4.12 TRAFFIC AND CIRCULATION

This section provides an overview of existing conditions within the proposed project area, including existing roadway networks, traffic conditions, bicycle and pedestrian networks, and public transit, as well as an overview of relevant Federal, State, and local transportation regulations. The impact section evaluates construction, operational, and cumulative impacts with mitigation measures, as necessary.

This analysis is based on estimates of workers and vehicles associated with construction and operation of the various components of the proposed project; Caltrans data on State highway traffic volumes; Transportation Agency for Monterey County (TAMC) data on local roadway traffic volumes; field reconnaissance; and review of available maps of transit routes, and recreational paths.

Public and agency comments related to traffic and circulation were received during the public scoping period, and are summarized below:

- Evaluate potential impacts associated with construction traffic.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the CEQA and/or are raised by responsible agencies, they are identified and addressed within this EIR. For a complete list of public comments received during the public scoping period, refer to **Appendix A**, **NOP and Public Comment Letters.**

4.12.1 Environmental Setting

4.12.1.1 Regional Overview

The proposed project is located in the unincorporated area of Monterey County, south of the City. The regional roadway network in the proposed project area is presented in **Figure 4.12-1, Regional Roadway Network**.

4.12.1.2 Existing Roadway Network

The proposed project area has a network of roads that serve various purposes: arterial streets designed to carry the traffic of local and collector streets to and from freeways and other major streets; collector streets designed to move traffic between arterials to local roadways; and local roads that generally provide direct access to residential land uses. The roadways that would be most affected by proposed project construction activities (and, to a lesser extent, proposed project operations) are primarily two-lane roads through a residential neighborhood.

The location of the proposed project allows for limited ingress and egress to the proposed project area; roads that are appropriate for heavy construction equipment travel are even further limited. All three of the proposed project components are best accessed by Rio Road via Highway 1. Alternately, the only access route to the proposed project area besides Rio Road is to use Highway 1 to Ocean Avenue, through the City.

The following is a summary of the local roadway network within and around the proposed project vicinity (**Figure 4.12-2, Local Roadway Network**).

Highway 1 is designated as a State Scenic Highway from the City south to Big Sur, including the highway segment to the west of the proposed project site. Highway 1 has four travel lanes (2 lanes in each

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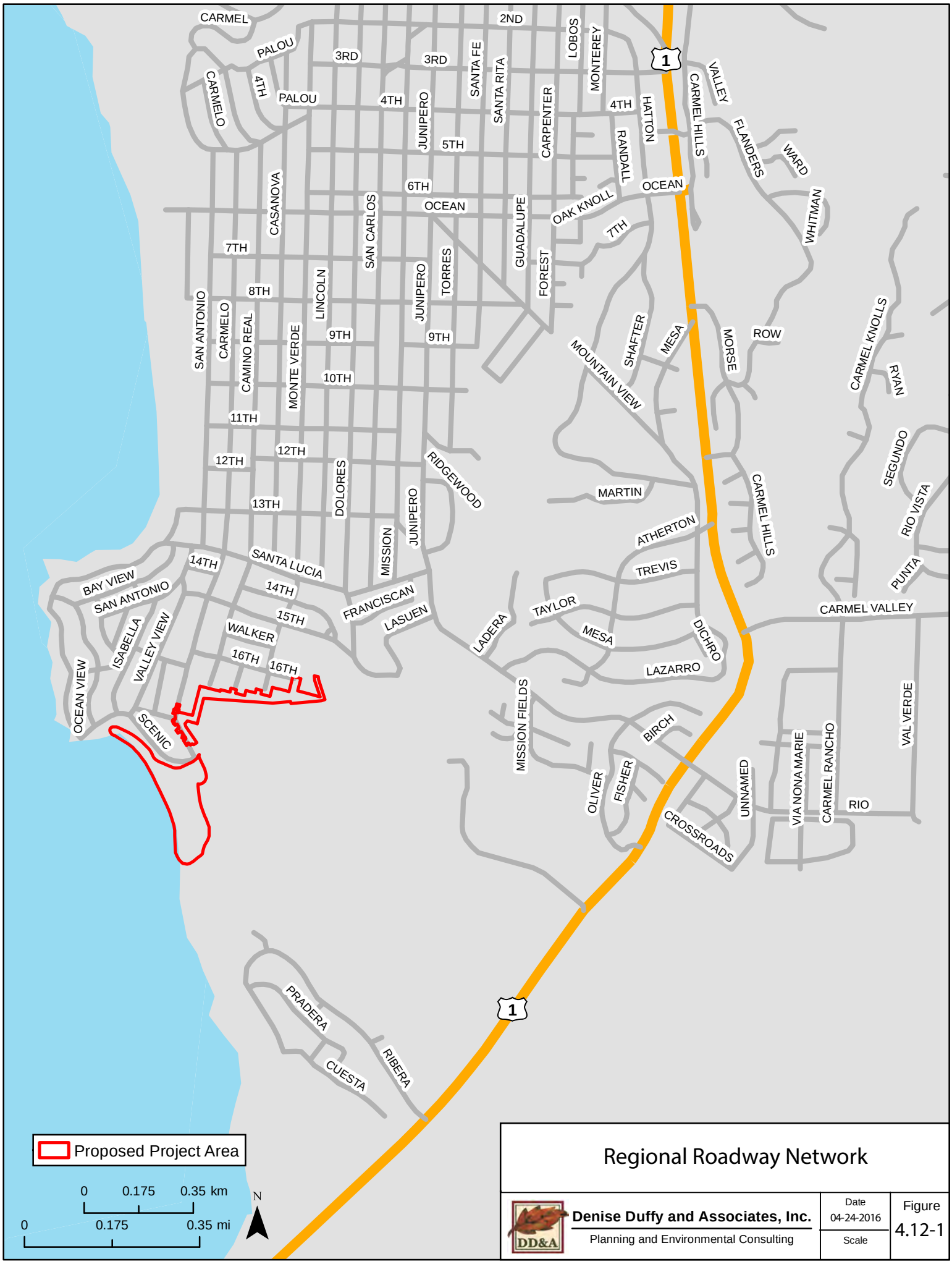

Regional Roadway Network

Denise Duffy and Associates, Inc.
Planning and Environmental Consulting

Date: 04-24-2016
Scale:

