

3.7 Traffic and Transportation

This supplemental environmental impact report (SEIR) addresses proposed modifications to the B.F. Sisk Dam Safety of Dams Modification Project, which was previously evaluated in the B.F. Sisk Dam Safety of Dams Modification Project Environmental Impact Statement/Environmental Impact Report (2019 EIS/EIR). The project addressed in the 2019 EIS/EIR is referred to herein as the Approved Project; the Approved Project with proposed modifications identified since certification of the 2019 EIS/EIR is referred to herein as the Modified Project.

This section describes the existing transportation conditions of the Modified Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies any applicable mitigation measures related to implementation of the Modified Project.

On September 27, 2013, Senate Bill (SB) 743 was signed into law, which creates a process to change the way that transportation impacts are analyzed under the California Environmental Quality Act (CEQA). SB 743 required the Governor's Office of Planning and Research (OPR) to amend the State of California CEQA Guidelines (CEQA Guidelines) to provide an alternative to level of service (LOS) for evaluating transportation impacts. Under the new transportation guidelines, LOS (or vehicle delay) would no longer be considered an environmental impact under CEQA. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. These guidelines identify vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts under CEQA and have been implemented as of July 1, 2020.

The following section analyzes the LOS impacts consistent with the 2019 EIS/EIR; it also analyzes the VMT impacts of the Modified Project consistent with SB 743.

3.7.1 Existing Conditions

This section describes key roadways, as well as transit, pedestrian, and bicycle facilities within the vicinity of the Modified Project site. The extent of these facilities constitutes the transportation study area evaluated in this analysis and is the same as in the 2019 EIS/EIR. Regional and site access is also described.

The Modified Project site encompasses the area immediately adjacent to and surrounding B.F. Sisk Dam, which is located near the community of Santa Nella in unincorporated Merced County as shown in Figure 1-1, Project Location. O'Neill Forebay lies on the northern section of the Modified Project boundary and includes several existing campground and day-use recreational facilities as part of the San Luis Reservoir State Recreation Area (SRA). State Route (SR) 152, which intersects the Modified Project site, provides regional access to the Modified Project.

3.7.1.1 Roadways and Regional Access

Roadway characteristics and roadway classifications for key vicinity roads are described below. All roadways discussed are within unincorporated Merced County and are shown on Figure 1-1.

Interstate 5

Interstate (I) 5 is a divided interstate north-south freeway that connects Merced County regionally with Southern California, Northern California, and the Pacific Northwest coast. The freeway is the main regional access point for the surrounding area. Within the vicinity of the study area, I-5 is identified as a four-lane Freeway in the Transportation and Circulation Element in the Merced Vision 2030 General Plan (Merced County General Plan) (Merced County 2013). The posted speed limit is 70 mph.

State Route 152

SR-152 is generally a four-lane, divided highway that occasionally provides passing lanes resulting in five lanes. SR-152 runs east–west within the study area, connecting to I-5 and the communities of Merced County in the east, to Highway 101 and the communities of Santa Clara County in the west. While the freeway is divided with a landscaped median, turn pockets allow for left-turning movements and U-turns at various intervals. SR-152 provides immediate access to B.F. Sisk Dam and the Modified Project site. SR-152 is identified as a Principal Arterial in the Merced County General Plan Transportation and Circulation Element (Merced County 2013). The posted speed limit is 65 mph.

State Route 33

SR-33 is generally a two-lane, undivided highway that runs north–south within the study area, connecting SR-152 to I-5, and the unincorporated community of Santa Nella and City of Gustine to the north. SR-33 is identified as a Principal Arterial in the Merced County General Plan Transportation and Circulation Element (Merced County 2013). The posted speed limit is 55 mph.

Basalt Road

Basalt Road is a two-lane, undivided roadway that runs north–south in the study area and intersects SR-152 and Gonzaga Road. Basalt Road is the main roadway to the Modified Project site and to the existing B.F. Sisk Dam facilities. Basalt Road south of SR-152 also leads to Basalt Campground and Medeiros Campground as part of the San Luis Reservoir SRA. Basalt Road is not identified in the Merced County General Plan Transportation and Circulation Element (Merced County 2013). The posted speed limit is 25 mph and there are no sidewalks, bicycle facilities, or parking facilities along the roadway, other than those provided by the campground parking lots.

San Luis Creek Campground Road

San Luis Creek Campground Road is an unnamed two-lane, undivided roadway that runs north–south in the study area and intersects SR-152 approximately 1 mile west of the Basalt Road/SR-152 intersection. This road allows for access to San Luis Creek Campground, group campground areas, and the San Luis Day Use Area along the western shore of O'Neill Forebay as part of the San Luis Reservoir SRA. This road is not identified in the Merced County General Plan Transportation and Circulation Element (Merced County 2013). The posted speed limit is 35 mph and there are no sidewalks, bicycle facilities, or parking facilities along the roadway, other than those provided by the campground parking lots.

3.7.1.2 Traffic Volumes

Overall, traffic volumes within the Modified Project area are not expected to have significantly changed since the preparation of the 2019 EIS/EIR; however, to provide a conservative analysis, highway volumes were adjusted at a rate of 0.5% per year to produce the 2020 condition, except for the segment along Basalt Road. This segment of road is not expected to have substantially changed in operation since it is used primarily for recreational activities—and no additional developments that create additional traffic have occurred. Therefore, all traffic volumes analyzed are representative of the year 2020 and match the 2020 traffic volumes as used in the 2019 EIS/EIR. All existing highway and roadway traffic volumes used within the analysis were also provided in the previously certified 2019 EIS/EIR as part of Appendix G1, 2016 Traffic Volumes on California State Highways. All traffic count data used within this analysis is included as Appendix D-1 of this SEIR.

Per the methodology used in the 2019 EIS/EIR, traffic counts along the study area highway segments under daily and peak-hour conditions were obtained from the Caltrans 2016 Traffic Volumes on California State Highways Traffic Census website (Caltrans 2016a) and adjusted accordingly. The roadway segment volume for Basalt Road is the average daily traffic volume between July 2007 and June 2008. Traffic in the area is not expected to have changed due to the rural nature of the road and the lack of development since this time period. All other additional data is gathered from the Bureau of Reclamation (Reclamation) and California Department of Parks and Recreation (Reclamation and CDPR 2013). All other traffic volumes used within the analysis are derived from both sources unless otherwise noted.

3.7.1.3 Level of Service and Methodology

LOS is commonly used as a qualitative description of segment and roadway operations and is based on the capacity and the volume of traffic using the segment or roadway. The Highway Capacity Manual, 6th Edition (HCM 6) (TRB 2016) describes the operation of a roadway using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions). All other relevant LOS and methodology tables used within this analysis were provided in the previously certified 2019 EIS/EIR as part of Appendix G2, Traffic and Transportation Appendix, and further attached as Appendix D-2 of this SEIR. The peak hours of traffic analyzed are typically from the hours of 7:00 a.m. to 9:00 a.m. for the AM peak hour and between 4:00 p.m. and 6:00 p.m. for the PM peak hour.

For all study roadway segments, HCM 6 (TRB 2016) methodology within the Highway Capacity Software 7.0 (HCS 7) was used. Intersections were analyzed per HCM 6 methodology using Synchro LOS software (version 10).

Existing LOS

A roadway segment LOS analysis was prepared for the existing conditions for all highway and roadway segments within the study area as provided in the 2019 EIS/EIR. Tables 3.7-1 shows the LOS values based on the daily traffic volume for highway and roadway segments under existing conditions. All segments are located within Merced County and are identified based on the LOS criteria provided in Table 6 of Appendix G2 of the 2019 EIS/EIR, Traffic and Transportation Appendix, and further attached to this report as Appendix D-2. As shown in Table 3.7-1, all of the existing daily highway segments operate at LOS B or better under existing conditions, except for the highway junction between the SR-33/I-5 west junction, which operates at LOS F (14,500 annual average daily traffic volumes).

