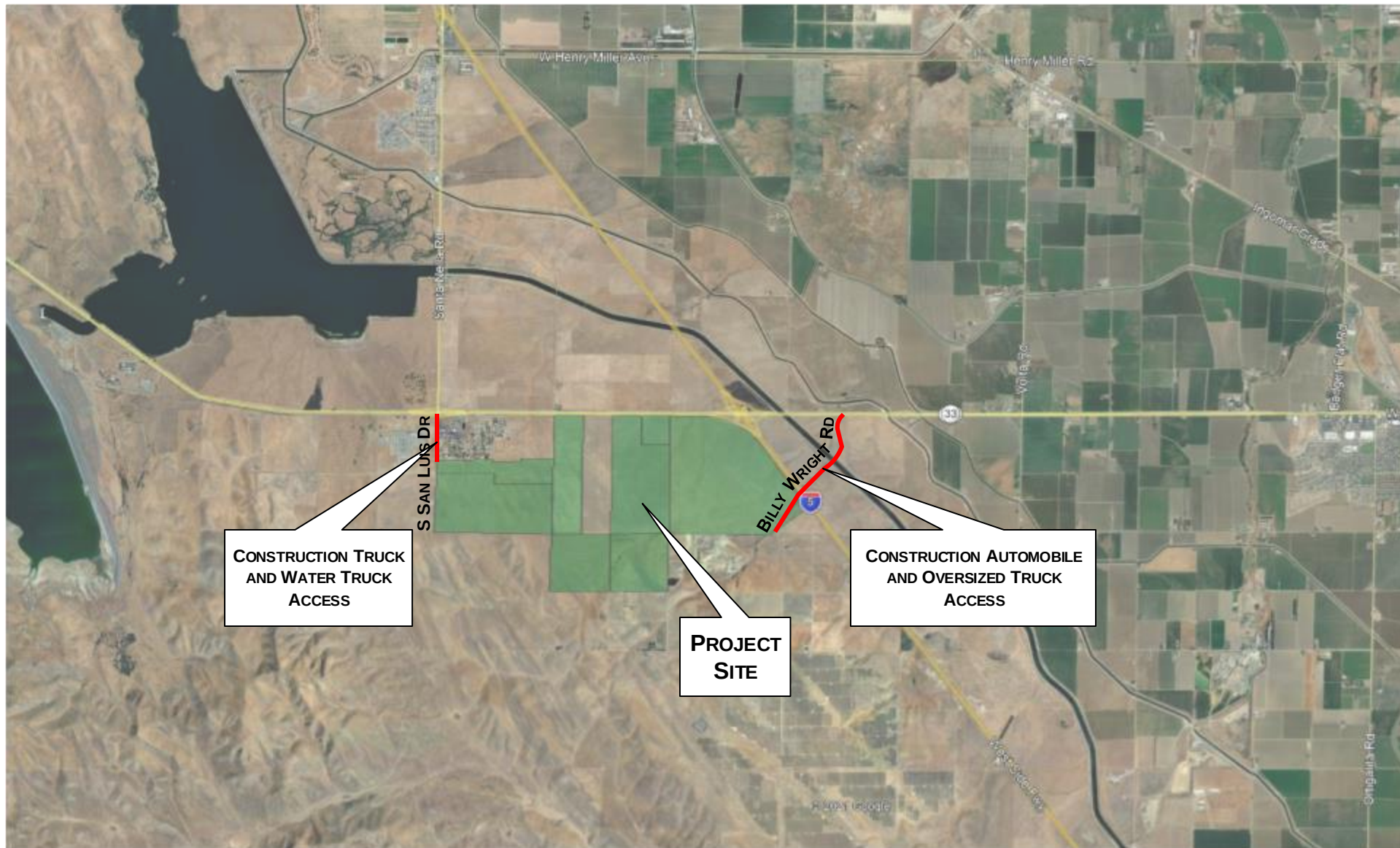
CEQA VMT Impacts. SB 743 requires the Governor’s Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts within CEQA. The Merced County Association of Governments (MCAG) released recommended VMT thresholds and implementation guidelines in September 2022, but at the time of this report, these have not been adopted by Merced County. Because Merced County has not yet adopted guidelines for evaluating the significance of VMT impacts, potential significance criteria contained in the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (California Governor’s Office of Planning and Research 2018) have been used, but significance under MCAG guidelines has also been assessed. Because project construction activity is temporary and will not continue after the project is complete the effects of the project’s regular operation are considered with regards to VMT.

Both OPR and MCAG guidelines recommend that small projects be presumed to have a less than significant effect on VMT. OPR suggests that development generating fewer than 110 daily trips satisfies that criterion, while MCAG guidelines establish a threshold of 1,000 daily trips for projects that are consistent with the General Plan or 500 daily trips for projects requiring a General Plan Amendment. Because regular operation of the project will result in fewer than 110 daily vehicle trips, the project’s VMT impact can be presumed to be less than significant under the screen line criteria suggested by OPR or by MCAG for “small projects”. Based on these considerations and on OPR screening guidance, the project’s Transportation impact under CEQA based on VMT is not significant.

Impacts to Alternative Transportation Modes. The project’s construction employees could desire to walk from the site to the commercial and residential area adjoining the site off of the SR 152 / SR 33 interchange. However, no pedestrian access is available to that area, and the distance via Billy Wright Road and SR 152 is too far to make pedestrian or bicycle travel a reasonable option. The closest regular transit service stop is at the Merced College’s Los Banos campus 3½ miles to the east of the project. Some construction employees residing in Los Banos may wish to use transit reach the site, but that distance would preclude using this stop. While not a significant impact, the project proponents could elect to offer shuttle service between the site and the existing stop is not significant, and mitigation is not required.

Safety. With implementation of the CTCP and use of San Luis Drive for truck access, solar project construction will not result in conflicts between construction related automobiles and trucks and through traffic on SR 152. As proposed, the solar project proponent will prepare a CTCP for review and approval by Caltrans District 10 and will be responsible for implementing the cost of traffic control plans under an encroachment permit through Caltrans. The work involved will include temporary signing and striping, as well as final modifications after the construction is completed to return all traffic control devices to the “regular” conditions.

Construction trucks and automobiles associated with the PG&E substation improvements would be minimal (up to 25 daily trips) and would have separate site access from Jasper Sears Road via the SR 152 / SR 33 interchange. Safety impacts from this component of the project would be less than significant.



VICINITY MAP

EXISTING SETTING

Existing Circulation System

Regional access to the solar project site and PG&E Substation is provided by SR 152, which in turn links the site with I-5 to the west and with SR 99, SR 165 and the Los Banos area to the east. Local access to the solar project during operation will be via a driveway on Billy Wright Road, which connects the site with the SR 152 / Billy Wright Road intersection. Local access to the PG&E Substation is provided by Jasper Sears Road off Gonzaga Road. The text that follows describes these existing transportation facilities.

Roadways. The study area includes these roadways:

State Route 152 (SR 152) is a principal arterial roadway which generally links the southern Santa Cruz County - Santa Clara County area with Interstate 5 and with SR 99 in Madera County. In the vicinity of the proposed project, SR 152 is a 4-lane limited access expressway in the area west of the western Los Banos urban limits and a four-lane conventional highway thoroughly the City of Los Banos. Near Billy Wright Road the highway is configured with two 12' travel lanes in each direction and a 36' wide median area. Paved shoulders exist adjoining the median area (i.e., 4 feet wide) and on the outside of the travel lanes (i.e., 8 to 12 feet wide'). The posted speed limit is 65 mph in the area of the project.

The most recent daily traffic counts reported by the California Department of Transportation (Caltrans) indicate that in 2019 SR 152 carries an *Annual Average Daily Traffic (AADT)* volume of 33,600 vehicles per day (vpd) from the SR 33 junction to I-5 and 27,000 AADT in the area east of the I-5 interchange¹. The daily traffic volume through Los Banos reaches 33,500 AADT. Caltrans reports that trucks comprise 17% of the daily traffic volume in the area near I-5 and 9% through Los Banos. SR 152 is designated an STAA truck terminal access route.

Interstate 5 (I-5) is a principal arterial roadway that traverses the state of California from south to north. In the area of the project I-5 is a four-lane controlled access freeway. The freeway is configured with two 12' travel lanes in each direction and a 60' wide median area. Paved shoulders exist adjoining the median area (i.e., 4 feet wide) and on the outside of the travel lanes (i.e., 8 feet wide). The posted speed limit is 65 mph.

The most recent daily traffic counts reported by Caltrans indicate that in 2019 I-5 carried 41,500 AADT between SR 152 and the State Route 165 (SR 165) interchange about 11 miles to the south. Caltrans reports that trucks comprise 30% of the daily traffic volume in this area. I-5 is a national STAA network route.

State Route 33 (SR 33) is a principal arterial roadway that travels the Central Valley from the US 101 junction in Ventura County to a connection to Interstate 5 in San Joaquin County. The

¹ <https://dot.ca.gov/programs/traffic-operations/census>

route is generally parallel to Interstate 5, and crosses the interstate at several locations. In Merced County SR 33 enters from Fresno County through Dos Palos and turns west along SR 152 and continues through Los Banos across I-5 to an interchange south of Santa Nella. SR 33 then leaves SR 152 and continues north through Santa Nella across I-5 to the Merced County community of Gustine and subsequently into Stanislaus County.

In the area of the project, north of SR 152, SR 33 is a two-lane conventional highway. The roadway has been widened to provide auxiliary turn lanes at key intersection in Santa Nella. The prima facie speed limit is 55 mph north of SR 152, and the limit is posted at 40 mph in Santa Nella.

The most recent daily traffic counts reported by Caltrans indicate that in 2019 SR 33 carried 11,300 AADT north of SR 152 and 12,900 AADT south of the I-5 interchange. Caltrans reports that trucks comprise 28% of the annual daily traffic volume in this area. SR 33 is an STAA Terminal access route from SR 152 to I-5.

State Route 165 (SR 165) is a principal arterial roadway that extends south from an interchange on SR 99 in Turlock south across Merced County through and through the city of Merced to an interchange on I-5. SR 152 is a conventional two-lane highway in rural areas and widens to four-lane near its intersection with the SR 152 in Los Banos. The posted speed limit is 65 mph on SR 165 between I-5 and Los Banos, and 35 mph to 45 mph through Los Banos.

The most recent daily traffic counts reported by Caltrans indicate that in 2019 SR 165 carried 1,400 AADT north of I-5, 4,300 AADT entering Los Banos and 12,000 AADT at the SR 152 intersection. Caltrans reports that trucks comprise 7% to 9% of the annual daily traffic volume in this area. SR 165 is an STAA Terminal access route.

Billy Wright Road is a rural two-lane road that links SR 152 with Merced County's Billy Wright landfill. Billy Wright Road is designated a Minor Collector in the Merced County General Plan, and the road right of way is 60 feet wide. To reach the landfill motorists follow this road as it passes beneath the I-5 freeway. Traffic counts conducted in May 2005 and reported in the Merced County General Plan Update EIR (2012) indicated that Billy Wright Road carried 240 vehicles per day south of SR 152. New 24-hr traffic counts conducted for this analysis in June 2021 indicated that Billy Wright Road carried 485 vpd. Trucks comprised 36% of the daily traffic count on Billy Wright Road in 2021.

San Luis Drive is a local Merced County road that extends south from the SR 152 / State Route 33 (SR 33) interchange in the area northwest of the project site. San Luis Drive provides access to the highway service commercial uses just south of SR 152 and to an existing residential neighborhood located south of the commercial area near the project site. At its south end San Luis Drive is a two-lane road with roughly 36 feet of pavement, and on-street parking is prohibited. A new 24-hr traffic count conducted for this analysis in June 2021 indicated that San Luis Drive carried 280 vpd just north of its intersection with W. Vista Grande Drive.

Jasper Sears Road is a local Merced County road that extends south from a frontage road along SR 152 (i.e., Gonzaga Road) west of the SR 33 / SR 152 interchange. Jasper Sears Road

provides access to the PG&E substation and to agricultural uses southwest of the Solar project site. At its north end Jasper Sears Road is a two-lane road with roughly 20 feet of pavement. Based on the types of land uses served by this road Jasper Sears Road is estimated to carry less than 100 vehicles per day.

Interchanges and Intersections. These facilities exist in the area of the proposed project.

The **SR 152 / I-5 interchange** is a full cloverleaf design (Type L-10) with 275' diameter ramp loops and 200' to 300' weaving areas between adjoining ramp terminals. 25 mph advisory speeds are posted on the ramp loops.

The **SR 33/ SR 152 interchange** is a tight diamond configuration controlled by stop signs on the SR 152 off ramps. Separate left turn lanes are provided on SR 33 at each ramp intersection. The two-lane eastbound off ramp is configured with a combined left turn+through lane and a right turn lane. The eastbound off ramp is 1,200 feet long from mainline gore point to the limit line at the intersection, and the separate right turn lane is 280 feet long. The westbound off ramp is 1,170 feet long.

The **SR 152 / Billy Wright Road Intersection** is a "tee" intersection controlled by a stop sign on the northbound Billy Wright Road approach. The median is open at the intersection, and while no left turn lane is available for westbound traffic, the median opening can accommodate roughly 60 feet of vehicle queuing outside of the through travel lanes. The Billy Wright Road approach has been widened to provide a standard rural road approach. An eastbound right turn lane approach taper of roughly 600 feet is available in advance of the intersection, and the shoulder along eastbound SR 152 east of the intersection has been widened to approximately 12 feet for roughly 1,000 feet. The intersection is not illuminated.

SR 152 is level and straight in the area of the Billy Wright Road intersection, and as a result, sight distance is generally unrestricted. A slight crest vertical curve exists to the west where the highway crosses the Delta Mendota Canal roughly 750 feet from the intersection. The available sight distance satisfies Caltrans' Minimum Sight Distance (MSD) requirement of 660 feet at 65 mph (Highway Design Manual (HDM) Table 201.1). Corner Sight Distance requirements for heavy trucks are longer (Highway Design Manual Table 405.1A) for 65 mph travel (i.e., 1,165 feet turning left and 1,000 feet turning right. The view looking west from the Billy Wright Road approach would satisfy corner sight distance requirements from the cab of a heavy truck.

Billy Wright Road is one of a limited number of designated access locations on the SR 152 expressway. Measured along the southerly right of way of SR 152 the Billy Wright Road access is 60 feet wide. Because SR 152 is a controlled access facility, any changes to the width of the access opening that may be needed to provide additional width on Billy Wright Road would require approval from the California Transportation Commission (CTC).

The **SR 152 / Volta Road intersection** is located about 1½ miles east of Billy Wright Road. The intersection is controlled by stop signs on the northbound and southbound Volta Road

approaches. Separate left turn lanes have been installed in each direction on SR 152, and the eastbound left turn lane is roughly 850 feet long.

Alternative Transportation Modes

Public Transit. The Transit Joint Powers Authority Board for Merced County operates transit services in Merced County². *The Bus* delivers fixed route service in major cities and serving rural communities. The Los Banos Corridor route link the community with Merced to the east and extend as far west as the Merced College campus on SR 152 about 3½ miles east of the Billy Wright Road. This route runs on one-hour headways from 7:44 a.m. to 7:44 p.m. Los Banos Dial-A-Ride (i.e., *The Micro Bus*) provides demand responsive transit within a service area that extends beyond Los Banos to Gustine and Santa Nella and includes the area of the proposed project. The Micro Bus runs from 6:00 a.m. to 7:30 p.m. on weekdays.