Figure 4.12-1

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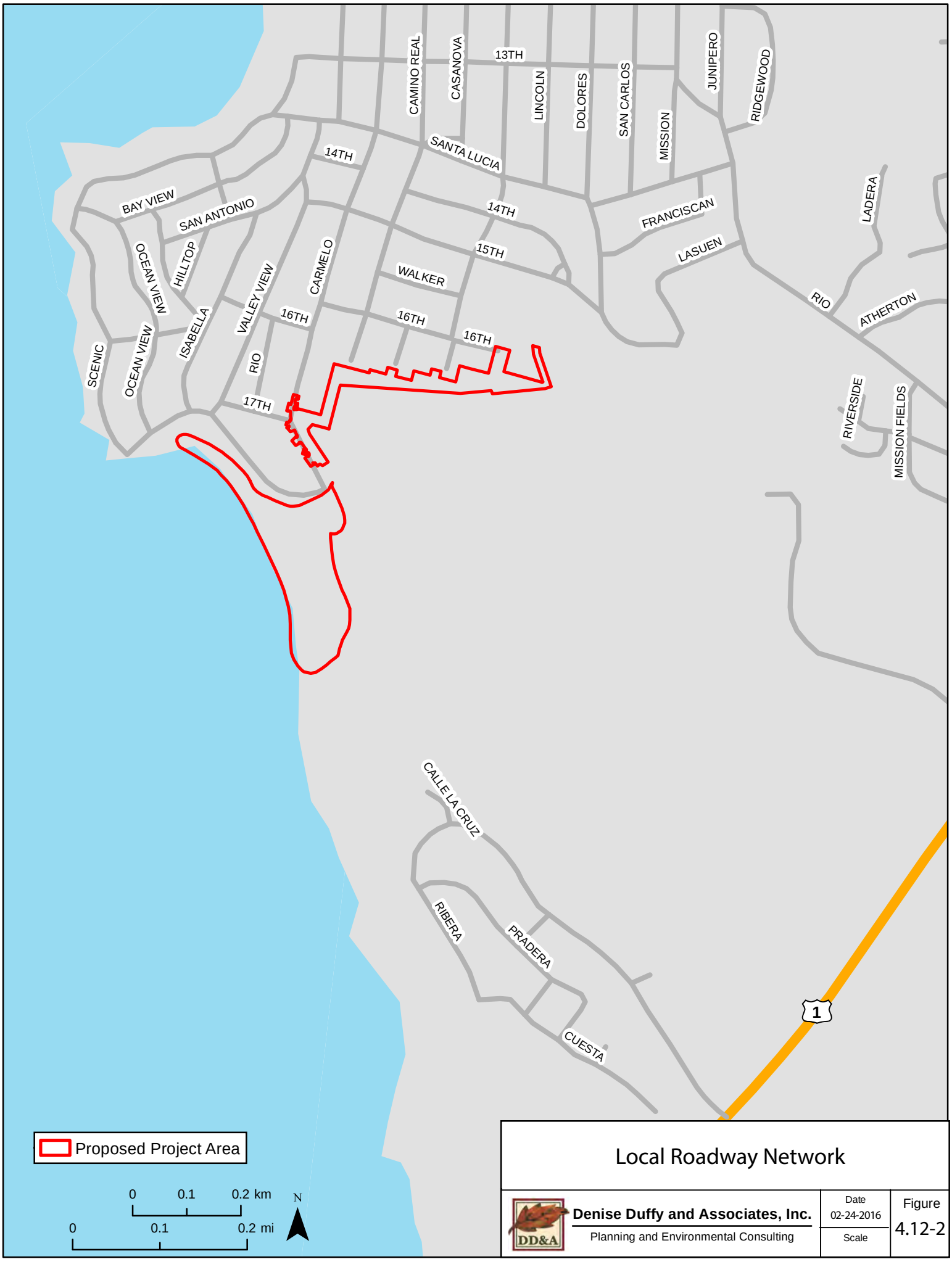
CAMINO REAL
CASANOVA
13TH
LINCOLN
DOLORES
SAN CARLOS
MISSION
JUNIPERO
RIDGEWOOD
SANTA LUCIA
14TH
BAY VIEW
SAN ANTONIO
OCEAN VIEW
HILLTOP
VALLEY VIEW
CARMELO
WALKER
15TH
FRANCISCAN
LASUEN
LADERA
RIO
ATHERTON
16TH
SCENIC
ISABELLA
RIO
17TH
RIVERSIDE
MISSION FIELDS
CALLE LA CRUZ
RIBERA
PRADERA
CUESTA
1
Proposed Project Area
0
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Local Roadway Network
Denise Duffy and Associates, Inc.
Planning and Environmental Consulting
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direction) north of Ocean Avenue, before the City. South of Ocean Avenue, southbound Highway 1 transitions to one travel lane. The posted speed limit is 65 miles per hour (mph) north of Carpenter Street and 40 mph south of Carpenter Street.

Highway 1 has 12-foot travel lanes with four foot shoulders; these shoulder widths are less than Caltrans' standard of eight feet. Average Annual Daily Traffic (ADT) for the year 2012 was 14,200 at the intersection of Highway 1 and Rio Road. Rio Road represents the major ingress/egress to the proposed project area. Highway 1 is identified as an emergency access route in the County's General Plan.

Rio Road, which intersects with Highway 1, is approximately 1.3 miles in length and is a two-lane surface street that extends to Junipero Street (its eastern terminus). Segments of Rio Road are four-lane, separated by a median, including the section that passes by a medium density residential neighborhood known as Carmel Point. Rio Road has marked public bus stops along its length.

Scenic Road is a local street that follows the shoreline of Carmel Point, originating at Ocean Avenue to the north and terminating at the Carmel River State Beach where it becomes Carmelo Street. Parking is not permitted at any time along Scenic Road adjacent to the proposed project site. Signs at the intersection of Scenic Road and Ocean View Avenue to the north of the proposed project site make note of the truck and bus route splitting off onto Ocean View Avenue, heading east.

Lasuen Drive is a two-lane street with room for parking along the side of the road that adjoins Rio Road and Dolores Street's southern terminus. It runs by the Carmel Mission Basilica and the Junipero Serra School.

