



3E – Circulation

CIRCULATION

How people and goods move throughout Morro Bay affects the vitality, sustainability, and economy of the city by ensuring everything gets where it needs to go in a convenient and efficient manner. Vehicles, pedestrians, bicyclists, and transit are all vital parts of the city's circulation system, are key to reducing greenhouse gas (GHG) emissions, and create a diverse and healthy community. The Circulation Element focuses on creating a regionally connected system that facilitates safe and convenient travel for all community members, regardless of travel mode, age, or physical ability.

OVERVIEW

Scope and Content

The Circulation Element is required by California Government Code Section 65302(b) and must include major thoroughfares, transportation routes, and other means of travel. The element must also plan for a multimodal transportation network that serves all users and reduces GHGs and vehicle miles traveled (VMT). The Coastal Act additionally requires cities and counties to maximize access to the coast, which includes access to parking and other forms of transportation that provide coastal access to visitors.

This element includes a description of the existing transportation network, parking facilities in the coastal zone, the transportation network diagram, and multimodal transportation infrastructure. It also covers key transportation issues in Morro Bay and the goals and policies which will guide efforts by the City, developers, and officials to improve travel mobility and efficiency in Morro Bay.

Relationship to Other Elements

Because transportation affects a wide range of issues, the Circulation Element is related to several other *Plan Morro Bay* elements. The Land Use Element relates to the Circulation Element by placing housing near stores, workplaces, and transit services to ensure that a full range of travel modes is feasible. The location of these uses, as well as their density and intensity, also increases the likelihood that people will bike or walk rather than drive to get where they need to go. Many Noise Element policies focus on reducing transportation noise in Morro Bay. The Conservation Element also relates to the Circulation Element, as both include policies to reduce transportation-related emissions and preserve the scenic beauty of Morro Bay's transportation corridors.

Correlation with the Land Use Plan

The Circulation Element is designed to meet transportation needs based on assumptions about the intensity and location of development from the Land Use Plan. In turn, the Land Use Plan was developed through an iterative process with the Circulation Element to ensure that the transportation network can meet the needs of proposed land uses.

Anticipated future development consistent with the General Plan land use designations is presented in the Land Use Element. With implementation of *Plan Morro Bay*, up to 933 additional dwelling units and approximately 4.3 million additional nonresidential square feet could be constructed in the planning area. This additional development would result in the addition of approximately XX,XXX average daily vehicle trips to roadways within the planning area. [Note to City: This will be completed following CCTC analysis.]

RESILIENCY APPROACH

Transportation is a significant contributor to GHGs and is a critical component of a city's ability to function. Much of Morro Bay has a design that facilitates active transportation and alternative routes for emergency vehicles and traffic. Ensuring these benefits are preserved and expanded will help the community recover from any natural disasters and facilitate a reduction in personal vehicle use.

Much of Morro Bay's transportation infrastructure and facilities are also vulnerable to the effects of sea level rise and climate change. High temperatures can cause pavement to soften and expand, creating ruts and potholes. Many local roads in Morro Bay are also located in flood hazard zones, and some lie within the sea level rise inundation area. While the effects of climate change occur slowly enough that it is generally not necessary to modify existing systems to adapt, establishing a plan for when and how to modify current design and maintenance practices will be essential to preventing damage in the long term. Monitoring performance of the infrastructure can help the City determine when to begin implementing adaptive practices such as using materials that can withstand higher temperatures, using expansion joints in existing pavement, and modifying street design to allow for better drainage.

For Morro Bay to have a transportation network that is adapted to the changing climate, the City's departments will need to work with each other and other agencies. The California Department of Transportation (Caltrans) and the San Luis Obispo Regional Transit Authority (RTA) will be important partners in creating a system that will withstand the stressors of increased temperatures and flooding.