Bicycle Facilities. According to Caltrans guidelines, bicycle facilities are generally divided into four categories:

- Class I Bikeway (Bike Path). A completely separate facility designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.
- Class II Bikeway (Bike Lane). A striped lane designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations.
- Class III Bikeway (Bike Route). A route designated by signs or pavement markings for bicyclists within the vehicular travel lane (i.e., shared use) of a roadway.
- Class IV Bikeway (Separated Bikeway). A bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

The *Merced County Regional Bicycle Transportation Plan (2008)* guides development of bicycle facilities in the County³. No dedicated bicycle facilities exist today in the immediate area of the project, but the plan indicates that Class II bicycle lanes could be developed in the future on SR 33 from McCabe Road in Santa Nella south to the SR 152 / SR 33 interchange.

Pedestrian Facilities. There are no dedicated pedestrian facilities along SR 152 or Billy Wright Road in this area of rural Merced County. There are no sidewalks on the streets within the residential neighborhood northwest of the project site.

Existing Traffic Volumes

Freeway Ramps. In addition to the daily traffic volume information discussed previously for

² <https://www.mercedthebus.com/27/About-Us>

³ <https://www.ca-ilg.org/sites/main/files/file-attachments/finalregbp.pdf>

roadway segments, recent Caltrans traffic count data for the I-5 / SR 152 ramps and the I-5 / SR 165 ramps are presented for Years 2015-2016 in Table 1. While no similar data are available for the SR 152 / SR 33 interchange ramps, daily volumes have been estimated from the SR 33 AADT and 2018 ramp intersection counts.

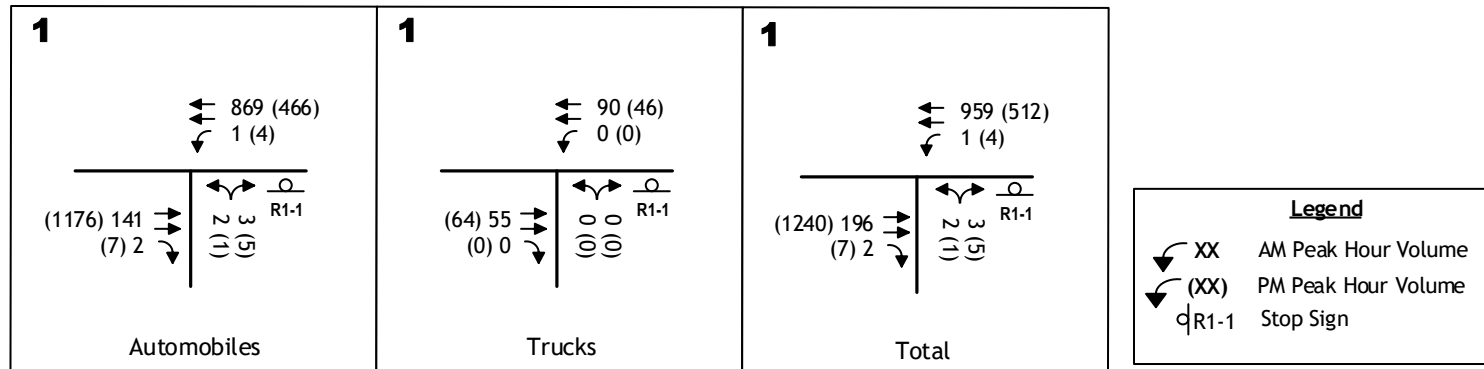
TABLE 1 INTERSTATE 5 FREEWAY RAMPS DAILY TRAFFIC VOLUMES				
Location	Direction	Type	Ramps	Daily Volume
I-5 / SR 152	Northbound	On-ramp	From WB SR 152	1,190
		Off-ramp	To WB SR 152	4,163
		On-ramp	From EB SR 152	2,542
		Off-ramp	To EB SR 152	226
	Southbound	On-ramp	From EB SR 152	4,121
		Off-ramp	To EB SR 152	2,126
		On-ramp	From WB SR 152	670
		Off-ramp	To WB SR 152	513
I-5 / SR 165	Northbound	Off-ramp	To SR 165	923
		On-ramp	From SR 165	420
	Southbound	Off-ramp	To SR 165	396
		On-ramp	From SR 165	977
SR 152 / SR 33	Eastbound	Off-ramp	From SR 152	4,900
		On-ramp	To SR 152	1,260
	Westbound	Off-ramp	From SR 152	1,200
		On-ramp	To SR 152	5,600

Source : <https://dot.ca.gov/programs/traffic-operations/census>

Volume estimated from 2018 peak hour data and 2019 AADT on SR 33

Peak Hour Traffic Volume Data. Morning (6:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) peak hour traffic volume data was assembled for the SR 152 / Billy Wright Road intersection. Due to the effects of COVID-19 Caltrans Headquarters has directed that traffic count data collected after March 15, 2020 not be used to evaluate conditions on state highways. Instead, available traffic counts were adjusted to current traffic levels based on annual growth rates provided by Caltrans District 10⁴. In this case, peak hour automobile and truck turning movement counts collected on March 20, 2014 were factored to Year 2021 by applying an annual growth rate of 2%. Resulting automobile, truck and total vehicle volumes are noted in Figure 2.

⁴ Eric Chin, Senior Transportation Engineer, California Department of Transportation, Office of Project Initiation and Travel Forecasting, District 10, personal communication July 21, 2021



SR 152 / BILLY WRIGHT ROAD INTERSECTION
EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

Level of Service Calculation

"Levels of Service" were determined at SR 152 / Billy Wright Road intersections and driveways to quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without project generated traffic. LOS analysis is also the basis for peak period queue forecasts included in the evaluation of safety impacts.

"Level-of-Service" (LOS) is a quantitative measure of traffic operating conditions whereby a letter grade "A" through "F" is assigned to an intersection. LOS "A" through "F" represents progressively worsening traffic conditions. The characteristics associated with the various LOS for intersections are presented in Table 2. LOS "E" and "F" are associated with severe congestion and delay and are unacceptable to most motorists.

TABLE 2 LEVEL OF SERVICE DEFINITIONS			
Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: <u>Highway Capacity Manual, 6th Edition.</u>			

Levels of Service were calculated using the respective methods in the Highway Capacity Manual, 6th Edition (HCM) using SYNCHRO 10.0 / Simtraffic software. 95th percentile queue lengths are a byproduct of this analysis.

Year 2021 Peak Hour Traffic Conditions

Level of Service. Levels of Service (LOS) were calculated at the SR 152 / Billy Wright Road intersections (Refer to Appendix for calculation worksheets) under the "Adjusted" Year 2021 conditions. Current LOS at the intersection is presented on Table 3. As shown, because the volume of traffic on Billy Wright Road is very low the stop-controlled northbound approach to the SR 152 / Billy Wright Road intersection operates at LOS A in the a.m. peak hour and in the p.m. peak hour.

Table 3 also identifies the length of 95th percentile queues occurring at the SR 152 / Billy Wright Road intersection. As indicated current 95th percentile queues are one vehicle or less (i.e., <25 feet).

Peak Hour Traffic Signal Warrants. Traffic operating conditions at unsignalized intersections is also evaluated based on the extent to which existing or projected traffic volumes satisfy traffic signal warrant requirements based on guidelines contained in the Manual of Uniform Traffic Control Devices (MUTCD). The SR 152 / Billy Wright Road intersection was selected for evaluation in consultation with Caltrans as the primary access for construction employees. The peak hour traffic volumes at the SR 152 / Billy Wright Road intersection were reviewed to determine whether either the a.m. or p.m. volume satisfies peak hour warrant requirements (i.e., Warrant 3). Today the volume of traffic is well below the minimum thresholds for peak hour volumes on high-speed roads.

TABLE 3 YEAR 2021 PEAK HOUR INTERSECTION LEVELS OF SERVICE AND 95TH PERCENTILE QUEUES					
Location	Control	AM Peak Hour		PM Peak Hour	
		Average Delay (sec / veh)	LOS	Average Delay (sec / veh)	LOS
SR 152 / Billy Wright Road NB left+right turn	NB Stop	5	A	7	A
Location	lane	Volume (vph)	95th % Queue (feet)	Volume (vph)	95th % Queue (feet)
SR 152 / Billy Wright Road	NB approach	5	<25	6	<25
	WB left turn	1	<25	4	<25
Bold values indicate conditions in excess of Merced County's LOS D minimum					

REGULATORY FRAMEWORK

The text which follows summarizes the circulation policies which govern the study area.

State of California

SB 743

SB 743 modified CEQA direction and requires local agencies to move from a Level of Service (LOS) based analysis to evaluation of impacts based on Vehicle Miles Traveled (VMT). General guidance as to methods for calculating VMT and significance criteria are contained in the Office of Planning & Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (California Governor's Office of Planning and Research 2018). The Merced County Association of Governments (MCAG) released recommended VMT thresholds and implementation guidelines in September 2022, but at the time of this report, these have not been adopted by Merced County. However, while SB 743 eliminates LOS as a CEQA criteria, this measure can still be considered in terms of General Plan consistency and for transportation planning purposes.

California Department of Transportation

In its **Vehicle Miles Traveled-Focused Transportation Impact Study Guideline (2020)**, Caltrans establishes operational objectives for highway performance based on VMT and safety rather than Level of Service while addressing impacts to alternative transportation modes.

Caltrans plans / policies for its state highways are also presented in the **SR 152 Transportation Concept Report, 2016 (SR 152 TCR)**. The Concept facility for SR 152 for the 20-year planning horizon is a 4-lane expressway, although the TCR indicates that current two-lane conventional highway will operate at LOS E-F through 2030.

Caltrans policy regarding applicable traffic controls is based on **Traffic Operations Policy Directive 13-02**. This directive requires that Caltrans consider the relative merits of alternative traffic controls when it becomes necessary to stop traffic on state highways. Roundabouts are the default intersection control, but all-way stops and traffic signals are to be considered. The policy directive requires preparation of an *Intersection Control Evaluation (ICE)* to determine the preferred traffic control.

Caltrans Encroachment Permit is required for improvements made to the state highway by private parties or local agencies, and the design of these improvements is subject to Caltrans approval.

Large trucks are permitted on designated facilities under the **Surface Transportation Authority Act (STAA)**. Roadways to be added to designated routes are processed through Caltrans with evidence of the adequacy of each road and intersection for the trucks.

Regional

Merced County Association of Governments (MCAG)

The **2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/STS)** for Merced County is a federally mandated, long-range transportation plan for the nine incorporated cities and the unincorporated county. The RTP/STS specifies the policies, projects, and programs necessary over a 20-plus year period to maintain, manage, and improve the region's transportation systems. It establishes goals and objectives for the future system. It identifies the actions necessary to achieve these goals and describes a funding strategy and options for implementing the actions. The RTP/STS is updated every 3 years. The present 2022 update concerns the period from 2022 to 2046.

To coordinate local planning efforts with other regional, state, and federal agencies, and to monitor and respond to policies that will affect the development and implementation of the RTP, MCAG prioritizes transportation projects in a Regional Transportation Improvement Program for federal and state funding. The process is based on each project for need, feasibility, and adherence to federal transportation policies.

The RTP's Regional Road network includes I-5, SR 33, SR 152 through the study area. The following Tier I projects (i.e., projects that have a funding source) in this area are included Appendix K of the RTP/STS.

TABLE 4					
2022 MERCED COUNTY RTP/SCS TIER I IMPROVEMENTS					
Title	Limits / Description	Type	Year	Total cost (\$1,000's)	Funding Source
SR 152 Median Barrier	Near Los Banos from 0.8 mi West of Basalt Road to Route 5. Construct median barrier	Road Ops / Safety	2023/2024	\$9,865	SHOPP
STAA Truck Turning Radius Improvement	Near Los Banos at Route 33 interchange; also on Route 5 (PM 6.3) at Route 165 interchange. Improve truck turning radius	Road Ops / Safety	2021-2022	\$4,529	SHOP

Local

Merced County General Plan

General Plan. The *2030 Merced County General Plan* (County of Merced 2013) *Circulation Element* focuses on providing roadways for growing automobile demands and alternative modes of transportation. This requires improving those alternative modes through regional coordination, improved funding, better land use and design, and fair pricing. The overarching goal of the

element seeks a balanced transportation system that moves people and goods in a safe and efficient way that minimizes environmental impacts, supports urban land uses, and serves rural needs. The following are two policies of the *General Plan Circulation Element* related to LOS standards:

“Policy CIR-1.5: County Level of Service Standards (RDR)

Implement a Countywide roadway system that achieves the following level-of-service (LOS) standards during peak traffic periods:

“a) For roadways located within rural areas: LOS "C" or better.

“b) For roadways located outside Urban Communities that serve as connectors between Urban Communities: LOS of “D” or better.

“c) For roadways located within Urban Communities: LOS of "D" or better.

“Policy CIR-1.6: Level of Service “E” Exception (RDR)

Allow a level of service "E" or worse only on a minor component of the circulation system (such as a left turn movement from a local roadway) if the major component of the circulation system (such as a through movement on a collector or arterial roadway) would be significantly compromised in the process of improving the level of service of the minor component.”

Merced County has jurisdiction of non-state roadways.

Villages of Laguna San Luis Community Plan.

The project lies within the Villages of Laguna San Luis Community Plan, and the CP’s Circulation policies, goals, objectives and implementation measures relating to transportation follow.

4.4.2 Circulation Plan Goals, Objectives, Policies and Implementation Measures

The following goals, objectives, and policies provide guidance in the planning and implementation of a circulation system intended to adequately serve development within the Villages CP:

Goal 1.0 Meet projected traffic demands of the Villages CP and surrounding region with a comprehensive circulation system.

Objective 1.A The roadway infrastructure within the Villages CP provides for the free and efficient movement of vehicular traffic.

Policy 1.A.1 Ensure that necessary transportation improvements will be implemented concurrent with development phasing to achieve General Plan level of service objectives.

Policy 1.A.2 Coordinate transportation planning for the Villages CP with Caltrans, MCAG, and other affected transportation planning entities in the region.

Policy 1.A.3 Implement design measures that expand the traffic-carrying capacity at intersections, (e.g. synchronized signals, right-turn lanes, additional travel lanes).

Implementation

Measure 1.A.3.a

In conjunction with each Implementation Plan prepare a Comprehensive Circulation Phasing Analysis that identifies the extent and timing of circulation improvements needed to mitigate impacts of traffic generated by the development phase proposed.

The Comprehensive Circulation Phasing Analysis will also establish Transportation Demand Management (TDM) measures as described in this Circulation Plan, Section 4.4.5, as necessary.

Policy 1.A.4 Implement special roadway design features in hillside areas as outlined in Section 4.3.2.10, Community Design Plan.

Objective 1.B *A hierarchical road network is established which effectively accommodates internal and external vehicle trips.*

Policy 1.B.1 The Circulation system within the Villages CP will consist of a combination of Neighborhood Streets, Minor and Major Collector Streets, Arterial Streets, and Freeways adequate to serve project and cumulative traffic volumes.

Policy 1.B.2 The basic location of Freeways, Arterial Streets and Major and Minor Collector Streets identified in the Circulation Plan, Exhibit 11, shall be implemented with individual development phases as appropriate.

Policy 1.B.3 The location of Neighborhood Streets and Minor Collector Streets not shown in Exhibit 11, shall be identified in future Implementation Plan approvals with each development phase.

Implementation

Measure 1.B.3.a

The Comprehensive Circulation Phasing Analysis required with each Implementation Plan shall be reviewed for consistency with the Circulation Plan and the Comprehensive Traffic Study prepared for the Village CP Environmental Impact Report. The roadway design standards identified in the Circulation Plan Statement, Section 4.4.4 will provide the standard for all community street improvements.

Policy 1.B.4 To ensure efficient and safe vehicle movement patterns, on-street parking and driveway access points shall conform with the standards identified in the Circulation Plan Statement, Section 4.4.4 and as shown in Figures 1 and 2, Roadway Design Standards.

Policy 1.B.5 Discourage through traffic on residential streets within neighborhoods.