Santa Lucia Avenue is a local street that has marked public bus stops as well as room for parking on the sides of the street. It spans the distance east to west between Rio Road and Scenic Road. It runs parallel to and just to the north of 14th Avenue.

Monte Verde Street is a local street with marked public bus stops originating near Toyon Heights to the north. The posted speed limit on Monte Verde Street is 25 mph. Its termination to the south abuts the proposed project site. It runs parallel and to the east of Camino Real.

16th Avenue is a local street running east to west that extends from Carmelo Street to its termination to the east, just past Monte Verde Street. It has room for parking along both sides of the road.

Carmelo Street, similar to Monte Verde Street, is a local street with marked public bus stops that originates at 4th Avenue to the north, coming to an end to the south at the proposed project site where it becomes Scenic Road. There is room for parking along both sides of the road.

17th Avenue is a local street that extends east to west between and perpendicular to Valley View Avenue and Carmelo Street. Similarly to 16th Avenue, there is room for parking on the sides of the street.

Valley View Avenue extends from Scenic Road to the south to San Antonio Avenue to the north and is a local street with minimal room for on-street parking.

Camino Real is a local street that extends between 2nd Avenue to the north and the proposed project site to the south. It is parallel to Carmelo Street and Monte Verde Street and has room for parking on either side of the street.

River Park Place is a small, local street extending perpendicularly from 16th Avenue just above the proposed project site and running south to the proposed project site itself. It has minimal room for on-street parking.

Dolores Street runs parallel to Monte Verde Street to the west, joining with Camino Del Monte to the north and connecting with Lasuen Drive to the south near the Junipero Serra School. It is a local street with sections having a posted speed limit of 20 mph.

4.12.1.3 Traffic Operating Conditions on Roadways

"Level of Service" (LOS) is used to identify the magnitude of traffic congestion and delay at intersections along highways and roadways in some jurisdictions. The LOS is based on several factors, including traffic volumes, number of lanes, type of intersection control, speed and travel time, traffic interruptions, driving comfort and convenience, and is expressed qualitatively on a six level range of conditions, represented as LOS A (best) to LOS F (worst). LOS A through D generally represent traffic volumes at less-than roadway capacity, while LOS E represents at capacity conditions, and LOS F represents over capacity or forced flow conditions; see **Table 4.12-1**.

Table 4.12-1 Level of Service (LOS) Definitions

Level of Service	Description
A	Relatively free-flow. No restrictions to vehicle maneuverability or speed. Very slight delay.
B	Stable flow. Some slight reduction in maneuverability and speed. Vehicle platoons form. This is a suitable level of operation for rural design. Slight delay.
C	Stable flow or operation. Higher volumes. More restrictions on maneuverability and speed. This level of operation is suitable for urban planning purposes. Acceptable delay.
D	Approaching unstable flow or operation. Queues develop. Little freedom to maneuver. Tolerable delays for short periods.
E	Unstable flow or operations. Low operating speed; momentary stoppages. This condition is not uncommon in peak hours. Congestion; intolerable delay.
F	Forced flow or operation. Many stoppages; jammed conditions.
Source: Transportation Research Board, 2000	

The TAMC 2010 Regional Transportation Plan evaluated the segment of Highway 1 from Carpenter Street to Rio Road in Carmel. Currently operating at LOS F during peak periods, Highway 1 will continue to operate at LOS F in 2030 without capacity improvements to the existing alignment. The Draft 2014 TAMC Regional Transportation Plan Project List outlines Regionally Significant Projects in Monterey County. The operational improvements identified for Highway 1 would construct one new northbound climbing lane between Rio Road and Carmel Valley Road, modify intersections, and enhance turn movements. This segment of northbound Highway 1 operates at an arterial LOS E during the weekday morning and evening peak hours and at LOS F during peak weekend hours. In the southbound direction, the segment of Highway 1 between Carmel Valley Road and Rio Road operates at an arterial LOS D in peak hours. The LOS for the roads in the proposed project region are shown in **Table 4.12-2**.

The TAMC Regional Transportation Report shows the year 2000 deficiencies in LOS with the segment of Highway 1 from Ocean Avenue to Carmel Valley Road as operating at LOS F, which is considered deficient.

Table 4.12-2 Highway 1 LOS During Peak Hours, Existing Roadway with Existing (2011-2012) Traffic

Highway 1 Segment and Direction	Weekday Morning Peak Hour	Weekday Evening Peak Hour	Weekend Evening Peak Hour
South of Rio Road, Northbound	E	E	F
Rio Road to Carmel Valley Road, Northbound	E	E	E
North of Carmel Valley Road, Southbound	B	B	B
Rio Road to Carmel Valley Road, Southbound	D	D	D

Source: Traffic Operations Technical Memorandum (April 2004) and Addendum (August 2010)

City and County jurisdictions, within Monterey County, have adopted designated truck routes in order to reduce problems associated with increased congestion during peak hours and to direct trucks away from certain streets that were not designed to accommodate the excess weight. Modern trucks accommodate a larger and heavier cargo load and require special geometric designs for roads. A locally-designated truck route in the vicinity of proposed project includes Highway 1 from Rio Road to the Santa Cruz County Line.

Per the County's 1982 General Plan, the acceptable level of service for County roads and intersections is LOS C except in specified situations.

4.12.1.4 Transit Service

Public transit services are provided by Monterey-Salinas Transit (MST) and Greyhound Lines. MST is a public transportation agency that provides bus service to the greater Monterey and Salinas areas, plus routes to Carmel Valley and North County. Greyhound provides intercity passenger service between Monterey Peninsula cities, Salinas, Salinas Valley cities, as well as intra- and inter-State service (County, 2010).

There is one bus route that runs near the proposed project vicinity: Route 22 from Monterey to Big Sur along Highway 1. There is an existing bus stop on the south side of Rio Road just east of Highway 1.

4.12.1.5 Bicycle/Pedestrian Facilities

Monterey County has approximately 246 miles of maintained bikeways on State, county, and local roads. Bikeways in the County are classified as Class I, II, and III. These classifications generally follow design standards established by Caltrans:

- Class I (bike path) - a completely separate right-of-way designed for the exclusive use of cyclists and pedestrians.
- Class II (bike lane) - a lane on a roadway that is separated from motorists by paint striping; designated for the exclusive use or semi-exclusive use of bicycles.
- Class III (bike route) - allows for shared use of the roadway with motorists; designated by signs or permanent marking.

