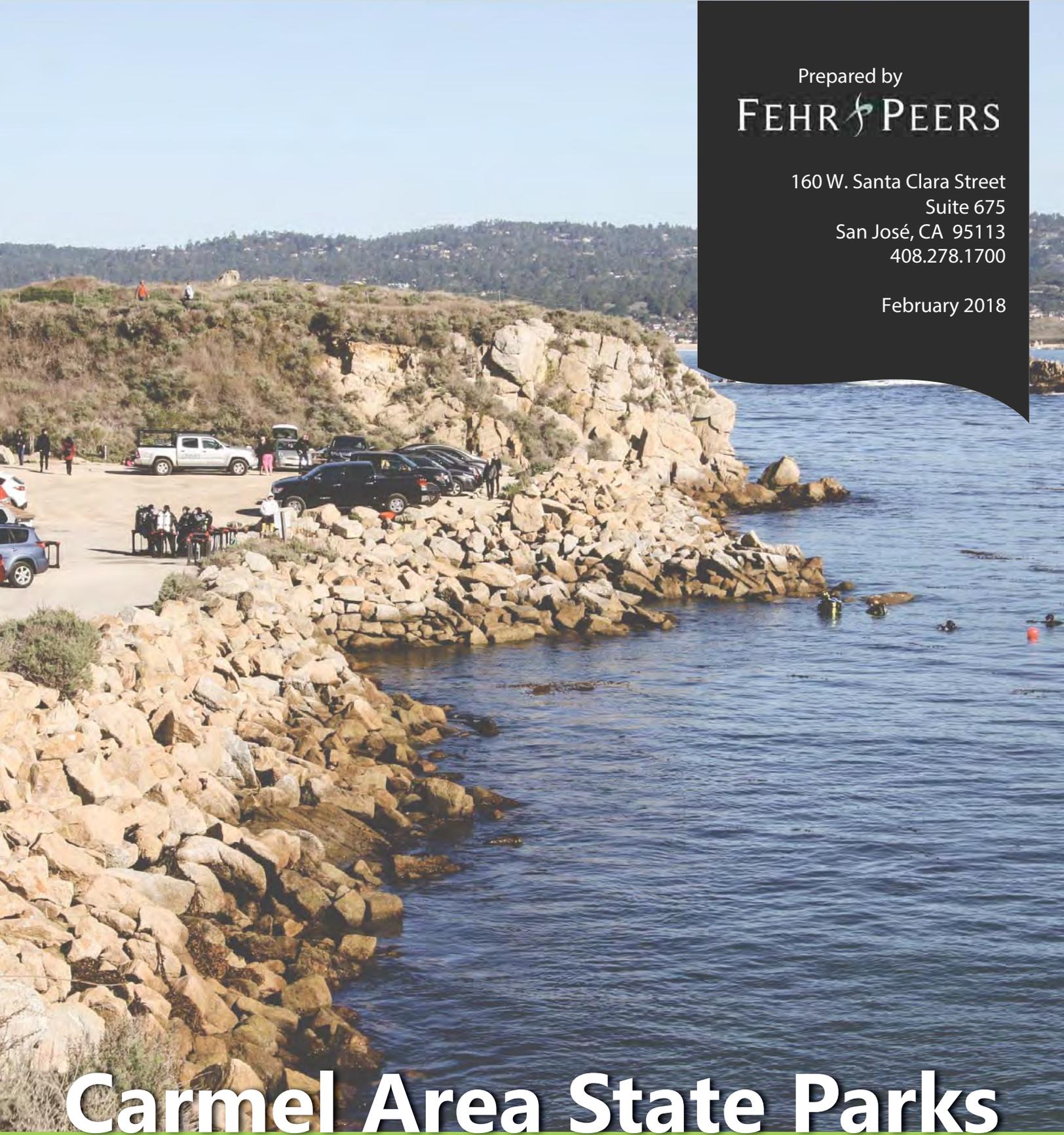


Appendix J

Final Traffic and Parking Study



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February 2018

Carmel Area State Parks

Final Traffic and Parking Study

Prepared for:

Ascent Environmental, Inc. and California State Parks

Final
Carmel Area State Parks General Plan
Traffic and Parking Study

Prepared for:
Ascent Environmental, Inc.
and
California State Parks

February 2018

SJ14-1542

FEHR  PEERS



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INTRODUCTION

This traffic and parking study has been prepared to support the development of alternatives for the Carmel Area State Parks (CASP) General Plan, which includes four park units: Point Lobos State Natural Reserve (PLSNR), Carmel River State Beach (CRSB), Point Lobos Ranch Property (PLRP) and Hatton Canyon Property (HCP). The General Plan includes visitor use, park management, and resource conservation concepts that implement the mission of California State Parks (CSP) and addresses the priorities of its stakeholders.

This report contains information used to help define alternatives developed during the CASP general planning process and for subsequent formulation of a preferred alternative. It describes existing transportation conditions for all travel modes and potential options for the plan alternatives. Information in this report is generally presented for each of the park units from the south to the north in the following order: PLSNR, PLRP, CRSB and HCP. The report is organized as follows:

- Existing Conditions – Fehr & Peers conducted field observations and collected data in November and December of 2014 to understand the parking and circulation conditions and challenges of the park units. The resulting data and existing conditions are summarized in this section.
- Transportation Opportunities and Constraints – A summary of the constraints and opportunities that were observed as a result of this research, fieldwork, and data collection is provided in this section.
- Transportation Concepts – In early 2015, Fehr & Peers presented to CSP a set of distinct transportation concepts that address the transportation challenges of the park units and that may also generate parking revenue. Those concepts are presented in this section. They served as input into the development of General Plan action alternatives.
- Recommendations – This section summarizes the Fehr & Peers recommended transportation elements and access and circulation improvements that have been formulated and presented in this traffic and parking study.





EXISTING CONDITIONS

This chapter describes the transportation context of the park units and provides more details on existing access, circulation, and parking issues. It also provides the results of data collection and field observations that were conducted on Saturday December 27, 2014.

LOCATION BOUNDARIES

There are four park units included in the General Plan update shown in **Figure 1**. From south to north they are: PLSNR, PLRP, CRSB and HCP. PLSNR is located three miles south of the City of Carmel-by-the-Sea and approximately 20 miles north of Big Sur along State Route 1 (SR 1). PLRP is located east of PLSNR across SR 1. CRSB is adjacent to and west of SR 1, just south of Carmel-by-the-Sea and north of PLSNR. HCP is east of Carmel-by-the-Sea and is parallel to SR 1.



Point Lobos Ranch Property. Source: Fehr & Peers, 2014.





0 0.25 0.5 1 Mile



Figure 1: CASP Park Units

EXISTING LAND USES

Prior to discussing transportation facilities, it is important to briefly summarize existing land uses to provide context for the later description of the existing transportation facilities. Land uses within the park units vary as do the types of facilities available to the public. The following section describes the land use context of each park unit. The details of existing parking, access and circulation are described later in this chapter.

Point Lobos State Natural Reserve

Land use designations within PLSNR include recreational uses and wildlife habitat. There are four residences for CSP staff and park operations and maintenance facilities within the unit as well. Facilities include five public restrooms, a maintenance shop, boat sheds, storage yard, entrance station, office/docent meeting room and library, information center, Whalers Cabin Museum, Whaling Station Museum, picnic facilities, trails, and ten public parking lots.

Point Lobos Ranch Property

PLRP was historically used for dairy farming, grazing, and irrigated pastureland. There are several historic buildings including the Foreman's House, Morales House, and Victorine House within the property that are currently being renovated as CSP facilities or residences. There is also a large barn, hay barn, and storage buildings. The barn area is the location for CSP trail crew staging. Adjacent private property also has structures and private rural residences. This unit is not currently open to the general public and there are no visitor facilities, although the property can be accessed by surrounding residents.

Carmel River State Beach

CRSB, including Monastery Beach and Carmel River Beach, supports beach-related, day-use recreational activities. This unit also contains a natural preserve and a cultural preserve. The Odello West portion of CRSB consists of a low-lying floodplain that is adjacent to the Carmel River lagoon and immediately west of SR 1. This area was previously used for agricultural cultivation, including artichokes, and is now partially restored riparian and wetland habitat. A portion of the property is part of a Caltrans mitigation bank.

Facilities in the unit include two primary parking and restroom areas, one at Carmel River Beach and one at Monastery Beach. Other facilities include Odello Farm complex structures, including the barn, blacksmith shed, creamery/cookhouse, old Odello residence, and garage buildings.

Hatton Canyon Property

HCP is a former highway right-of-way that has been preserved as open space adjacent to Carmel Valley Road and SR 1. Land uses adjacent to HCP include residential, commercial, and visitor accommodation. Facilities in HCP include a Class I bicycle facility in the southern portion of the property, primarily south of





Carmel Valley Road, that connects the commercial area at Carmel Valley Road and SR 1 to the residential uses to the north. The pedestrian tunnel under Carmel Valley Road provides an example of how to improve bicycle and pedestrian access by using grade separation. An unpaved service road runs up the northern half of the property and is used as a popular hiking trail by local residents.

ACCESS AND CIRCULATION

Due to the rural setting of PLSNR and most of CRSB, visitors arrive primarily by vehicle. Portions of CRSB and HCP are located in suburban settings where access by bicyclists and pedestrians is common. While transit service is available, the service is limited, and few visitors currently access the park via transit. Once visitors arrive at PLSNR and CRSB (and HCP to a more limited extent), the internal system of roads and trails allows for pedestrian and bicycle movement throughout each of these units and access to the various beaches, coves, and vistas. (Bicycles are allowed only on paved roads, not on pedestrian trails). This section of the report describes the existing access and circulation for vehicles, pedestrians, bicyclists, and transit users.

Vehicle Access and Circulation

SR 1 is a state highway parallel to the Pacific Coast in California and provides primary access to CASP. SR 1 begins in Mendocino County and runs south to its terminus in Orange County. In the CASP vicinity, SR 1 varies in width from as narrow as 20 feet (10-foot travel lanes with no paved shoulders) to 40 feet (12-foot lanes and 8-foot shoulders). SR 1 is managed by the California Department of Transportation, or Caltrans. The Caltrans transportation concept for SR 1 calls for two 12-foot lanes with 4-foot paved shoulders in the park vicinity. The transportation concept for a roadway is defined as long-range improvements needed to bring an existing facility up to the standards necessary to adequately serve 20-year traffic forecasts.

Vehicles can access each of the park units from SR 1. This section describes vehicle access to each of the units, starting with PLSNR, then PLRP, CRSB and HCP.



State Route 1 at Point Lobos State Natural Reserve. State Route 1 is a scenic highway with two lanes in the project area. Source: Fehr & Peers, 2014.



Point Lobos State Natural Reserve

The public entrance to PLSNR is from Point Lobos Road, which intersects with SR 1. There is a left-turn lane on SR 1 allowing northbound vehicles to enter PLSNR, while southbound traffic must make a right turn directly on to Point Lobos Road. The intersection at the entrance is controlled with a side street stop sign. Drivers must pay a fee to enter by stopping at a kiosk that is set back approximately 400 feet from the intersection. During peak periods vehicles queue back from the entry kiosk, causing drivers trying to enter PLSNR to either stop and wait, or park along the SR 1 shoulder. There are no marked crosswalks at the PLSNR entrance, and visitors that park on the west side of SR 1 typically use an unauthorized trail parallel to SR 1 and located outside of the park in the Caltrans right-of-way to enter PLSNR. Visitors that park on the east side of SR 1 typically wait for a break in traffic before crossing the two-lane highway. Pedestrians may cross the highway uncontrolled at many places along the frontage of PLSNR, recognizing the absence of a crossing facility.

SR 1 carries high levels of traffic on a typical day and experiences periodic traffic congestion in the vicinity of the PLSNR entrance. The 2010 AMBAG Metropolitan Transportation Plan (MTP) identified the portion of SR 1 from Carmel to Carmel Highlands as being congested or projected to be congested based on projections from the regional travel demand model. The more recent 2014 MTP does not contain information regarding congestion or projected congestion. During field visits no major traffic delays were observed along SR 1 on those particular days, although late weekend afternoon northbound traffic queues were observed extending back from intersections further north in Carmel. This congestion results in relatively slow traffic speeds along SR 1 near the park units. Stakeholders and local residents also report that traffic congestion is an ongoing problem in the area.