Policy 1.B.6 All roadways shall be designed to satisfy the emergency access provisions outlined in Section 4.3.2.11, Fire Safety.

Objective 1.C *The regional circulation needs of the Villages CP and surrounding area are satisfied through adequate state highway interchanges and freeways.*

Policy 1.C.1 The County shall enter into a Memorandum of Understanding (MOU) with Caltrans ensuring the appropriate design and funding of the proposed interchanges along SR-152 prior to the approval of the first Implementation Plan within the Community.

Objective 1.D *The circulation system that serves the Villages CP is adequately financed to provide for the timely construction of necessary improvements as well as the on-going maintenance of the resulting infrastructure.*

Policy 1.D.1 All development projects within the Villages CP shall contribute their fair share of community-wide and regional circulation improvements as identified in Section 5.0 Implementation.

Policy 1.D.2 Establish a "fair share" funding mechanism for those transportation improvements that are required due to traffic generated by more than one CP area.

Policy 1.D.3 Establish an appropriate funding mechanism to provide for the on-going maintenance of the Villages CP circulation system.

Implementation

Measure 1.D.3.a

In conjunction with each Implementation Plan, address and confirm financing provisions for transportation improvements, as well as on-going maintenance of the circulation system, in the required Capital Facility and Fiscal Impact Phasing Studies.

Goal 2.0 *A comprehensive transportation network is provided which contains alternate modes of vehicular and non-vehicular travel.*

Objective 2.A *Public transportation is easily accessible within the Villages CP.*

Policy 2.A.1 Coordinate with the Merced County Transit (MCT), to ensure that adequate transit facilities and service will be provided and safe and convenient access to public transportation is achieved.

Policy 2.A.2 Transit improvements within the Villages CP will incorporate bus shelters and stops, as well as a mass transit center, as described in the Circulation Plan Statement, Section 4.4.4.

Implementation

Measure 2.A.2.a

In conjunction with each Implementation Plan and tentative subdivision map, define the location and design of bus routes, bus stops, bays and other public transportation facilities, as applicable and feasible, and in coordination with MTC.

Policy 2.A.3 Provide a park and ride lot, in conjunction with the mass transit center to promote the use of the transit system and facilitate car pooling.

Objective 2.B A combination of road-side bikeways and separate bikeways and trails within the Villages CP provides convenient circulation, allows ease of access, and acknowledges the importance of the pedestrian and bicyclist.

Policy 2.B.1 Implement bicycle and pedestrian routes which provide direct access between residential neighborhoods, schools, parks and commercial uses.

Policy 2.B.2 Class I (off-street) bikeways shall be provided along all Arterial Roads.

Policy 2.B.3 Class II bikeways which provide for restricted right-of-way within street sections shall be provided along Minor and Major Collector Streets.

Policy 2.B.4 Class III bikeways where bikes share right-of way with vehicles may be provided along neighborhood streets as determined appropriate to connect with other bikeways or community open space areas.

Implementation

Measure 2.B.4.a

In conjunction with each Implementation Plan, establish the location of all Class I and II bike ways consistent with Exhibit 12, Circulation Plan- Pedestrian/Bicycle Trails, and the policies of this Circulation Plan. The location of Class III bikeways can be determined in conjunction with Implementation Plans or tentative subdivision maps. The bikeway sections and descriptions are presented in Section 4.4.4, Circulation Plan Statement.

Policy 2.B.5 Locate neighborhood support uses such as commercial, schools, and parks to maximize safe bicycle and pedestrian access to these activities from the residential neighborhoods which they serve.

PROJECT CHARACTERISTICS

The characteristics of the project with regards to trip generation and distribution are discussed in this report section.

Project Description

The proposed solar project is a 200 megawatt (MW) photovoltaic solar power plant to be installed over an approximately 1,700 acre area. When operational the solar project will have up to 8 employees on site daily. The project site is located in the area west of I-5 and south of SR 152 in the unincorporated area of Merced County near Santa Nella, California. Employee access to the site when the solar project is completed will be via Billy Wright Road, a local Merced County facility that intersects SR 152 about a mile east of I-5. Billy Wright Road also provides access to the County's Billy Wright landfill and to the existing Wright Solar plant. During construction, automobiles and oversized trucks will access the solar project site from this same access point off Billy Wright Road. Construction trucks and water trucks will access the solar project site via San Luis Drive to the SR 152 / SR 33 interchange.

The project also includes transmission system improvements at PG&E's Los Banos substation, including connecting the PG&E substation to the solar project's gen-tie line and installing new structures and equipment within PG&E-owned substation property. The existing substation fence would be moved outward to the south and east, on existing substation property, to accommodate the additional equipment required. The area within the modified fence would be graveled and encompass an additional approximately 450,000 square feet (10.3 acres) of existing PG&E-owned substation property. The PG&E substation improvements will be implemented by PG&E. The PG&E substation is accessed by Jasper Sears Road off SR 152.

It should be noted that the project includes two off-site components that will be evaluated in the proposed project's California Environmental Quality Act (CEQA) document but are outside the scope of this report:

- **Off-Site Mitigation Site.** The project would establish a roughly 1,498-acre, off-site mitigation site for San Joaquin kit fox. The mitigation site, which would be near the eastern and southern edges of Los Banos Reservoir, would be placed into a conservation easement in perpetuity, with the land managed to provide habitat for San Joaquin kit fox. The conservation easement on the mitigation site would require the continuation of current land management practices, including livestock grazing. Establishment and management of the mitigation site (see Figure 1) would not affect use of the site or existing conditions related to transportation. Impacts on transportation resulting from construction and operation of the off-site mitigation site will be evaluated in the proposed project's CEQA document and are not addressed further in this report.
- **Off-Site Residential Redesignation Area.** The project includes an amendment to the Merced County General Plan to redesignate roughly 202.8 acres immediately south of the project site from single-family residential to high-density/medium-density residential. The proposed redesignation would preserve the supply of medium-density and/or high-density

units in the county during the life of the solar project. The project does not propose any development within the off-site residential redesignation area. Future development in this area would be subject to independent review under CEQA. Given its proximity to the Solar Park project site, the area would use the same regional access, and transportation conditions at the off-site residential redesignation area are expected to be similar to conditions at the solar project site. Impacts on transportation at or resulting from the proposed residential redesignation area will be evaluated in the proposed project's CEQA document and are not addressed further in this report.

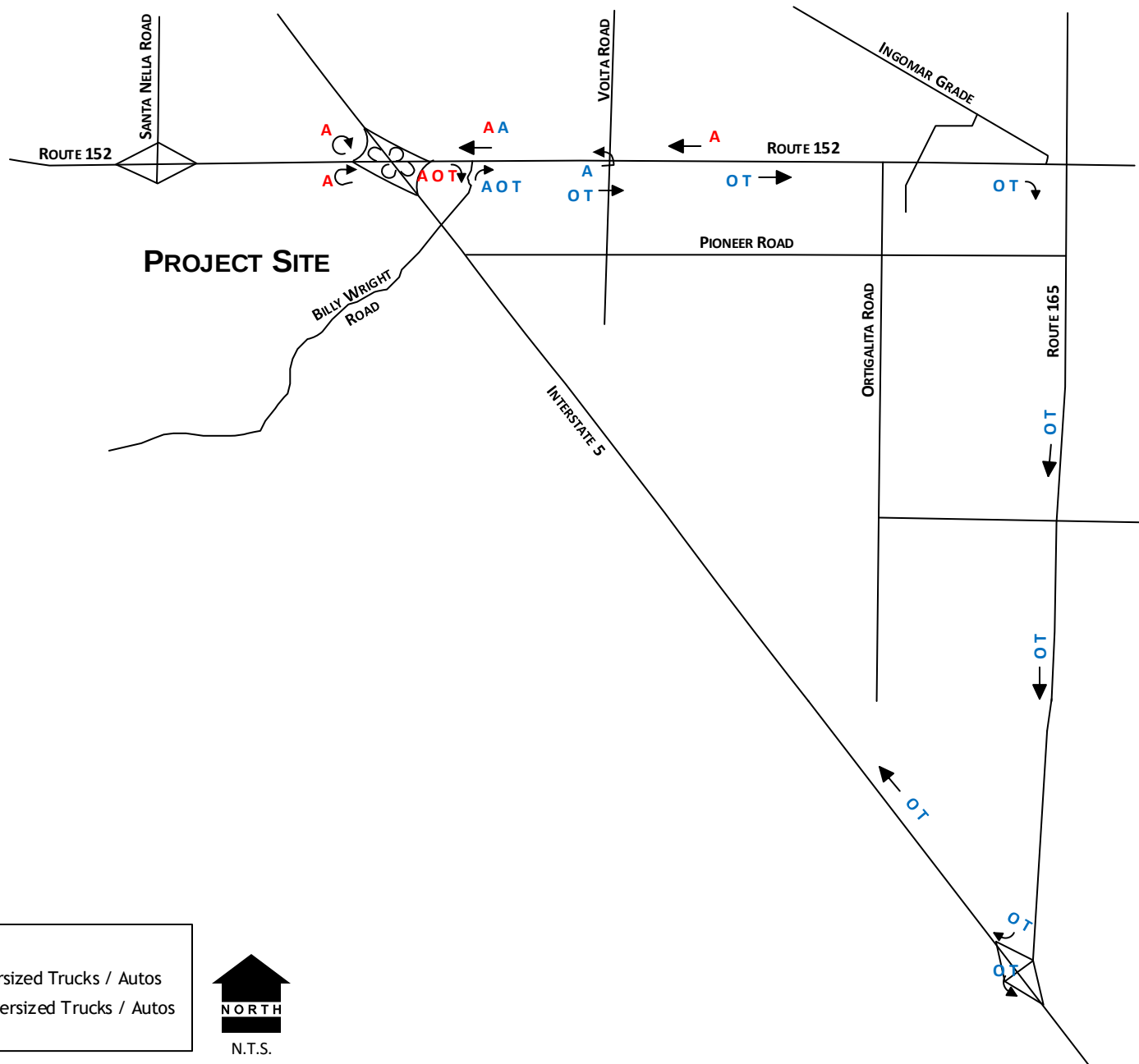
Construction Traffic Control Plan. The solar project includes implementation of a Construction Traffic Control Plan (CTCP) to direct construction related automobiles and trucks to the safest routes. While the CTCP will be subject to Caltrans review and will be implemented under an encroachment permit through Caltrans, a preliminary concept has been developed in consultation with Caltrans District 10 based on their experience with construction of the adjoining Wright Solar project. During implementation of the CTCP, non-project vehicles traveling to and from the Billy Wight landfill will be permitted to continue to have full access at the SR 152 / Billy Wright Road intersection.

Figure 3 identifies the directional layout of the routes included under the CTCP. Key elements of the plan include:

1. All construction related automobile traffic using eastbound SR 152 will be directed to turn right onto Billy Wright Road to reach the site.
2. All construction automobile traffic to the site using westbound SR 152 will be directed to continue past the Billy Wright Road intersection to the SR 152 / I-5 interchange. At that point the detour will direct vehicles to leave the expressway and use the loop ramps to turn onto eastbound SR 152 and continuing to a right turn onto Billy Wright Road.
3. All exiting automobile traffic from the solar project site will be directed to turn left onto northbound Billy Wright Road. All exiting automobile traffic from northbound Billy Wright Road will be required to turn right onto eastbound SR 152. No left turns will be permitted for construction traffic at this location. Automobiles bound for westbound SR 152 will turn right onto eastbound SR 152. The detour will direct automobiles to then make a U-turn at the SR 152 / Volta Road intersection and continue westerly from that point.
4. Regular construction trucks, including water trucks, will access the site via San Luis Drive and use the SR 152 / SR 33 interchange for access. A detour is not required for these vehicles. Vehicles would proceed along San Luis Drive and the dirt road at its southern terminus, accessing the solar project site from a temporary access point along the western boundary of the solar project site.
5. Oversized trucks will take access via the SR 152 / Billy Wright Road intersection in the same manner as described above for construction automobiles. Exiting oversized trucks will be directed to turn left on to Billy Wright Road and travel northbound to the SR 152 / Billy Wright Road intersection. Oversized trucks that are destined for I-5 or for SR 152 west of I-5 will be directed to continue on eastbound SR 152 into Los Banos to the signalized SR 152 /

SR 165 (Mercey Springs Road) intersection. At that point Oversized trucks are to turn right and continue south on SR 165 to its interchange on I-5 where a right turn will send trucks back to the I-5 / SR 152 interchange.

6. The shoulder along eastbound SR 152 will temporarily be restriped as an acceleration lane east of Billy Wright Road, as was the case during construction of the Wright Solar project. Current striping shall be restored after Las Camas Solar construction is completed.



Project Characteristics

Information in the project description has been used for this analysis.

Operational Trip Generation. Once the solar project is completed the site will be visited by maintenance / inspection personnel. Visits would occur between the hours of 8:00a.m. to 5:00p.m. and generate a small amount of vehicular traffic. On a daily basis up to 8 persons would generate 16 daily vehicle trips (i.e., total of inbound and outbound trips).

Water trucks will continue to visit the solar project site after construction when it is under regular operation for maintenance. An estimated 407 roundtrips will be made by water trucks annually spread over a 20-work day period. An average of roughly 21 daily round trips would be made by water trucks at that time.

The proposed improvements to the PG&E substation are minor in nature and would not result in additional operational trips being made at that facility, as compared to existing conditions.

Construction Trip Generation. The trip generation of the project during construction is defined in terms of amount of construction employee, construction truck, and water truck traffic occurring on a weekday and during peak commute hours. The project description notes a 12-month construction schedule within an 18-month window from project initiation to construction and final testing.

Construction Truck Traffic. The number of construction truck and water truck trips has been estimated on a daily and peak hour basis.

Daily Trip Generation. The number of trucks hauling materials and equipment to and from the site will vary over the life of construction. The largest number of trucks per day is anticipated during the phase when vendors transport equipment and aggregates are hauled to the site (i.e., overlap of Site Preparation, Underground Work, and PV System Installation). At that time a total of 363 truck trips per day are anticipated, as shown in Table 5.

Water trucks will visit the site over that same time period. An average of 75 round trips per day could occur over the life of construction, and on a peak day that total could increase to 137 round trips. The sum of construction trucks and water trucks is 319 round trips per day during peak times or 637 one-way daily trips.

Peak Hour Trip Generation. Typically, shipments by truck to construction sites occur throughout the day but are normally concentrated into the beginning of the workday. The analysis assumes that shipments will primarily be accepted over an eight-hour period from 7:00 a.m. to 3 p.m., and this assumption has been used to identify a.m. and p.m. peak hour truck trip generation. Two assumptions have been made regarding the distribution of trucks during the 8-hour window. On average 12½% of the construction truck loads could arrive in each hour. For this analysis it has been conservatively assumed that 20 of the 182 inbound daily truck trips will occur during the

a.m. peak hour (i.e., 15% of total) and that 19 trucks will also exit at that time. Conversely, while few shipments are regularly expected to be received during the p.m. peak hour (i.e., between 4:00 to 6:00 p.m.), it has been conservatively assumed that 1 inbound and 1 outbound truck trip will occur during that period.

Water truck activity would also be spread across a construction day, but this activity would occur uniformly throughout the day. Assuming 10% of the daily water truck trips were made in the a.m. and p.m. peak hour, then 14 round trips would during both hours occur on a peak day.

Because the acceleration and deceleration requirements of trucks differ from regular automobiles, the effects of a single truck are different from an automobile. The relationship has been addressed in the peak hour LOS analysis based on the truck percentage identified for individual intersection turning movements under existing and plus project conditions.

Construction Employee Traffic. Similarly, the number of employees working on the site at any time will vary, with a peak employee level of 408 persons.