In the vicinity of the proposed project, Highway 1 is a designated bicycle route (road with bicycle lane). Existing paved shoulders are five feet wide at some locations, too narrow to meet Caltrans standards.

The Carmel Hills Trail was built in September 2010 and extends from the north bank of the Carmel River, northward in the State Park's property, to the east of Highway 1. It crosses Rio Road at-grade and passes under Carmel Valley Road in a concrete box tunnel. The Carmel Hills Trail is now the main north-south bicycle route in the proposed project area (rather than the shoulder of Highway 1). There are no existing sidewalks on either side of Rio Road to the west of Highway 1 nor are there sidewalks throughout the Carmel Point residential neighborhood. Bicycling along Highway 1 with its narrow lanes, blind curves, and heavy traffic is considered hazardous. Congested traffic conditions combined with steep grades and strong winds are factors that discourage bicycling along the coast.

4.12.1.6 Airports

There are no airports within two miles of the proposed project sites. The Monterey Regional Airport serves the Monterey region. The Monterey Regional Airport comprises an area of 498-acres and has been in service since 1941. It is classified as a "non-hub" airport that is served by five airlines (Monterey Regional Airport, 2013). The Comprehensive Land Use Plan for Monterey Regional Airport was approved by the Monterey County Airport Land Use Commission in 1987. The plan adopts the land use designations of the general plans of the jurisdictions within the Airport's "Area of Influence," and includes the cities of Monterey, Del Rey Oaks, Seaside, Sand City, Pacific Grove, and portions of the County of Monterey. In addition, the plan shows the specific Approach Protection Zone and a Runway Protection Zone, neither of which is in the proposed project area.

4.12.2 Regulatory Environment

4.12.2.1 Federal and State

United States Department of Transportation Federal Highway Administration (FHWA) supports State and local governments in the design, construction, and maintenance of the nation's highway system. Federal interstate highway standards are implemented in California by Caltrans.

Caltrans is responsible for constructing, enhancing, and maintaining the State highway and interstate freeway systems. As a result, any change to the State roadway system requires an encroachment permit from Caltrans. Work that requires movement of oversized or excessive load vehicles on highway facilities requires a transportation permit by Caltrans.

In addition to maintaining highways and general regulations and laws dealing with licensing, traffic signage, and other noncommercial driver requirements, State laws and regulations also govern motor carriers on roadways within the State.

4.12.2.2 Regional/Local

TRANSPORTATION AGENCY FOR MONTEREY COUNTY

TAMC is an independent association of local officials who oversee planning and funding of regional transportation improvements throughout Monterey County. The agency prepares the Regional Transportation Plan and oversees the implementation of its recommended improvements.

ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

AMBAG prepares studies, plans, policy and action recommendations that may be incorporated into regulatory documents. In addition to its transportation planning, study functions, and policy recommendations, AMBAG develops and maintains a regional travel demand forecasting model used for the planning of regional transportation facilities and the assessment of development proposals.

RELEVANT PLANNING DOCUMENTS

The 1982 Monterey County General Plan, Carmel Area Land Use Plan, Carmel Area Coastal Implementation Plan, Point Lobos State Reserve and Carmel River State Beach General Plan, CCA, and California PRC contain a variety of policies related to traffic and circulation. Please refer to **Section 4.9, Land Use and Planning** for a description of these regulations and plans, and **Appendix C, Applicable Land Use Plans, Policies, and Regulations Consistency Analysis for the Carmel Lagoon Project** for a list of relevant policies and the consistency analysis.

4.12.3 Impacts and Mitigation

4.12.3.1 Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the project would result in significant impacts related to traffic and circulation if the project would:

a. Conflicts with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
b. Conflicts with an applicable congestion management program, including but not limited to level of service (LOS) standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
c. Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which results in substantial safety risks.
d. Substantially increases hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
e. Results in inadequate emergency access.
f. Conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.12.3.2 Impact Analysis Overview

APPROACH TO ANALYSIS

The impact analyses in this section evaluates the potential for short-term construction-related traffic impacts that may result in increased traffic delays or hazards, or that may impede pedestrian, bicycle and transit access, including access to recreational resources. Long-term traffic impacts associated with proposed project operations are also addressed.

Construction-related trip and traffic assumptions have been developed for each proposed project component. This analysis assumes the construction schedules of the proposed project components would be phased, with some activities occurring simultaneously. The analysis of potential impacts

assumes that all components would be constructed during an approximately 90-day construction period for the proposed EPB project component, and an approximately 60-day construction period for the proposed SRPS project component. The proposed ISMP project component would occur over one day in October, and two, three-day periods in the winter and summer seasons. This analysis assumed a total of 25 heavy duty truck trips per year would be needed for implementing the proposed ISMP project component. For the purposes of this analysis, it is assumed that one mechanical breaching event and one closure event would be required each year.

The implementation of the proposed ISMP project component would not involve the "construction" of any permanent structures requiring operation and maintenance, and would not occur in the long-term. In addition, the implementation of the proposed ISMP project component would involve activities similar to short-term construction activities, primarily ground-disturbing activities to breach the Lagoon. Therefore, the potential impacts associated with the implementation of the proposed ISMP project component are considered in the construction impact analysis and this component is not analyzed as a long-term, operational impact.

Construction Assumptions for the Proposed Ecosystem Protection Barrier and Scenic Road Protection Structure Project Components

Construction Duration and Schedule

- Construction is anticipated to be completed within two to five months, depending on the component phasing and the amount of concurrent activities.
- General work hours are assumed to be between 7:00 AM and 6:00 PM, Monday through Friday.
- No nighttime construction would occur.