TRANSPORTATION NETWORK

Morro Bay's transportation network encompasses infrastructure, facilities and amenities, and transit services. The system reflects the small-town nature of the city, with a connected grid network and pedestrian and bicycle infrastructure on many of the main streets. The streets facilitate travel by a variety of modes, but they must be carefully maintained and managed to accommodate seasonal visitors without impacting local residents and employees.

Transportation Network Diagram

Morro Bay has many roadways that are designed to be complete streets, accommodating multiple travel modes and user needs. A well-designed complete street allows for easy and safe transportation that may include vehicles as well as pedestrians, bicyclists, and public transit, traveled by individuals of all ages with a wide variety of needs, destinations, and abilities.

The Complete Streets Act requires cities and counties to plan for balanced, multimodal streets that can meet the needs of all users. The method by which a street is designed to be complete depends on the location, existing infrastructure, and demand for each mode type, and could include installing or improving sidewalks and crosswalks, adding bike or bus lanes, or other features to improve the safety and flow of transportation. Many of the streets in Morro Bay already exemplify the complete streets approach, especially in downtown, and the City has implemented a number of tactics to improve mobility in other areas.

The Transportation Network Diagram in **Figure CIR-1** illustrates the plan for a complete, integrated, multimodal circulation system serving Morro Bay. The transportation network includes the roadway, active transportation, and transit systems described below.

[Note: Figure CIR-1 on the following page will be updated in the next draft of the plan after the traffic model and report are completed]

Figure CIR-1:
Transportation Network Diagram [Note: this figure will be updated in the next draft of the plan after the traffic model and report are completed]

Roadway Designations

Roadways are classified according to how they provide access and mobility to various land uses within the city. Federal transportation regulations define a classification system, but local jurisdictions can define different functional classifications if desired. Roadways in Morro Bay are classified as follows:

- **Freeways** are intended to carry high volumes and high-speed traffic. Freeways are designed to maximize mobility, not to serve abutting land uses. The segment of Highway 1 in Morro Bay between South Bay Boulevard and Atascadero Road operates as a freeway.
- **Expressways** are high-volume and high-speed facilities with access via controlled at-grade intersections. Expressways emphasize mobility and are not intended to serve abutting land uses. The segment of Highway 1 in Morro Bay from Atascadero Road north to the city limits operates as an expressway.
- **Arterials** balance mobility and access, carrying moderate volumes at lower speeds and serving abutting land uses. Main Street, Morro Bay Boulevard, and the segments of Highway 41 in Morro Bay east of Highway 1 operate as arterials. Arterials can also be divided into principal and minor arterials. Principal arterials serve more vehicles and have wider shoulders than minor arterials. Principal arterials can also have a median and partial access controls, while minor arterials always lack a median and have uncontrolled access.
- **Collectors** gather traffic from local roads and tie into the arterial roadway network. Collectors often pass through residential areas and may have direct driveway access connected to individual parcels.
- **Local roads** provide access to abutting land uses and connect to the collector and arterial street network. Local roads typically constitute the largest percentage of roadways in terms of mileage.

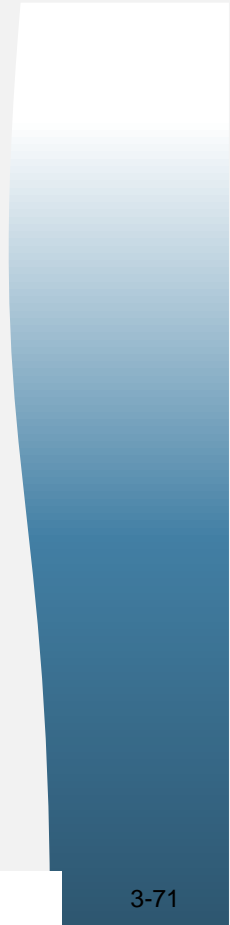
These roadway classifications are identified on the integrated transportation network diagram presented in **Figure CIR-1**. **Figures CIR-2a** through **2g** show the typical cross sections of the above roadway classifications. A list of each roadway's classification appears in the Traffic Impact Analysis accompanying the *Plan Morro Bay* Program Environmental Impact Report (EIR).