Table 3.7-1. Existing Daily Roadway Segment Level of Service

Roadway/Junction	Number of Lanes	Roadway Type	AADT ¹	LOS
I-5/SR-152	4	Rural freeway	32,600	B
SR-152/I-5	4	Rural freeway	31,300	B
SR-152/SR-33	4	Rural freeway	29,700	B
SR-33/I-5 West Junction	2	Rural non-freeway isolated stops	14,500	F
Basalt Road/SR-152	2	Rural non-freeway isolated stops	191	B

Source: Appendix D-2.

Notes: AADT = annual average daily traffic volumes; LOS = level of service; I = Interstate; SR = State Route.

¹ At a highway junction, the segment would have two different values for both directions of the road. In order to provide a conservative analysis, the higher AADT value was used for the analysis.

Table 3.7-2 shows the LOS values based on the AM and PM peak-hour operation for highway segments under existing conditions using the HCM 6 methodology for study area segments as provided in the 2019 EIS/EIR under 2020 conditions. All segments are located within Merced County and were evaluated based on the LOS criteria

provided in Tables 2 and 3 of Appendix G2 of the 2019 EIS/EIR, Traffic and Transportation Appendix, and further attached to this report as Appendix D-2. As shown in Table 3.7-2, all of the existing peak hour roadway segments operate at LOS D or better under existing conditions in both peak hours.

Table 3.7-2. Existing AM and PM Peak Hour Roadway Segment Level of Service

Roadway Segment	Direction	AM Peak Hour		PM Peak Hour	
		Volume	LOS ¹	Volume ¹	LOS ¹
I-5, South of SR-152	Northbound	2,100	C	2,200	C
	Southbound	1,750	C	1,100	B
SR-152, West of I-5	Eastbound	1,200	B	2,000	C
	Westbound	1,600	B	950	A
SR-152, West of SR-33	Eastbound	200	A	1,900	C
	Westbound	1,600	B	650	A
SR-33, Between I-5 and SR-152 ²	Northbound	550	D	650	D
	Southbound	350	C	300	B

Source: Appendix D-2.

Notes: LOS = level of service; I = Interstate; SR = State Route.

- 1 LOS for freeway segments is based on average vehicle density, while LOS for two-lane highway segments is based on percent time-spent-following. All relevant criteria are provided in Tables 2 and 3 of Appendix D-2.
- 2 Maximum segment length allowable for two-lane highway analysis is 3 miles. The 2019 EIS/EIR used a segment length of 3.4 miles. Therefore, this result differs from the 2019 EIS/EIR analysis for 2020 conditions.

An intersection LOS analysis was prepared for the existing conditions using the HCM 6 methodology for unsignalized intersections for the two study area intersections as provided in the 2019 EIS/EIR. Table 3.7-3 shows the LOS values based on the AM and PM peak-hour intersection operations under existing conditions. All intersections are located within Merced County and were evaluated based on the LOS criteria provided in Table 4 Appendix G2 of the 2019 EIS/EIR, and further attached to this report as Appendix D-2. As shown in Table 3.7-3, all of the existing peak-hour intersections operate at LOS A at better. However, when the most delayed movement is analyzed, both intersections in the PM peak hour operate at LOS F. The overall number of vehicles experiencing this delay is equal to or less than 10 vehicles and is expected for such two-way stop-controlled intersections that lie along a separated right-of-way highway with a high degree of through traffic volumes.

Table 3.7-3. Existing Peak Hour Intersection Level of Service

	AM Peak Hour		PM Peak Hour	
	Delay ¹	LOS ²	Delay ¹	LOS ²
Access Road to Romero Visitor Center/SR-152				
Average Delay ³	0.0	A	0.6	A
Worst Delayed Movement ³	16.7	C	118.4	F
Basalt Road/SR-152				
Average Delay ³	0.1	A	0.8	A
Worst Delayed Movement ³	29.8	D	>300	F

Source: Appendix D-2.

Notes: LOS = level of service; SR = State Route.

- 1 Delay in seconds per vehicle.
- 2 LOS is based on the criteria provided for unsignalized intersections in Table 4 of Appendix D-2.
- 3 LOS at unsignalized intersections is reported for both the total average delay of the intersection and the worst movement of the intersection.

3.7.1.4 Transit

The Modified Project site is not directly served by an active transit service. The Bus, Merced’s Regional Transit System, provides bus service throughout Merced County; however, the nearest bus routes to the Modified Project site operate within the City of Gustine and the City of Los Banos, both of which are approximately 15 miles from the Modified Project site (The Bus 2019). Therefore, the Modified Project does not have an active transit service connection for daily use.

3.7.1.5 Pedestrian and Bicycle Facilities

There are no pedestrian or bicycle facilities located in the San Luis Reservoir region within the vicinity of the Modified Project site. However, there are a variety of multi-use trails and hiking trails that exist within the San Luis Reservoir SRA south of SR-152 and along the perimeter of O’Neill Forebay. The San Luis Reservoir SRA provides a map of trails within the area that surround the southeastern corner of San Luis Reservoir and along the perimeter of O’Neill Forebay (CDPR 2010, 2017).

3.7.2 Relevant Plans, Policies, and Ordinances

3.7.2.1 Federal

There are no federal plans, policies, or ordinances related to traffic and transportation that are relevant to the Modified Project.

3.7.2.2 State

California Senate Bill 743

CEQA Guidelines Section 15064.3, subdivision (b), focuses on specific criteria for determining the significance of transportation impacts. It is divided into four subdivisions, including (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. Subdivision (b)(3) recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type. In these situations, lead agencies are directed to evaluate factors such as the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by a project. Subdivision (b)(3) further indicates that a qualitative analysis of construction traffic is often appropriate. A qualitative analysis of VMT is provided in this section as the Modified Project consists of elements that would generate temporary construction-related traffic. SB 743 requires California to reduce greenhouse gas emissions by 40% below 1990 levels by 2030. The California Air Resources Board has determined that it is not possible to achieve this goal without reducing VMT growth, and specifically, California needs to reduce per-capita VMT across all economic sectors. SB 743 is primarily focused on passenger cars and the reduction in per-capita VMT as it relates to individual trips. The OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) (OPR 2018) provides guidance and tools to properly carry out the principles within SB 743 and outlines how to evaluate transportation impacts in CEQA. The OPR Technical Advisory was used within this analysis as the primary source of analysis of VMT, as well as for other transportation-related impacts.

OPR’s Technical Advisory does not provide specific guidance to analyze VMT for recreational facilities. However, in 2020, OPR held a series of virtual office hours to discuss implementation of the Technical Advisory, as well as additional questions posed by attendees (OPR 2020). In response to questions regarding recreational facilities,

OPR recommended comparing the total VMT with and without implementation of a proposed project and determining whether a project would draw visitors from further away or reduce the distance visitors would travel by providing closer amenities. This methodology is similar to the OPR guidance for analyzing the effects of retail projects. The OPR Technical Advisory recommends that the effects of a retail project should be analyzed by assessing the change in total VMT as retail projects typically reroute travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns. Similarly, development of recreational facilities might lead to increases or decreases in VMT, depending on previously existing recreational travel patterns. As such, OPR's guidance for analysis of retail projects is used as the basis for the Modified Project's analysis.

California Department of Transportation

As the owner and operator of the State Highway System, the California Department of Transportation (Caltrans) implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. Pursuant to Section 21092.4 of the California Public Resources Code, for projects of statewide, regional, or area-wide significance, the lead agency shall consult with transportation planning agencies and public agencies that have transportation facilities that could be affected by a project.