Within PLSNR, Point Lobos Road provides access from the PLSNR entrance to Whalers Cove, Sea Lion Point, China Cove, and Bird Island. Point Lobos Road also provides access to all of the parking areas within the unit. Two spur roads from Point Lobos Road are available to the public: Whalers Cove Road leading to the Whalers Cove parking area, and an unnamed road providing access to the Piney Woods Picnic Area and reconnecting with Point Lobos Road. Additionally, a driveway from SR 1 leads to the Hudson House, which provides CSP staff housing. While this area is within the boundary of PLSNR the driveway is not connected to the rest of the internal road system and is not open to the public. The speed limit throughout PLSNR is 15 mph. The road leading to Rat Hill is open to staff only, with the exception of visitors parking boat trailers. Pedestrians often walk on the internal roadways within PLSNR. Bicycle use is permitted on the paved roads within PLSNR.

Point Lobos Ranch Property

PLRP is accessible directly from SR 1. San Jose Creek Canyon Road provides access from SR 1 to the northern and eastern portion of the property. Red Wolf Drive and Riley Ranch Road provide access to the southern and eastern portion of the property.



Roads within PLRP include Red Wolf Drive, Riley Ranch Road, Allen Road, and San Jose Creek Canyon Road. San Jose Creek Canyon Road is a gated unpaved road that provides access to the northeastern portion of the property and to the adjacent open space (Palo Corona Regional Park) north and northeast of PLRP. Allen Road, Red Wolf Drive and Riley Ranch Road are paved, private roads that provide access to CSP employee housing and private residences. Private roads are maintained by homeowners and CSP has easements to allow for use of the roads. Allen Road is the historic SR 1 alignment and connects to the current SR 1 at two locations: approximately 800 feet southwest of the PLSNR entrance and across from CRSB. The connection across from CRSB is not accessible due to trees and landscaping.

Carmel River State Beach

The designated public access points for CRSB are the Monastery Beach parking area directly accessible from SR 1, and a parking area accessible from one-way Scenic Road and Carmelo Street in Carmel-by-the-Sea serving Carmel River Beach. There are additional points of access from Ribera Road and the Bay School, which have trailheads to CRSB. Roads within CRSB include an unpaved service road that also functions as a trail and an unpaved road that leads to the Odello Farm complex. Vehicle access on these roadways is limited to authorized vehicles and personnel. There is also a paved road with a 20-foot easement that runs from SR 1 to the Carmel Area Wastewater District (CAWD) treatment plant located on a property adjacent to the Odello Farm complex.





Hatton Canyon Property

HCP does not contain any public roads. The only vehicle circulation within the property is provided via an unpaved service road, which is used by CAWD to maintain their sewer main line and by Pacific Gas and Electric (PG&E) to maintain utility lines in the unit.

Traffic Volumes and Vehicle Count Data

SR 1 provides access to many of the nearby parks including Palo Corona Regional Park, Garrapata State Park, and the Big Sur area. In 2014, the annual average daily traffic just north of PLSNR at the CRSB was 14,200 vehicles.

Intersection counts were collected at the intersection of SR 1 and Point Lobos Road on Friday, November 28, 2014, the day after Thanksgiving (representing a peak weekend in this study because it is between a Thursday holiday and a Saturday), as well as on Wednesday December 31, 2014 (representing a peak weekday). Point Lobos Road is the primary access road into PLSNR. The counts provide information on vehicular volumes entering and exiting the unit. Bicycles were also counted at the intersection and counts demonstrated low bicycle volumes for all movements. **Figure 2** below illustrates the rolling hourly volume of vehicles from 10:00 AM to 3:00 PM. The peak weekday entrances were observed at 10:30 AM (106 vehicles) and the peak weekday exits were observed at 12:30 PM (97 vehicles). The peak of vehicle activity, including vehicles entering and exiting PLSNR on a weekday, was observed at 12:30 PM with 177 vehicles. The peak weekend entrances (111 vehicles) were observed at 1:30 PM and the peak weekend exits (128 vehicles) were observed at 1:00 PM. The peak of vehicle activity including vehicles entering and exiting PLSNR on a weekend was observed at 1:00 PM with 233 vehicles.



Park entrance at Point Lobos State Natural Reserve. A queue begins to form during peak visitor hours and can spill onto State Route 1. Source: Fehr & Peers, 2014.

Traffic volume data at the intersection shows a steady stream of entrances and exits throughout the day. This is different than typical, non-recreation traffic patterns, such as retail or commercial uses, which generally show highly distinct peak demands at the AM and PM. The data suggests that during peak visiting days, visitors are constantly arriving and leaving throughout the day. It is also important to note that when parking is at capacity, vehicles are not allowed to enter PLSNR until parked vehicles leave. The decline in vehicles entering the unit at 11:30 AM suggests that PLSNR is at or near its parking capacity during that time.



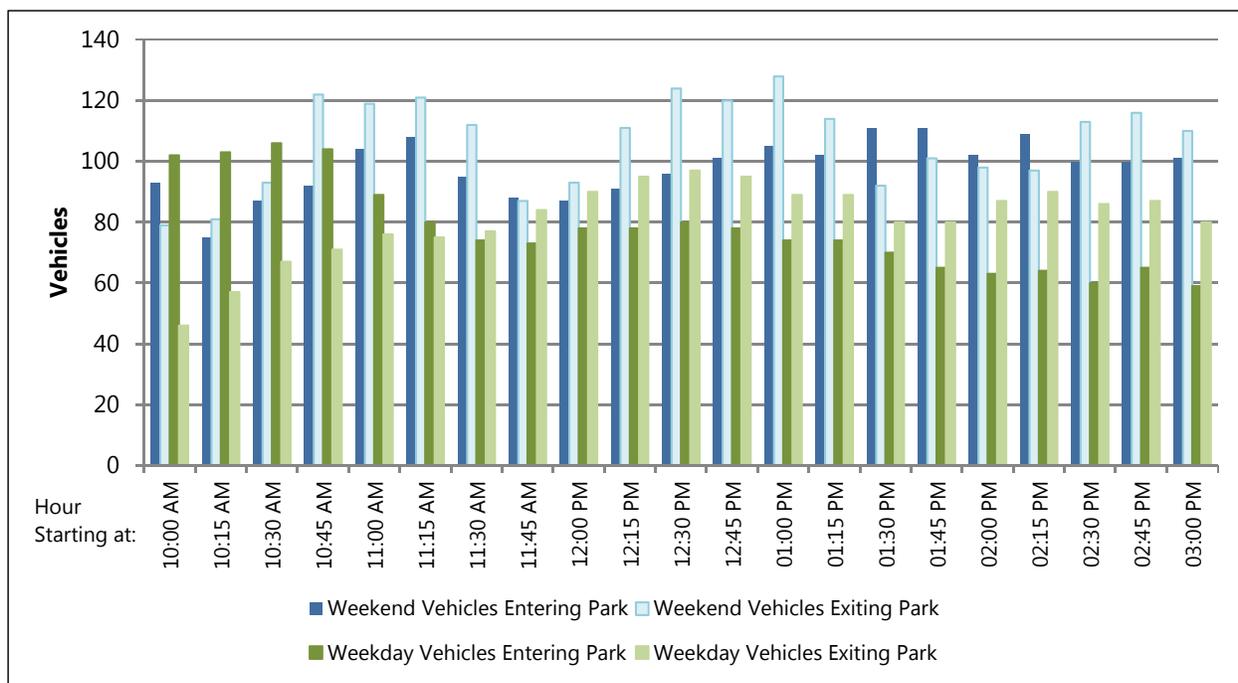


Figure 2: Hourly Vehicle Volume at PLSNR Entrance

Source: Fehr & Peers, 2014. Weekend counts were conducted on November 28, 2014 and weekday counts were conducted on December 31, 2014.

In addition to the vehicle count data collected by Fehr & Peers, visitor data was provided by CSP for PLSNR and CRSB. **Figure 3** below shows visitor data collected by CSP over 2011-2014. Spring, summer, and fall are the most popular times of year to visit the unit. However, visitor volumes during the winter are also high. For example, on the peak day in July 2014, 1,000 vehicles visited PLSNR, and on the peak day in December 2013 over 860 vehicles were recorded. In the year from July 2013 to June 2014 the monthly peak visitor day for PLSNR has been between 740 to around 1,000 vehicles with the exception of April (which reached over 1,300 vehicles that month).

While vehicle and visitor data can help to estimate the busiest times of year, they do not necessarily represent the total number of visitors at PLSNR, because the vehicle counts do not capture walk-in visitors. Because a large number of vehicles often park along the shoulders of SR 1, many visitors access PLSNR on foot. Pedestrian counts at the entrances of the facility would present a more complete estimate of total visitor demand. For instance, CSP staff have reported that walk-in visitation has reached 2,000 people per day.

When the parking lot is at capacity, staff at PLSNR institutes a rule of “one car in, one car out” or temporarily closes all access until an adequate number of spaces become available. During these times a queue forms at the PLSNR entrance for those people who choose to wait. Queues also form when PLSNR is busy, but not necessarily at capacity for parking. This line of vehicles can spill out onto SR 1. Drivers were observed exiting the queue when traffic was spilling out onto SR 1.