Daily Trip Generation. Construction employees will generally arrive by private automobile, but informal car-pooling, especially during the later stages of the project, is a reasonable expectation. For this analysis 10% of the employees are expected to be carpool riders. Thus, on a daily basis construction employee commute trips could total 734 trip ends (i.e., ½ inbound and ½ outbound).

Peak Hour Trip Generation. The project would be expected to operate on a regular construction day with employees arriving in the a.m. peak hour and departing during the p.m. peak hour. This analysis assumes that under a regular schedule all employees arrive/depart within a single peak commute hour. Thus, peak hour trip generation would total 367 inbound trips in the a.m. peak hour and 367 outbound trips in the p.m. peak hour.

Total Trip Generation. On a busy day a total of 1,373 daily trips could be made by automobiles and trucks, with 443 trips in the a.m. peak hour and 398 trips in the p.m. peak hour.

**TABLE 5
PROJECT TRIP GENERATION**

	Type	Peak Day	Trip Generation				
			Daily	AM Peak Hour (6:00 to 9:00 a.m.)		PM Peak Hour (4:00 to 6:00 p.m.)	
				In	Out	In	Out
Regular Trip Generation after Construction							
Regular Operation	Maintenance	8 employees	16	8	0	0	8
		21 water truck loads	42	2	2	2	2
Total All Vehicles			58	10	2	2	10
Construction Trip Generation							
Construction Employees	Solo Drivers	367 employees	734	367	0	0	367
	Ride Share	41 employees	0	0	0	0	0
	SubTotal	408 employees	734	367	0	0	367
Construction Trucks	Total	182 truck loads	363	23	22	1	1
Water Trucks	Total	137 truck loads	274	14	14	14	14
	SubTotal	319 truck loads	637	37	38	15	15
Total All Vehicles			1,373	405	38	15	383
Note: Includes trips associated with PG&E substation improvements.							

Trip Distribution. The regional distribution of construction trucks, water trucks and employee vehicles is likely to differ.

Trucks. The distribution of construction trucks will be oriented to the shipping points for equipment and materials. Solar Park components, that comprise 90% of the construction truck traffic, would likely originate at the Port of Oakland and be trucked to the site via I-5. Materials such as gravel and concrete would originate at existing sources already serving the western Merced County area from sites near Los Banos / Santa Nella. Because the selection of material sources will eventually depend on choices made by the contractor, this analysis assumes a general distribution for construction truck traffic of 90% north on I-5 and 10% east on SR 152, as shown in Table 6.

For water trucks the source of water is expected to be in Santa Nella on SR 33 north of I-5, and these vehicles would use SR 33 to reach the site.

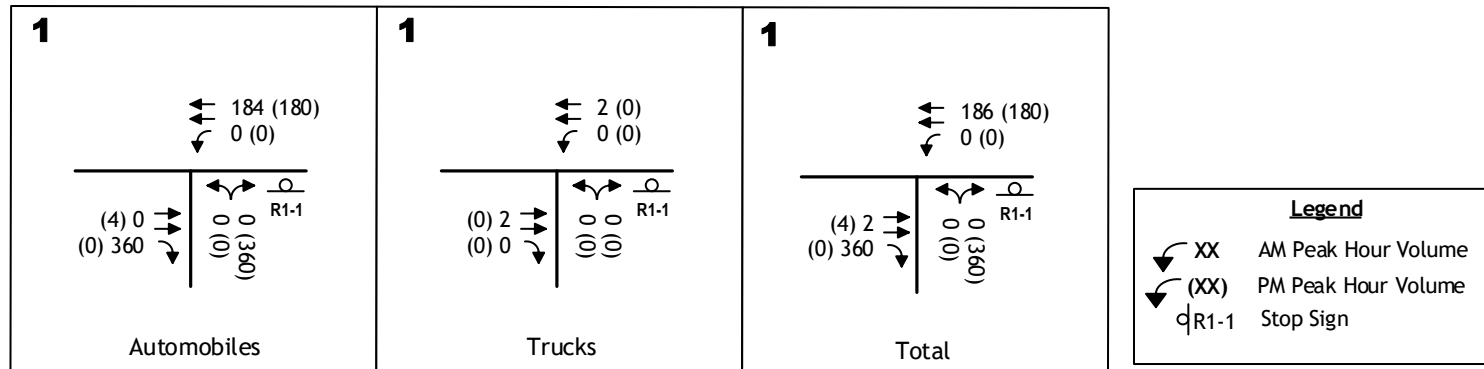
Construction Employees. The distribution of construction employee trips will depend on the location of employee residences, either temporary or full time. Construction employees could reasonably reside up to 30 to 40 minutes from the site. To the east the communities of Los Banos and Dos Palos are close to the project and the City of Merced could be within the potential commute area. To the north, the communities of Patterson, Newman, Gustine and Santa Nella lie along the I-5 – SR 33 corridor, and Santa Clara / San Benito County communities can be reached via SR 152 to the west. Based on the population in each area and the relative driving distance to the site, it is assumed that employee travel will be split as indicated in Table 5, with 50% to the west of the employee's Billy Wright Road access and 50% to the east of Billy Wright Road on SR 152.

TABLE 6 CONSTRUCTION TRIP DISTRIBUTION SUMMARY				
Direction	Route	Percent of Total Trips		
		Automobiles	Construction Trucks (Oversize and Regular)	Water Trucks
North	Interstate 5	20%	90%	-
	Santa Nella	10%	-	100%
East	State Route 152	50%	10%	-
West	State Route 152	20%	-	-
Total		100%	100%	100%

Trip Assignment

Using the trip generation and distribution assumptions described above, the automobile and truck construction trips generated by the proposed project were assigned to the study area street system under the proposed CTCP via the project's driveway on Billy Wright Road and via San Luis Drive to the SR 152 / SR 33 interchange. Figure 4 presents peak hour automobile traffic volumes accompanying construction of the project at the SR 152 / Billy Wright Road intersection.

Oversized trucks will visit the site and a total of 65 oversized truck loads are expected over the life of construction. That truck activity would occur under permit from Caltrans, and the specific routes to be used and the traffic control measures to be implemented would be determined under that permit. Oversized trucks are not expected to be accommodated at the SR 152 / SR 33 interchange, and use of the SR 152 / Billy Wright Road access is anticipated. Under the CTCP such trucks would leave the site by turning right and following eastbound SR 152 into Los Banos where they would turn south onto SR 165 then to Interstate 5.



SR 152 / BILLY WRIGHT ROAD INTERSECTION

PROJECT ONLY CONSTRUCTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS

EXISTING PLUS PROJECT CONDITIONS

Vehicle Miles Traveled (VMT) Impact

SB 743 requires the Governor's Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts within CEQA. For land use projects, OPR identified Vehicle Miles Traveled (VMT) per capita, VMT per employee, and net VMT as new metrics for transportation analysis. The CEQA Guidelines state that lead agencies, such as Merced County, may establish "thresholds of significance" to assist with the determination of significant impacts of a project. The CEQA Guidelines generally state that projects that decrease VMT can be assumed to have a less than significant transportation impact. The CEQA Guidelines do not provide any specific criteria on how to determine what level of project VMT would be considered a significant impact. The Merced County Association of Governments (MCAG) released recommended VMT thresholds and implementation guidelines in September 2022, but at the time of this report, these have not been adopted by Merced County. Because Merced County has not yet adopted guidelines for evaluating the significance of VMT impacts, potential significance criteria contained in the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (California Governor's Office of Planning and Research 2018) have been used, but significance under MCAG guidelines has also been assessed. Because project construction activity is temporary and will not continue after the project is complete the effects of the project's regular operation are considered with regards to VMT.

The extent to which VMT analysis is applicable to this project has been considered from several perspectives is discussed in the materials which follow.

Temporary Nature of Project Construction. All development projects would to some degree be accompanied by automobile and truck construction traffic. However, while under CEQA the effects of construction activity on GHG are addressed, OPR guidance does not extend to temporary short-term travel associated with construction projects.

Vehicle Types. OPR guidance notes that CEQA VMT analysis is intended to focus on passenger vehicles.

Proposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks.

OPR guidance allows Heavy-duty truck VMT to be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT).

Methods and Significance Criteria. The OPR *Technical Advisory* provides general direction regarding the methods to be employed and significance criteria to evaluate VMT impacts, absent policies adopted by local agencies. The directive addresses several aspects of VMT impact analysis, and is organized as follows:

- **Screening Criteria:** Screening criteria are intended to quickly identify when a project should be expected to cause a less-than-significant VMT impact without conducting a detailed study.
- **Significance Thresholds:** Significance thresholds define what constitutes an acceptable level of VMT effect and what could be considered a significant level of VMT effect requiring mitigation.
- **Analysis Methodology:** These are the potential procedures and tools for producing VMT forecasts to use in the VMT impact assessment.
- **Mitigation:** Projects that are found to have a significant VMT impact based on the adopted significance thresholds are required to implement mitigation measures to reduce impacts to a less than significant level (or to the extent feasible).

Screening Criteria. Screening criteria can be used to quickly identify whether sufficient evidence exists to presume a project will have a less than significant VMT impact without conducting a detailed study. However, each project should be evaluated against the evidence supporting that screening criteria to determine if it applies. Under OPR and MCAG guidance projects meeting at least one of the criteria below can be presumed to have a less than significant VMT impact, absent substantial evidence that the project will lead to a significant impact.

- **Small Projects:** Defined by OPR as a project that generates 110 or fewer average daily vehicle trips and by MCAG as a project that is consistent with the General Plan generating 1,000 or fewer daily trips or a project requiring a General Plan Amendment generating 500 or fewer daily trips.
- **Affordable Housing:** Defined as a project consisting of deed-restricted affordable housing.
- **Local Serving Retail:** Defined as retail uses of 50,000 square feet or less can be presumed to have a less than significant impact.
- **Projects in Low VMT-Generating Area:** Defined as a residential or office project that is in a VMT efficient area based on an available VMT Estimation Tool. The project must be consistent in size and land use type (i.e., density, mix of uses, transit accessibility, etc.) as the surrounding built environment.
- **Proximity to High Quality Transit.** The directive notes that employment and residential development located within ½ mile of a high-quality transit corridor offering 15 minute headways can be presumed to have a less than significant impact.

Screenline Evaluation. The extent to which the proposed project's VMT impacts can be presumed to be less than significant has been determined based on review of the OPR directive's screening criteria and general guidance. Because the construction related activities associated with the project are temporary and will cease once the project is constructed, the screen line evaluation considers the VMT effects of the project's regular operation.

The OPR **Small Project** criteria is applicable to this project. The regular operation of the project with 8 employees is projected to result in 16 daily automobile trips as well as 42 water truck trips. Because regular operation of the project will result in fewer than 110 daily vehicle trips, the

project's VMT impact can be presumed to be less than significant under the screen line criteria suggested by OPR or by MCAG for "small projects". As the 110 ADT threshold for automobiles is not exceeded, the project's VMT impacts can be presumed to be less than significant.

The project cannot be addressed by other screen line criteria identified by OPR. The project is not an *Affordable Housing* development or *Locally Serving Retail* use. Merced County has not established *Low VMT-generating areas* nor is *High Quality Transit* available in this area of Merced County.

Construction VMT / Average Trip Length

Total Construction VMT. The total VMT caused by construction activity is not a transportation impact significance criterion under CEQA but may be needed to support analysis of the project impact's relating to Greenhouse gas (GHG) emissions in the project's Environmental Impact Report (EIR). Table 7 identifies the estimate of total automobile and vehicle trips caused by the project over the duration of construction, as well as the average lengths of trips based on the trip distribution assumptions presented earlier. As indicated, the sum of all construction related VMT is approximately 12 million vehicle miles.

TABLE 7 CONSTRUCTION VEHICLE MILES TRAVELED				
Description	Vehicle Type	Total Aggregate Daily Trips	Average Trip Length	Total Aggregate VMT
Construction Employees	Automobiles and light trucks	591,144	16.4	9,717,056
Construction Materials Long Haul	Heavy Trucks	18,105	110.0	1,991,528
Construction Materials Short Haul	Heavy Trucks	2,774	14.3	39,581
Construction Materials - Vendors	Heavy Trucks	8,193	7.3	59,809
Water Trucks	Heavy Trucks	60,280	4.36	262,821
Oversized Trucks	Heavy Trucks	130	113	14,690
Total all vehicles				12,085,485

Existing Plus Project Traffic Operations During Construction

The effects of project construction traffic have been assessed based on the sum of Existing traffic and Project trips shown in Figure 5.

Level of Service. Table 7 summarizes the results of Level of Service calculations for the SR 152 / Billy Wright Road intersection under "Existing plus Project" conditions assuming

implementation of the CTCP and the local striping changes associated with that plan.

As noted, with planned improvements and the CTCP the addition of project traffic would result in moderate delays on the northbound approach to SR 152 at the Billy Wright Road intersection during peak periods, but projected conditions would satisfy the Merced County minimum LOS D standard.

Queueing. Table 8 identifies the length of 95th percentile queues at the SR 152 / Billy Wright Road intersection. With regards to safety on the state highway, the most significant project impact to be assessed would be the creation of queues of westbound traffic behind vehicles waiting to turn left across eastbound traffic at the Billy Wright Road intersection, or queuing by eastbound traffic arriving at that intersection. Because the CTCP prohibits project traffic from making westbound left turns, the volume of traffic turning left will not increase and queues caused by vehicles headed to the landfill will remain within the immediate area of the median opening. No safety impact will occur for this vehicle movement. Because a long eastbound right turn deceleration lane will be available, eastbound traffic turning onto Billy Wright Road will be able to decelerate outside of the flow of through traffic, and a queue will not affect eastbound traffic. A northbound queue can be expected on Billy Wright Road during peak evening commute times, but it would not affect mainline traffic on SR 152.

TABLE 8 EXISTING PLUS PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE AND 95TH PERCENTILE QUEUES					
Location	Control	AM Peak Hour		PM Peak Hour	
		Average Delay (sec / veh)	LOS	Average Delay (sec / veh)	LOS
SR 152 / Billy Wright Road NB left+right turn	NB Stop	5	A	5	A
Location		Volume (vph)	95th % Queue (feet)	Volume (vph)	95th % Queue (feet)
SR 152 / Billy Wright Road	NB approach	5	<25	365	95
	WB left turn	1	<25	4	<25
Bold values indicate conditions in excess of Merced County's LOS D minimum					

The project will add a small amount of truck traffic to the SR 152 / SR 33 off ramps during construction. Based on the projected trip generation and distribution for construction trucks, roughly 27 trucks may be added to the eastbound off ramp over the course of day and 27 could be

added to the westbound on ramp. Water trucks would also use the SR 152 / SR 33 interchange but would likely proceed north and south along SR 33 and but would not be turning onto and off of the ramps. Construction activity at the PG&E substation would also add a small number of trips (up to 25 daily trips) along Jasper Sears Road and its intersection with SR 152. This additional truck traffic would be too little to appreciably lengthen current queueing on the off ramps, and a safety issue is not expected due to queueing that extended to the freeway mainline.

Traffic Signal Warrants. The volume of traffic at SR 152 / Billy Wright Road intersection during construction was compared to MUTCD peak hour warrants requirements to determine whether conditions with the project reach the level that may justify a traffic signal. The volume of traffic on the northbound Billy Wright Road approach in the p.m. peak hour is projected to reach 367 vehicles, and the combination of mainline SR 152 and side street traffic would result in conditions which would satisfy peak hour volume warrants.

While meeting peak hour warrants may suggest that a traffic signal could be needed, simply satisfying an individual warrant among the nine addressed in the MUTCD is not by itself justification for a traffic signal. As noted in Caltrans' Policy Directive 13.02, alternatives to signalization would need to be considered. In this case, nearly all northbound traffic turns right, and creating an eastbound acceleration area, as is included in the CTCP, provides the opportunity for exiting traffic to enter SR 152 without waiting for a gap in the flow of mainline eastbound traffic. As a result, the length of delays on the northbound approach is not excessive, and the queue of traffic waiting to turn in the p.m. peak hour is projected to be manageable without a temporary traffic signal.