In anticipation of SB 743 implementation, Caltrans released the Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG) in May 2020, replacing the 2002 Guide for the Preparation of Traffic Impact Studies. Per the 2020 TISG, Caltrans' primary review focus is now VMT, replacing LOS as the metric used in CEQA transportation analyses. Caltrans recommends use of OPR's recommended thresholds for land use projects and recommends following the guidance on methods of VMT assessment found in OPR's Technical Advisory. Thresholds from the Technical Advisory for residential, office, and retail projects are provided as follows (OPR 2018):

Residential: A proposed project exceeding a level of 15% below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the Sustainable Communities Strategy for that city and should be consistent with the Sustainable Communities Strategy.

Office: A proposed project exceeding a level of 15% below existing regional VMT per employee may indicate a significant transportation impact.

Retail: A net increase in total VMT may indicate a significant transportation impact.

Mixed-Use: Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential, office, and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

In addition to VMT, the 2020 TISG states that it may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System (Caltrans 2020). Caltrans also notes that a future update of the TISG may include the basis for

requesting transportation impact analysis not based on VMT and define elements to be included in non-VMT analysis. At the time of this study, this update has not been released; however, the following analysis provided includes a mainline segment analysis along Caltrans facilities within the study area.

Caltrans Transportation Concept Report for State Route 152

Transportation Concept Reports are planning documents that describe Caltrans' basic approach to development of a given state route. The Transportation Concept Report for State Route 152, District 06 is a long-range system planning document that establishes a planning concept for the District 6 state highway corridor through the year 2035 (Caltrans 2016b). The report provides the route, traffic data, and operating characteristics for the current year (2012), and future years 2020 and 2035. In addition, Transportation Concept Reports define the type of facility and LOS for each route. Caltrans attempts to maintain a target LOS at the transition between LOS C and D on state highway facilities, or whichever LOS is feasible to attain. The Concept LOS is a target LOS determined by the importance of the route and environmental factors. A deficiency or a need for improvement is triggered when the actual LOS falls below the Concept LOS. Again, as mentioned above, per the 2020 TISG, Caltrans' primary review focus is now VMT, replacing LOS as the metric used in CEQA transportation analyses.

3.7.2.3 Local

Merced Vision 2030 General Plan

As required by state law, Merced County has adopted a general plan to guide land use decisions within the county. The general plan provides goals, policies, standards, and implementation programs to guide the physical development of a county. At a minimum, the general plan must address the topics of land use, transportation, housing, conservation, open space, noise, and safety. The Merced County General Plan, adopted in 2013, has established the year 2030 as the plan's time horizon. The following policies from the Merced County General Plan Transportation and Circulation Element are relevant to the Modified Project (Merced County 2013):

Transportation and Circulation Element

- **Policy CIR-1.5: County Level of Service Standards:** 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:** 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.
- **Policy CIR-1.14: Required Structural Improvements:** Require developers of mining, large commercial, agricultural commercial, and industrial projects to either make appropriate roadway improvements and/or provide a funding mechanism for maintenance of the structural sections of County roadways when such projects could result in appreciable increases to commercial truck traffic and/or compromise the integrity of existing road sections.

3.7.3 Thresholds of Significance

The following significance criteria from the 2019 EIS/EIR are used for the purposes of analysis in this SEIR. These criteria, which have not changed from the 2019 EIS/EIR, are identified in Chapter 12, Traffic and Transportation, of the 2019 EIS/EIR. A significant impact related to transportation would occur if the Modified Project would:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and relevant components of the circulation system, including streets, highways and freeways, and mass transit.
2. Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
3. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.
4. Increase traffic substantially in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
5. Exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways.
6. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
7. Result in inadequate emergency access.

3.7.4 Impacts Analysis

Analytical Approach

Construction

Modified Project construction was evaluated to determine study area and roadway network impacts. The Institute of Transportation Engineers' (ITE's) Trip Generation Handbook, 10th Edition (ITE 2017) does not contain trip rates for the construction-related activities that would be associated with the Modified Project. Trip generation estimates for construction projects are based on average or peak number of workers and trucks that would be required for the proposed construction activities. The Modified Project would result in the temporary addition of haul trucks, vendor trucks, and worker vehicles to the circulation network within the study area over the course of the construction period. As stated in Chapter 2, Project Description, the previously approved 2019 EIS/EIR stated that construction of the Approved Project is expected to last approximately 8 to 10 years, assuming no funding constraints are encountered. The 2019 EIS/EIR assumed work would commence in 2020 and would likely be completed within 10 to 12 years and up to 20 years if funding constraints are encountered.

The additional components of the Modified Project analyzed herein include the proposed new campground in the northwest corner of O'Neill Forebay, the improvements to the existing San Luis Creek Day Use Area, and the minor additions to the contractor work area, which are expected to begin in 2022 and occur over a period of 18 months, concluding in 2023. In addition, the additional construction assumptions element of the Modified Project is described for clarification purposes in this SEIR and would result in no change in the emissions or conclusions presented in the 2019 EIS/EIR. According to the construction information provided by Reclamation, and as provided

in Section 3.2, Air Quality, Table 3.2-6, Construction Scenario Assumptions, the peak construction phase between all components of the Modified Project is the Grading/Trenching phase of proposed campground construction. Therefore, all other components of the Modified Project that involve construction are assumed to have a less than or equal to impact than the peak construction phase. Additionally, the construction of all other components of the Modified Project is not expected to change the trip generation estimates, construction trips, and resulting impacts or conclusions as stated in the 2019 EIS/EIR.

Generally, work would be performed 24 hours per day, 7 days per week, 12 months per year. The 24-hour workday would consist of two 10-hour work shifts, with one 30-minute break for lunch each shift, plus a 3-hour maintenance period. However, in order to provide a conservative analysis, all truck trips would be distributed evenly throughout the workday according to a 12-hour shift, while worker trips would result in shift changes at 6:00 a.m. and 6:00 p.m. generating both inbound and outbound trips.

Typically, the AM peak hour analyzed is between the hours of 7:00 a.m. to 9:00 a.m.; therefore, the number of worker trips that would occur during the AM peak hour is zero. However, to provide a conservative analysis, the analysis would assume approximately one-third of outbound workers departing the site in the AM peak hour. The typical PM peak hour analyzed is between the hours of 4:00 p.m. to 6:00 p.m.; therefore, all inbound worker trips would arrive to the site in the PM peak hour.

The construction trip generation assumptions and trip generation table for the Approved Project from the 2019 EIS/EIR was used as base estimate in this analysis. Therefore, all construction scenarios analyzed include the trip generation and trip assignment for the entire Approved Project. The same distribution assumptions also apply—the construction workforce is expected to arrive from the City of Los Banos due to the close proximity of the expected labor population. Trucks are expected to originate from I-5 since it is a major truck hauling route that connects the interior of California and the west coast. It is important to note that the peak construction phase of the Approved Project may or may not occur concurrently with the peak construction phase of the newly added components of the Modified Project discussed below. One other major difference between the 2019 EIS/EIR analysis and assumptions to this analysis is that there would no longer be a temporary signalization of any intersections along SR-152. The intersections of Basalt Road/SR-152 and access road to Romero Visitor Center/SR-152 would remain unsignalized and in their existing configuration for the purposes of this analysis.

Operation

As described in Chapter 2 of this SEIR, the Modified Project's operation and maintenance activities would generally remain similar to the existing activities that occur currently within the study area. Operation and maintenance activities associated with all components of the Modified Project would therefore generate nominal new traffic volume to the circulation network, except for the proposed campground. The operation of the proposed new campground located in the northwest section of O'Neill Forebay would generate permanent trips to the study area. The proposed campground is assumed to be operational after 18 months of construction, and therefore, all operational trips associated with the campground would overlap with the peak construction phase of the remainder of the Modified Project. As such, operational trips associated with the campground and peak construction phase of the Modified Project have been analyzed concurrently. Additionally, to compensate for the Modified Project-related closure of the Basalt Day Use Area, improvements made to the San Luis Creek Day Use Area would involve marginal improvements that would generate a nominal number of permanent trips to the area. Trip generation estimates were calculated from the AM and PM peak hour trip generation rates obtained from the ITE's Trip Generation Handbook, 10th Edition (ITE 2017). The daily trip rate was obtained from the (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (SANDAG 2002) due to the lack of available data from ITE.