Construction Trips Assumptions

- Traffic-generating construction activities for the proposed EPB and SRPS project components are assumed to consist of the daily arrival and departure of construction work crews, trucks hauling equipment and materials to the work sites, hauling of excavated spoils from the site, and importing fill to the site.
- Proposed project-generated truck trips would be dispersed throughout the day (generally from 9:00 AM to 4:00 PM on weekdays), thus lessening the effect on peak hour traffic.
- Workers would commute to and from the construction areas earlier or later than proposed project-related construction truck trips. Based on anticipated work shifts, worker trips would occur prior to morning peak hour period in order to arrive at the proposed project sites at 7:00 AM. However, worker trips would occur during the afternoon peak hour period from 4:00 PM to 6:00 PM.
- All workers are assumed to drive separately in single occupancy vehicles for the purpose of the traffic analysis.
- The average capacity for haul trucks would be 10 cubic yards per truck.
- The truck (haul) trip counts include the number of trucks that would come to the site and leave the site: one incoming trip and one outgoing trip. The worst-case daily assumption would be that all trucks are heavy duty (semi-trucks). The purpose of the trips would be to deliver construction equipment, vehicles, and materials, and to remove construction materials, soils, and waste.

- The proposed ISMP project component would be implemented by County employees and contracted employees, as needed. Activities are assumed to occur over one day in October, and two, three-day periods in the winter and summer seasons. This analysis assumed a total of 25 heavy duty truck trips per year would be needed for implementing the proposed ISMP project component.

Construction Staging Areas and Construction Techniques

- The limits of construction for the two proposed project components, including proposed staging and access areas, are shown on **Figure 3-9**, for the proposed EPB project component, and **Figure 3-15**, for the proposed SRPS project component (See **Section 3**, **Project Description**). The staging area for the proposed SRPS project component is proposed at the State Beach parking lot (approximately half of the lot would not be available for public parking). The staging area for the proposed EPB project component is proposed at the Carmel River Elementary School field at the eastern terminus of 16th Avenue.
- To the extent feasible, parking for construction and worker vehicles would be accommodated within the construction work areas and on adjacent roadways.
- Construction could include site preparation, grading and excavation, equipment and materials deliveries, concrete formwork, trenching, installation of support equipment, installation of security fencing, and revegetation. Earthmoving activities would be performed using heavy construction equipment such as excavators, backhoes, graders, pavers, rollers, bulldozers, concrete trucks, flatbed trucks, boom trucks and/or cranes, forklifts, welding equipment, dump trucks, air compressors, and generators.

Construction Traffic and Roadway Controls

- All construction activities within roadways would be restricted to the right-of-way approved by the applicable agency for public right-of-way and property owner for private roads. All roadways disturbed during construction would be restored. Generally, trench spoils would be temporarily stockpiled within the construction easement, then backfilled into the trench after placing materials (e.g., rock, wall, etc.).

Operational Assumptions for Proposed Ecosystem Protection Barrier and Scenic Road Protection Structure Project Components[1]

Employees and Hours of Operation

- Upon completion of construction, the proposed EPB and SRPS project components would be in place at all times; however, the operation and maintenance of these components would not require any permanent, new employees. Maintenance of these facilities would require annual inspections and response in emergency situations by existing County employees. This analysis assumes four heavy duty truck trips per year would be needed for the maintenance of the facilities.

AREAS OF NO IMPACT

Some of the Threshold of Significance criteria outlined above are not applicable to the proposed project or the proposed project would not result in impacts related to these criteria, as explained below.

[1] Potential impacts associated with the implementation of the proposed ISMP project component are considered in the construction impact analysis and the proposed ISMP project component is not analyzed as a long-term, operational impact.

(b) Conflicts with Congestion Management Programs. (No impact during the construction or operation of the proposed project) There are no adopted congestion management plans within any of the cities or unincorporated areas, and none have been adopted by TAMC. Thus, significance criterion "b" is not applicable.

(c) Air Traffic Patterns. (No impact during the construction or operation of the proposed project) The proposed project would not affect the air traffic patterns for airports that are located within two miles of the proposed project components. There are no airports located within two miles of any of the three proposed project components. The Monterey Regional Airport is greater than two miles from all three proposed project components. Construction would not occur in proximity to the airport nor would construction equipment exceed height restrictions within these areas. Therefore, the proposed project would not alter air traffic patterns nor result in substantial safety risks associated with airport operations.

(d) Increased Hazards Due to Design or Incompatible Uses. (No impact during operation of the proposed project) Significance criterion "d" does not apply to either the design of the proposed components or temporary construction impacts. The proposed project would not include any new road designs or alterations of existing features (e.g., road realignment) that could substantially increase hazards. In addition, traffic generated by the proposed project would be compatible with the mix of vehicle types (autos and trucks) currently using nearby proposed project area roads. Therefore, the proposed project would not result in hazards caused by a road design feature or use that is incompatible with roadway designs. Temporary impacts related to roadway safety during proposed project construction are addressed in **Impact TRA-2 (Construction-Related Traffic Delays, Safety Hazards, and Access Limitations)** below.

(e) Results in inadequate emergency access. (No impact during the operation of the proposed project) Operation of the proposed project would have no impact on emergency access as the proposed project would not result in significant permanent impacts to emergency routes. Construction impact analyses related to criterion "e" is addressed below under **Section 4.12.3.3**, **Impacts and Mitigation Measures**.

(f) Conflict with Adopted Policies Regarding Transit, Bicycle, or Pedestrian Facilities. (No impact during the operation of the proposed project) The intent of significance criterion "f" is to account for potential project conflicts with adopted policies, plans, and programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities. The proposed project does not include changes in policies or programs that support alternative transportation, and proposed project operation would not conflict with adopted policies, plans, or programs supporting alternative transportation. The proposed project would not directly or indirectly eliminate, alter, or conflict with alternative transportation corridors or facilities (e.g., bike paths, lanes, bus turnouts, etc.). Temporary impacts related to alternative modes of transportation and access during proposed project construction are addressed in **Impact TRA-2, (Construction-Related Traffic Delays, Safety Hazards, and Access Limitations)**.