Safety Impacts under CEQA. Potential local and regional safety impacts were assessed.

Local Safety Effects. With implementation of the CTCP, solar project construction traffic will not cause appreciable vehicular safety conflicts in the vicinity of the SR 152 / Billy Wright Road intersection. By providing acceleration and deceleration lanes on SR 152 trucks and construction employee vehicles will be able to access the state highway without interfering with the flow of through traffic.

The PG&E substation improvements will add a small amount of truck traffic to the SR 152 / SR 33 interchange during peak hours, but the traffic volume increase would be too small to lengthen the exiting off ramp queues. The project's safety impacts at location on state highways are not significant.

Regional Safety Effects The extent to which implementation of the solar project CTCP would affect traffic operations elsewhere has been considered. Under the CTCP solar project construction automobiles and trucks will be prohibited from turning left onto the state highway at the SR 152 / Billy Wright Road intersection. Automobiles will instead be directed easterly to make u-turns at the SR 152 / Volta Road intersection, and construction trucks and water trucks will instead use San Luis Road to the SR 152 / SR 33 interchange.

Over the course of construction oversized trucks with destinations that are north on Interstate 5 are likely to be directed to use SR 152 through Los Banos to SR 165. While school and commercial areas are located in Los Banos along the detour route, as noted in the existing setting these state highways already carry appreciable truck volumes, and the intersections along the highway have been configured to accommodate the turning requirements of large trucks (i.e., STAA designations). Thus the safety impact of additional truck traffic caused by the CTCP is not significant, and no additional improvements are required.

The solar project CTCP also affects automobile traffic. The CTCP will direct exiting automobiles to head to the west to instead turn right onto eastbound SR 152. Project automobile traffic would then make a U-turn at the SR 152 / Volta Road intersection. As noted in the existing setting, the eastbound left turn lane at this location is 850 feet long and provides space needed for deceleration outside of the flow of through traffic. No additional improvements are required.

Seasonal Safety Issues. Two seasonal factors affect safety in this area of Merced County. Fog can occur in the winter and reduce visibility for motorists on state highways and Merced County roads. In the late summer the tomato harvest results in large numbers of agricultural trucks using Volta Road to reach packing plants off Ingomar Grade in and near the community of Volta. It is reasonable to expect that project construction traffic will occasionally occur during periods of fog, and construction will likely occur during the harvest season. With implementation of the CTCP potential traffic conflicts on SR 152 would be addressed, and this impact is not significant. While not required to address a specific project safety impact, if requested by Caltrans the project proponents could include applicable signing relating to seasonal issues in the CTCP.

Emergency Access and Evacuation. The effects of the project on emergency access and evacuation during construction and with regular operations has been considered. During construction the project has two points of access, either via Billy Wight Road to SR 152 or via San Luis Drive or the SR 152 / SR 33 interchange. As a result, if one access was unavailable during an emergency then the other access to an alternative highway would remain available. Construction access that may not be used with regular operation would remain available in an emergency. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would not involve physical components that would interfere with the ability of the County, and emergency response service providers, to implement emergency response activities within the project site or vicinity.

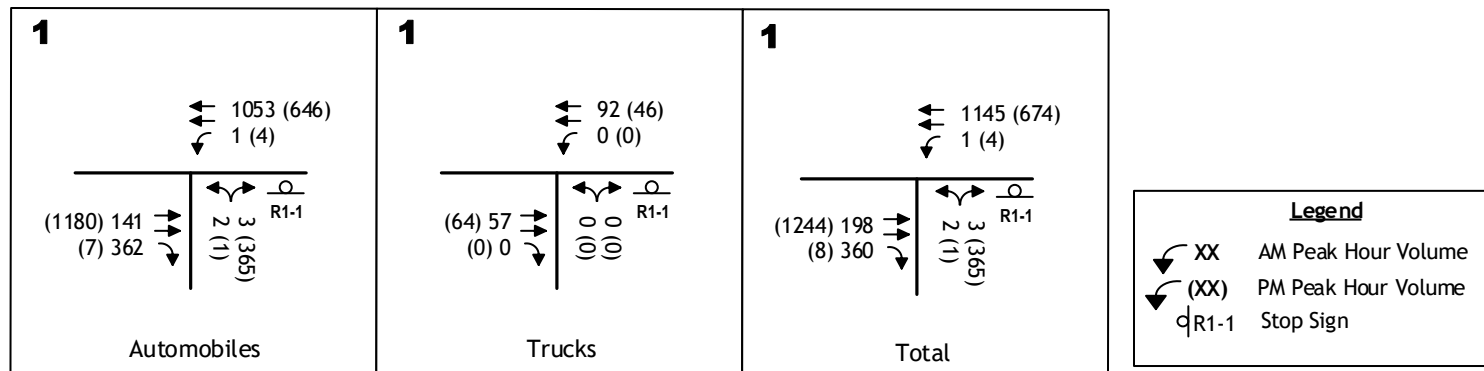
Impacts to Other Transportation Modes

Pedestrian Facilities. While there are few developed areas around the project to create pedestrian travel to and from the site, while during construction the project could result in a desire for employees to occasionally walk to the existing residential and commercial area at the SR 152 / SR 33 interchange. However, no pedestrian access is available to that area, and a route along SR 152 and Billy Wright Road to the site access is too long to be a likely pedestrian choice (i.e., roughly 5 miles). The solar project will not generate pedestrian travel.

The circulation plan for the Villages of Laguna San Luis identifies multi use trails and bicycle lanes on future roads that traverse the plan area upon completion. Those facilities cover the Solar Park project site and adjoining parcels. The Solar Park project would conflict with the existing circulation plan because it would preclude development of identified trails, bicycle lanes, and future roads during the Solar Park project's life. However, the proposed project includes amendments to the Villages of Laguna San Luis Community Plan; with these amendments, the project would not conflict with the circulation plan. In addition, the project will not substantively impact alternative transportation because the currently planned alternative transportation services on the project site are intended to serve currently planned residential uses on the project site that will also be removed by implementation of the project amendment: because commercial and residential development at the project site will not occur over the life of the Solar Park project, the project does not interfere with the implementation of any plan facilities within the solar project site. If future development under the Villages of Laguna San Luis were to occur in the areas surrounding the solar project site, that development would be required to prepare an implementation plan pursuant to County requirements. The implementation plan would identify specific pedestrian facilities and circulation plans to serve the project. Therefore, the project's impact to pedestrian facilities is less than significant.

Bicycle Facilities. The same issues affecting pedestrian travel also affect bicycles. The project's distance to potential construction employee residences is too far to make bicycling a feasible option. The solar project is not expected to result in additional bicycle travel in this area. Because the project includes an amendment to the Villages community plan and residential and commercial development will not occur over the life of the Solar Park project, the project does not interfere with the implementation of any planned facilities within the solar project site. If future development under the Villages of Laguna San Luis were to occur in the areas surrounding the solar project site, that development would be required to prepare an implementation plan pursuant to County requirements. The implementation plan would identify specific bicycle facilities and circulation plans to serve the project. Therefore, the project's impact to bicycle facilities is less than significant.

Transit. Some employees would elect to use transit service if it was convenient to the site. The closest transit stop is at the Mercey College's Los Banos campus 3½ miles away. This distance is generally too far to walk along SR 152, but the project proponents could offer to provide shuttle service between the stop and the site. However, as the location of employee residences and the temporary nature of construction employment makes the number of potential transit riders unknown. Thus, the Solar project is not expected to generate an increase in demand for transit service, and the project's impact on transit use based on ridership is not significant, and mitigation is not required.



**SR 152 / BILLY WRIGHT ROAD INTERSECTION EXISTING PLUS PROJECT
CONSTRUCTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS**

APPENDIX

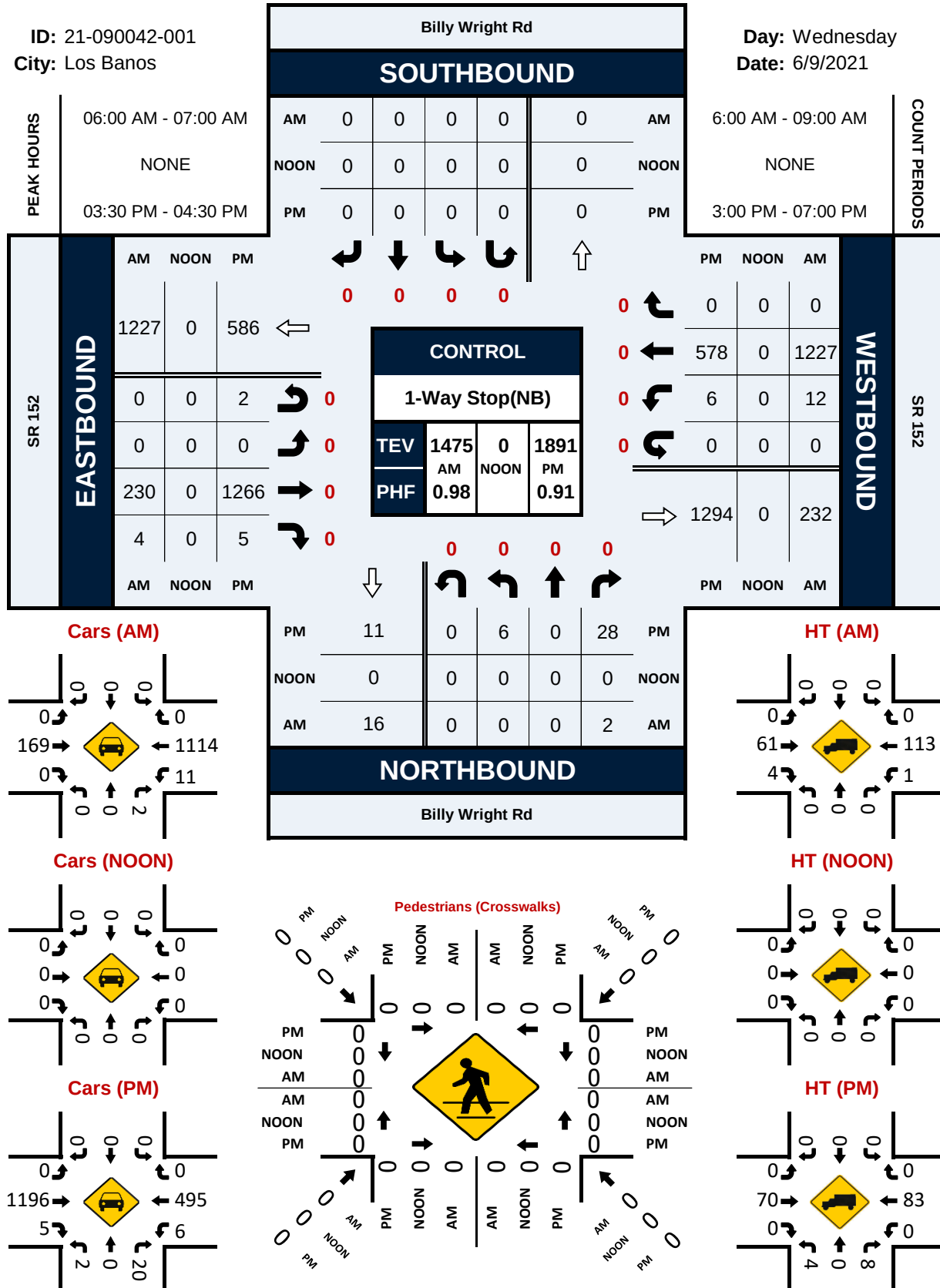
Traffic counts
Simtraffic results

Prepared by National Data & Surveying Services

Billy Wright Rd & SR 152**Peak Hour Turning Movement Count**

ID: 21-090042-001
City: Los Banos

Day: Wednesday
Date: 6/9/2021



National Data & Surveying Services Intersection Turning Movement Count

Location: Billy Wright Rd & SR 152
City: Los Banos
Control: 1-Way Stop(NB)

Project ID: 21-090042-001
Date: 6/9/2021

Data - Total

NS/EW Streets:		Billy Wright Rd				Billy Wright Rd				SR 152				SR 152				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
	6:00 AM	0	0	0	0	0	0	0	0	0	31	0	0	2	337	0	0	370
	6:15 AM	0	0	1	0	0	0	0	0	0	58	1	0	6	310	0	0	376
	6:30 AM	0	0	1	0	0	0	0	0	0	69	0	0	3	288	0	0	361
	6:45 AM	0	0	0	0	0	0	0	0	0	72	3	0	1	292	0	0	368
	7:00 AM	1	0	0	0	0	0	0	0	0	71	3	1	3	242	0	0	321
	7:15 AM	1	0	2	0	0	0	0	0	0	81	0	0	6	239	0	0	329
	7:30 AM	3	0	2	0	0	0	0	0	0	99	1	0	1	196	0	0	302
	7:45 AM	7	0	1	0	0	0	0	0	0	107	0	0	4	205	0	0	324
	8:00 AM	4	0	2	0	0	0	0	0	0	81	3	0	3	193	0	0	286
	8:15 AM	1	0	3	0	0	0	0	0	0	102	1	0	3	198	0	0	308
	8:30 AM	0	0	4	0	0	0	0	0	0	92	1	0	2	180	0	1	280
	8:45 AM	1	0	3	0	0	0	0	0	0	92	1	1	5	144	0	0	247
TOTAL VOLUMES:		NL 18	NT 0	NR 19	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 955	ER 14	EU 2	WL 39	WT 2824	WR 0	WU 1	TOTAL 3872
APPROACH %'s:		48.65%	0.00%	51.35%	0.00%					0.00%	98.35%	1.44%	0.21%	1.36%	98.60%	0.00%	0.03%	
PEAK HR:		06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL:		0	0	2	0	0	0	0	0	0	230	4	0	12	1227	0	0	1475
PEAK HR FACTOR:		0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.799	0.333	0.000	0.500	0.910	0.000	0.000	0.981
		0.500								0.780				0.914				

PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
	3:00 PM	1	0	5	0	0	0	0	0	0	281	6	1	4	157	0	0	455
	3:15 PM	0	0	5	0	0	0	0	0	0	277	2	2	3	169	0	0	458
	3:30 PM	5	0	8	0	0	0	0	0	0	363	1	1	2	141	0	0	521
	3:45 PM	0	0	2	0	0	0	0	0	0	277	0	0	3	158	0	0	440
	4:00 PM	1	0	7	0	0	0	0	0	0	312	1	1	0	142	0	0	464
	4:15 PM	0	0	11	0	0	0	0	0	0	314	3	0	1	137	0	0	466
	4:30 PM	1	0	1	0	0	0	0	0	0	320	2	0	0	132	0	0	456
	4:45 PM	1	0	1	0	0	0	0	0	0	336	1	1	0	125	0	0	465
	5:00 PM	1	0	3	0	0	0	0	0	0	301	3	0	2	143	0	0	453
	5:15 PM	0	0	2	0	0	0	0	0	0	343	1	2	0	134	0	0	482
	5:30 PM	0	0	1	0	0	0	0	0	0	300	1	0	0	143	0	0	445
	5:45 PM	0	0	1	0	0	0	0	0	0	358	1	0	0	113	0	0	473
	6:00 PM	0	0	2	0	0	0	0	0	0	338	2	0	3	103	0	0	448
	6:15 PM	0	0	2	0	0	0	0	0	0	353	2	2	1	92	0	0	452
	6:30 PM	1	0	0	0	0	0	0	0	0	314	2	0	1	89	0	0	407
	6:45 PM	0	0	2	0	0	0	0	0	0	265	1	1	0	88	0	0	357
TOTAL VOLUMES:		NL 11	NT 0	NR 53	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 5052	ER 29	EU 11	WL 20	WT 2066	WR 0	WU 0	TOTAL 7242
APPROACH %'s:		17.19%	0.00%	82.81%	0.00%					0.00%	99.21%	0.57%	0.22%	0.96%	99.04%	0.00%	0.00%	
PEAK HR:		03:30 PM - 04:30 PM																TOTAL
PEAK HR VOL:		6	0	28	0	0	0	0	0	0	1266	5	2	6	578	0	0	1891
PEAK HR FACTOR:		0.300	0.000	0.636	0.000	0.000	0.000	0.000	0.000	0.000	0.872	0.417	0.500	0.500	0.915	0.000	0.000	0.907
		0.654								0.872				0.907				