Threshold 1

Would the Modified Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and relevant components of the circulation system, including streets, highways and freeways, and mass transit?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant	Less than Significant	No

Campground Construction and Day Use Area Improvements

LOS Analysis

The construction phasing schedule and vehicle trip assumptions for construction of the proposed campground and San Luis Creek Day Use Areas improvements are provided in Section 3.2, Table 3.2-6. The number of vehicles traveling to and from the Modified Project site during the proposed campground construction and day use area improvements is expected to result in a temporary increase of traffic within the study area, including in all relevant components of the circulation system. However, this increase is temporary and expected to occur over the approximately 18-month construction period. The campground construction would generate approximately 70 daily trips, 10 AM peak-hour trips, and 18 PM peak hour trips. The permanent operations of the proposed campground would generate 316 daily trips, 17 AM peak-hour trips, and 21 PM peak-hour trips. As described in detail below, the permanent operations of the campground would not result in impacts. Therefore, since the construction of the campground is expected to generate fewer overall trips than the operation of the campground, the impacts to the policies establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, would be **less than significant**.

VMT Analysis

OPR’s Technical Advisory does not provide specific guidance on the evaluation of VMT related to construction and temporary traffic impacts. Since the construction of the proposed campground and San Luis Creek Day Use Area improvements would both be temporary and result in non-permanent trips, the completion of construction would return VMT to pre-project conditions that match the baseline VMT conditions. Therefore, as the campground construction and day use area improvements would not increase VMT in the area, impacts to VMT policies related to SB 743 would be **less than significant**.

Changes in Borrow Area Location

LOS Analysis

As discussed in Section 2.4.2, Changes in Borrow Area Location, the change in borrow area locations involves the extraction of materials for dam construction from two additional areas, Borrow Area 12 and Borrow Area 14, as shown on Figure 2-3, Approved and Modified Project Footprints, and Figure 2-4B, Modified Project Detail. Borrow Area 12 and Borrow Area 14 are within the overall construction footprint identified in the 2019 EIS/EIR, but were analyzed as contractor staging areas. There are no additional construction worker vehicles or trucks expected with the use of

Borrow Area 12 and 14. While the existing roads near the borrow areas (e.g., access roads and Basalt Road) would need to be widened, the impacts to the policies establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, would be **less than significant**.

VMT Analysis

OPR's Technical Advisory does not provide specific guidance on the evaluation of VMT related to construction and temporary traffic impacts. Since the changes in borrow area locations are within the overall construction footprint identified in the 2019 EIS/EIR, and since construction in general would result in temporary and non-permanent trips, the completion of construction within the borrow area locations would return VMT to pre-project conditions that match the baseline VMT conditions. Therefore, as the changes in borrow area locations would not increase VMT in the area, impacts to VMT policies related to SB 743 would be **less than significant**.

Minor Additions to Contractor Work Area

LOS Analysis

The construction phasing schedule and vehicle trip assumptions for the construction of the minor additions to contractor work area is provided in Section 3.2, Table 3.2-6. The number of vehicles traveling to and from the Modified Project site during the construction associated with the minor additions to the contractor work area is expected to result in a temporary increase of traffic within the study area, including in all relevant components of the circulation system. However, since this increase is temporary, and because the construction associated with the minor additions to the contractor work area is expected to generate fewer trips than the operation of the proposed campground analyzed above in Campground Construction and Day Use Area Improvements, the impacts to the policies establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, would be **less than significant**.

VMT Analysis

OPR's Technical Advisory does not provide specific guidance on the evaluation of VMT related to construction and temporary traffic impacts. Since the minor additions to the contractor work area would not substantially change the construction impacts as analyzed in the 2019 EIS/EIR, and since construction in general would result in temporary and non-permanent trips, the completion of construction for minor additions to the contractor work area would return VMT to pre-project conditions that match the baseline VMT conditions. Therefore, as the construction of the minor additions to contractor work area would not increase VMT in the area, impacts to VMT policies related to SB 743 would be **less than significant**.

Additional Construction Assumptions

As discussed in Chapter 2 of this SEIR, the overall construction schedule and assumptions regarding personnel and equipment remain unchanged by the Modified Project. Overall, the additional construction assumptions are described for clarification purposes in the SEIR. Based on the above considerations, the Modified Project's impacts on the policies establishing measures of effectiveness for the performance of the circulation system, considering all modes of transportation, would be **less than significant**.

Campground Operations

The Modified Project would entail construction of a new campground on the northwest corner of O’Neill Forebay to help offset the temporary loss of Basalt Campground, which would close due to construction of the Approved Project as discussed in the 2019 EIS/EIS. The 79-site Basalt Campground is part of the San Luis Reservoir SRA and is accessible year-round from the Basalt Road/SR-152 intersection. The proposed campground would be constructed to offset the temporary closure of Basalt Campground, and would possess the same number of campsites. Upon completion of the Modified Project, Basalt Campground would reopen to the general public. Additionally, to compensate for the closure of the Basalt Day Use Area, the Modified Project would make marginal improvements to the San Luis Creek Day Use Area that would generate a nominal amount of traffic. Therefore, upon the reopening of Basalt Campground, the operation of the proposed new campground would result in permanently added new vehicle trips to the circulation system and roadway network within the study area. Campground operations are assessed through both an intersection LOS analysis and a VMT analysis and discussed below.

LOS Analysis

To assess the operational impacts of the campground operations, an additional study area intersection was added to the intersection LOS analysis. There is one road that provides access to the proposed campground area from SR-152, and currently it provides access to the existing San Luis Creek Campground, group campgrounds, and day use areas on the western portion of O’Neill Forebay. Therefore, the intersection of San Luis Creek Campground Road/SR-152 was added to assess the potential impact to the intersection.

In order to assess the operations at the intersection, traffic volumes for the southbound movements (outbound movements from San Luis Creek Campground Road onto SR-152) and for eastbound left-turn and westbound right-turn movements (inbound movements from SR-152 onto the San Luis Creek Campground Road) were approximated based on an evaluation of the existing land uses accessible from San Luis Creek Campground Road. Currently, San Luis Creek Campground and the adjacent group campgrounds (primarily intended for large group gatherings and do not provide accommodation for overnight stay) are at the northern terminus of San Luis Creek Campground Road; together San Luis Creek Campground and the group campgrounds consist of approximately 78 campsites. Additionally, the San Luis Creek Day Use Area is located south of the group campgrounds, and provide day use amenities such as picnic locations, tables, grills, swimming areas, and boat launch zones (CDPR 2017). The total area of the San Luis Creek Day Use Area was estimated to be approximately 90 acres, of which two-thirds is directly useable for Public Park amenities.

Since the only accessible uses from this roadway are the aforementioned campground and associated land uses, trip generation estimates were prepared to assess the inbound and outbound AM and PM peak-hour movements at the intersection. As previously shown, the daily trips for this area are already reflected in existing data used within the analysis. Trip generation estimates for a typical weekday period were calculated from the AM and PM peak-hour trip generation rates obtained from ITE (2017). The daily trip rate was obtained from SANDAG (2002) rates due to the lack of available data from ITE. Due to the difference in land use, the San Luis Creek Day Use Area was evaluated as a Public Park land use since, as described in ITE (2017), that land use more closely represents the day use area activities than ITE’s Campground/Recreational Vehicle Park land use trip rate. As shown in Table 3.7-4, San Luis Creek Campground generates approximately 18 AM peak-hour trips (7 inbound and 11 outbound) and 28 PM peak-hour trips (18 inbound and 10 outbound). The traffic volumes estimated are similar to those observed from traffic counts at the Basalt Road/SR-152 intersection, which also possess similar land uses including Basalt Campground, Medeiros Campground, and boat launch areas. As stated above, these estimates were used to approximate the AM and PM peak-hour traffic volumes for inbound and outbound movements at the San Luis Creek Campground Road/SR-152 intersection.