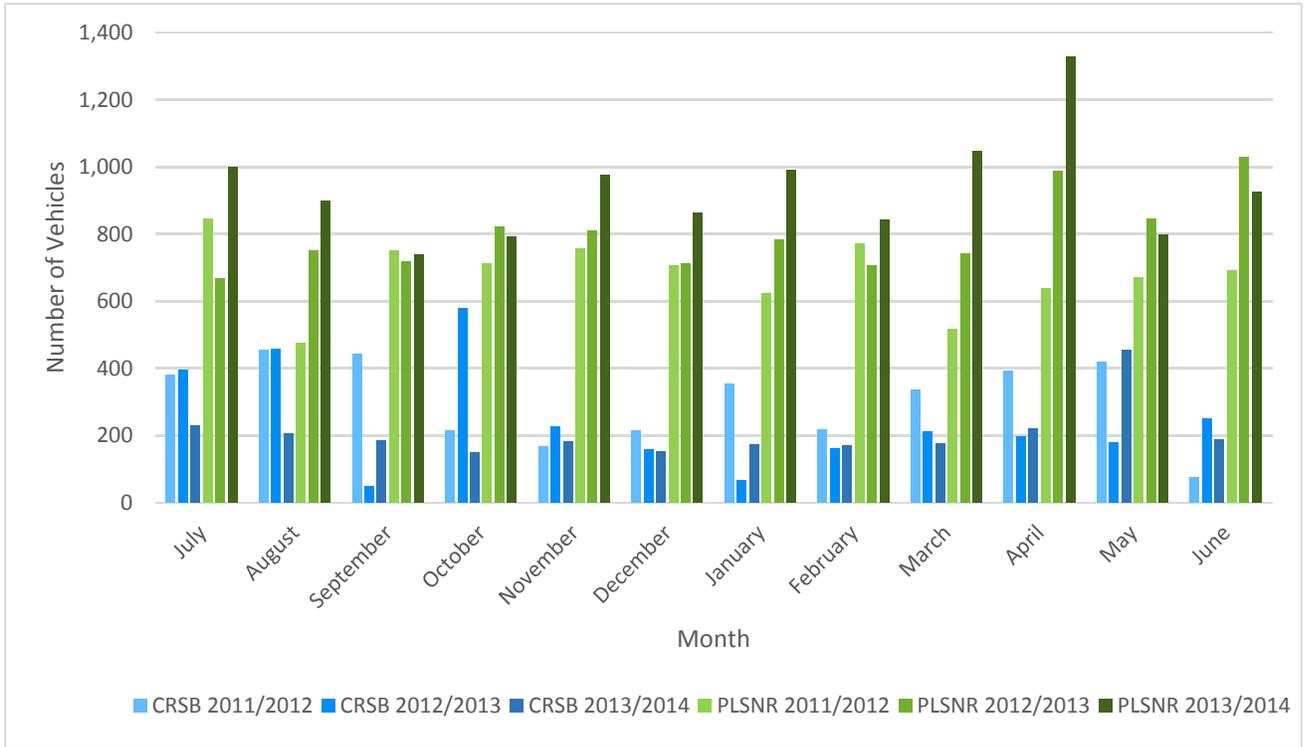


Figure 3: Monthly Peak Visitor Data for PLSNR and CRSB

Source: CSP 2011 -2014



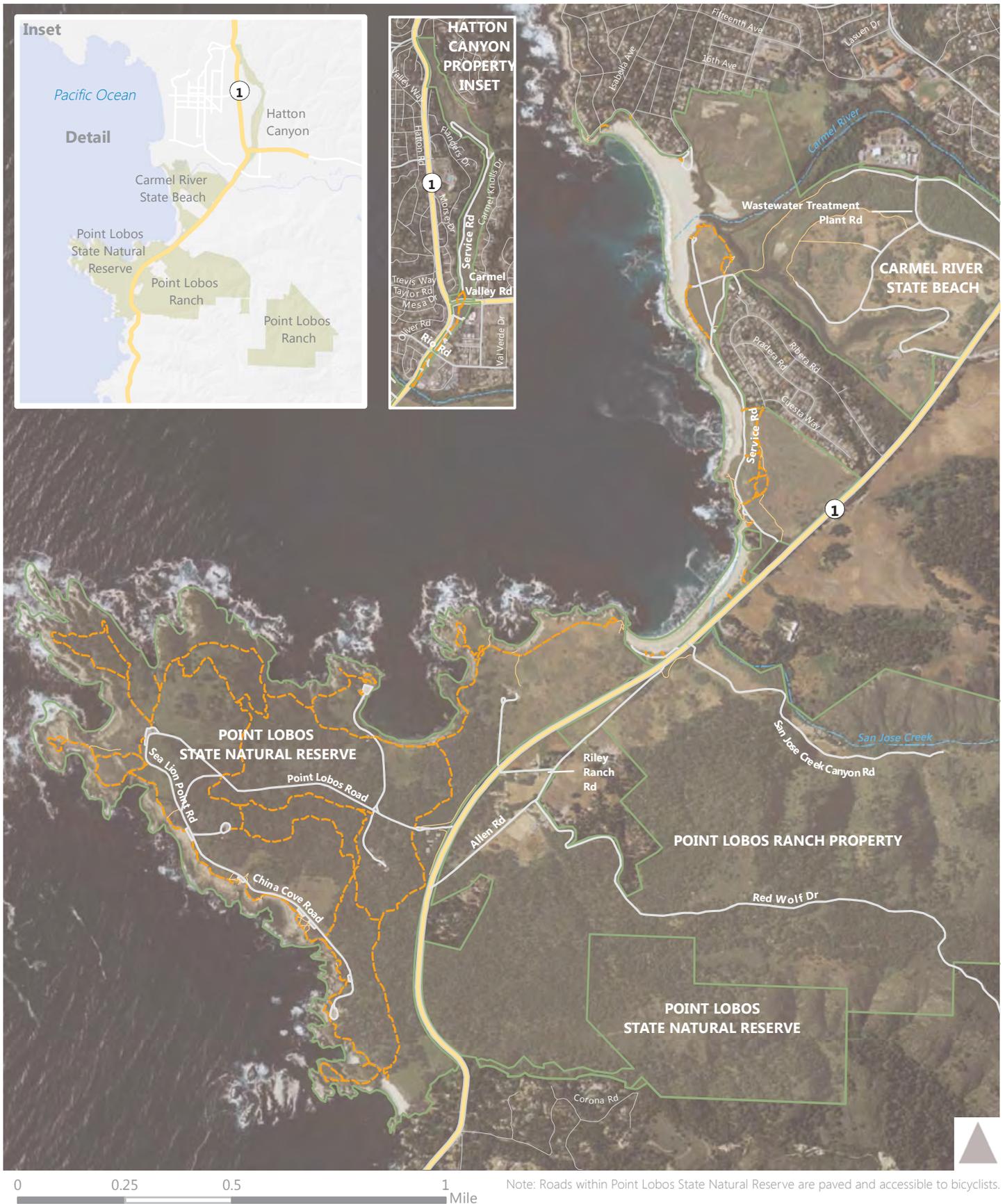


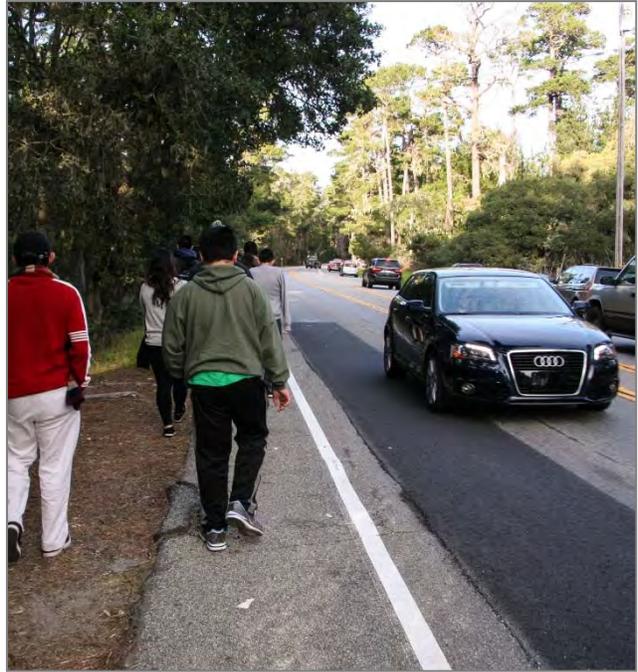
Figure 4: Existing Pedestrian and Bicycle Trails



Pedestrian Access and Circulation

The trail system within PLSNR has clear signage and provides easy access to many parts of the unit. **Figure 4** shows formal and unauthorized trails within CASP.

Visitors frequently park on the shoulder of SR 1 and cross SR 1, which is a safety concern identified by project stakeholders, because it creates a point of conflict between drivers and pedestrians. Despite the apparent risk of mixing high pedestrian volumes and on-highway vehicles, the Statewide Integrated Traffic Records System (SWITRS) does not have any recorded injuries or fatalities involving pedestrians on file during the last ten years on SR 1 near any of the CASP units. This is likely due to the fact that drivers typically have to slow down along this section of SR 1 to allow for parallel parking activity along the shoulder or cars entering and exiting PLSNR or Monastery Beach.



State Route 1 at Point Lobos State Natural Reserve. Pedestrians often use the shoulder of the highway to get to and from their vehicles. Source: Fehr & Peers, 2014.

PLRP does not have any formal trails or access points open to the general public; residents living adjacent to the property have informal access. As discussed above there are roads within the unit, but no sidewalks or formal trails.

CRSB can be accessed by pedestrians via a service road and trail along the shoreline between Carmel River Lagoon and Monastery Beach. Walk-in access is also provided at Bay School and from three public trailheads in the Carmel Meadows subdivision located on Ribera Road, Calle la Cruz, and Cuesta Way. In Carmel, Scenic Road provides access at three points between Valley View Avenue and the end of the road.

Although not an authorized access point, visitors have also been observed entering PLSNR on the northern boundary adjacent to CRSB on foot by climbing the bluff located at the southern edge of Monastery Beach. The unauthorized foot traffic along this portion of PLSNR has caused damage to the natural habitat and sensitive resources. In response, CSP has fenced off access to PLSNR from Monastery Beach. However, holes in the fencing indicate that people are vandalizing CSP property and climbing through the fence.

Pedestrian access to the southern portion of HCP is unrestricted and the property can generally be accessed from SR 1, Carmel Valley Road, Rio Road, the Barnyard Shopping Village, Carmel Rancho Shopping Center, and Crossroads Shopping Center. There are also a number of unofficial pedestrian access points to the



northern section of the unit from surrounding neighborhoods. These include Edgefield Place, Via Mar Monte, Carmel Hills Drive, Canada Court, and Carmel Knolls Drive.

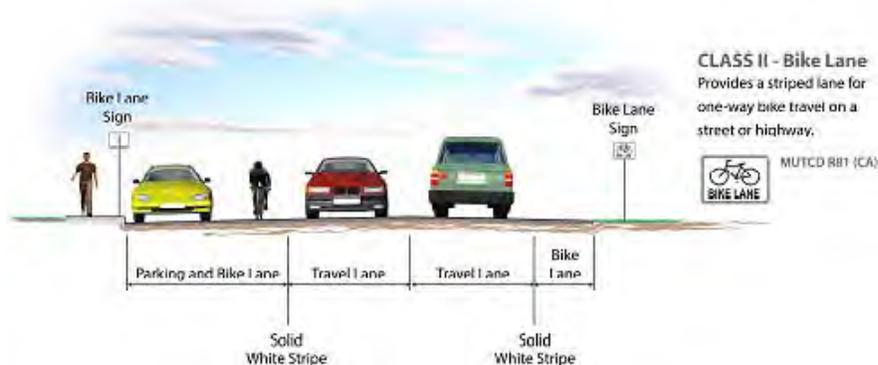
Bicycle Access and Circulation

Bikeway planning and design in California typically relies on guidelines and design standards established by Caltrans in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design). Caltrans standards provide for four distinct types of bikeway facilities, as described below and shown on the accompanying figures.

- Class I Bikeway (Bike Path) provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized. In general, bike paths serve corridors not served by streets and highways or where sufficient right-of-way exists to allow such facilities to be constructed away from the influence of parallel streets and numerous vehicle conflicts.



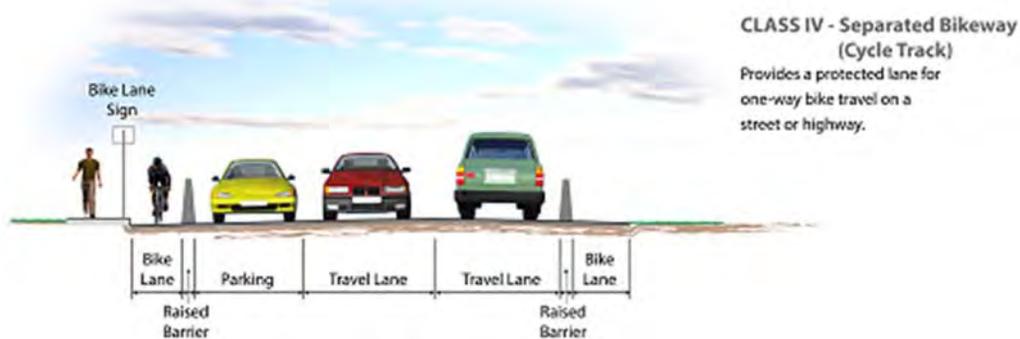
- Class II Bikeways (Bike Lanes) are lanes for bicyclists adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are generally five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.



- Class III Bikeway (Bike Route) are designated by signs or pavement markings for shared use with pedestrians or motor vehicles, but have no separated bike right-of-way or lane striping. Bike routes serve either to: a) provide continuity to other bicycle facilities, or b) designate preferred routes through high demand corridors.



- Class IV Bikeways (cycle tracks or protected bike lanes) provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other vehicle traffic with devices, including, but not limited to, grade separation, flexible posts, inflexible physical barriers, or parked cars.



PLSNR can be accessed via bicycle by using SR 1. Caltrans has classified SR 1 as a Class III bicycle route. Bicycles are only allowed on the paved roads within PLSNR.

CRSB, PLRP, and HCP can be accessed by bicycle at several points as described in the section above. Bicycles are not allowed within PLRP because this property is not currently open to the general public for visitor use. The paved multi-use trail in the southern portion of HCP is classified as a Class I bicycle route, which provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians. Limited bicycle parking is located at various points within PLSNR. Bike parking consists of a post with a small pliable ring attached, which is not secure. No bikes were parked when data was collected. Additionally, fewer than five



bicyclists were observed during the data collection time period. Bicycle volumes may vary in the summer months, although data are not available on seasonal variation in bicycling activity in the park units.