National Data & Surveying Services Intersection Turning Movement Count

Location: Billy Wright Rd & SR 152
City: Los Banos
Control: 1-Way Stop(NB)

Project ID: 21-090042-001
Date: 6/9/2021

Data - Cars

NS/EW Streets:		Billy Wright Rd				Billy Wright Rd				SR 152				SR 152				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
	6:00 AM	0	0	0	0	0	0	0	0	0	23	0	0	1	317	0	0	341
	6:15 AM	0	0	1	0	0	0	0	0	0	42	0	0	6	281	0	0	330
	6:30 AM	0	0	1	0	0	0	0	0	0	52	0	0	3	262	0	0	318
	6:45 AM	0	0	0	0	0	0	0	0	0	52	0	0	1	254	0	0	307
	7:00 AM	0	0	0	0	0	0	0	0	0	56	0	1	3	217	0	0	277
	7:15 AM	0	0	0	0	0	0	0	0	0	63	0	0	6	212	0	0	281
	7:30 AM	0	0	2	0	0	0	0	0	0	89	0	0	1	172	0	0	264
	7:45 AM	5	0	1	0	0	0	0	0	0	90	0	0	4	183	0	0	283
	8:00 AM	3	0	2	0	0	0	0	0	0	68	2	0	1	171	0	0	247
	8:15 AM	1	0	1	0	0	0	0	0	0	88	0	0	2	169	0	0	261
	8:30 AM	0	0	3	0	0	0	0	0	0	76	1	0	2	158	0	1	241
	8:45 AM	1	0	2	0	0	0	0	0	0	69	1	1	4	131	0	0	209
TOTAL VOLUMES:		NL 10	NT 0	NR 13	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 768	ER 4	EU 2	WL 34	WT 2527	WR 0	WU 1	TOTAL 3359
APPROACH %'s:		43.48%	0.00%	56.52%	0.00%					0.00%	99.22%	0.52%	0.26%	1.33%	98.63%	0.00%	0.04%	
PEAK HR:		06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL:		0	0	2	0	0	0	0	0	0	169	0	0	11	1114	0	0	1296
PEAK HR FACTOR:		0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.813	0.000	0.000	0.458	0.879	0.000	0.000	0.950
		0.500								0.813				0.884				

PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
	3:00 PM	1	0	5	0	0	0	0	0	0	255	3	1	1	135	0	0	401
	3:15 PM	0	0	4	0	0	0	0	0	0	260	1	2	0	142	0	0	409
	3:30 PM	2	0	5	0	0	0	0	0	0	336	1	1	2	112	0	0	459
	3:45 PM	0	0	1	0	0	0	0	0	0	265	0	0	3	143	0	0	412
	4:00 PM	0	0	4	0	0	0	0	0	0	292	1	1	0	126	0	0	424
	4:15 PM	0	0	10	0	0	0	0	0	0	303	3	0	1	114	0	0	431
	4:30 PM	1	0	1	0	0	0	0	0	0	297	2	0	0	113	0	0	414
	4:45 PM	1	0	1	0	0	0	0	0	0	327	1	1	0	105	0	0	436
	5:00 PM	1	0	3	0	0	0	0	0	0	287	3	0	2	124	0	0	420
	5:15 PM	0	0	2	0	0	0	0	0	0	326	1	1	0	112	0	0	442
	5:30 PM	0	0	1	0	0	0	0	0	0	278	1	0	0	128	0	0	408
	5:45 PM	0	0	1	0	0	0	0	0	0	340	1	0	0	99	0	0	441
	6:00 PM	0	0	2	0	0	0	0	0	0	320	2	0	3	94	0	0	421
	6:15 PM	0	0	2	0	0	0	0	0	0	325	2	2	1	84	0	0	416
	6:30 PM	1	0	0	0	0	0	0	0	0	304	2	0	1	83	0	0	391
	6:45 PM	0	0	2	0	0	0	0	0	0	253	1	1	0	80	0	0	337
TOTAL VOLUMES:		NL 7	NT 0	NR 44	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 4768	ER 25	EU 10	WL 14	WT 1794	WR 0	WU 0	TOTAL 6662
APPROACH %'s:		13.73%	0.00%	86.27%	0.00%					0.00%	99.27%	0.52%	0.21%	0.77%	99.23%	0.00%	0.00%	
PEAK HR:		03:30 PM - 04:30 PM																TOTAL
PEAK HR VOL:		2	0	20	0	0	0	0	0	0	1196	5	2	6	495	0	0	1726
PEAK HR FACTOR:		0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.890	0.417	0.500	0.500	0.865	0.000	0.000	0.940
		0.550								0.890				0.858				

National Data & Surveying ServicesIntersection Turning Movement Count

Location: Billy Wright Rd & SR 152
City: Los Banos
Control: 1-Way Stop(NB)

Project ID: 21-090042-001
Date: 6/9/2021

Data - HT

NS/EW Streets:		Billy Wright Rd				Billy Wright Rd				SR 152				SR 152				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	6:00 AM	0	0	0	0	0	0	0	0	0	8	0	0	1	20	0	0	29
	6:15 AM	0	0	0	0	0	0	0	0	0	16	1	0	0	29	0	0	46
	6:30 AM	0	0	0	0	0	0	0	0	0	17	0	0	0	26	0	0	43
	6:45 AM	0	0	0	0	0	0	0	0	0	20	3	0	0	38	0	0	61
	7:00 AM	1	0	0	0	0	0	0	0	0	15	3	0	0	25	0	0	44
	7:15 AM	1	0	2	0	0	0	0	0	0	18	0	0	0	27	0	0	48
	7:30 AM	3	0	0	0	0	0	0	0	0	10	1	0	0	24	0	0	38
	7:45 AM	2	0	0	0	0	0	0	0	0	17	0	0	0	22	0	0	41
	8:00 AM	1	0	0	0	0	0	0	0	0	13	1	0	2	22	0	0	39
	8:15 AM	0	0	2	0	0	0	0	0	0	14	1	0	1	29	0	0	47
	8:30 AM	0	0	1	0	0	0	0	0	0	16	0	0	0	22	0	0	39
	8:45 AM	0	0	1	0	0	0	0	0	0	23	0	0	1	13	0	0	38
TOTAL VOLUMES:		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:		8	0	6	0	0	0	0	0	0	187	10	0	5	297	0	0	513
		57.14%	0.00%	42.86%	0.00%					0.00%	94.92%	5.08%	0.00%	1.66%	98.34%	0.00%	0.00%	
PEAK HR:		06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL:		0	0	0	0	0	0	0	0	0	61	4	0	1	113	0	0	179
PEAK HR FACTOR:		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.763	0.333	0.000	0.250	0.743	0.000	0.000	0.734
										0.707				0.750				

PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	3:00 PM	0	0	0	0	0	0	0	0	0	26	3	0	3	22	0	0	54
	3:15 PM	0	0	1	0	0	0	0	0	0	17	1	0	3	27	0	0	49
	3:30 PM	3	0	3	0	0	0	0	0	0	27	0	0	0	29	0	0	62
	3:45 PM	0	0	1	0	0	0	0	0	0	12	0	0	0	15	0	0	28
	4:00 PM	1	0	3	0	0	0	0	0	0	20	0	0	0	16	0	0	40
	4:15 PM	0	0	1	0	0	0	0	0	0	11	0	0	0	23	0	0	35
	4:30 PM	0	0	0	0	0	0	0	0	0	23	0	0	0	19	0	0	42
	4:45 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	20	0	0	29
	5:00 PM	0	0	0	0	0	0	0	0	0	14	0	0	0	19	0	0	33
	5:15 PM	0	0	0	0	0	0	0	0	0	17	0	1	0	22	0	0	40
	5:30 PM	0	0	0	0	0	0	0	0	0	22	0	0	0	15	0	0	37
	5:45 PM	0	0	0	0	0	0	0	0	0	18	0	0	0	14	0	0	32
	6:00 PM	0	0	0	0	0	0	0	0	0	18	0	0	0	9	0	0	27
	6:15 PM	0	0	0	0	0	0	0	0	0	28	0	0	0	8	0	0	36
	6:30 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	6	0	0	16
	6:45 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	8	0	0	20
TOTAL VOLUMES:		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:		4	0	9	0	0	0	0	0	0	284	4	1	6	272	0	0	580
PEAK HR:		03:30 PM - 04:30 PM								0.00% 98.27% 1.38% 0.35%				2.16% 97.84% 0.00% 0.00%				TOTAL
PEAK HR VOL:		4	0	8	0	0	0	0	0	0	70	0	0	0	83	0	0	165
PEAK HR FACTOR:		0.333	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.648	0.000	0.000	0.000	0.716	0.000	0.000	0.665
										0.648				0.716				

National Data & Surveying ServicesIntersection Turning Movement Count

Location: Billy Wright Rd & SR 152

City: Los Banos

Control: 1-Way Stop(NB)

Project ID: 21-090042-001

Date: 6/9/2021

Data - Bikes

NS/EW Streets:	Billy Wright Rd				Billy Wright Rd				SR 152				SR 152				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 1	ER 0	EU 0	WL 0	WT 5	WR 0	WU 0	TOTAL 6
	0.00% 100.00% 0.00% 0.00%				0.00% 100.00% 0.00% 0.00%												
PEAK HR :	06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500
	0.500																

[illegible]

National Data & Surveying Services Intersection Turning Movement Count

Location: Billy Wright Rd & SR 152
City: Los Banos

Project ID: 21-090042-001
Date: 6/9/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Billy Wright Rd		Billy Wright Rd		SR 152		SR 152		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
6:00 AM	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	06:00 AM - 07:00 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

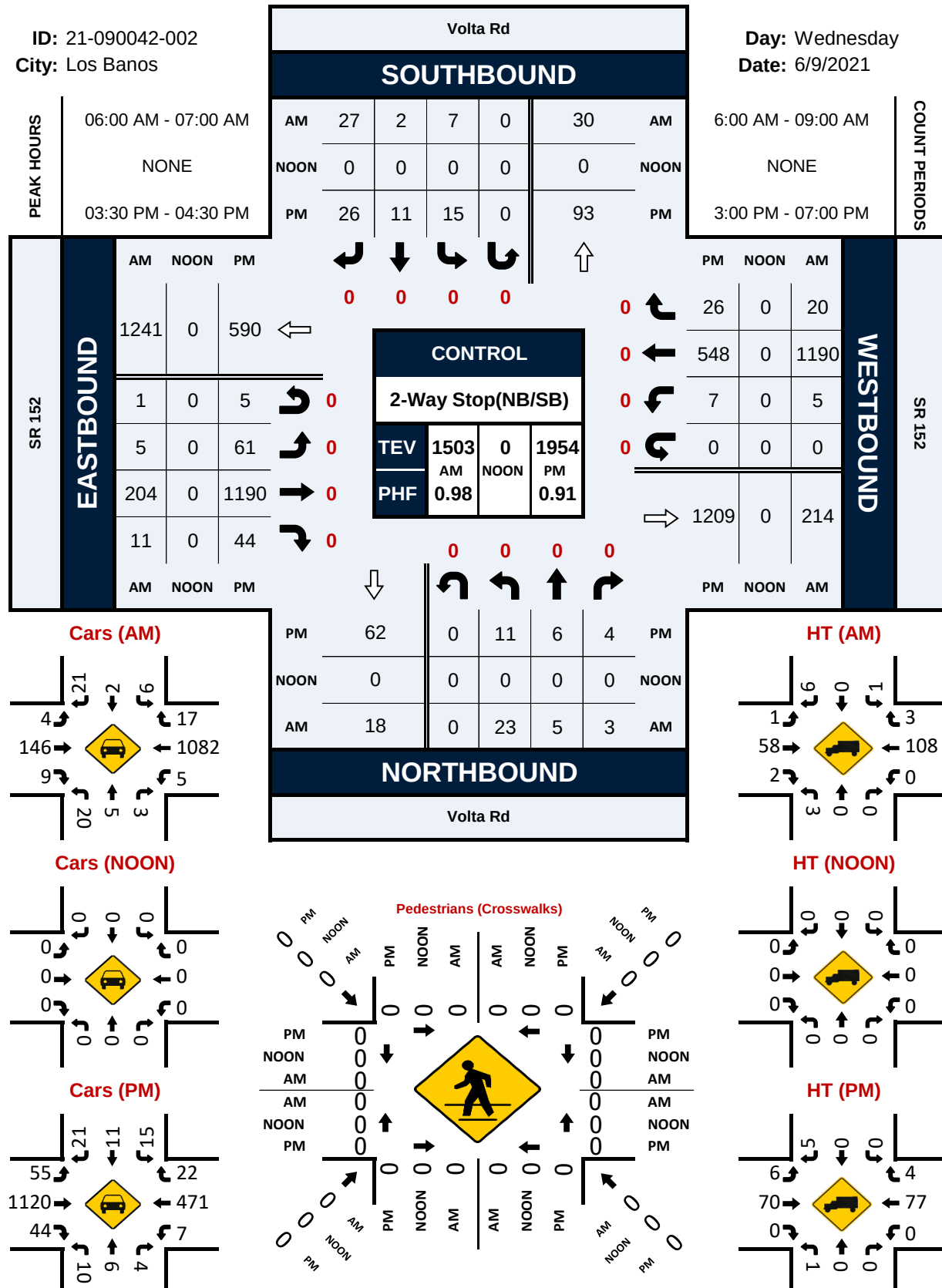
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	03:30 PM - 04:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

Volta Rd & SR 152**Peak Hour Turning Movement Count**

ID: 21-090042-002
City: Los Banos

Day: Wednesday
Date: 6/9/2021



National Data & Surveying Services Intersection Turning Movement Count

Location: Volta Rd & SR 152
City: Los Banos
Control: 2-Way Stop(NB/SB)