4.12.3.3 Impacts and Mitigation Measures

Impact TRA-1: <u>Construction Traffic</u>. Construction of the proposed EPB and SRPS project components and implementation of the proposed ISMP project component would result in a temporary increase in traffic volumes on regional and local roadways due to construction-related vehicle trips, but would not result in conflicts with any applicable plan, ordinance, or policy establishing measures of effectiveness for performance of the circulation system. (Criterion a) (EPB: Less-Than-Significant) (SRPS: Less-than-Significant) (ISMP: Less-than-Significant) (Project Overall: Less-than-Significant)

Construction activities would result in a temporary increase in traffic on the regional roadway circulation system during the construction period. Traffic generated during construction activities would include the daily arrival and departure of construction work crews, trucks hauling equipment and materials to the work sites, hauling of excavated debris and spoils from the site, and importing of fill to the construction sites. The number of construction-related trips would vary among the proposed project components. Activities associated with the construction of the proposed project components and implementation of the proposed ISMP project component would take place at various locations in the proposed project area (e.g., staging area, pump stations, State Parks parking lot, etc.). The three proposed project components may be constructed simultaneously, and the construction traffic for the components could use the same roads.

Construction workers and construction vehicles would use regional highways and local roadways to access the construction work areas. Highway 1, Rio Road, Carmelo Street, and 16th Avenue would be the primary access roads to the proposed project sites.

The construction of the proposed EPB project component could employ up to 10 workers per day, and, based on the assumptions described above, result in 20 trips per day for the three-month construction period. The construction of the proposed SRPS project component could employ up to 15 workers per day, and, based on the assumptions described above, result in 30 trips per day for the two-month construction period.

Approximately 300 trips would be required for construction materials for the proposed EPB project component, and approximately 1,000 trips would be required for the proposed SRPS project component.

The ultimate construction schedule of the proposed project components would be determined when funding becomes available and design plans are finalized; as such, the schedule could vary from what is presented in this analysis. Likewise, the exact construction characteristics, such as excavation quantities or estimated truck trips, could also vary. However, the construction scenario characteristics summarized herein have been developed to allow a reasonable assessment of the nature and magnitude of potential construction impacts.

Construction-related worker trips are expected to occur prior to the weekday morning peak traffic periods (7:00 AM to 9:00 AM), but during the weekday afternoon peak traffic periods (4:00 PM to 6:00 PM) given the anticipated work shifts. Project-generated truck trips would be dispersed throughout the day (generally from 9:00 AM to 4:00 PM on weekdays), thus lessening the effect on peak hour traffic.

Most traffic analyses (including analyses on projects consistency with policies and ordinances) rely on an analysis of changes to an intersection or roadway LOS standards, as set by local jurisdictions, in order to evaluate the long-term effects of projects on the operations of roadways and intersections. However, construction projects that increase traffic only temporarily, or that result in traffic fluctuations, do not have a long-term effect on LOS. In addition, most LOS analyses focus on the peak hours of traffic (typically morning and evening commute times). By contrast, many of the worker trips for the construction period would be outside these typical peak hours, as discussed above. Construction workers also are expected to commute to and from the construction work areas earlier and/or later than project-related construction truck trips, which are expected to be distributed throughout the day at any one work site. In addition, daily traffic volumes on public roads typically vary from day to day by 5 to 10%; therefore any temporary increase in traffic due to construction would be within the typical daily fluctuation and would not be perceptible to the average motorist. Construction-related vehicle trips on local, two-lane roadways in the proposed project area would not substantially affect traffic flow if the traffic volumes remained within the carrying capacity of the roads (roughly 10,000 to 15,000 vehicles per day for two-lane roads, depending on design features). For all of the reasons described above, the analysis of the proposed project construction traffic impacts focuses on overall roadway capacity and traffic safety, rather than the various cities' or the county's LOS standards.

Construction of the proposed EPB project component would be expected to result in approximately 20 daily trips; at worst-case, approximately 10 worker trips would occur during the weekday afternoon peak period. The peak hour trips likely would occur primarily on Carmelo Street and 16th Avenue and then onto Rio Road and Highway 1, with an estimated temporary traffic increase of approximately 10 peak hour trips along these routes over a three-month construction period. Traffic flows along these routes would not be substantially affected by the short-term, three-month construction activities at the EPB proposed project site.

Construction of the proposed SRPS project component would be expected to result in approximately 30 daily trips; at worst-case, approximately 15 worker trips would occur during the weekday afternoon peak period. The peak hour trips likely would occur primarily on Carmelo Street and then onto Rio Road and Highway 1, with an estimated temporary traffic increase of approximately 15 peak hour trips over a two-month construction period. Traffic flows along these routes would not be substantially affected by the short-term, two-month construction activities at the proposed SRPS project component site.

It is likely that construction at the proposed EPB and SRPS project components sites could result in overlapping construction schedules and both of these components could produce construction-related trips along Highway 1. Based on the above discussion, it is estimated that approximately 25 construction worker and truck trips would be distributed along Highway 1 during the weekday afternoon peak period. The most recent Caltrans traffic volume counts identify peak hour volumes of 1,550 trips at the intersection of Highway 1 and Rio Road (Caltrans, 2013). The additional temporary construction trips represent approximately 0.01% of the peak hour trips. This would not be considered substantial and would be within the daily fluctuation of traffic volumes expected on the highway.

The implementation of the proposed ISMP project component would require an estimated 25 truck trips to place the sandbags, conduct the breach, remove the sandbags, and close the sandbar over approximately four time periods, averaging two days each and six trips each. These activities would occur outside morning and afternoon peak hour periods based on anticipated work shifts. As a result, the implementation of the proposed ISMP project component would result in temporary, intermittent, increases in traffic in the proposed project vicinity due to vehicles accessing the site. This temporary, short-term traffic would not cause an increase in traffic that is considered substantial in relation to the existing traffic load and capacity of the surrounding road network. This is a less-than-significant impact.

Impact Conclusion

Proposed project-related construction activities would result in a temporary increase in traffic from construction workers and trucks traveling to and from the construction work areas. The number of onsite workers would vary throughout the construction phases, and truck and equipment-related deliveries would be spread out over the construction work day. Given the anticipated worker shifts, most of the daily traffic would be outside of the peak traffic periods, except for construction worker traffic in the afternoon. The implementation of the proposed ISMP project component would result in approximately 25 trips to the site annually, spread out over four different time periods.

Highway 1 would be used for construction traffic to access the proposed EPB and SRPS project component sites, which could result in increased trips along Highway 1 that are higher than the maximum number of daily vehicle trips associated with each proposed project component. However, the worst-case increases in traffic resulting from concurrent construction of two proposed project components during peak periods of construction would fall within the daily fluctuations of traffic on Highway 1.