Transit Access

Monterey-Salinas Transit's (MST) bus Line 22 serves PLSNR and HCP with bus stops immediately in front of the PLSNR main entrance, as well as on Rio Road and within the Crossroads Shopping Center adjacent to HCP. The route provides access to Monterey, Carmel-by-the-Sea, and the Big Sur region with three round trips daily in the summer. Between Labor Day and Memorial Day the route has limited service with two trips daily on the weekend only. The line's on-time performance is generally described as poor by MST partially due to seasonal traffic congestion in Carmel and the high volume of trucks along the route. (Specific performance data is unavailable at this time.) Ridership data is not available by stop. Ridership for the route by year is shown in **Figure 5**. While ridership has increased slightly on Line 22 in the last couple years, overall route ridership remains low compared to other MST routes.

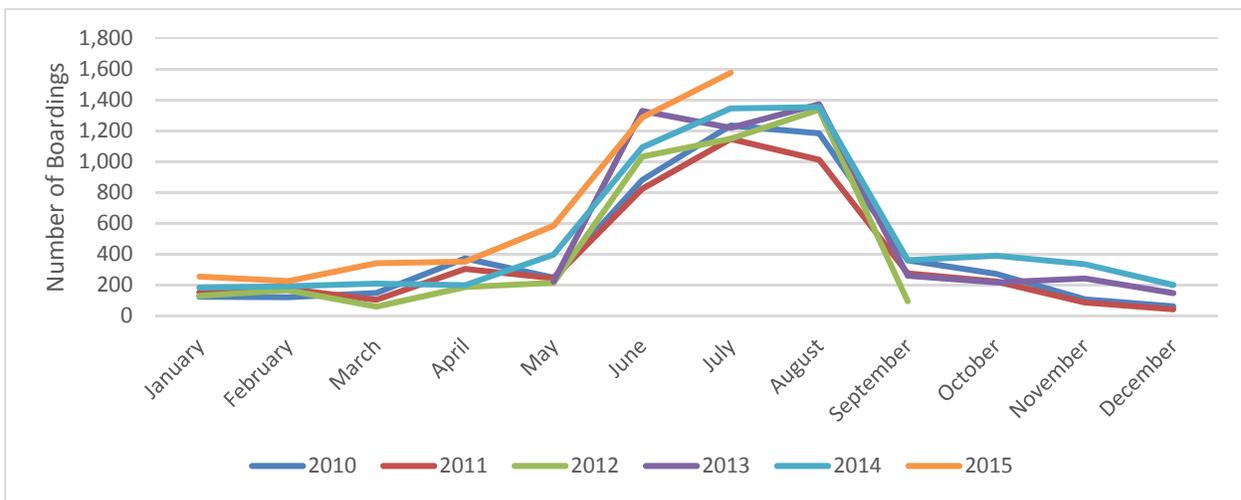


Figure 5: MST Line 22 Total Ridership by Month

Source: Monterey-Salinas Transit, 2015

Note: Service was temporarily suspended between Labor Day 2012 and Memorial Day 2013.

PARKING

There are currently ten designated parking areas with a total of approximately 150 paved and unpaved parking spaces within PLSNR, eight of which are ADA accessible. When PLSNR reaches capacity, additional vehicles must wait until spaces become available within PLSNR or instead park along the shoulder of SR 1. Data are not currently available on the average length of stay, particularly because many vehicles park outside PLSNR along the highway.



There are no public parking facilities within PLRP, because it is currently not open to the public. CRSB has paved parking located at the end of Scenic Road and Carmelo Street, which primarily serves Carmel River Beach. This parking area has 22 standard parking spaces and three ADA accessible parking spaces. A portion of the parking area has been lost, because floodwaters washed away the pavement. Side road shoulders near Bay School offer limited unmarked parking. Additionally, there is informal parking at Monastery Beach along the shoulder of SR 1. There is also a small trailhead with limited parking at Ribera Road and Cuesta Way, and there is on-street parking in the adjacent Carmel Meadows residential area. HCP has parking available on surrounding residential streets and at the shopping centers near SR 1 (Barnyard Shopping Village, Carmel Rancho Shopping Center, and Crossroads Shopping Center). **Table 1** below shows the approximate number of formal parking spaces for each unit. It does not include parking that is nearby, but that is not provided by CSP, such as, but not limited to, parking at the various shopping centers adjacent to HCP or parking at Bay School and Monastery Beach.

TABLE 1: FORMAL PARKING SPACES BY UNIT

Unit	Number of Formal Parking Spaces
Point Lobos State Natural Reserve	150
Point Lobos Ranch Property	0
Carmel River State Beach	25
Hatton Canyon Property	0

Source: California State Parks, 2013

Parking field observations were conducted on a peak weekend in December at PLSNR and SR 1. The peak parking demand was observed at 2:30 PM with a combined total of approximately 380 vehicles parked either within PLSNR or along the shoulder of SR 1. The average vehicle occupancy for vehicles entering PLSNR was observed to be three people. The Monastery Beach parking area was also full, and drivers were observed parking along SR 1 and walking into CRSB. District staff counted the number of parking spaces on SR 1 during Labor Day weekend in 2017 and noted there was room for approximately 310 cars on both sides of the highway outside PLSNR. Staff reported that the internal 150 spaces typically turn over one to three times in a day, and there were over 2,000 people who walked in through the main gate during the Labor Day weekend.



The CRSB parking lot was also observed to be at capacity during peak periods, and limited on-street parking may prevent visitors from parking nearby to walk to CRSB. While parking occupancy counts were not conducted in the commercial center parking lots near HCP, a windshield survey showed that there were many unoccupied parking spaces immediately adjacent to the trail.



State Route 1 near Carmel River State Beach and Point Lobos Ranch Property. Source: Fehr & Peers, 2014.

PLANNED IMPROVEMENTS

There are two long-range regional transportation plans that include programmed projects for Monterey County: *Moving Forward 2035* (AMBAG, 2014) and the *2014 Monterey County Regional Transportation Plan* (TAMC, 2014). The *Moving Forward 2035* is a long-range transportation plan for Monterey, San Benito, and Santa Cruz counties, whereas the *2014 Monterey County Regional Transportation Plan* includes just Monterey County. Projects included in these plans may be implemented over the span of 20 years between 2010 and 2035. The only programmed improvement nearby the project area is the Rio Road truck climbing lane on SR 1. The project would consist of a northbound truck-climbing lane from Rio Road to Carmel Valley Road. According to Caltrans' 2015 *Status of Projects Central Region District 5* report, this project is currently in the design phase (Caltrans 2015).

In 2000, the California State Legislature passed legislation calling for the establishment of the California Coastal Trail, a 1,200-mile trail running the length of the California Coast. The Monterey Bay Sanctuary Scenic Trail will be a link in this larger chain of trail segments, connecting Santa Cruz and Monterey Counties with the rest of the California Coast. In Monterey County the project area for the Monterey Bay Sanctuary Scenic Trail is from the Pajaro River in the north to the Lovers Point in Pacific Grove to the south. This trail is included in the programmed list of improvements for the region.





TRANSPORTATION CONSTRAINTS AND OPPORTUNITIES

The following section identifies key transportation opportunities and constraints relating to the four CASP units. These were identified through analysis of existing conditions data, field observations, and coordination with the General Plan planning team.

PRESERVING OPEN SPACE

PLSNR has been called the “crown jewel” of the state park system. With its stunning views, extensive trail system and vibrant ocean life, it is a major attraction for tourists from around the world. The nearby CRSB is a popular launching spot for advanced divers and provides a scenic hike for those hoping to spot a whale. The popularity of these units is due to the easy and scenic access they provide to the Monterey Bay National Marine Sanctuary. Open space is the reason that people visit these parks. Therefore, preserving that open space is a critical goal of the planning process for the General Plan. Transportation and circulation improvements should take advantage of opportunities to provide access to this open space while preserving the existing character of the natural setting.



Point Lobos State Natural Reserve. Source: Fehr & Peers, 2014.





STATE ROUTE 1

As shown in **Figure 1** of the Existing Conditions section, the four CASP units are all adjacent to SR 1. Because of the proximity to this roadway, highway access is important to consider as part of the General Plan process. The following constraints and opportunities were identified and should be addressed in coordination with Caltrans, Monterey County, and agencies involved in transportation planning.

Constraints

The popularity and parking overflow issues of PLSNR and CRSB's Monastery Beach parking area result in drivers parking along the shoulder of SR 1 within the highway right-of-way. When drivers



State Route 1 at Point Lobos State Natural Reserve. Source: Fehr & Peers, 2014.

park on the east side of the highway, visitors have to cross two lanes of potentially high-speed traffic to access PLSNR and CRSB. Additionally, the shoulder on the east side of SR 1 is not wide enough in many places for drivers to exit their vehicle without stepping into the vehicle lane, which creates a potential safety hazard.

SR 1 is a state-designated scenic highway. The Caltrans *Scenic Highway Guidelines* (2012) provide guidance on what defines a scenic corridor, which should have limited visual intrusions. The Guidelines state that parking lots visible from a scenic highway are an example of a visual intrusion. The intrusion is considered minor if the parking lot is screened from view so that most vehicles and pavement are not visible; moderate if the lot generally blends with surroundings; and major if visibility of vehicles dominates the landscape. Accommodating the need for parking while maintaining the visual character of the highway is a key constraint and requires careful consideration of where parking is best located. Additional discussion of the opportunities of where and how parking is located along SR 1 is included below.

Opportunities

As mentioned in the Existing Conditions section, despite the potential for conflict with pedestrians crossing SR 1, there have been no reported accidents in the last 10 years involving pedestrian collisions. This could be partly due to traffic slowing from queuing at the PLSNR entrance and parallel parkers slowing traffic.



Another contributing factor to this safety record could be the parallel, unpaved pedestrian path on the west side of the highway right-of-way in the vicinity of the PLSNR entrance, which allows people to access PLSNR without walking on the highway shoulder. PLSNR and PLRP also have good sight distance north of the entrances (over 550 feet).¹ These factors should be considered in the design of any SR 1 pedestrian crossings to optimize the safety of their locations that may connect PLSNR and PLRP.

There are two types of pedestrian crossing opportunities that could be considered between PLRP and PLSNR: grade-separated and at-grade crossings. Grade-separated pedestrian crossings provide the most pedestrian and bicycle friendly environment by completely separating vehicles from other modes. A pedestrian bridge or overpass would disrupt the visual aesthetic of the designated scenic highway and, therefore, is not recommended. A pedestrian tunnel would be the least intrusive option and could be designed to match the visual character of the surrounding environment. A tunnel, if well designed, could act as the gateway between PLSNR and PLRP, designed to enhance visitors' arrival experience, particularly if parking for PLSNR is provided at PLRP.



Example of a grade-separated tunnel. Source: Fehr & Peers, 2015.

There are several types of at-grade crossings that could be considered as well: a high visibility crossing, a signal, and a pedestrian hybrid beacon. A high visibility crossing would include new yellow signage and striping patterns (referred to as continental markings) that are more likely to catch a driver's attention. This would be the least costly improvement and would provide improved visibility for pedestrians. A new signal would require additional analysis and coordination with Caltrans to determine feasibility. Signals are not

¹ Sight distance here is corner sight distance, which is the line of sight maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. It is the distance at which the driver of the stopped vehicle can see an object 3.5 feet off the ground on the cross street. The *Highway Design Manual* uses over 550 feet for a design speed of 50 mph.



common on rural segments of SR 1 on the Central Coast, but could be explored if Caltrans considered it a potential option. Ultimately, Caltrans would need to approve any new pedestrian crossing of SR 1.

A pedestrian hybrid beacon consists of an overhead beacon with two horizontally arranged red lenses above a single yellow lens. The beacon remains unlit for drivers until a pedestrian activates the system. While the beacon is unlit, the pedestrian display shows "Don't Walk." Once pedestrians activate the beacon it begins to flash yellow warning motorists that the beacon has been activated. This brief flashing yellow interval is followed by a steady yellow interval, then by a steady red signal indicating motorists need to come to a complete stop. While motorists are seeing the steady red signal, the "Walk" sign is lit for pedestrians, allowing them to cross. During the flashing "Don't Walk" pedestrian phase, the beacons flash red for drivers. The flashing red indicates to drivers that they are to stop and yield to pedestrians in the crosswalk.



Example of a pedestrian hybrid beacon. Source: Fehr & Peers, 2011.