Figure CIR-2a
50ft Local Street Cross Section

Figure CIR-2b
60ft Local Street Cross Section

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Figure CIR-2c
Local Street Without Sidewalk

Figure CIR-2d
60ft Collector Street Cross Section

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Figure CIR-2e
46ft Minimum Frontage Road Cross Section

Figure CIR-2f
80ft Arterial Street Cross Section

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Figure CIR-2g
8oft Arterial TWLTL Street Cross Section

Active Transportation

The ability to safely and easily walk and bike in a community directly affects individual physical and mental health, community vitality, and citywide traffic and emissions levels. Promoting maximum bicycle and pedestrian accessibility ensures that all members of the community can meet their needs regardless of age, income level, or disability. Having a strong active transportation network improves the overall health, sustainability, and resiliency of the community.

Morro Bay's active transportation network is designed to allow safe and convenient mobility by pedestrians and bicyclists. The *City's Bicycle and Pedestrian Master Plan* was adopted in 2011 and guides the improvement of pedestrian and bicycle facilities in Morro Bay. Pedestrian mobility is generally evaluated by the connectivity of infrastructure such as safe crosswalks and sidewalks, while bicycle mobility is evaluated based on the types of bikeways available in the community and how effectively they serve the needs of bicyclists.

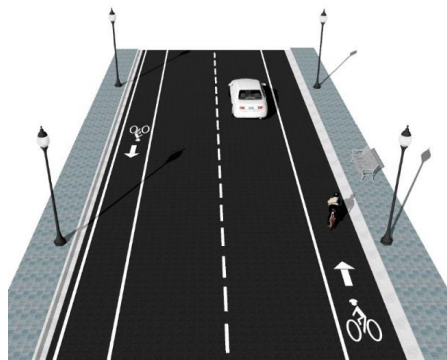
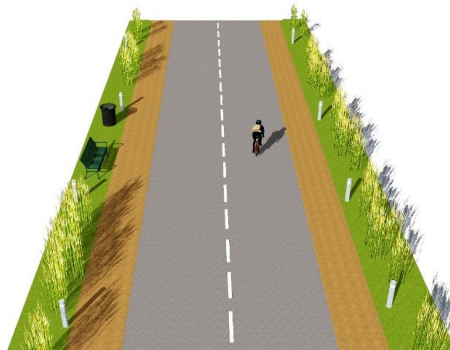
The Embarcadero and most of downtown have complete sidewalks and crosswalks, but most residential areas do not. The City takes active steps to increase the presence of sidewalks in specific areas by enforcing Municipal Code requirements for developments to install sidewalks in many circumstances and seeking funding for other areas.

Three classifications of bikeways in Morro Bay offer varying levels of separation from vehicular traffic. Typical configurations for each type of bikeway are shown in **Figure CIR-3**:

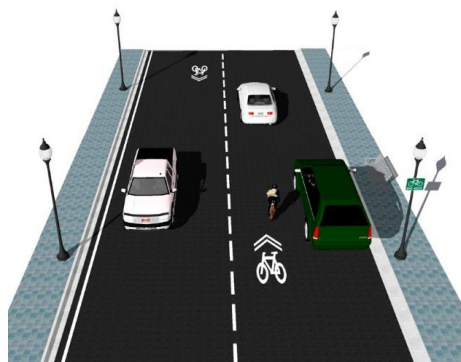
- **Class I Bike Paths** – off-road routes located along designated multiuse trails or vacated rail lines separated from streets
- **Class II Bike Lanes** – on-road routes delineated by painted stripes and other identifying features
- **Class III Bike Routes** – on-road routes sharing use with pedestrians or motor vehicle traffic that are signed but not striped