Project ID: 21-090042-002
Date: 6/9/2021

Data - Total

NS/EW Streets:	Volta Rd				Volta Rd				SR 152				SR 152				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
6:00 AM	5	1	0	0	1	0	5	0	1	25	0	0	4	325	7	0	374
6:15 AM	7	0	0	0	2	1	7	0	1	53	5	1	0	302	3	0	382
6:30 AM	7	4	0	0	0	0	5	0	2	60	2	0	0	288	5	0	373
6:45 AM	4	0	3	0	4	1	10	0	1	66	4	0	1	275	5	0	374
7:00 AM	3	2	0	0	0	1	4	0	3	72	1	0	0	239	8	0	333
7:15 AM	5	1	0	0	0	2	5	0	1	80	2	0	0	245	8	0	349
7:30 AM	2	1	2	0	4	0	4	0	1	95	2	0	0	184	4	0	299
7:45 AM	2	0	0	0	2	0	4	0	4	104	5	1	0	194	3	0	319
8:00 AM	7	3	0	0	5	1	8	0	1	80	1	0	1	194	4	0	305
8:15 AM	3	1	0	0	3	4	9	0	1	102	2	0	0	192	3	0	320
8:30 AM	4	1	0	0	1	3	7	0	4	85	2	0	1	170	2	0	280
8:45 AM	2	0	1	0	6	0	2	0	2	91	6	0	1	151	5	0	267
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	51	14	6	0	28	13	70	0	22	913	32	2	8	2759	57	0	3975
PEAK HR:	06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL:	23	5	3	0	7	2	27	0	5	204	11	1	5	1190	20	0	1503
PEAK HR FACTOR:	0.821	0.313	0.250	0.000	0.438	0.500	0.675	0.000	0.625	0.773	0.550	0.250	0.313	0.915	0.714	0.000	0.984
	0.705				0.600				0.778				0.904				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
3:00 PM	2	4	0	0	5	0	6	0	11	247	16	0	0	173	2	0	466
3:15 PM	1	1	2	0	5	3	2	0	9	271	5	0	0	154	11	1	465
3:30 PM	4	1	2	0	4	3	1	0	18	345	7	0	1	143	10	0	539
3:45 PM	2	1	1	0	9	1	7	0	10	270	6	2	1	143	9	0	462
4:00 PM	4	0	0	0	1	3	9	0	18	277	14	0	1	137	3	0	467
4:15 PM	1	4	1	0	1	4	9	0	15	298	17	3	4	125	4	0	486
4:30 PM	0	3	1	0	7	0	9	0	23	277	14	1	0	127	3	0	465
4:45 PM	3	3	1	0	6	0	5	0	14	316	8	0	0	111	8	0	475
5:00 PM	3	0	0	0	4	0	2	0	12	284	8	0	0	149	5	0	467
5:15 PM	1	1	2	0	4	2	3	0	18	322	17	0	0	125	3	0	498
5:30 PM	1	1	0	0	6	0	5	0	13	283	3	2	1	145	9	0	469
5:45 PM	2	0	1	0	2	0	5	0	8	337	5	2	1	90	8	0	461
6:00 PM	1	1	1	0	2	0	9	0	10	313	10	1	0	100	11	0	459
6:15 PM	0	0	1	0	5	2	5	0	14	341	10	0	0	92	3	0	473
6:30 PM	1	1	0	0	3	3	0	0	10	290	5	1	0	82	12	0	408
6:45 PM	1	1	1	0	2	0	2	0	5	267	4	0	2	87	4	0	376
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	27	22	14	0	66	21	79	0	208	4738	149	12	11	1983	105	1	7436
PEAK HR:	03:30 PM - 04:30 PM																TOTAL
PEAK HR VOL:	11	6	4	0	15	11	26	0	61	1190	44	5	7	548	26	0	1954
PEAK HR FACTOR:	0.688	0.375	0.500	0.000	0.417	0.688	0.722	0.000	0.847	0.862	0.647	0.417	0.438	0.958	0.650	0.000	0.906
	0.750				0.765				0.878				0.943				

National Data & Surveying Services Intersection Turning Movement Count

Location: Volta Rd & SR 152
City: Los Banos
Control: 2-Way Stop(NB/SB)

Project ID: 21-090042-002
Date: 6/9/2021

Data - Cars

NS/EW Streets:	Volta Rd				Volta Rd				SR 152				SR 152				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
6:00 AM	5	1	0	0	1	0	4	0	1	17	0	0	4	302	6	0	341
6:15 AM	6	0	0	0	2	1	5	0	0	39	4	1	0	278	3	0	339
6:30 AM	5	4	0	0	0	0	5	0	2	47	2	0	0	262	4	0	331
6:45 AM	4	0	3	0	3	1	7	0	1	43	3	0	1	240	4	0	310
7:00 AM	2	2	0	0	0	1	3	0	2	60	1	0	0	217	7	0	295
7:15 AM	4	1	0	0	0	2	4	0	1	63	1	0	0	219	8	0	303
7:30 AM	2	0	2	0	4	0	4	0	1	84	2	0	0	158	2	0	259
7:45 AM	2	0	0	0	2	0	4	0	2	86	5	1	0	178	2	0	282
8:00 AM	5	3	0	0	5	0	4	0	1	66	1	0	1	172	4	0	262
8:15 AM	3	1	0	0	3	4	4	0	0	88	2	0	0	165	3	0	273
8:30 AM	3	1	0	0	1	3	7	0	2	69	2	0	1	152	2	0	243
8:45 AM	2	0	1	0	4	0	1	0	2	72	3	0	1	137	2	0	225
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	43	13	6	0	25	12	52	0	15	734	26	2	8	2480	47	0	3463
PEAK HR:	06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL:	20	5	3	0	6	2	21	0	4	146	9	1	5	1082	17	0	1321
PEAK HR FACTOR:	0.833	0.313	0.250	0.000	0.500	0.500	0.750	0.000	0.500	0.777	0.563	0.250	0.313	0.896	0.708	0.000	0.968
	0.778				0.659				0.784				0.885				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
3:00 PM	2	4	0	0	5	0	6	0	8	231	12	0	0	144	2	0	414
3:15 PM	1	0	2	0	5	2	2	0	9	253	3	0	0	127	9	1	414
3:30 PM	4	1	2	0	4	3	0	0	15	322	7	0	1	117	7	0	483
3:45 PM	1	1	1	0	9	1	5	0	10	254	6	2	1	131	8	0	430
4:00 PM	4	0	0	0	1	3	8	0	16	260	14	0	1	119	3	0	429
4:15 PM	1	4	1	0	1	4	8	0	14	284	17	3	4	104	4	0	449
4:30 PM	0	3	1	0	7	0	5	0	20	263	13	1	0	109	3	0	425
4:45 PM	3	3	1	0	6	0	3	0	13	302	7	0	0	97	7	0	442
5:00 PM	3	0	0	0	4	0	2	0	12	272	8	0	0	127	5	0	433
5:15 PM	1	1	2	0	4	2	2	0	13	307	16	0	0	104	3	0	455
5:30 PM	1	1	0	0	6	0	3	0	10	266	3	2	1	135	8	0	436
5:45 PM	2	0	1	0	2	0	4	0	7	321	5	2	1	78	8	0	431
6:00 PM	1	1	1	0	2	0	6	0	8	298	10	1	0	91	11	0	430
6:15 PM	0	0	1	0	5	2	4	0	13	316	10	0	0	84	2	0	437
6:30 PM	1	1	0	0	3	3	0	0	9	280	5	1	0	77	11	0	391
6:45 PM	1	1	1	0	2	0	1	0	4	257	4	0	2	80	4	0	357
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	26	21	14	0	66	20	59	0	181	4486	140	12	11	1724	95	1	6856
PEAK HR:	03:30 PM - 04:30 PM																TOTAL
PEAK HR VOL:	10	6	4	0	15	11	21	0	55	1120	44	5	7	471	22	0	1791
PEAK HR FACTOR:	0.625	0.375	0.500	0.000	0.417	0.688	0.656	0.000	0.859	0.870	0.647	0.417	0.438	0.899	0.688	0.000	0.927
	0.714				0.783				0.890				0.893				

National Data & Surveying ServicesIntersection Turning Movement Count

Location: Volta Rd & SR 152
City: Los Banos
Control: 2-Way Stop(NB/SB)

Project ID: 21-090042-002
Date: 6/9/2021

Data - HT

NS/EW Streets:	Volta Rd				Volta Rd				SR 152				SR 152				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
6:00 AM	0	0	0	0	0	0	1	0	0	8	0	0	0	23	1	0	33
6:15 AM	1	0	0	0	0	0	2	0	1	14	1	0	0	24	0	0	43
6:30 AM	2	0	0	0	0	0	0	0	0	13	0	0	0	26	1	0	42
6:45 AM	0	0	0	0	1	0	3	0	0	23	1	0	0	35	1	0	64
7:00 AM	1	0	0	0	0	0	1	0	1	12	0	0	0	22	1	0	38
7:15 AM	1	0	0	0	0	0	1	0	0	17	1	0	0	26	0	0	46
7:30 AM	0	1	0	0	0	0	0	0	0	11	0	0	0	26	2	0	40
7:45 AM	0	0	0	0	0	0	0	0	2	18	0	0	0	16	1	0	37
8:00 AM	2	0	0	0	0	1	4	0	0	14	0	0	0	22	0	0	43
8:15 AM	0	0	0	0	0	0	5	0	1	14	0	0	0	27	0	0	47
8:30 AM	1	0	0	0	0	0	0	0	2	16	0	0	0	18	0	0	37
8:45 AM	0	0	0	0	2	0	1	0	0	19	3	0	0	14	3	0	42
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	8	1	0	0	3	1	18	0	7	179	6	0	0	279	10	0	512
PEAK HR:	06:00 AM - 07:00 AM																TOTAL
PEAK HR VOL:	3	0	0	0	1	0	6	0	1	58	2	0	0	108	3	0	182
PEAK HR FACTOR:	0.375	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.250	0.630	0.500	0.000	0.000	0.771	0.750	0.000	0.711
	0.375				0.438				0.635				0.771				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	0	0	0	0	3	16	4	0	0	29	0	0	52
3:15 PM	0	1	0	0	0	1	0	0	0	18	2	0	0	27	2	0	51
3:30 PM	0	0	0	0	0	0	1	0	3	23	0	0	0	26	3	0	56
3:45 PM	1	0	0	0	0	0	2	0	0	16	0	0	0	12	1	0	32
4:00 PM	0	0	0	0	0	0	1	0	2	17	0	0	0	18	0	0	38
4:15 PM	0	0	0	0	0	0	1	0	1	14	0	0	0	21	0	0	37
4:30 PM	0	0	0	0	0	0	4	0	3	14	1	0	0	18	0	0	40
4:45 PM	0	0	0	0	0	0	2	0	1	14	1	0	0	14	1	0	33
5:00 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	22	0	0	34
5:15 PM	0	0	0	0	0	0	1	0	5	15	1	0	0	21	0	0	43
5:30 PM	0	0	0	0	0	0	2	0	3	17	0	0	0	10	1	0	33
5:45 PM	0	0	0	0	0	0	1	0	1	16	0	0	0	12	0	0	30
6:00 PM	0	0	0	0	0	0	3	0	2	15	0	0	0	9	0	0	29
6:15 PM	0	0	0	0	0	0	1	0	1	25	0	0	0	8	1	0	36
6:30 PM	0	0	0	0	0	0	0	0	1	10	0	0	0	5	1	0	17
6:45 PM	0	0	0	0	0	0	1	0	1	10	0	0	0	7	0	0	19
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	1	1	0	0	0	1	20	0	27	252	9	0	0	259	10	0	580
PEAK HR:	03:30 PM - 04:30 PM																TOTAL
PEAK HR VOL:	1	0	0	0	0	0	5	0	6	70	0	0	0	77	4	0	163
PEAK HR FACTOR:	0.250	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.500	0.761	0.000	0.000	0.000	0.740	0.333	0.000	0.728
	0.250				0.625				0.731				0.698				

National Data & Surveying ServicesIntersection Turning Movement Count

Location: Volta Rd & SR 152
City: Los Banos
Control: 2-Way Stop(NB/SB)

Project ID: 21-090042-002
Date: 6/9/2021

Data - Bikes

NS/EW Streets:		Volta Rd				Volta Rd				SR 152				SR 152				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :		NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 0
PEAK HR :		06:00 AM - 07:00 AM																TOTAL 0
PEAK HR VOL : PEAK HR FACTOR :		0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000		

[illegible]

National Data & Surveying Services Intersection Turning Movement Count

Location: Volta Rd & SR 152
City: Los Banos

Project ID: 21-090042-002
Date: 6/9/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Volta Rd		Volta Rd		SR 152		SR 152		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
6:00 AM	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	06:00 AM - 07:00 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	03:30 PM - 04:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by NDS/ATD
Prepared by National Data & Surveying Services

VOLUME
Billy Wright Rd S/O SR 152

Day: Wednesday
Date: 6/9/2021

City: Los Banos
Project #: CA21_090043_001

DAILY TOTALS					NB	SB						EB	WB	Total
					244	241						0	0	485
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00	0	0	0	0		12:00	4	8	0	0	12			
00:15	0	0	0	0		12:15	7	9	0	0	16			
00:30	0	0	0	0		12:30	9	3	0	0	12			
00:45	0	0	0	0		12:45	10	30	4	24	54			
01:00	2	0	0	0	2	13:00	6	3	0	0	9			
01:15	0	0	0	0		13:15	1	7	0	0	8			
01:30	0	0	0	0		13:30	8	5	0	0	13			
01:45	0	2	0	0	2	13:45	6	21	7	22	43			
02:00	0	0	0	0		14:00	3	3	0	0	6			
02:15	0	0	0	0		14:15	6	3	0	0	9			
02:30	0	0	0	0		14:30	6	6	0	0	12			
02:45	0	0	0	0		14:45	3	18	3	15	33			
03:00	1	0	0	0	1	15:00	6	10	0	0	16			
03:15	3	0	0	0	3	15:15	4	5	0	0	9			
03:30	0	0	0	0		15:30	13	2	0	0	15			
03:45	0	4	0	0	4	15:45	2	25	3	20	45			
04:00	0	1	0	0	1	16:00	9	1	0	0	10			
04:15	1	0	0	0	1	16:15	10	4	0	0	14			
04:30	1	0	0	0	1	16:30	1	2	0	0	3			
04:45	0	2	1	2	4	16:45	2	22	0	7	29			
05:00	0	1	0	0	1	17:00	4	5	0	0	9			
05:15	1	1	0	0	2	17:15	2	1	0	0	3			
05:30	0	2	0	0	2	17:30	1	1	0	0	2			
05:45	2	3	0	4	7	17:45	1	8	1	8	16			
06:00	0	2	0	0	2	18:00	2	4	0	0	6			
06:15	1	6	0	0	7	18:15	1	3	0	0	4			
06:30	1	3	0	0	4	18:30	0	3	0	0	3			
06:45	0	2	4	15	17	18:45	2	5	1	11	16			
07:00	1	5	0	0	6	19:00	1	2	0	0	3			
07:15	5	5	0	0	10	19:15	1	1	0	0	2			
07:30	5	3	0	0	8	19:30	4	0	0	0	4			
07:45	7	18	3	16	34	19:45	3	9	0	3	12			
08:00	6	6	0	0	12	20:00	1	2	0	0	3			
08:15	4	4	0	0	8	20:15	1	3	0	0	4			
08:30	4	2	0	0	6	20:30	0	3	0	0	3			
08:45	3	17	6	18	35	20:45	1	3	0	8	11			
09:00	4	6	0	0	10	21:00	2	0	0	0	2			
09:15	6	2	0	0	8	21:15	0	1	0	0	1			
09:30	2	3	0	0	5	21:30	0	1	0	0	1			
09:45	6	18	5	16	34	21:45	1	3	1	3	6			
10:00	1	9	0	0	10	22:00	0	0	0	0				
10:15	3	2	0	0	5	22:15	0	0	0	0				
10:30	7	7	0	0	14	22:30	0	0	0	0				
10:45	7	18	2	20	38	22:45	0	0	0	0				
11:00	5	8	0	0	13	23:00	0	0	0	0				
11:15	2	6	0	0	8	23:15	0	1	0	0	1			
11:30	2	5	0	0	7	23:30	0	0	0	0				
11:45	7	16	8	27	43	23:45	0	1	2	0	2			
TOTALS	100	118			218	TOTALS	144	123			267			
SPLIT %	45.9%	54.1%			44.9%	SPLIT %	53.9%	46.1%			55.1%			

DAILY TOTALS					NB	SB						EB	WB	Total
					244	241						0	0	485
AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	15:30	12:00			12:00			
AM Pk Volume	27	30			55	PM Pk Volume	34	24			54			
Pk Hr Factor	0.750	0.833			0.859	Pk Hr Factor	0.654	0.667			0.844			
7 - 9 Volume	35	34	0	0	69	4 - 6 Volume	30	15	0	0	45			
7 - 9 Peak Hour	07:15	08:00			07:15	4 - 6 Peak Hour	16:00	16:15			16:00			
7 - 9 Pk Volume	23	18	0	0	40	4 - 6 Pk Volume	22	11	0	0	29			
Pk Hr Factor	0.821	0.750	0.000	0.000	0.833	Pk Hr Factor	0.550	0.550	0.000	0.000	0.518			