The most effective option of both grade-separated and at-grade pedestrian improvements would be to remove pedestrians completely from vehicle traffic using a tunnel. A tunnel would also be a high-construction cost solution. If parking were to be prohibited along the shoulder of SR 1 within the vicinity of PLSNR, it would be reasonable to expect that speeds would increase and the pedestrians crossing the highway would be more exposed to fast-moving vehicles, increasing the need for a designated crossing area. However, even if parking continues along the highway, visitors would still benefit from a grade-separated tunnel crossing, which would facilitate an improved and safer experience for both drivers and pedestrians. Note that an internal shuttle serving PLSNR and PLRP would not prevent pedestrians from crossing the highway and would increase CSP's operation costs. Therefore, even if an internal shuttle is provided, it is recommended to establish a designated pedestrian crossing, as well.

For any potential formal entrances to be provided at PLRP and/or CRSB at or near the Bay School, the intersection with SR 1 would need to be paved and realigned at a 90-degree angle to the highway to improve access. Access to HCP and CRSB occurring along local streets is generally adequate.





CIRCULATION AND ACCESS

The constraints and opportunities associated with circulation and access vary at each unit. However, three of the four units are within very close proximity to each other. Therefore, while these constraints and opportunities are discussed separately for each unit, the concepts provided in the next chapter make use of the opportunities in ways that connect the units and provide a more cohesive approach to CASP circulation and access.

Constraints

PLSNR contains many small dispersed lots requiring drivers to circulate searching for parking within those lots. Distracted drivers looking for parking or looking at the scenic vistas may not see pedestrians, which have a tendency to walk in the road within PLSNR. Additionally, this type of distracted driving is dangerous for bicyclists. However, bicycle access to the park is only provided by SR 1. Bicycle parking within the park is limited, and existing facilities are not secure.



Point Lobos Ranch Property. Source: Fehr & Peers, 2014.

PLRP is not currently open to the public. There are three roads providing access to the area: Riley Ranch Road, Allen Road, and San Jose Creek Canyon Road from SR 1. These roads would need to be improved prior to opening the unit for public access. None of the roads connect to SR 1 at the same location as the PLSNR entrance. If an entrance was located across from PLSNR to create a four-way intersection, then a higher intensity pedestrian crossing treatment would be recommended as the potential for pedestrian-driver conflicts at the intersection would increase.

There are no major constraints that present themselves with regard to circulation and access at CRSB or HCP. However, access to the unpaved service roads within the Odello Farm complex from SR 1 is limited to authorized vehicles and personnel. Access would need to be improved if additional visitor activity would need to be accommodated at the Odello Farm complex. Note that this report does not consider environmental, economic, political, or other non-transportation-related constraints.

Opportunities: Bicycle and Pedestrian

If fees were built into the cost of parking around Monastery Beach and other nearby units, CSP could recoup costs from visitors who would otherwise not pay to enter the units. However, it is currently unknown if CSP



could collect fees for parking in the SR 1 right-of-way. This would need to be discussed with Caltrans; there is currently no precedent for charging fees along State Routes in rural areas.

There is also an opportunity to create an inter-park trail network by connecting PLRP to nearby parks such as Garrapata State Park, Palo Corona Regional Park, and other Monterey County regional parks. This could be completed in conjunction with planning efforts to complete the California Coastal Trail through the area. Once PLRP is opened there will likely be additional demand for trails on the east side of SR 1. CRSB is already well connected and does not have any major needs for improved trail access.

HCP is the smallest unit, but offers an opportunity to provide trail access to visitors and residents located adjacent or close to the unit. The City of Carmel-by-the-Sea is located west of the unit on the west side of SR 1, and there are residences immediately surrounding the trail and unit. The Class I bicycle and pedestrian facility (multi-use trail) within the southern section of the property also provides a connection to the Barnyard and Crossroads Shopping Centers. The trail is not paved in the majority of the property north of Carmel Valley Road. If the Class I facility was paved throughout HCP and formally connected to Ocean Ave, it would provide Carmel residents with bicycle access to the grocery and retail uses at the shopping centers. To facilitate this formal connection, a bicycle route would need to be provided between the HCP trail and Ocean Avenue via Canyon Drive, Flanders Drive, and Carmel Hills Drive. While this opportunity would offer a community benefit, it may be more appropriate as a locally sponsored facility, rather than a priority for CSP. The benefits include increased safety by offering a parallel route to SR 1, as well as improved connectivity.

Opportunities: Vehicles

There are multiple locations where roads, existing parking, and potential new parking are accessed from SR 1 by vehicles. Each location is discussed below. All of the intersections and opportunities discussed below are operationally feasible.

Point Lobos State Natural Reserve

Vehicle access and circulation to PLSNR is generally adequate, although high parking demand can cause queueing at the entrance, as discussed in other sections of this report. However, the vehicle queueing is more attributable to parking supply and demand and not directly related to access deficiencies.





Access to Hudson House is provided via a gated unpaved driveway. The driveway could be paved and widened to improve access, if additional vehicle demand is anticipated in the future. Additionally the entrance could be marked and paved to more formally intersect SR 1. Currently, the entrance is set back far into the shoulder and vehicles entering or exiting have to cross through that shoulder. The sight distance is generally adequate in this location.



Point Lobos State Natural Reserve: South Shore Trail. Source: Fehr & Peers, 2014.

Point Lobos Ranch Property

There are three existing intersections accessing PLRP: Riley Ranch Road / SR 1; Allen Road / SR 1; and San Jose Creek Canyon Road / SR 1. (As mentioned previously, there is another intersection created by Allen Road and SR 1 to the south of the PLSNR entrance; however it is overgrown with vegetation.) Riley Ranch Road is a paved and unpaved road with varying widths. Allen Road is a gated paved road in disrepair. Sight distance at the intersection of Allen Road / SR 1 south of the PLSNR entrance was not measured; however, from a windshield survey, the sight distance appears to be insufficient due to the horizontal and vertical curvature of SR 1 at this location. If this road was opened to visitor access, it is recommended that access be right in and right out only. Existing sight distances from the intersection of Riley Ranch Road and SR 1 are sufficient at approximately 700 feet.

San Jose Creek Canyon Road is a gated unpaved road that provides access to PLRP and the open space (Palo Corona Regional Park) northeast of PLRP. It is not a private road and, therefore, would not induce any private-property conflicts. There are several flat areas of land that have been previously disturbed. These areas may be potential locations for parking and may also provide access to trails and open space as discussed in the following chapter. If these areas are developed for a small visitor parking area the road



should be paved with two 10-foot lanes and the intersection with SR 1 should be treated as side-street stop-controlled. The driveway to the gate at San Jose Creek Canyon Road is slightly inclined. When the road is paved it should be raised to provide drivers with better sight of vehicles on SR 1. The sight distance of vehicles on SR 1 appears to be adequate based on a field evaluation.

There are four intersections within PLRP:

- Riley Ranch Road and an unnamed road that connects Allen Road and Riley Ranch Road (unnamed road not shown in figures);
- Riley Ranch Road and Allen Road;
- Allen Road and Red Wolf Drive; and
- Allen Road and an unnamed road that connects Allen Road and Riley Ranch Road (unnamed road not shown in figures).

Conceptual parking and access recommendations will be presented in the Preliminary General Plan. Generally, if any of these roads would be used to access parking, they would need to be widened to be consistent with design standards for two 10-foot lanes and treated as stop-controlled intersections. As discussed above, access improvements would also include rehabilitating the roadways and realigning Riley Ranch Road to a 90-degree angle with SR 1. If certain road or intersections are phased, then maintenance or upgrades could be deferred until such a time that those roads provide a useful connection. Improvements could improve access for both adjacent residents and park visitors. With these improvements and coordination with adjacent residents this intersection is a feasible access point for PLRP.

Carmel River State Beach: Bay School Area, Scenic Road, Ribera Road, Odello Farm Complex, and the Carmel Wastewater Treatment Plant Entrance Road

Bay School Area - The Bay School area and adjacent CSP property are convenient locations for additional parking to access CRSB. Currently, there is informal trailhead parking for a small number of vehicles on side roads off SR 1. However, there are no signs indicating that it can be used to access CRSB and the driveway is angled with a steep incline. The state park land at CRSB adjacent to Bay School is disturbed land that is relatively flat and would provide a good location for parking and additional access to CRSB. If the property owner were willing to share entrance driveway access with CSP, a small parking lot adjacent to Bay School could be developed with a shared access point. For any trailhead parking added there, it is recommended that signage be added to indicate the parking can be used to access CRSB. Additionally, the driveway should be realigned to a 90-degree angle with the highway and lengthened to reduce the grade of the driveway. These improvements would substantially improve access and increase sight distance to over 500 feet at Bay School. Because the Bay School is private property these intersection improvements would need to be coordinated with the property owners.

Scenic Road - CRSB is also accessed by parking at Scenic Road and Carmelo Street. As mentioned previously, this area is prone to flooding and wind-blown sand. It may not be possible to relocate it due to surrounding



natural habitat. However, providing better pedestrian access to the beach from available nearby on-street parking may be a viable alternative to expanding the small parking lot. Pedestrian access improvements could consist of new connections from CRSB to streets with available on-street parking, as well as new or improved pedestrian street crossing locations.

Ribera Road - Ribera Road also provides access to trailheads to CRSB. There is limited on-street parking in this residential area, and there may be a limitation to adding any surface lot parking due to surrounding habitat.

Odello Farm Complex - The Odello Farm complex is accessed using an unpaved service road that is not currently available for public use. If public access and parking were located near the Odello Farm complex, the road should be paved. Access to SR 1 could likely be treated as a side-street, stop-controlled intersection. The sight distance at the intersection is good (over 550 feet), because the landscaping is well maintained and the grade is minor. If a parking lot is located here, the road would need to be widened to accommodate two 10-foot lanes. Also, a complicating factor is the residential street that intersects SR 1 just south of the Odello Farm complex service road, which are less than 50 feet apart. Intersection design would need to consider how to integrate the vehicle access to both the Odello Farm complex and the adjacent residences to avoid two intersections on SR 1 with inadequate distance between them. If maintained as separate access points to SR 1, the two intersections would need to generally be located several hundred feet apart and would require the Odello Farm complex service road to be shifted to the north. The precise separation distance would be determined during design, based on site conditions.

Carmel Wastewater Treatment Plant Entrance Road - CRSB and the adjacent Carmel Wastewater Treatment Plant are accessed via an unnamed paved entrance road that is stop-sign controlled. The access could continue to be treated as a side-street, stop-controlled intersection. The sight distance at the intersection is good (over 550 feet) and would accommodate vehicle access to a parking lot if parking were located in this area of CRSB. This intersection could also be considered as an access point to the Odello Farm complex if a public road were to be constructed to connect underneath the proposed causeway on the Carmel River. The Carmel River causeway is part of the Carmel River Floodplain Restoration and Environmental Enhancement (FREE) Project, which will construct a 360-foot long causeway to improve Carmel River floodwater movement under the highway. This causeway would re-establish the connection between the historic floodplain east of the SR 1 and Carmel Lagoon to the west.

While the proposed causeway is expected to include a public access trail underneath it adjacent to the Carmel River floodplain, a preliminary review of the project plans suggest that there may not be adequate vertical clearance to provide a full public roadway underneath the causeway. Public roadways typically have substantially higher vertical clearance requirements than a recreational trail or maintenance road. Additionally, there may be other restrictions to building a new road within a floodplain. As a result, it may be difficult to construct a road underneath the causeway to access to the east and west sides of SR 1 at the





Odello Farm complex. If developed, a trail/underpass would link CRSB with the Monterey Peninsula Regional Park District's Palo Corona Regional Park.

Hatton Canyon Property

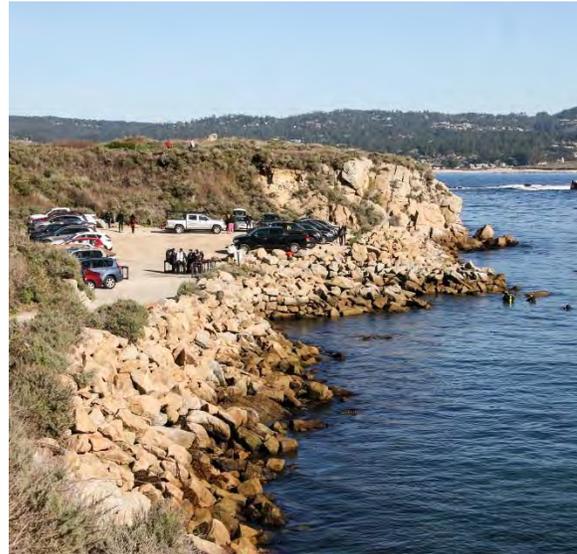
The access and circulation around HCP is generally adequate and sufficient. No substantial improvement opportunities were identified as part of this traffic and parking study.