Table 3.7-4. Peak Hour Trip Generation Estimates for Existing San Luis Creek Campground Area Operations

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates¹									
Campground/Recreational Vehicle Park	416	Campsites	4.00	0.08	0.13	0.21	0.18	0.09	0.27
Public Park	411	Acres	0.78	0.01	0.01	0.02	0.06	0.05	0.11
Trip Generation									
San Luis Creek Campground and Group Campgrounds ²	416	78 campsites	312	6	10	16	14	7	21
North and South Beach Day Use Picnic Area ³	411	60 acres	47	1	1	2	4	3	7
Total Trip Generation			359	7	11	18	18	10	28

Notes: ITE = Institute of Transportation Engineers.

¹ Peak hour trip rates from ITE 2017. Daily trip rate from SANDAG 2002.

² Group campground number of campsites estimated on number of vehicles allowed per campsite (25 total vehicles, two total group campsites).

³ Based on an estimate of 2/3 of the total acreage of the day use area.

As stated above, the Modified Project would construct a proposed new campground to replace the temporary closure of Basalt Campground due to construction outlined in the 2019 EIS/EIR. Basalt Campground and the proposed campground would be identical in terms of size, with a capacity of 79 campsites. Upon the reopening of Basalt Campground, the proposed new campground would remain operational, therefore permanent vehicle trips would be added to the circulation system and study area roadway network. Trip generation estimates for a typical weekday period were calculated from the AM and PM peak-hour trip generation rates obtained from ITE (2017). The daily trip rate was obtained SANDAG (2002) rates due to the lack of available data from ITE. As shown in Table 3.7-5, the permanent operation of the proposed campground would be expected to generate approximately 316 daily trips, 17 AM peak-hour trips (6 inbound and 11 outbound), and 21 PM peak-hour trips (14 inbound and 7 outbound).

Table 3.7-5. Modified Project Trip Generation for Campground Operation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates¹									
Campground/Recreational Vehicle Park	416	Campsites	4.00	0.08	0.13	0.21	0.18	0.09	0.27
Trip Generation									
Proposed Campground in NW Area of O'Neill Forebay	416	79 campsites	316	6	11	17	14	7	21
Total Trip Generation			316	6	11	17	14	7	21

Notes: ITE = Institute of Transportation Engineers; NW = northwest.

¹ Peak hour trip rates from ITE 2017. Daily trip rate from SANDAG 2002.

As mentioned previously, because permanent campground operations would result in a higher trip generation as compared to all other construction components of the Modified Project, and because these trips would have a permanent contribution to the circulation system and study area roadway network, the campground operations would be analyzed in conjunction with the Approved Project construction trip generation peak as identified in the 2019 EIS/EIR since these periods would overlap and occur concurrently. As shown in Table 3.7-6, trip generation for the peak construction phase of the Approved Project as analyzed in the 2019 EIS/EIR would result in a total 268 daily trips (150 construction personnel trips and 118 construction truck trips), 45 AM peak-hour trips (25 construction personnel trips and 20 construction truck trips), and 95 PM peak-hour trips (75 construction personnel trips, which account for spillover from the previous shift, and 20 construction truck trips).

Table 3.7-6. Approved Project Trip Generation

Vehicle Type ¹	Time Period			
	AM Peak Hour	PM Peak Hour	Off-Peak Hours	Total Daily
Construction Truck Trip	20	20	78	118
Construction Personnel Trip	25	75	50	150
Total Construction-Related Trip	45	95	148	268

Note:

¹ As provided for the Crest Raise Alternative in Table 12-7 of the 2019 EIS/EIR.

A daily roadway segment LOS analysis was prepared for the Existing plus Approved Project Construction plus Campground Operation by combining the existing conditions analysis with trip generation and traffic volume information in Tables 3.7-5 and 3.7-6. Table 3.7-7 shows the LOS values based on the daily traffic volume for highway and roadway segments. All segments are located within Merced County and are identified based on the LOS criteria provided in Table 6 in Appendix G2 of the 2019 EIS/EIR, and further attached to this report as Appendix D-2. As shown in Table 3.7-7, all of the daily highway segments would continue to operate at LOS B or better under Existing plus Approved Project Construction plus Campground Operation conditions, except for the highway junction between the SR-33/I-5 west junction, which would continue to operate at LOS F (14,642 annual average daily traffic volume). There would be no change to the LOS as it pertains to the daily roadway segment analysis. Therefore, the temporary construction activities associated with the Modified Project would have a **less-than-significant impact**.

Table 3.7-7. Existing plus Approved Project Construction plus Campground Operation Daily Roadway Segment Level of Service

Roadway/Junction	Existing 2020		Approved Project Peak Construction	Campground Operations	Existing + Approved Project Peak Construction + Campground Operations		Change in LOS
	AADT ¹	LOS	Daily Trips	Daily Trips	AADT ¹	LOS	
I-5/SR-152	32,600	B	95	79	32,774	B	None
SR-152/I-5	31,300	B	78	111	31,489	B	None
SR-152/SR-33	29,700	B	268	158	30,126	B	None
SR-33/I-5 West Junction	14,500	F	95	47	14,642	F	None

Table 3.7-7. Existing plus Approved Project Construction plus Campground Operation Daily Roadway Segment Level of Service

Roadway/Junction	Existing 2020		Approved Project Peak Construction	Campground Operations	Existing + Approved Project Peak Construction + Campground Operations		Change in LOS
	AADT ¹	LOS	Daily Trips	Daily Trips	AADT ¹	LOS	
Basalt Road/ SR-152	191	B	268	0	459	B	None

Source: Appendix D-2.

Notes: AADT = annual average daily traffic volumes; LOS = level of service; I = Interstate; SR = State Route.

¹ At a highway junction, the segment would have two different values for both directions of the road. In order to provide a conservative analysis, the higher AADT value was used for the analysis.

A peak-hour roadway segment LOS analysis was prepared for the Existing plus Approved Project Construction plus Campground Operation by combining the existing conditions analysis with trip generation and traffic volume information in Tables 3.7-5 and 3.7-6. Table 3.7-8 shows the LOS values based on the AM and PM peak-hour operation for highway segments. All segments are located within Merced County and were evaluated based on the LOS criteria provided in Tables 2 and 3 in Appendix G2 of the 2019 EIS/EIR, and further attached to this report as Appendix D-2.

As shown in Table 3.7-8, all of the peak hour roadway segments would continue to operate at LOS D or better under Existing plus Approved Project Construction plus Campground Operation conditions. Therefore, the temporary construction activities associated with the Approved Project, combined with operation of the proposed new campground, would have a **less-than-significant impact**.

An intersection LOS analysis was prepared for the Existing plus Approved Project Construction plus Campground Operation by combining the existing conditions analysis with trip generation and traffic volume information in Tables 3.7-5 and 3.7-6. Table 3.7-9 shows the LOS values based on the AM and PM peak hour intersection operations. All intersections are located within Merced County and were evaluated based on the LOS criteria provided in Table 4 in Appendix G2 of the 2019 EIS/EIR and further attached to this report as Appendix D-2.