Figure CIR-3:
Bikeway Cross Sections

Class I Bike Path



Class II Bike Lane



Class III Bike Route

Planned bikeway locations are identified on the Transportation Network Diagram presented in **Figure CIR-1**. Class II lanes make up most of the existing bikeways in the city,

including the California Pacific Bike Route that follows Highway 1 through Morro Bay and connects Vancouver, British Columbia, to Imperial Beach, California. The California Coastal Trail, which is described in the Open Space Element, is tentatively planned to run from Morro Bay's northern border, through Morro Strand State Beach to Morro Rock, then into downtown. The *Bicycle and Pedestrian Master Plan* also identifies a number of improvements to both pedestrian and bicycle infrastructure, including a Class I bike lane along San Jacinto Street and the Tree Grove Preservation Pathway, and a Class II bikeway along the Beach Tract and Embarcadero to improve beach access and mobility to and from main commercial areas.

Transit

Morro Bay is served by regional and local bus transit. Regional transit is operated by the San Luis Obispo Regional Transit Authority (RTA) and includes both ADA paratransit services and multiple routes connecting Morro Bay to San Luis Obispo and other nearby cities. RTA ridership has consistently increased each year since 2007.

Local fixed-route service is operated by the City and serves major campgrounds, the high school, the senior center, grocery stores, and neighborhoods throughout Morro Bay. The Morro Bay Trolley also provides access to north Morro Bay, downtown, and the waterfront from Memorial Day weekend through the first weekend in October. The trolley offers access to the coast at Beachcomber Street and the west end of the Embarcadero, and it has a route that runs along the coast from Morro Rock to Tidelands Park.

OTHER COMPONENTS

TRANSPORTATION

Goods Movement

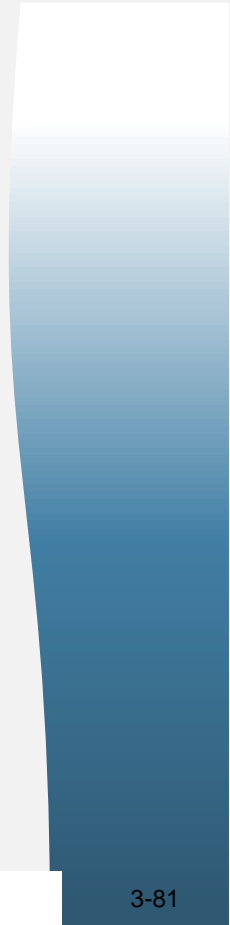
The transportation of goods is a critical component of Morro Bay's transportation system, with businesses, residents, and visitors all being affected by truck routes and deliveries on city streets and at the piers. As shown in **Figure CIR-4**, designated truck routes in Morro Bay are along parts of Main Street, Highway 41/Atascadero Road, Quintana Road, Morro Bay Boulevard, Beach Street, Harbor Street, and Highway 1.

Downtown and Embarcadero area businesses receive deliveries from trucks parked in curbside spaces, off-street lots, or designated loading zones. Where there are no designated commercial loading zones, commercial vehicles park wherever the California Vehicle Code allows. Commercial fishing and aquaculture offloading occurs at a number of piers along the Embarcadero. The City operates a launch ramp facility, fish cleaning station, and rinse-down area for trailered vessels. No facilities are provided for large vessel haul-outs. Policies related to the commercial fishing industry are identified in the Land Use Element.

**Figure CIR-4:
Truck Routes**

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Blueprint



Planned Circulation Improvements

Various improvements are planned for the Morro Bay circulation system, and are included in the Transportation Network Diagram and the Capital Improvement Plan (CIP). **[NOTE: this section will be finished after the traffic model and report is complete]**

GOALS AND POLICIES

GOAL CIR-1: Residents and visitors can easily move about the city in a variety of safe and active ways.

POLICY CIR-1.1: Balanced Transportation. Work to complete a balanced multimodal transportation system that meets the needs of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

POLICY CIR-1.2: Access Improvement. Use infrastructure improvements within public rights-of-way as an opportunity to improve street design and multimodal access.