PARKING

While the concepts considered in this study provide options for making it easier to walk and bike to the units, parking is a key aspect of the transportation planning needed for the General Plan. For detailed discussion of circulation and access, including the locations of trailheads, see the previous sections.

Constraints

PLSNR contains the most parking of the four units, but also experiences the greatest visitor demand. Drivers park along SR 1 both before the parking lots in PLSNR are full and after they are full. While drivers are currently able to find parking on the shoulder of SR 1, it is not an advantageous situation for CSP because parking revenue is not collected, which may reduce funds needed to pay for the maintenance and operations of the transportation infrastructure within the parks. Additionally, over the course of the next 20 years, as demand grows, there may no longer be enough parking supply in or near PLSNR to accommodate visitor demand.



View of Whalers Cove parking area from trail.
Source: Fehr & Peers, 2014.

PLRP is not currently open to the public and has no formal visitor parking facility. However, when this unit opens additional parking would be needed to accommodate the new demand.

CRSB already has a constrained parking situation with limited parking located at Scenic Road and Carmelo Street in the City of Carmel-by-the-Sea and a small informal parking area located at Monastery Beach across from San Jose Creek Canyon Road along SR 1. The small parking area at Monastery Beach is within the Caltrans right-of-way and is not CSP property. The parking lot at Carmel River Beach also experiences demand in excess of its capacity during peak visitor times. Informal parking along the shoulder of SR 1 is also used by visitors when the parking area near Monastery Beach is full.





Opportunities

PLRP has a large amount of land that has already been disturbed, which creates an opportunity for the development of additional parking. Its proximity to PLSNR would make it an attractive option for visitor parking. Additionally, there are three sites in or near CRSB that provide an opportunity for additional parking supply: Bay School area, San Jose Creek Canyon Road (PLRP), and the Odello Farm complex. These are discussed more in the next section.

The Whalers Cove parking lot is visible from some of the trail vistas. It would improve the recreational experience for trail users to relocate or redesign Whalers Cove parking to more effectively use the space and preserve scenic vistas; however, relocating this parking would complicate access for recreational divers and research activity in Whalers Cove.

Visitors to HCP can park in the retail shopper parking spaces within Crossroads or Barnyard shopping centers. The adjacent shopping centers provide a large supply of parking that could be shared with the unit to provide adequate recreational access on non-event days. Property owners/managers should be contacted, if a shared parking agreement for visitors to the park unit is desired.

BICYCLES AND THE MONTEREY BAY SANCTUARY SCENIC TRAIL

Bicycle access to HCP and CRSB is primarily provided via the local street network through the adjacent residential areas. However, there is limited to no bicycle parking once cyclists arrive at these parks. Bicycle access to PLRP and PLSNR is provided by using SR 1, which is designated a Class III bicycle route. Because SR 1 is the only connection to PLSNR and PLRP, there may be an opportunity to encourage access to the parks via bicycle.

Constraints

Currently, the only bicycle access to PLSNR and PLRP is along SR 1. CRSB can be accessed by bicycle in Carmel-by-the-Sea, but there is no formal bicycle parking. HCP has a multi-use paved trail in the southern section (south of Carmel Valley Road) that is used by cyclists. The northern section of the trail is unpaved.



State Route 1 near Point Lobos Ranch Property Source: Fehr & Peers, 2014.



Opportunities

The Monterey Bay Sanctuary Scenic Trail could provide an opportunity to link Carmel-by-the-Sea and the Monterey Peninsula to the CASP units. Goals for the development of the Monterey Sanctuary Scenic Trail in Monterey County include providing a continuous public trail and enhancing the appreciation, understanding, and protection of the Monterey Bay National Marine Sanctuary.² This and the likely goal of the CASP General Plan to connect with regional parks and open space provides a synergy between these two public projects. While the Master Plan for the Monterey Bay Sanctuary Scenic Trail does not cover Pebble Beach or Carmel-by-the-Sea, CSP could work with these jurisdictions and the Transportation Agency for Monterey County to provide a bicycle facility that connects to Carmel-by-the-Sea and Carmel Valley in the short term with a long-term goal of connecting the trail to the larger California Coastal Trail and Monterey Bay Sanctuary Scenic Trail.

The challenges associated with connecting the Monterey Bay Sanctuary Scenic trail include potential resource impacts, obtaining the right-of-way through a mix of public and private land, and identifying funding. However, the provision of separated Class I facility would not only enhance recreational opportunity for visitors to the CASP units, but it could also reduce vehicle trips generated by visitors to PLSNR. To achieve this trip reduction, bicycle rentals could be provided in Carmel-by-the-Sea and/or in Carmel Valley, where people would leave their vehicles and ride a bicycle instead of driving. Marketing and education would be required to achieve this objective. However, it could result in a reduction of parking demand at PLSNR, traffic on SR 1, and greenhouse gas emissions from visitor trips.

TRANSIT

Shuttles are often used by the National Park Service to better manage visitation levels, reduce overcrowding, and reduce the impact of vehicles on surrounding habitat and wildlife. Visitors can be required to use the shuttle service and park their vehicle in a remote lot with the exception of visitors who require ADA accommodations. For instance, beginning in January 2018, at Muir Woods National Monument in the Golden Gate National Recreation Area, a parking and shuttle reservation system will be implemented to improve visitor experience and enhance the protection of park resources. To keep visitors from waiting too long, this type of shuttle service would operate with 15 to 20 minute headways. For this type of shuttle system to work effectively a remote lot should not be located more than a couple miles away. The farther the lot is from PLSNR the more shuttle vehicles would be required to provide frequent service. If a dedicated transit or shuttle service to CASP units is planned, it would need to be in coordination with local and regional transportation agencies and a study would be needed to determine feasibility and operations details, including locations for parking.

² Transportation Agency for Monterey County, *Monterey Bay Sanctuary Scenic Trail Master Plan* (January 2008).



Constraints

Currently, MST Route 22 operates service to PLSNR and HCP. As discussed above the service has low ridership and poor on-time performance due to seasonal and truck traffic in the Carmel area. If shuttle service is implemented, it is recommended that CSP coordinate the service with MST to learn from their experience with Route 22. CSP could also test shuttle service by entering into an agreement with MST to operate the service for a trial period and determine if the shuttle service is worth pursuing and investing in. It is preferable to have one large remote lot as a shuttle serving multiple parking lots would not be as efficient.

Opportunities

The MST Route 22 serves many other locations in Carmel-by-the-Sea and Monterey, whereas a shuttle service would run between a park-and-ride location and the CASP units. A shuttle service that provides access to just the units, rather than commercial and retail destinations, has the potential to be more attractive to visitors. When paired with a park-and-ride facility, it would be more convenient for visitors to use. There are two potential locations for a park-and-ride facility: HCP and the Odello Farm complex. The Odello Farm complex would allow for shorter headways to and from PLSNR, as well as other parks and open space destinations further south; however, parking would need to be developed with entirely new spaces and access is only available from SR 1. A parking lot in the Odello Farm complex area could also accommodate growth in parking demand for CRSB. HCP is adjacent to multiple public streets for vehicle access and a large supply of commercial parking is located nearby, currently provided by the Barnyard and Crossroads shopping centers. A shared parking arrangement between CSP and the commercial center property owners could result in less construction and lower parking maintenance costs compared to the Odello Farm complex option.



TRANSPORTATION CONCEPT OPTIONS

Transportation concepts were developed to provide options to the CASP planning team for development of the General Plan. The concepts were structured to address the various opportunities and constraints of the area. Each concept was developed with a different theme and vision to highlight the opportunities and help prioritize the General Plan transportation goals. However, they were also developed with the understanding that ultimately concepts could be integrated to create a transportation approach that fits CSP management, stakeholder input, and public needs for the CASP area.

PROCESS FOR DEVELOPING CONCEPTS

The process for developing the transportation concepts involved collaboration, collecting data, assessing opportunities and constraints, followed by providing options that could be used to help define alternatives in the public outreach process.

Fehr & Peers collaborated with the planning team to assess the planning goals. Background research was then conducted to collect existing information on the area. After collecting data, Fehr & Peers also conducted field research to assess the opportunities and constraints for parking, access, and circulation to the four units. These observations, along with the data collected, led to the formulation of four distinct transportation planning concepts that integrated the goals for the CASP General Plan process.

PARKING SUPPLY

Before developing the transportation concepts Fehr & Peers estimated a recommended range of parking supply for PLSNR, PLRP, and CRSB. Parking supply is calculated by estimating demand and then adding a circulation factor. A parking facility operates at optimum efficiency at slightly less than its actual capacity. For the purpose of recommending parking supply, a parking facility is considered to have reached its effective supply at 90 percent utilization. Effective supply is the extra spaces to account for operating fluctuations, vehicle maneuvers, illegally parked vehicles, minor construction, and other disruptions. It is unrealistic to expect an arriving motorist looking for parking to find the last available parking space in a facility without some frustration and the resulting perception that parking is inadequate. Because of this, a circulation factor is included in the parking supply. A factor of ten percent was added to allow for circulation.

The parking demand was calculated based on data collected in PLSNR and the shoulder of SR 1 adjacent to PLSNR. Parking demand was approximated for other units based on field observations. Additionally, a growth rate in peak parking demand of 20 percent over the next 20 years was assumed. This growth factor is provided to recognize the high popularity of CASP units, particularly PLSNR and CRSB, and the potential for new recreation uses, such as trails associated with the opening of PLRP. Future visitation is difficult to predict, because it is influenced by CSP facility and management decisions, population growth, economic trends, and recreation trends and preferences. The growth factor is intended to reflect a reasonable level



for planning consideration, but is imprecise and subject to refinement, depending on General Plan decisions regarding future facilities, public access, and resource protection guidelines, or differing views of future visitation trends. **Table 2** below shows the calculation of expected future parking supply needs in the park units.

TABLE 2: PROJECTED GENERAL PLAN PARKING SUPPLY NEEDS

Parking Calculation	Result
Observed Peak Parking Demand ¹	450
Growth in Demand (20%)	90
Future Parking Demand	540
Circulation Factor (10%) ²	54
Growth Due to New Uses ³	100-200
Total Parking Supply Needed to Accommodate Future Demand⁴	695-795

Source: Fehr & Peers, 2014

Notes:

1. This is based on data collected at PLSNR and on the shoulder of SR 1, as well as approximations of demand at Monastery Beach, CRSB, and Hatton Canyon. Numbers are rounded.
2. For the purpose of recommending parking supply, effective supply includes extra spaces to account for operating fluctuations, vehicle maneuvers, illegally parked vehicles, minor construction, and other disruptions. It is unrealistic to expect an arriving motorist looking for parking to find the last available parking space in a facility without some frustration and the resulting perception that parking is inadequate. Because of this, parking demand must include a circulation factor in the parking supply.
3. New uses include opening up PLRP to visitors.
4. Numbers are rounded. Parking supply needs would be comprised of a combination of formal and informal (i.e. parking along the shoulders of SR 1) parking. Existing formalized parking in the CASP units is approximately 175 spaces and informal parking along SR 1 is approximately 250-400 spaces, for a total existing supply of 425-575 spaces.

SUMMARY OF CONCEPTS

The transportation planning concepts were developed with the intent of providing the CASP planning team with a set of options that could be considered when developing alternatives. They are intended as possible ideas and do not reflect ultimate decisions on the configuration of alternatives or the selection of the preferred alternative.

These concepts were formulated with distinct themes to assist the planning team in providing options for the units. However, there are a few themes that are common to all four transportation planning concepts. All of the concepts include these similar overarching characteristics:

- Reduce parking within PLSNR and accommodate future parking demand in all four units. This would require replacing PLSNR parking with parking outside of the unit and anticipating future visitor growth, distributing parking among the units. Based on current observations and a future growth rate of 1 percent per year, demand could be in the range of 695 to 795 spaces serving PLSNR, PLRP, CRSB and HCP.