Given the above, temporary construction traffic would not cause a substantial increase in traffic relative to existing conditions and roadway capacity, or contribute substantial volumes of traffic during peak hours at the proposed EPB and SRPS project components sites. Generally, the estimated maximum increase in traffic along regional roadways would remain within the carrying capacities of the regional roadways and would not substantially affect traffic flow, and the impact is less-than-significant. No mitigation measures are required.

Impact TRA-2: <u>Construction-Related Traffic Delays, Safety Hazards, and Access Limitations</u>. Construction activities could result in temporary traffic delays, safety hazards, and/or disruption of access. (Criteria a, d, f, and e) (EPB: Less-Than-Significant with Mitigation) (SRPS: Less-than-Significant with Mitigation) (ISMP: Less-than-Significant) (Project Overall: Less-than-Significant with Mitigation)

Construction activities could occur within vehicle travel lanes and/or road shoulders, which may require temporary lane closures and/or detours. These lane closures and detours would temporarily reduce roadway performance and result in temporary traffic delays during project construction, potentially affecting motorists, bicyclists, pedestrians, buses and/or emergency vehicles as discussed below. This would include potential disruption of access to residences, businesses, schools, and/or recreational facilities. The movement of construction trucks could result in slower travel speeds and potential delays.

<u>TEMPORARY DISRUPTION TO TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES</u>

Project construction activities and truck trips could result in temporary delays and potential hazards for public buses, bicyclists, and pedestrians. The greatest number of daily construction-related truck trips would occur along Highway 1, Rio Road, and Carmelo Street. During project construction, bicyclists and pedestrians could be required to enter the adjacent road shoulder or use other temporary detours to circumvent construction work areas.

Project construction activities could affect safety of bicyclists and pedestrians in the proposed project area due to:

- Conflicts between haul trucks and other large construction vehicles (with slower speeds and wider turning radii than automobiles) and automobiles, bicyclists, and pedestrians using the roadways.
- Conflicts related to the movement of traffic on travel lanes adjacent to construction work areas, particularly at entry and egress points where construction-related vehicles would access public roadways.
- Confusion on the part of bicyclists and pedestrians due to temporary changes in bicycle and pedestrian circulation along designated bicycle routes, bike lanes, and other sidewalks and public pathways.

The proposed EPB and SRPS project components sites are located within an area with high recreational use, including bicycle and pedestrian use, as well as vehicle traffic from tourists and locals due to the scenic views in the area. Construction-related impacts on alternative transportation modes during construction of the proposed EPB and SRPS project components would be potentially significant.

Construction activities for the proposed EPB and SRPS project components would not disrupt access to the bus stop in the proposed project vicinity, which is located on the south side of Rio Road just east of Highway 1. No construction-related traffic delays, safety, or access limitations to transit operations or facilities would result from the construction of the proposed EPB or SRPS project components.

EMERGENCY ACCESS DELAYS

Highway 1 is identified as an emergency access route in the County's 1982 General Plan. As discussed above, construction activities could require construction within some vehicle travel lanes and road shoulders. Temporary reductions in travel lanes and the roadway capacities to accommodate work areas could result in delays for emergency vehicles. This impact is potentially significant.

Impact Conclusion

Traffic delays, safety hazards, and access limitations resulting from temporary lane closures and detours could result in delays to motorists and would be a potentially significant impact for bicyclists, pedestrians, transit operations, and emergency access during construction of the proposed EPB and SRPS project components, but the effects would be short-term in duration for any one location. Construction would require issuance of encroachment permits from the County, Carmel Unified School District, and State Parks for any construction within public rights-of-ways. However, with implementation of **Mitigation Measure TRA-2 (Traffic Control and Safety Assurance Plan)**, which includes measures to minimize the adverse effects of roadway construction and detours, these impacts would be reduced to a less-than-significant level.

Mitigation Measures

Mitigation Measure TRA-2: Traffic Control and Safety Assurance Plan (Applies to EPB and SRPS project components). Prior to construction of the EPB and SRPS project components, the County and/or its contractor shall prepare and implement a traffic control plan or plans for the roadways and intersections affected by construction. The traffic control plan(s) shall comply with the affected jurisdiction's encroachment permit requirements and shall be based on detailed design plans. For all project construction activities that could affect public rights-of-ways (e.g., roadways, sidewalks, and walkways), the plan shall include measures that would provide for continuity of vehicular, pedestrian, and bicyclist access, reduce the potential for traffic accidents, and ensure worker safety in construction zones. Where project construction

activities could disrupt mobility and access for bicyclists and pedestrians, the plan shall include measures to ensure safe and convenient access would be maintained.

The traffic control and safety assurance plan shall be developed on the basis of detailed design plans for the approved project. The plan shall include, but not necessarily be limited to, the elements listed below:

General

- Develop circulation and detour plans to minimize impacts on local streets. As necessary, signage and/or flaggers shall be used to guide vehicles to detour routes and/or through the construction work areas.
- Implement a public information program to notify motorists, bicyclists, nearby residents, and adjacent businesses of the impending construction activities (e.g., media coverage, email notices, websites, etc.). Notices of the location(s) and timing of lane closures shall be published in local newspapers and on available websites to allow motorists to select alternative routes.

Roadways

- Haul routes that minimize truck traffic on local roadways and residential streets shall be used to the extent feasible.
- Schedule truck trips outside of peak morning and evening commute hours to minimize adverse impacts on traffic flow.
- Limit lane closures during peak hours. Travel lane closures, when necessary, shall be managed such that one travel lane is kept open at all times to allow alternating traffic flow in both directions along affected two-lane roadways; the contractor shall use steel plates or trench backfilling to restore vehicle access at the end of each workday.
- Restore roads and streets to normal operation by covering trenches with steel plates outside of normal work hours or when work is not in progress.
- Comply with roadside safety protocols to reduce the risk of accidents. Provide "Road Work Ahead" warning signs and speed control (including signs informing drivers of State legislated double fines for speed infractions in a construction zone) to achieve required speed reductions for safe traffic flow through the work zone. Train construction personnel to apply appropriate safety measures as described in the plan.
- Provide flaggers in school areas at street crossings to manage traffic flow and maintain traffic safety during the school drop-off and pickup hours on days when pipeline installation would occur in designated school zones.
- Maintain access to private driveways.