As shown in Table 3.7-9, all of the peak-hour intersections would continue to have average delays equating to LOS A in both peak hours. However, it should be noted that individual movements at the intersections would continue to operate at LOS F in one or both peak hours. As stated previously, the overall number of vehicles experiencing delays at these individual movements is relatively low and constitutes a small percentage of the total volumes at each intersection. Also, none of the intersections would warrant a traffic signal due to the low volume of side-street peak-hour volumes. During the overlap of the Modified Project construction and the proposed new campground operation, most of the delay would be experienced by the construction personnel and trucks; however, once the Modified Project is constructed, the delay experienced by the proposed campground operation would be equivalent to other existing unsignalized stop-controlled intersections along SR-152. This is expected for such two-way stop-controlled intersections that lie along a separated right-of-way highway with a high degree of through traffic volumes. All study intersections also possess adequate safety measures to allow for turning movements to safely maneuver from higher-speed roadways (e.g., SR-152) to lower-speed local roads. Such safety elements include adequate site distance at each intersection, separate left-turn lanes, a center median for storage, and acceleration lanes. Importantly, the LOS at each of the study intersections would not change and would not result in LOS degradation. The study intersection LOS and function of the intersections would remain consistent with existing conditions.

Therefore, the temporary construction activities associated with the Approved Project, combined with operation of the proposed campground, would have a **less-than-significant impact**.

VMT Analysis

Camping at Basalt Campground primarily attracts visitors interested in boating activities at either O'Neill Forebay or San Luis Reservoir. The proposed new campground would attract the same type of visitors. The nearest campground offering similar camping activities is Los Banos Creek Campground, approximately 16 miles to the southeast. Otherwise, additional alternative recreational camping and boating activities would be provided by several reservoirs and lakes within the foothills of the Sierra Nevada, including Hensley Lake, Millerton Lake, Eastman Lake, Lake McClure, and Don Pedro Reservoir. All are located 70 miles or more from the Modified Project site. As such, an additional campground within the San Luis Reservoir SRA would likely reduce trips made from communities in the nearby coastal regions to recreational camping and boating activities further to the east; thereby decreasing the net VMT in the region. Furthermore, as discussed in Section 3.2, the average occupancy rate of Basalt Campground is approximately 40%, based on input from the California Department of Parks and Recreation. Therefore, it is unlikely that the addition of a new, duplicate campground, would largely induce travel demand; rather, campground visitors would be spread across a larger area.

Reopening Basalt Campground upon completion of the Modified Project, in conjunction with operation of the proposed new campground, would permanently add new vehicle trips to the transportation network; however, as described above, trips associated with proposed new campground operations are unlikely to induce additional VMT. Similarly, improvements to the San Luis Creek Day Use Area would produce a nominal number of permanent vehicular trips to the study area, and therefore not increase VMT. Therefore, the net VMT in the region would not increase with the Modified Project, and impacts to VMT policies related to SB 743 would be **less than significant**.

Table 3.7-8. Existing plus Approved Project Peak Construction plus Campground Operation AM and PM Peak-Hour Roadway Segment Level of Service

Roadway Segment	Direction	Existing 2020				Approved Project Peak Construction		Campground Operations		Existing + Approved Project Peak Construction + Campground Operations				Change in LOS	
		AM Peak		PM Peak		AM Peak-Hour Volume	PM Peak-Hour Volume	AM Peak-Hour Volume	PM Peak-Hour Volume	AM Peak		PM Peak		AM Peak-Hour Volume	PM Peak-Hour Volume
		Volume	LOS ¹	Volume ¹	LOS ¹					Volume ¹	LOS ¹	Volume ¹	LOS ¹		
I-5, South of SR-152	Northbound	2,100	C	2,200	C	4	11	2	5	2,106	C	2,216	C	None	None
	Southbound	1,750	C	1,100	B	12	17	3	2	1,765	C	1,119	B	None	None
SR-152, West of I-5	Eastbound	1,200	B	2,000	C	23	31	3	2	1,226	B	2,033	C	None	None
	Westbound	1,600	B	950	A	6	19	2	5	1,608	B	974	A	None	None
SR-152, West of SR-33	Eastbound	200	A	1,900	C	35	60	5	3	240	A	1,963	C	None	None
	Westbound	1,600	B	650	A	10	35	3	7	1,613	B	692	A	None	None
SR-33, Between I-5 and SR-152 ²	Northbound	550	D	650	D	12	17	2	1	564	D	668	D	None	None
	Southbound	350	C	300	B	4	11	1	2	355	C	313	B	None	None

Source: Appendix D-2.

Notes: LOS = Level of Service; I = Interstate; SR = State Route.

- ¹ LOS for freeway segments is based on average vehicle density, while LOS for two-lane highway segments is based on percent time-spent-following. All relevant criteria are provided in Tables 2 and 3 of Appendix D-2.
- ² Maximum segment length allowable for two-lane highway analysis is 3 miles. The 2019 EIS/EIR used a segment length of 3.4 miles. Therefore, this result differs from the 2019 EIS/EIR analysis for 2020 conditions.

Table 3.7-9. Existing plus Approved Project Peak Construction plus Campground Operation Intersection Level of Service

	Existing 2020				Existing + Approved Project Peak Construction + Campground Operations				Change in LOS	
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak-Hour Volume	PM Peak-Hour Volume
	Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²		
Access Road to Romero Visitor Center/SR-152										
Average Delay ³	0.0	A	0.6	A	0.1	A	0.9	A	None	None
Worst Delayed Movement ³	16.7	C	118.4	F	16.9	C	125.7	F	None	None
Basalt Road/SR-152										
Average Delay ³	0.1	A	0.8	A	0.3	A	1.8	A	None	None
Worst Delayed Movement ³	29.8	D	>300	F	31.7	D	>300	F	None	None
San Luis Creek Campground/SR-152										
Average Delay ³	0.3	A	0.1	A	0.5	A	0.3	A	None	None
Worst Delayed Movement ³	65.4	F	57.5	F	72.4	F	59.2	F	None	None

Source: Appendix D-2.

Notes: LOS = level of service; SR = State Route.

¹ Delay in seconds per vehicle.

² LOS is based on the criteria provided for unsignalized intersections in Table 4 of Appendix D-2.

³ LOS at unsignalized intersections is reported for both the total average delay of the intersection and the worst movement of the intersection.

Cumulative Impacts

As discussed in Chapter 3, Environmental Analysis, and displayed in Table 3-1, Cumulative Projects, there are several projects within the study area and circulation of the Modified Project that may contribute to cumulative impacts. The California High-Speed Rail Project is expected to be under construction during the course of construction of the Modified Project; however, since the Gilroy–Merced alignment of the rail project is currently slated to be placed approximately 15 miles west of the San Luis Reservoir SRA, and 3 miles north of O’Neill forebay, construction or operational traffic for the California High-Speed Rail Project is not expected to influence the study area roadway network.

The Central Valley Project Municipal and Industrial Water Shortage Policy EIS (Reclamation 2015) is a policy statement and not expected to influence the study area roadway network. Additionally, the San Luis Transmission Project is expected to be fully constructed prior to the construction or operation of any component of the Modified Project, and therefore is not expected to influence the study area roadway network. Operation and construction of the San Luis Reservoir Low Point Improvement Project is also not expected to influence the study area roadway network.

It is expected that work associated with the San Luis Reservoir SRA Resource Management Plan/General Plan (San Luis Reservoir SRA RMP/GP) would occur over the course of construction of the Modified Project; however, the San Luis Reservoir SRA RMP/GP does not identify specific projects, as those would be evaluated on a case-by-case basis. Therefore, the San Luis Reservoir SRA RMP/GP cannot be conclusively analyzed and it is not expected to influence the study area roadway network.