- Provide formalized, preferably grade-separated, pedestrian access across (i.e., under) SR 1 to improve pedestrian safety while maintaining vehicle movements on SR 1.
- Provide opportunities for revenue from parking that can be used to fund transportation facilities and operations, such as trail maintenance, shuttles, and parking lot maintenance.

Concept Option 1: Dispersed Parking and Access

This transportation concept, shown below in **Figure 6**, provides for multiple small dispersed parking lots with trails that connect to nearby regional parks in addition to the CASP units. The advantage of this concept is that it spreads the distribution of vehicles entering and exiting parking lots which could reduce the potential for congestion and choke points on SR 1. These lots could charge for parking on a tiered or seasonal pricing scheme with the highest prices being charged at the parking lots closest to PLSNR. This concept also provides for a trail network that increases regional park connectivity. Parking lots would be constructed at locations such as PLRP, San Jose Creek Canyon Road, Bay School area, and Odello Farm complex. The recommendation for HCP is to share parking with the surrounding shopping centers rather than adding new parking.



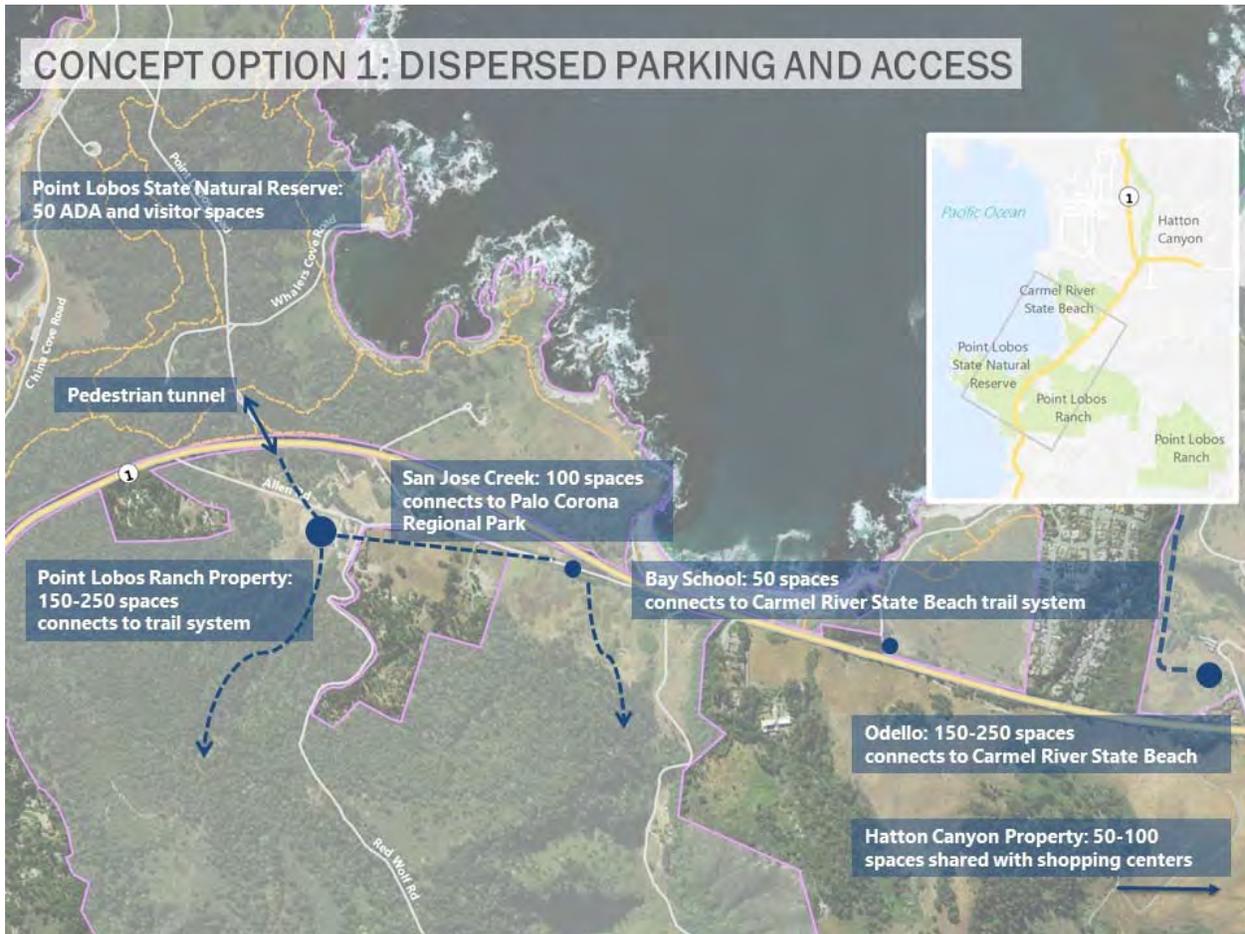


Figure 6: Transportation Concept Option 1 - Dispersed Parking and Access

Note: HCP is not included in this figure to improve readability.



Concept Option 2: Point Lobos Ranch Property Centralized Parking

This transportation concept, shown below in **Figure 7**, would provide a large lot at PLRP and formalize parking along the west side of SR 1. Currently, there are many visitors who park along the west side of SR 1 and walk into PLSNR. This concept would include formalized parking on SR 1 that allowed for charging of fees. This would be a unique approach to parking management and would need to be coordinated with Caltrans. This type of formalized, fee-based, on-highway parking has precedents in urban areas, but is extremely uncommon in rural settings; therefore, there may be challenges demonstrating the feasibility of this approach. Additionally, formalizing parking along the highway would prove difficult with the SR 1 scenic highway designation. There may also be constraints related to compliance with Coastal Act requirements for providing maximum public access to the coast. In addition to the large parking lot at PLRP, some additional parking would be constructed at the Bay School area of CRSB to provide access to the CRSB trail network. Minimal or no parking would be constructed in the San Jose Creek area or Odello Farm complex area. As with Concept Option 1, the recommendation for HCP is to share parking with the surrounding shopping centers rather than adding new parking.

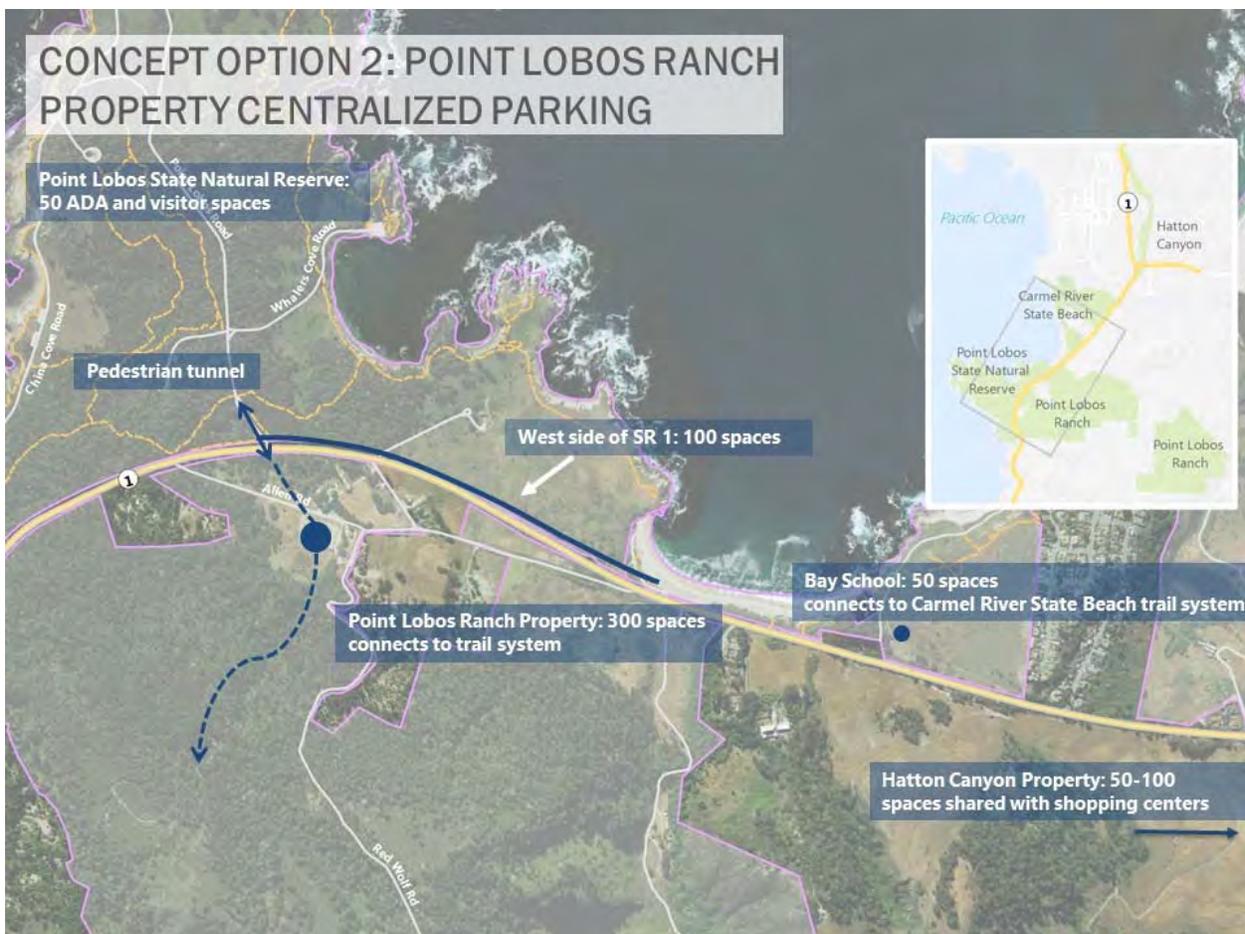


Figure 7: Transportation Concept Option 2 - Point Lobos Ranch Property Centralized Parking

Note: HCP is not included in this figure to improve readability and because no parking changes are proposed there.



Concept Option 3: Coastal Trail Connection

The coastal trail connection concept, shown below in **Figure 8**, emphasizes bicycle access by providing a separated Class I facility that connects the Monterey Bay Sanctuary Scenic Trail through the CASP planning area. This would be an expensive option; however, it would provide a viable bicycle alternative for casual bicycle users visiting PLSNR. This, coupled with a bike rental or bike sharing system, would provide for a complete recreational experience that would also reduce vehicle traffic between Carmel and PLSNR. Some new parking would be constructed at PLRP and at the Bay School area of CRSB to provide access to the connected trail network. Minimal or no parking would be constructed at San Jose Creek Canyon Road or the Odello Farm complex, although the Odello Farm complex could be considered as an alternate location for parking that would provide convenient access to CRSB trails. Some ADA and premium visitor parking spaces would be maintained within PLSNR.