Pedestrian and Bicyclists

- Perform construction that crosses on street and off street bikeways, sidewalks, and other walkways in a manner that allows for safe access for bicyclists and pedestrians. Alternatively, provide safe detours to reroute affected bicycle/pedestrian traffic.

Recreational Trails

- At least two weeks prior to construction, post signage along all potentially affected recreational trails, Class I, II, and III bicycle routes, and pedestrian pathways to warn bicyclists and pedestrians of construction activities. The signs shall include information regarding the nature of construction activities, duration, and detour routes. Signage shall be composed of or encased in weatherproof material and posted in conspicuous locations, including on park message boards and existing wayfinding signage and kiosks, for the duration of the closure period. At the end of the closure period, the County or its contractors shall retrieve all notice materials.

Emergency Access

- Maintain access for emergency vehicles at all times. Coordinate with facility owners or administrators of sensitive land uses, such as police and fire stations, transit stations, hospitals, and schools.
- Provide advance notification to local police, fire, and emergency service providers of the timing, location, and duration of construction activities that could affect the movement of emergency vehicles on area roadways.
- Avoid truck trips through designated school zones during the school drop-off and pickup hours.

Impact TRA-3: Construction-Related Roadway Deterioration. Construction truck trips could result in increased wear-and-tear on the designated haul routes, which could result in temporary impacts to performance of the regional circulation system. (Criterion a) (EPB: Less-than-Significant with Mitigation) (SRPS: Less-than-Significant with Mitigation) (ISMP: Less-than-Significant) (Project Overall: Less-than-Significant with Mitigation)

The use of trucks to transport equipment and material to and from the construction work areas could affect road conditions on the designated haul routes by increasing the rate of road wear. The degree to which this impact would occur depends on the roadway design (pavement type and thickness) and the existing condition of the road. Freeways and major arterials (e.g., Rio Road and Highway 1) are designed to handle a mix of vehicle types, including heavy trucks; therefore, the significant roadway deterioration impacts of project-related construction traffic is not expected to occur on those roads. However, some of the local roadways may not have been constructed to support use by heavy construction trucks and vehicles, and project-related construction truck trips could cause excessive wear-and-tear on these roadways, which is a potentially significant impact. Implementation of **Mitigation Measure TRA-3 (Roadway Rehabilitation Program)**, which requires rehabilitation of any roadways damaged following construction, would reduce this impact to a less-than-significant level.

Impact Conclusion

The use of trucks to transport construction equipment and materials could adversely affect road conditions on local roadways. However, with implementation of **Mitigation Measure TRA-3 (Roadway Rehabilitation Program)**, this impact would be reduced to a less-than-significant level.

Mitigation Measure

Mitigation Measure TRA-3: Roadway Rehabilitation Program (Applies to EPB and SRPS project components). Prior to commencing project construction, the County shall detail the preconstruction condition of all local construction access and haul routes proposed for substantial use by project-related construction vehicles. The construction routes surveyed must be consistent with those identified in the construction traffic control and safety assurance plan developed under **Mitigation Measure TRA-2** (described above). After construction is completed, the same roads shall be surveyed again to determine whether excessive wear and tear or construction damage has occurred. Roads damaged by project-related construction vehicles shall be repaired to a structural condition equal to that which existed prior to construction activities.

Impact TRA-4: Construction Parking Interference. Construction activities may temporarily affect parking availability. (Criterion a) (EPB: Less-than-Significant with Mitigation) (SRPS: Less-than-Significant with Mitigation) (ISMP: Less-than-Significant) (Project Overall: Less-than-Significant with Mitigation)

During construction, workers would drive their own vehicles to the component staging area or proposed project component construction site, which could result in an increased parking demand at certain locations. Parking demand would vary among the individual project components and would also depend on the construction phase and the nature of construction activities. Depending on the width of the vehicle travel lanes or adjacent road shoulders, construction activities could temporarily displace parking spots and adversely affect parking conditions due to worker parker demands, including parking in the Coastal Zone and near parks, such as the Carmel River Beach State Park.

Impact Conclusion

Construction of the proposed EPB and SRPS project components could result in potentially significant parking impacts due to temporary increases in parking demand and the displacement of on-street parking. Implementation of **Mitigation Measure TRA-4,** (**Construction Parking Requirements)** would reduce this impact to a less-than-significant level.

Mitigation Measure

Mitigation Measure TRA-4: Construction Parking Requirements (Applies to EPB and SRPS project components). Prior to commencing project construction, the construction contractor(s) shall coordinate with the potentially affected jurisdictions to identify designated worker parking areas that would avoid or minimize parking displacement. The contractors shall provide transport between the designated parking location and the construction work areas. The construction contractor(s) shall also provide incentives for workers that carpool or take public transportation to the construction work areas. The engineering and construction design plans shall specify that contractors limit time of construction within travel lanes and public parking spaces and provide information to the public about locations of alternative spaces to reduce parking disruptions.

Impact TRA-5: Operational Traffic. Operation and maintenance of the proposed EPB and SRPS project components would result in small traffic increases on regional and local roadways, but would not substantially affect the performance of the regional circulation system. (Criterion a) (EPB: Less-than-Significant) (SRPS: Less-than-Significant) (ISMP: No Impact) (Project Overall: Less-than-Significant)

PROPOSED ECOSYSTEM PROTECTION BARRIER AND SCENIC ROAD PROTECTION STRUCTURE PROJECT COMPONENTS

The operation of the proposed EPB and SRPS project components would not require any permanent, new employees or daily oversight and maintenance. Maintenance of these facilities would require annual inspections and response in emergency situations by existing County employees. This analysis assumes four heavy duty truck trips per year would be needed for the maintenance of the facilities.

Impact Conclusion

Operation and maintenance activities would not generate a significant increase in traffic to the existing circulation system, or result in a LOS degradation over the long-term. A total increase of approximately four trips would be spread out among the two project component sites annually. Operation and routine maintenance of the proposed EPB and SRPS project components would not substantially increase traffic volumes on local or regional roadways; therefore, the impact would be less-than-significant and no mitigation measures are required.

4.12.4 References

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