CLASSIFICATION

Billy Wright Rd S/O SR 152

Day: Wednesday

Date: 6/9/2021

City: Los Banos

Project #: CA21_090043_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:15	0	1	2	0	0	0	0	0	0	0	0	0	0	3
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15	0	0	2	0	0	0	0	0	0	0	0	0	0	2
05:30	0	1	1	0	0	0	0	0	0	0	0	0	0	2
05:45	0	0	2	0	0	0	0	0	0	0	0	0	0	2
06:00	0	0	1	0	0	1	0	0	0	0	0	0	0	2
06:15	0	3	2	0	1	0	0	0	1	0	0	0	0	7
06:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
06:45	0	1	0	0	1	0	0	0	2	0	0	0	0	4
07:00	0	0	1	0	2	0	0	0	3	0	0	0	0	6
07:15	0	3	4	0	2	0	0	1	1	0	0	0	0	10
07:30	0	2	2	0	2	0	0	1	1	0	0	0	0	8
07:45	0	0	6	1	2	0	0	0	1	0	0	0	0	10
08:00	0	3	6	0	2	1	0	0	0	0	0	0	0	12
08:15	0	3	0	0	3	1	0	0	1	0	0	0	0	8
08:30	0	2	3	0	1	0	0	0	0	0	0	0	0	6
08:45	0	1	5	0	1	2	0	0	0	0	0	0	0	9
09:00	0	6	2	0	2	0	0	0	0	0	0	0	0	10
09:15	0	0	2	1	1	4	0	0	0	0	0	0	0	8
09:30	0	2	2	0	0	0	0	0	1	0	0	0	0	5
09:45	0	2	3	1	4	0	0	1	0	0	0	0	0	11
10:00	1	0	1	0	1	5	0	1	1	0	0	0	0	10
10:15	0	1	3	0	0	1	0	0	0	0	0	0	0	5
10:30	0	3	4	1	2	3	1	0	0	0	0	0	0	14
10:45	0	0	4	0	3	1	0	0	1	0	0	0	0	9
11:00	0	4	3	1	3	2	0	0	0	0	0	0	0	13
11:15	0	2	4	0	0	2	0	0	0	0	0	0	0	8
11:30	0	0	2	0	1	1	0	0	3	0	0	0	0	7
11:45	0	2	5	0	4	1	0	2	1	0	0	0	0	15
12:00 PM	0	4	4	0	1	2	0	0	1	0	0	0	0	12
12:15	0	5	4	1	2	1	0	0	3	0	0	0	0	16
12:30	0	4	2	0	3	1	0	1	1	0	0	0	0	12
12:45	0	4	5	0	2	1	0	0	2	0	0	0	0	14
13:00	0	0	4	2	0	2	1	0	0	0	0	0	0	9
13:15	0	3	1	0	0	2	0	0	2	0	0	0	0	8
13:30	0	5	3	0	2	2	0	0	1	0	0	0	0	13
13:45	0	3	2	0	2	1	0	1	4	0	0	0	0	13
14:00	0	1	2	2	0	0	0	0	1	0	0	0	0	6
14:15	0	1	4	1	2	0	0	1	0	0	0	0	0	9
14:30	0	0	5	2	3	1	0	0	1	0	0	0	0	12
14:45	1	1	1	0	1	1	0	0	1	0	0	0	0	6
15:00	0	1	8	0	1	3	0	0	3	0	0	0	0	16
15:15	0	0	4	0	2	3	0	0	0	0	0	0	0	9
15:30	1	3	6	1	1	1	0	0	2	0	0	0	0	15
15:45	0	1	4	0	0	0	0	0	0	0	0	0	0	5
16:00	0	4	2	0	1	2	0	0	1	0	0	0	0	10
16:15	0	6	7	0	1	0	0	0	0	0	0	0	0	14
16:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
16:45	0	0	2	0	0	0	0	0	0	0	0	0	0	2
17:00	0	6	3	0	0	0	0	0	0	0	0	0	0	9
17:15	0	1	2	0	0	0	0	0	0	0	0	0	0	3
17:30	0	1	1	0	0	0	0	0	0	0	0	0	0	2
17:45	0	1	1	0	0	0	0	0	0	0	0	0	0	2
18:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
18:15	0	2	2	0	0	0	0	0	0	0	0	0	0	4
18:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
18:45	0	1	1	0	1	0	0	0	0	0	0	0	0	3
19:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
19:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
19:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
19:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
20:00	0	1	2	0	0	0	0	0	0	0	0	0	0	3
20:15	0	3	0	0	0	0	0	1	0	0	0	0	0	4
20:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
20:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:00	0	0	1	0	0	0	0	1	0	0	0	0	0	2
21:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:45	0	1	1	0	0	0	0	0	0	0	0	0	0	2
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Totals	3	136	169	14	63	48	2	10	40					485
% of Totals	1%	28%	35%	3%	13%	10%	0%	2%	8%					100%

AM Volumes	1	49	77	5	38	25	1	5	17	0	0	0	0	218	
% AM	0%	10%	16%	1%	8%	5%	0%	1%	4%					45%	
AM Peak Hour	09:15	11:45	07:15	09:00	11:45	10:00	09:45	11:45	11:30					11:45	
Volume	1	15	18	2	10	10	1	3	8					55	
PM Volumes	2	87	92	9	25	23	5	5	23	8	0	0	0	267	
% PM	0%	18%	19%	2%	5%	5%	0%	1%	5%					55%	
PM Peak Hour	14:45	12:00	15:00	13:45	12:00	14:30	12:15	13:30	13:15					54	
Volume	2	17	22	5	8	8	1	2	8					54	
Directional Peak Periods	AM 7-9				NOON 12-2				PM 4-6				Off Peak Volumes		
All Classes	Volume 69	↔	% 14%		Volume 97	↔	% 20%		Volume 45	↔	% 9%		Volume 274	↔	% 56%

Classification Definitions

- | | | | | |
|-------------------------------|-------------------------------|----------------------------|-----------------------------|----------------------------|
| 1 Motorcycles | 4 Buses | 7 >=4-Axle Single Units | 10 >=6-Axle Single Trailers | 13 >=7-Axle Multi-Trailers |
| 2 Passenger Cars | 5 2-Axle, 6-Tire Single Units | 8 <=4-Axle Single Trailers | 11 <=5-Axle Multi-Trailers | |
| 3 2-Axle, 4-Tire Single Units | 6 3-Axle Single Units | 9 5-Axle Single Trailers | 12 6-Axle Multi-Trailers | |

CLASSIFICATION

Billy Wright Rd S/O SR 152

Day: Wednesday

Date: 6/9/2021

City: Los Banos

Project #: CA21_090043_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4
04:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
05:00	0	1	6	0	0	0	0	0	0	0	0	0	0	7
06:00	0	7	4	0	2	1	0	0	3	0	0	0	0	17
07:00	0	5	13	1	8	0	0	1	6	0	0	0	0	34
08:00	0	9	14	0	7	4	0	0	1	0	0	0	0	35
09:00	0	10	9	2	7	4	0	1	1	0	0	0	0	34
10:00	1	4	12	1	6	10	1	1	2	0	0	0	0	38
11:00	0	8	14	1	8	6	0	2	4	0	0	0	0	43
12:00 PM	0	17	15	1	8	5	0	1	7	0	0	0	0	54
13:00	0	11	10	2	4	7	1	1	7	0	0	0	0	43
14:00	1	3	12	5	6	2	0	1	3	0	0	0	0	33
15:00	1	5	22	1	4	7	0	0	5	0	0	0	0	45
16:00	0	12	12	0	2	2	0	0	1	0	0	0	0	29
17:00	0	9	7	0	0	0	0	0	0	0	0	0	0	16
18:00	0	10	5	0	1	0	0	0	0	0	0	0	0	16
19:00	0	9	3	0	0	0	0	0	0	0	0	0	0	12
20:00	0	7	3	0	0	0	0	1	0	0	0	0	0	11
21:00	0	3	2	0	0	0	0	1	0	0	0	0	0	6
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Totals	3	136	169	14	63	48	2	10	40					485
% of Totals	1%	28%	35%	3%	13%	10%	0%	2%	8%					100%

AM Volumes	1	49	77	5	38	25	1	5	17	0	0	0	0	218
% AM	0%	10%	16%	1%	8%	5%	0%	1%	4%					45%
AM Peak Hour	10:00	09:00	08:00	09:00	07:00	10:00	10:00	11:00	07:00					11:00
Volume	1	10	14	2	8	10	1	2	6					43
PM Volumes	2	87	92	9	25	23	1	5	23	0	0	0	0	267
% PM	0%	18%	19%	2%	5%	5%	0%	1%	5%					55%
PM Peak Hour	14:00	12:00	15:00	14:00	12:00	13:00	13:00	12:00	12:00					12:00
Volume	1	17	22	5	8	7	1	1	7					54
Directional Peak Periods		AM 7-9				NOON 12-2				PM 4-6				Off Peak Volumes
All Classes		Volume				Volume				Volume				Volume
		69				97				45				274
		↔				↔				↔				↔
		14%				20%				9%				56%

Classification Definitions

1 Motorcycles	4 Buses	7 >=4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

VOLUME

San Luis Dr N/O Vista Grande Dr

Day: Wednesday
Date: 6/9/2021City: Los Banos
Project #: CA21_090043_002

DAILY TOTALS					NB	SB						EB	WB	Total	
					144	146						0	0	290	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00	0	0			0		12:00	0	2			2			
00:15	0	0			0		12:15	2	1			3			
00:30	0	0			0		12:30	5	7			12			
00:45	0	0			0		12:45	1	8	2	12	3	20		
01:00	0	0			0		13:00	3	3			6			
01:15	0	0			0		13:15	3	2			5			
01:30	2	1			3		13:30	1	2			3			
01:45	0	2	0	1	0	3	13:45	2	9	0	7	2	16		
02:00	0	0			0		14:00	4	3			7			
02:15	0	0			0		14:15	3	0			3			
02:30	1	2			3		14:30	6	3			9			
02:45	1	2	1	3	2	5	14:45	1	14	3	9	4	23		
03:00	0	0			0		15:00	0	3			3			
03:15	0	1			1		15:15	2	3			5			
03:30	1	0			1		15:30	2	2			4			
03:45	1	2	0	1	1	3	15:45	0	4	3	11	3	15		
04:00	0	0			0		16:00	2	8			10			
04:15	2	1			3		16:15	3	3			6			
04:30	1	0			1		16:30	1	5			6			
04:45	1	4	1	2	2	6	16:45	5	11	2	18	7	29		
05:00	1	1			2		17:00	3	0			3			
05:15	3	0			3		17:15	3	2			5			
05:30	1	0			1		17:30	1	3			4			
05:45	1	6	1	2	2	8	17:45	2	9	3	8	5	17		
06:00	0	0			0		18:00	1	3			4			
06:15	0	0			0		18:15	7	4			11			
06:30	1	0			1		18:30	1	3			4			
06:45	2	3	0		2	3	18:45	1	10	1	11	2	21		
07:00	3	1			4		19:00	0	3			3			
07:15	0	1			1		19:15	0	7			7			
07:30	4	2			6		19:30	0	2			2			
07:45	3	10	1	5	4	15	19:45	0	1	13		1	13		
08:00	1	0			1		20:00	1	3			4			
08:15	3	1			4		20:15	1	3			4			
08:30	1	3			4		20:30	0	0			0			
08:45	5	10	0	4	5	14	20:45	2	4	1	7	3	11		
09:00	2	2			4		21:00	2	2			4			
09:15	3	0			3		21:15	1	1			2			
09:30	1	1			2		21:30	0	2			2			
09:45	4	10	1	4	5	14	21:45	0	3	1	6	1	9		
10:00	2	1			3		22:00	1	0			1			
10:15	2	3			5		22:15	2	2			4			
10:30	2	1			3		22:30	0	2			2			
10:45	3	9	1	6	4	15	22:45	0	3	1	5	1	8		
11:00	3	1			4		23:00	0	3			3			
11:15	2	1			3		23:15	2	1			3			
11:30	2	1			3		23:30	0	0			0			
11:45	2	9	3	6	5	15	23:45	0	2	1	5	1	7		
TOTALS	67	34			101		TOTALS	77	112			189			
SPLIT %	66.3%	33.7%			34.8%		SPLIT %	40.7%	59.3%			65.2%			

DAILY TOTALS					NB	SB						EB	WB	Total	
					144	146						0	0	290	
AM Peak Hour	07:30	11:45			11:45		PM Peak Hour	13:45	15:45			16:00			
AM Pk Volume	11	13			22		PM Pk Volume	15	19			29			
Pk Hr Factor	0.688	0.464			0.458		Pk Hr Factor	0.625	0.594			0.725			
7 - 9 Volume	20	9	0	0	29		4 - 6 Volume	20	26	0	0	46			
7 - 9 Peak Hour	07:30	07:00			07:00		4 - 6 Peak Hour	16:15	16:00			16:00			
7 - 9 Pk Volume	11	5	0	0	15		4 - 6 Pk Volume	12	18	0	0	29			
Pk Hr Factor	0.688	0.625	0.000	0.000	0.625		Pk Hr Factor	0.600	0.563	0.000	0.000	0.725			

3: Billy Wright Road & SR 152 Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.0
Total Del/Veh (s)	0.5	3.4	4.9	3.1

Intersection: 3: Billy Wright Road & SR 152

Movement	NB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	7
95th Queue (ft)	33
Link Distance (ft)	305
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

3: Billy Wright Road & SR 152 Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	2.2		0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.5	0.8		3.4	10.2	2.3	3.1

Intersection: 3: Billy Wright Road & SR 152

Movement	NB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	7
95th Queue (ft)	33
Link Distance (ft)	305
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

3: Billy Wright Road & SR 152 Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.2	0.0	0.1	0.1
Total Del/Veh (s)	1.6	4.7	7.3	2.6

Intersection: 3: Billy Wright Road & SR 152

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	26	23
Average Queue (ft)	2	4
95th Queue (ft)	14	17
Link Distance (ft)		305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

3: Billy Wright Road & SR 152 Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.2	1.8	0.0	0.0		0.1	0.1
Total Del/Veh (s)	1.6	1.3	7.5	4.7		3.9	2.6

Intersection: 3: Billy Wright Road & SR 152

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	26	23
Average Queue (ft)	2	4
95th Queue (ft)	14	17
Link Distance (ft)		305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

3: Billy Wright Road & SR 152 Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	1.6	0.0	0.1	0.5
Total Del/Veh (s)	2.5	3.8	6.4	3.4

3: Billy Wright Road & SR 152 Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.2	2.4	0.0	0.0	0.1	0.1	0.5
Total Del/Veh (s)	1.2	3.2	2.9	3.8	23.6	2.1	3.4

Intersection: 3: Billy Wright Road & SR 152

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	7	56
Average Queue (ft)	0	7
95th Queue (ft)	6	33
Link Distance (ft)		305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

3: Billy Wright Road & SR 152 Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.2	0.0	0.4	0.2
Total Del/Veh (s)	2.7	3.3	5.5	3.3

3: Billy Wright Road & SR 152 Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.2	1.8	0.9	0.0	0.5	0.4	0.2
Total Del/Veh (s)	2.7	1.7	5.8	3.3	34.7	5.4	3.3

Intersection: 3: Billy Wright Road & SR 152

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	26	140
Average Queue (ft)	2	60
95th Queue (ft)	12	100
Link Distance (ft)		305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	