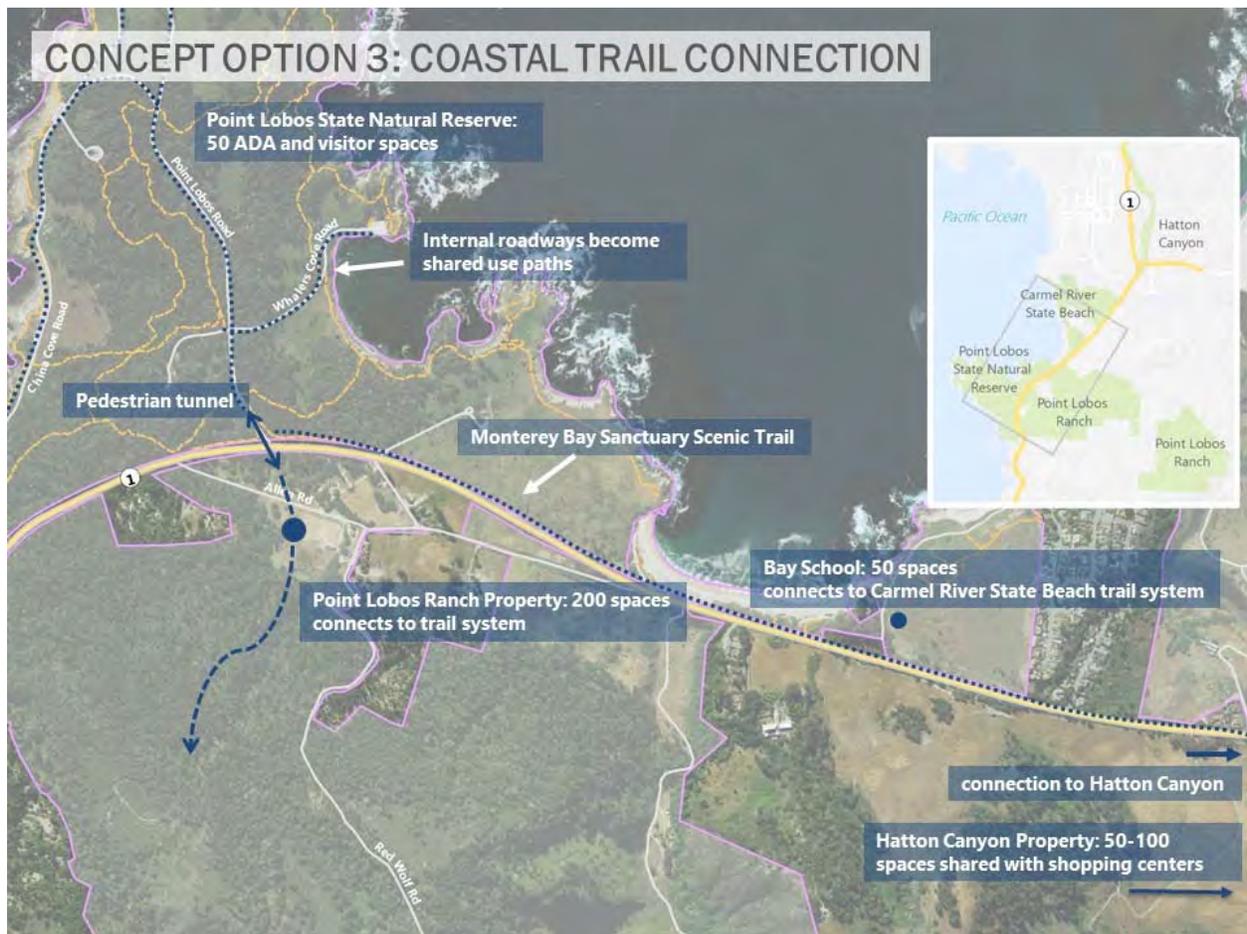


Figure 8: Transportation Concept Option 3 - Coastal Trail Connection



Concept Option 4: Remote Parking with Shuttle Access

This concept, shown below in **Figure 9**, considers one large remote parking lot at Odello Farm complex with shuttles providing service to the units, as well as potentially other regional and state parks south of PLSNR. Service could be limited to 10:00 AM to 4:00 PM during which time visitors would be required to use the shuttle. To provide attractive service there should be shuttles that complete a shorter route with more frequent service of 15 to 20 minutes between the remote lot and PLSNR. Service to the parks south of PLSNR can be provided with less frequent service. As mentioned above, MST has a route currently serving PLSNR which has low ridership. However, the service is very limited and the route has poor on time performance due to delays north of the parks. Contracting with MST for the operation of a redesigned shuttle service could be a viable interim solution for shuttle implementation. In addition, HCP may also be a viable location option for a similar shuttle staging area or transit staging location.

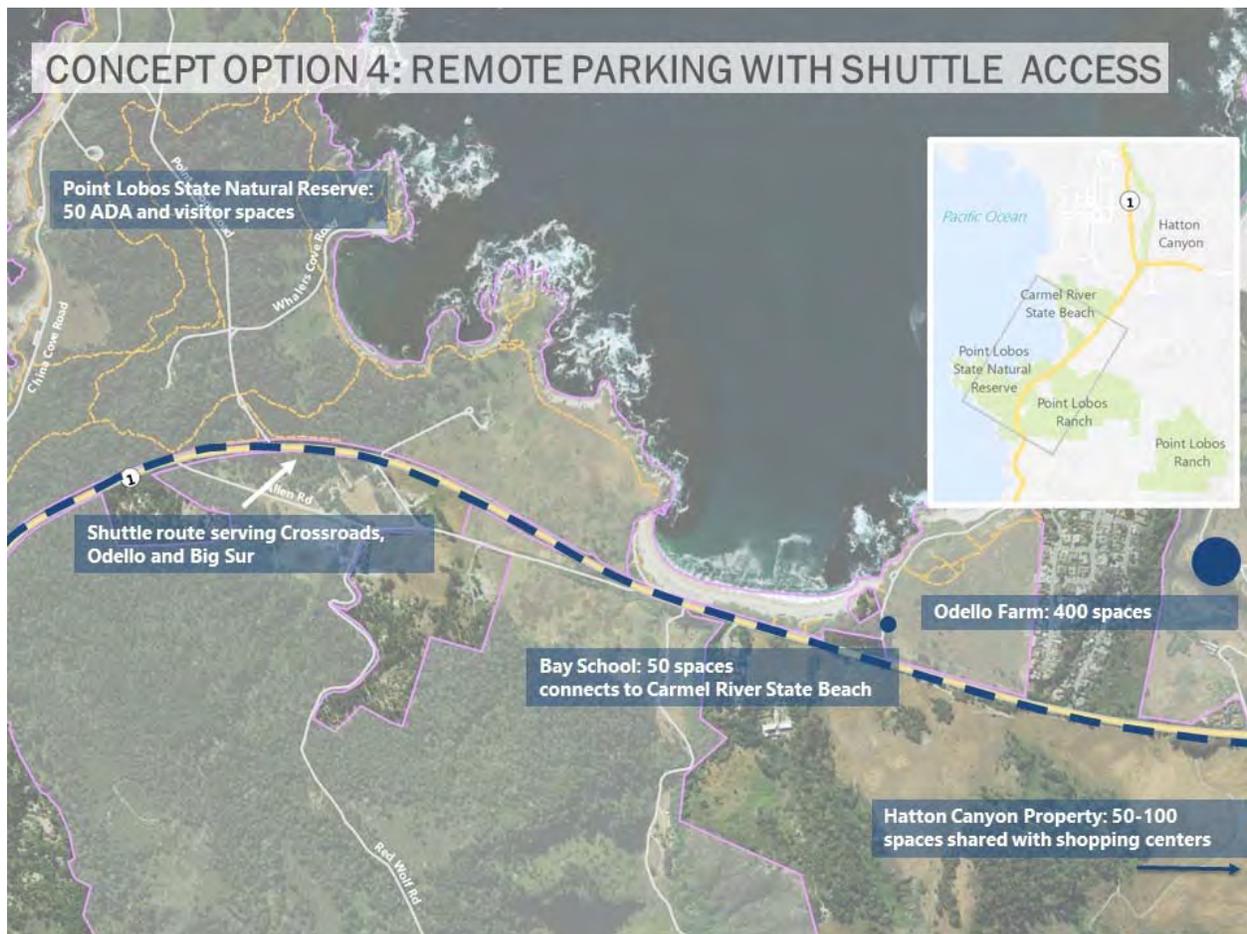


Figure 9: Transportation Concept Option 4 - Remote Parking with Shuttle Access



RECOMMENDATIONS

In addition to the unique characteristics of each transportation concept option described above, the following recommendations are provided to improve parking, access and circulation throughout the units.

PARKING, ACCESS, AND CIRCULATION

- Design a parking revenue system that responds to current demand to optimize funding for transportation services and facilities.
- Consider a tiered or seasonal parking fee system allowing people to choose more convenient parking for a higher price or select parking that is farther away for a lower cost, or visit the parks in seasons with less visitation.
- Use revenue from parking fees to fund a grade-separated pedestrian crossing, or other capital improvements, as well as maintenance for transportation facilities and amenities within the park units.

Point Lobos State Natural Reserve

- Reduce the number of vehicles and parking within PLSNR to enhance and support resource conservation, restoration efforts, and visitor experience. Remaining parking in PLSNR could be limited to ADA-accessible spaces and/or special-use purposes (e.g., diver access).
- Provide access to the PLRP for parking area near PLNSR from the existing intersection of SR 1 at Riley Ranch Road. Intersection modifications would likely include a dedicated southbound left turn lane if a substantial number of parking spaces are provided (subject to Caltrans review and approval). Sight distance would allow for left and right turns onto SR 1. On-highway parking on the east side of SR 1 should be prohibited in the immediate vicinity of the intersection to avoid visibility interference for vehicles leaving PLRP.
- Consider an internal tram for PLSNR.
- Provide a grade-separated pedestrian tunnel for safe and convenient access between the two park units.
- Relocate or redesign and upgrade the Whalers Cove parking to more effectively use the space and preserve scenic vistas.
- Pave the driveway to the Hudson House, mark the entrance with a sign, and treat it as a side-street, stop-sign controlled intersection, if additional visitor use of this driveway is anticipated.

Point Lobos Ranch Property

- Provide a grade-separated pedestrian crossing of SR 1 between PLSNR and PLRP (i.e., pedestrian tunnel), if a substantial parking area is developed in PLRP. An at-grade crossing may also be possible; however, this may create other challenges given the scenic highway status of SR 1 and



necessary approvals by Caltrans. An alternative conveyance approach (e.g., tram circulator system) may be considered, and if that system was used to convey visitors across SR 1, a pedestrian crossing (or other crossing) would still be needed.

- Provide access to the San Jose Creek Canyon area parking from the existing intersection of San Jose Creek Canyon Road, across from Monastery Beach. Depending on the amount of parking provided, it could require a dedicated southbound left turn lane from SR 1 (subject to future Caltrans review and approval). Sight distance would allow for left and right turns onto SR 1. On-highway parking on the east side of SR 1 should be prohibited in the immediate vicinity of the intersection to avoid visibility interference for vehicles leaving the park. A stop sign control would be sufficient and sight distance would be adequate to maintain visibility both left and right turns.
- Roads providing access to visitor parking lots should be paved with two 10-foot lanes, and intersections with SR 1 should be treated as side-street stop-controlled. Intersections should be aligned to 90-degree angles.

Carmel River State Beach

- Redesign access to Bay School area for CSP parking to provide improved operations (in cooperation with current property owners). The street approach should be at a 90 degree angle. This access would be a stop-sign controlled intersection with SR 1 to the trailhead and new parking area. Depending on the amount of parking provided, this access could require a dedicated northbound left turn lane or southbound deceleration/acceleration lane (subject to Caltrans review and approval). Sight distance would allow for left and right turns onto SR 1. Signage should be added to clearly mark the entrance road.
- Provide access to the Odello Farm complex parking by a stop-sign controlled intersection with SR 1 at the location of the current service road. Depending on the amount of parking provided, this access could require a dedicated northbound left turn lane or southbound deceleration/acceleration lane (subject to Caltrans review and approval). The CSP access road could be connected to an existing residential access road to avoid side-by-side intersections on SR 1. Sight distance would allow for left and right turns onto SR 1. Provide access to the Odello Farm complex with a paved road that accommodates two 10-foot lanes. The Odello Farm complex intersections at SR 1 can continue to be treated as stop-controlled and would not likely need to be signalized.
- CRSB parking could also be accessed via the Carmel Wastewater Treatment Plant entrance road. The sight distances north and south from this intersection are likely adequate, recognizing the long straight stretch of the Carmel River Bridge to the north and straight alignment of SR 1 to the south. Paved shoulders exist for turning movements entering and exiting the treatment plant road. Coordination with Caltrans would be needed to determine whether turning lanes would be necessary. Signage should be added to clearly mark parking access.



Hatton Canyon Property

- Provide shared parking with the surrounding shopping centers for HCP, including a potential shuttle or transit staging area.
- If regional trail connections or shuttle/transit staging were pursued, define the planning processes, design, funding mechanisms/partners, and stakeholder/agency coordination approaches.

BICYCLE USE IN ALL PARK UNITS

- Provide secure and convenient bicycle parking in all of the units.
- Consider implementing a bike share system and/or bike rentals within the park units. A bike share system has the potential to reduce vehicle trips if there is a convenient, tourist-friendly connection to the City of Carmel-by-the-Sea, especially if there are connections to visitor lodging areas. A bike rental system would be recreational in nature and provide visitors with another way of enjoying the parks, but does not have the same potential to reduce vehicle trips. The two systems serve slightly different purposes.



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