POLICY CIR-1.3: System Connectivity. Develop a complete and connected network of accessible sidewalks, crossings, paths, and separated bike lanes that are convenient and attractive throughout the city.

POLICY CIR-1.4: Future Enhancements. Identify streets in the city that can be made “complete,” and plan for new bikeways, sidewalks, and crosswalks on these streets by reallocating how space within the public right-of-way is used.

POLICY CIR-1.5: Regional Transit. Coordinate with the San Luis Obispo Regional Transit Authority to ensure local transit connects smoothly with regional transit and possible future route and schedule expansions.

POLICY CIR-1.6: Local Transit Improvement. Continue to improve the local Morro Bay Transit Deviated Fixed Route and Call-A-Ride services and ensure connections to regional transit and active transportation facilities.

POLICY CIR-1.7: System Flexibility. Regularly evaluate and modify the overall transportation system, and remain informed and innovative regarding use of new mobility technologies.

POLICY CIR-1.8: Automated Vehicles. Stay informed on developing automated vehicle technology and prepare to invest in needed infrastructure adjustments, such as well-defined pavement markings, flexible parking spaces, and smart infrastructure.

POLICY CIR-1.9: Goods Movement. Maintain smooth, consistent, and nonintrusive movement of trucks and goods through the city by way of truck routes, including working with businesses to minimize disruption to traffic flow during loading and unloading, and expanding designated commercial loading zones along the Embarcadero.

GOAL CIR-2: Morro Bay is a pleasant and safe place to walk and bike.

POLICY CIR-2.1: Pedestrian Safety. Provide for accessible, safe, and convenient paths and crossings along major streets for all users, including the disabled, youth, and the elderly.

Commented [KK1]: Maybe insert a policy that new development shall improve and/or provide sidewalks? And that new subdivisions shall provide public sidewalks and access shall be from public roads? These are common issues we tend to see.

POLICY CIR-2.2: Active Transportation Amenities. Provide facilities and amenities for active transportation users at public facilities, including bicycle storage and seating areas.

POLICY CIR-2.3: Prioritizing Improvements. Prioritize infrastructure improvements that benefit bicycle and pedestrian safety and convenience around community facilities and locations in pedestrian-oriented areas.

POLICY CIR-2.4: Destination Facilities. Require and place access areas and facilities for bicycle, pedestrian, and transit travel in front of major destinations, such as shopping centers, parks, and schools. Facilities may include any or a combination of the following: designated passenger drop-off and pickup zones, benches, lighting, secure bike parking, shelters, and street trees.

POLICY CIR-2.5: Compact Development. Support mixed-use, compact-style, and other land use development patterns that facilitate easy active transportation and transit use.

POLICY CIR-2.6: Street End Pedestrian Connections. Create safer and more distinct lateral access connections across the street ends on the west side of the Embarcadero at Harbor, Front, Pacific, Marina, and Driftwood Streets.

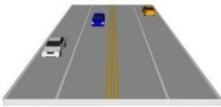





Transportation Metrics

Maximizing the efficiency of the transportation system and evaluating the impact of projects require assessing traffic flow by all modes of travel. There are a number of ways this assessment can be done, with varying benefits and drawbacks to each method of evaluation. In the past, transportation efficiency was measured using level of service (LOS). Recently, jurisdictions have been moving toward more equitable means of measurement that capture all modes of transportation efficiency, resulting in a more complete picture of the existing system and potential impacts of transportation on the environment. The City uses two of the most common methods to ensure the safety and convenience of all modes of travel: (1) level of service/multimodal level of service and (2) VMT.

Level of Service

LOS measures the flow of vehicle traffic at intersections on a scale from A to F, shown in **Table CIR-1**. The ratings are based on the volume-to-capacity ratio, which indicates how many vehicles travel on the roadway and the number of vehicles that the roadway can accommodate. Level of service grades range from LOS A for free-flowing conditions to LOS F for highly congested conditions.