The San Luis Solar Project is expected to be partially under construction over the course of construction of the Modified Project, but would not generate trips on I-5 or SR-152. Instead, the San Luis Solar Project would use SR-33 to access McCabe Road and Donohugh Road. However, construction of the San Luis Solar Project would occur in phases and at different sites along the eastern edge of O’Neill Forebay and would not cause a substantial reduction in LOS within the study area roadway network.

The B.F. Sisk Dam Raise and Reservoir Expansion Project (reservoir expansion project) would be constructed within the same general area of San Luis Reservoir as the Modified Project; however, as analyzed within the joint Final EIR and Supplemental EIS for the reservoir expansion project produced by Reclamation and the San Luis & Delta–Mendota Water Authority and released in December 2020, the addition of the reservoir expansion project with the Modified Project would not change the LOS within any of the shared study area roadway segments or intersections.

Once operational, many of the cumulative projects would add only a nominal number of permanent vehicular trips and not substantially degrade the LOS within the study area roadway network. Therefore, because many of the cumulative projects would either generate a nominal number of trips within the study area roadway network or generate temporary construction trips that would not change the LOS within the study area roadway network, the Modified Project including the operation of the proposed campground, along with the cumulative projects listed above, would result in **less-than-significant cumulative impacts** to the policies establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant.

Threshold 2

Would the Modified Project conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant	Less than Significant	No

There is no congestion management program currently adopted for Merced County. As such, construction and operation of all components of the Modified Project would not conflict with any applicable congestion management program. Therefore, both in reference to all components of the Modified Project, as well as cumulatively, this impact would be **less than significant**.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant.

Threshold 3

Would the Modified Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant	Less than Significant	No

As described in Section 3.7.2, Relevant Plans, Policies, and Ordinances, the Merced County General Plan Transportation and Circulation Element outlines policies that pertain to the Modified Project as it relates to public transit, bicycle, and pedestrian facilities. Additionally, as described under Section 3.7.1, Existing Conditions, the San Luis Reservoir region within the vicinity of the Modified Project does not have pedestrian or bicycle facilities. Multi-use and hiking trails are provided along the perimeter of O’Neill Forebay and at various other locations within the San Luis Reservoir SRA. Additionally, there is no active transit service that services the Modified Project site, as the nearest transit stops are within the City of Gustine and City of Los Banos. Construction truck traffic could also have temporary and nominal effects on transit service within the study area due to the slow-moving traffic. Therefore, construction of the Modified Project as analyzed would not cause any interruptions to public transit, pedestrian, or bicycle facilities. The permanent operation of the proposed campground would increase active users in the area and would therefore raise the total number of pedestrians and bicyclists in the area and along the multi-use and hiking trails; however, since all trails provide separation between motorized and non-motorized forms of travel, the effect would be negligible. Furthermore, the improvements to the San Luis Creek Day Use Area would generate a nominal number of permanent trips. Therefore, construction of the Modified Project and operation of the proposed campground would not have an effect on any adopted policy, plan, or program regarding public transit, bicycle, or pedestrian facilities, and impacts would be **less than significant**.

Cumulative Impacts

All of the cumulative projects as analyzed in Threshold 1 would either generate a nominal number of trips within the study area roadway network, as well as temporary construction trips that would not change the general functioning of the study area roadway network. Therefore, addition of the Modified Project, including the operation of the campground, along with the cumulative projects, would not have an effect on any adopted policy, plan, or program regarding public transit, bicycle, or pedestrian facilities, and cumulative impacts would be **less than significant**.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant.

Threshold 4

Would the Modified Project increase traffic substantially in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant	Less than Significant	No

Campground Construction and Day Use Area Improvements

As discussed under Threshold 1, the number of vehicles traveling to and from the Modified Project site during the proposed campground construction and improvements to the San Luis Creek Day Use Area is expected to result in a temporary increase in traffic within the study area, including in all relevant components of the circulation system. However, because this increase is temporary and occurring over the approximately 18-month construction period, and because campground construction is expected to generate fewer overall trips than the operation of the campground, the Modified Project would not result in a substantial increase in traffic and impacts would be **less than significant**.

Changes in Borrow Area Location

As discussed under Threshold 1, the changes in borrow area locations are within the overall construction footprint identified in the 2019 EIS/EIR, and there will be no additional construction worker vehicles or trucks expected with use of Borrow Area 12 and 14. The existing non-public access roads currently used around San Luis Reservoir, as well as Basalt Road, may need be widened and improved to provide access to the borrow areas. However, the number of trips will remain the same, and therefore would not result in a substantial increase in traffic; impacts would be **less than significant**.

Minor Additions to Contractor Work Area

As discussed under Threshold 1, the number of vehicles traveling to and from the Modified Project site during construction associated with the minor additions to the contractor work area is expected to result in a temporary increase in traffic within the study area, including in all relevant components of the circulation system. However, because this increase is temporary, and because the construction associated with the minor additions to the contractor work area is expected to generate fewer trips than operation of the campground, the Modified Project would not result in a substantial increase in traffic; impacts would be **less than significant**.

Additional Construction Assumptions

As discussed in Chapter 2 of this SEIR, the overall construction schedule and assumptions regarding personnel and equipment remain unchanged by the Modified Project. Overall, the additional construction assumptions are described for clarification purposes in the SEIR. Based on the above considerations, these additional assumptions would not result in a substantial increase in traffic; impacts would be **less than significant**.

Campground Operations

As discussed, and analyzed under Threshold 1, the proposed new campground on the northwest corner of O'Neill Forebay would be constructed as part of the Modified Project to offset the closure of Basalt Campground during the construction of all components of the Modified Project. Upon reopening of Basalt Campground, both campgrounds would remain active, and the operation of the proposed campground would be expected to generate permanent vehicle trips to the study area. Additionally, to compensate for the Modified Project-related closure of the Basalt Day Use Area, improvements made to the San Luis Creek Day Use Area would involve marginal improvements that would generate a nominal number of permanent trips to the area. Because the proposed campground would become operational while construction of the remainder of the Modified Project is ongoing, both the Modified Project peak construction and the campground operations were analyzed together. As shown under Threshold 1, the LOS analysis prepared for daily roadway segments, peak-hour roadway segments, and intersections shows that there would be no degradation of LOS or change in LOS, and there would not be a substantial change to traffic within the study area. Therefore, the combination of the peak traffic condition occurring, which is the peak construction phase of the other components of the Modified Project and the operation of the proposed new campground, would not result in a substantial increase in traffic; impacts would be **less than significant**.

Cumulative Impacts

As discussed under Threshold 1, the cumulative projects would either generate a nominal number of trips within the study area roadway network, or generate temporary construction trips that would not change the LOS within the study area roadway network. Also, the addition of the Modified Project, including the operation of the proposed new campground, along with the cumulative projects, would not result in cumulative impacts in regard to traffic load and capacity of the street system; cumulative impacts would be **less than significant**.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant.

Threshold 5

Would the Modified Project exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant	Less than Significant	No

As discussed under Threshold 2, there is no congestion management program currently adopted for Merced County. As such, the construction and operation of all components of the Modified Project would not conflict with any applicable congestion management program. Additionally, there is no LOS standard established currently by the county congestion management agency. Also, as discussed under Threshold 1, the LOS standards for Merced County and Caltrans facilities would not exceed the thresholds of significance and change LOS values. The expected cumulative contribution would also not be possible to analyze, and similarly is not expected to cause a permanent change in LOS values. Therefore, this impact would be **less than significant**.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant.

Threshold 6

Would the Modified Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant with Mitigation Incorporated	Less than Significant with Mitigation Incorporated	No

Campground Construction and Day Use Area Improvements, Changes in Borrow Area Location, Minor Additions to Contractor Work Area, and Additional Construction Assumptions

As stated in the 2019 EIS/EIR, all haul and access roads on the Modified Project site would be constructed consistent with Reclamation standards. All new roads would be improved and treated to prevent dust, and would be approximately 30 feet wide, with approximately 100 feet of clearance to allow for safe egress and ingress of construction equipment. The construction of all components of the Modified Project would result in an increase in construction equipment, construction personnel vehicles, and construction trucks, along with a potential temporary increase in the vehicle speed limit along Basalt Road, which would increase hazards along every study area roadway and intersection evaluated. The construction of the proposed campground would result in new asphalt and resurfacing of the access road leading to the campground, as well as the internal parking lot of the campground, which could increase hazards between construction equipment and visitors accessing the northwest portion of

O’Neill Forebay. Therefore, the Modified Project would increase hazards, and a significant impact would occur. In order to mitigate for this impact, mitigation is provided (see Section 3.7.5, Mitigation Measures). After application of the construction traffic control plan required by **Mitigation Measure TR-1 (same as TR-1 in the 2019 EIS/EIR)**, which would account for roadway safety signage, lane closures, and any other required changes to the local roadway network to safely accommodate construction, this impact would be **less than significant**.

Campground Operations

The permanent operations of the proposed campground would provide an additional approximately 79 campsites to the San Luis Creek Campground area, which would generate permanent vehicle trips to the study area as well as the immediate vicinity of the campground. The improvements made to the San Luis Creek Day Use Area would be marginal and would generate a nominal number of permanent trips to the area. However, as discussed under Threshold 1, the number of trips generated would not change the LOS of the study area roadway network, and the overall amount of traffic volumes would be consistent with the existing level of traffic in the San Luis Reservoir SRA. Therefore, operation of the campground would not increase hazards in the area, and impacts would be **less than significant**.

Cumulative Impacts

As stated in the 2019 EIS/EIR and above, all haul and access roads on the Modified Project site would be constructed consistent with the Reclamation’s standards. All new roads would be improved and treated to prevent dust, and would be approximately 30 feet wide, with approximately 100 feet of clearance to allow for safe egress and ingress of construction equipment. The construction of all components of the Modified Project would result in an increase in construction equipment, construction personnel vehicles, and construction trucks, which would increase hazards along every study area roadway and intersection evaluated. Cumulatively, this would be further increased by the contribution of construction vehicles and trucks within the study area, especially for slow-moving traffic along SR-152. Therefore, the Modified Project would cumulatively increase hazards and therefore a cumulative significant impact would occur. In order to mitigate for this impact, mitigation is provided (see Section 3.7.5). After application of the construction traffic control plan required by Mitigation Measure TR-1, the cumulative impact would be **less than significant**.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts with mitigation incorporated and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant with mitigation incorporated (see Section 3.7.5).

Threshold 7

Would the Modified Project result in inadequate emergency access?

2019 EIS/EIR Impact Determination	Modified Project Impact Determination	New Significant Increase in Impact Severity?
Less than Significant with Mitigation Incorporated	Less than Significant with Mitigation Incorporated	No

Campground Construction and Day Use Area Improvements, Changes in Borrow Area Location, Minor Additions to Contractor Work Area, and Additional Construction Assumptions

As stated in the 2019 EIS/EIR, for dam safety and public visitor safety, Reclamation, California Department of Water Resources, and California Department of Parks and Recreation personnel must have access to areas around the reservoir and dam at all times. Overall, as part of the Modified Project, the construction traffic, including personnel and trucks, would hinder or slow down emergency vehicles and their ability to access the reservoir and dam. Construction of the proposed campground would result in new asphalt and resurfacing of the access road leading to the campground, as well as the internal parking lot of the campground, which could lead to further hindrance and delay for emergency vehicles accessing the northwest portion of O'Neill Forebay. Therefore, the Modified Project would result in inadequate emergency access, and a significant impact would occur. In order to mitigate for this impact, mitigation is provided (see Section 3.7.5). After application of the construction traffic control plan required by **Mitigation Measure TR-1**, impacts would be **less than significant**.

Campground Operations

The operation of the campground would result in an additional number of visitors to the San Luis Creek Campground area and to the western edge of O'Neill Forebay. Improvements to the San Luis Creek Day Use Area would generate a nominal increase in visitors. However, all access roads to campsites and associated amenities that would be in operation would be improved and maintained to provide emergency vehicle access in accordance with all Merced County standards. Therefore, the Modified Project would not result in inadequate emergency access, and impacts would be **less than significant**.

Cumulative Impacts

As stated above and in the 2019 EIS/EIR, the cumulative impact of additional construction worker and truck trips, especially slow-moving vehicles along SR-152 from other projects, would further create a hinderance and otherwise impede emergency vehicles within the study area. Therefore, the Modified Project would cumulatively result in inadequate emergency access, resulting in a significant impact. In order to mitigate for this impact, mitigation is provided (see Section 3.7.5). Therefore, after application of the construction traffic control plan required by Mitigation Measure TR-1, the impact would be **less than significant**.

Comparison to 2019 EIS/EIR

The additional project components analyzed above would result in less-than-significant impacts with mitigation incorporated and therefore impacts of the Modified Project would not result in a significant increase in the severity of impacts as determined in the 2019 EIS/EIR. Impacts of the Modified Project would remain less than significant with mitigation incorporated (see Section 3.7.5).

3.7.5 Mitigation Measures

The following mitigation measure was identified in the 2019 EIS/EIR for the Approved Project and has been incorporated herein for the Modified Project to reduce impacts associated with traffic generated during construction.

TR-1 (Same as TR-1 in 2019 EIS/EIR): Construction Traffic Control Plan. The following construction management actions will be documented in a temporary traffic control plan developed by the contractor as a requirement that will be included in its construction contract. The temporary traffic control plan

will be submitted for Caltrans review and approval during the Encroachment Permit process. Construction contractors shall install signage at affected intersections in accordance with the California Manual on Uniform Traffic Control Devices guidelines warning motorists of slow moving construction traffic and lane closures, including SR-152, Basalt Road, Romero Visitor Center access road, and the San Luis Creek Campground Road. Signage shall also be posted at these intersections one month in advance to allow motorists time to plan for delays or alternate routes. Construction contractors shall implement dust abatement and perform proper construction traffic management actions, including signage warning motorists of construction activity and traffic controls like flaggers or temporary traffic lights where construction equipment will be entering roadways, to reduce conflicts during periods of high traffic volume in and around each construction site and to avoid conflicts with emergency responders entering and existing the area during an emergency. In addition to the temporary traffic control plan, prior to the initiation of any construction actions, construction contractors shall develop and adhere to a health and safety plan outlining all applicable Occupational Safety and Health Administration requirements, important traffic safety plans including identification of emergency access routes in and through construction areas that would will need to be kept clear at all times during construction. The health and safety plan shall include coordination with emergency service personnel to ensure adequate mitigation for all impacts.

3.7.6 Level of Significance After Mitigation

The Modified Project would result in a less-than-significant impact with respect to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

The Modified Project would result in a less-than-significant impact for both construction and operational components with respect to conflict with an applicable congestion management program.

The Modified Project would result in a less-than-significant impact for both construction and operational components with respect to conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

The Modified Project would result in a less-than-significant impact for both construction and operational components with respect to increase traffic substantially in relation to the existing traffic load and capacity of the street system.

The Modified Project would result in a less-than-significant impact for both construction and operational components with respect to exceeding a LOS standard established by the county congestion management agency or designation roads or highways.

The Modified Project would result in a significant impact for both construction and operational components with respect to substantially increasing hazards due to a geometric design feature or incompatible uses. Mitigation Measure TR-1, which requires a temporary traffic control plan, would reduce impacts to a level below significance.

The Modified Project would result in a significant impact for both construction and operational components with respect to resulting in inadequate emergency access. Mitigation Measure TR-1, which requires a temporary traffic control plan, would reduce impacts to a level below significance.