**Table CIR-1:
Peak-Hour Level of Service Descriptions**

Level of Service	Flow Conditions	Volume-to-Capacity Ratio	Service Rating
A	 Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed.	0.01–0.60	Good
B	 Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.	0.61–0.70	Good
C	 Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density of the number of vehicles increasing.	0.71–0.80	Adequate
D	 Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.	0.81–0.90	Adequate
E	 Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability, and low driver comfort.	0.91–1.00	Poor
F	 Forced traffic flow. Speed and flow may drop to zero with high densities.	Above 1.00	Poor

While LOS can provide essential information on traffic flow within the city, it is primarily vehicle-centric and does not focus on reducing GHG emissions. For this reason, the California Legislature passed Senate Bill (SB) 743 in 2013 to require that jurisdictions consider alternative methods of traffic impact evaluation as part of the California Environmental Quality Act (CEQA) process for a project. Because LOS has been a long-standing standard used to evaluate traffic congestion, it is relevant to understanding the operations of the existing transportation system. However, in the future, Morro Bay will use both level of service (LOS) and VMT to evaluate impacts to the existing system.

Morro Bay has historically used the Caltrans target of LOS C or better as a standard for acceptable roadway operations on roadway segments and intersections, although this standard has not been officially adopted. The City of Morro Bay will take steps to formally adopt a level of service standard for roadway segments and intersections. [City: edits to this paragraph may be made after traffic report is completed]

Vehicle Miles Traveled

Among other topics, SB 743 discusses how transportation impacts are addressed under CEQA. Currently, an environmental impact report addresses impacts to traffic congestion and delays. SB 743 requires the California Governor's Office of Planning and Research to update the State CEQA Guidelines so that impacts are instead measured by the predicted change in VMT rather than the change in LOS. This method allows for better calculation of greenhouse gas and energy impacts associated with a project. Local jurisdictions may still use LOS in making planning decisions, but it cannot be included as part of the CEQA process. This alteration may result in significant changes to the way transportation systems are designed and operated in cities. The City of Morro Bay will utilize VMT or a similar metric as a CEQA threshold of significance, while maintaining the best possible traffic flow across all modes by assessing proposed development or reuse project impacts to LOS as part of determining a project's consistency with *Plan Morro Bay*.

The benefits of having a variety of travel options are numerous. Having access to public transit, cycling, and walking options increases the opportunity for residents to navigate the community and fulfill the necessary aspects of everyday life, regardless of age, ability, or economic status. Multiple options also offer individuals greater choice and control over their mobility, and support a physically and socially active lifestyle. In addition, increased travel options have the potential to reduce automobile traffic, reduce greenhouse gas emissions, and minimize the need for large, multilane roadways and busy neighborhood streets.

GOALS AND POLICIES

GOAL CIR-3: Traffic monitoring considers all methods of travel, with emphasis on active and sustainable transportation methods.

POLICY CIR-3.1: LOS Standards. Update City guidelines to formally adopt an LOS standard.

POLICY CIR-3.2: VMT Thresholds. Achieve State-mandated reductions in VMT by establishing a VMT standard, including a threshold of 15 percent below the 2015 baseline conditions, through implementation of the Morro Bay Climate Action Plan. This standard will be for roadway segments and intersections during PM peak hour.

POLICY CIR-3.3: Updating Guidelines. Regularly update guidelines for transportation impact analyses to ensure consistency with established metrics and standards.

Parking

Morro Bay is a popular destination for visitors. Demand for limited parking in downtown, along the waterfront, at the beach, and near popular community locations has been a continuing issue for many years. The City has focused its management and planning activities on approximately 2,500 parking spaces located downtown and along the Embarcadero. Recent occupancy survey identified that parking on the Embarcadero was fully utilized and several downtown blocks were nearly fully utilized during the peak hour of a holiday weekend. However, the high parking occupancy rates were short, and sufficient supply was available within four blocks of all surveyed areas at all times, even during a holiday weekend.

Coastal Zone Parking

Pursuant to Coastal Act requirements, parking must be maintained within the coastal zone. The availability of parking in the coastal zone allows access to the beach and amenities offered nearby, facilitating recreational opportunities for locals and visitors while assisting with the success of businesses. Using this space efficiently, however, helps maximize land potential and minimize traffic impacts.



Public parking provides access to the coastal zone at numerous locations in Morro Bay. More than 2,200 free public parking spaces are provided by the City in the coastal zone. The primary public access points are described below and shown on **Figure CIR-5**.

- North Point Natural Area, located at the north end of Toro Lane, has 10 marked vehicle parking spaces on the bluff connecting to stairways and trails to the beach. These parking spaces are occasionally fully utilized, but additional curbside parking is nearby in the Morro Strand campground area.
- Beachcomber Street provides approximately one-half mile of curbside parking (roughly 100 spaces) on the bluffs above the Morro Strand campground. These spaces are frequented by surfers and other beachgoers.
- The Morro Strand campground provides five marked parking spaces for day use in addition to the campsites.
- Beachcomber Street offers curbside parking and two informal off-street parking areas south of Alva Paul Creek.

- An off-street parking lot at the end of Azure Street includes approximately 30 parking spaces as well as a restroom for beachgoers. This parking lot connects to the Cloisters trail network.
- The Cloisters Community Park offers 28 off-street parking spaces serving the park and multiuse trails providing beach access.
- Informal dirt parking lots and curbside parking are situated along the Embarcadero north of Morro Creek. A bicycle and pedestrian bridge crosses Morro Creek to connect with the Harborwalk path.
- A dirt parking lot is located at the end of the Embarcadero just south of Morro Creek. This lot also offers parking for bikes and surreys.
- Numerous parking areas are along Coleman Drive between the Embarcadero and Morro Rock. These provide access to the Harborwalk, basketball courts, small craft launch sites at Coleman Beach, Morro Rock, and other amenities in the area. Most of the parking areas consist of dirt lots. The lot closest to the harbor mouth is owned by California State Parks, and is permanently closed.
- Parking supply along the Embarcadero includes 282 on-street parking spaces and 571 off-street spaces that mostly meet weekday demand but do not always meet weekend demand.
- An informal dirt parking area west of Morro Bay State Park accommodating approximately 12 vehicles is situated on Main Street north of the Museum of Natural History. This lot is regularly used as a launching point for small boats.
- A paved parking lot is located at the Morro Bay State Park Marina serving the general public and vessel owners. This lot also provides access to estuary walking trails.

**Figure CIR-5:
Coastal Zone Access Points with Parking**

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GOALS AND POLICIES

GOAL CIR-4: Morro Bay has convenient parking that enables access to the downtown and waterfront areas and the coast while enhancing the city’s character.

Commented [KK2]: Let’s discuss parking strategies along the Embarcadero. We should use this as an opportunity to holistically address parking issues there, including a potential parking garage, in-lieu fee system, etc.

POLICY CIR-4.1: Modify Parking Requirements. Eliminate minimum parking requirements when and where appropriate to promote walkable neighborhoods and transit and bicycle use, and establish maximum parking standards. **[Note: A more formal parking requirement policy may be included in a future draft of this element based on content of the Draft Zoning Code.]**

POLICY CIR-4.2: Paid Parking. Continue to investigate the applicability of implementing a paid parking program to encourage walking and biking in desired areas, promote employee parking in long-term parking areas, and provide resources to maintain parking lots and spaces. Any paid parking program shall require a CDP, and revenues shall only be used for public recreational access enhancements.

POLICY CIR-4.3: Expand In-Lieu Fee Program. Update parking fee requirements to expand options for how in-lieu fees can improve access to downtown businesses and the coast.

POLICY CIR-4.4: Shared Parking. Encourage shared parking between adjacent uses where possible.

POLICY CIR-4.5: Coastal Access Parking. Monitor coastal access parking and adjust parking strategies to ensure an appropriate amount of parking is provided.

Commented [KK3]: Let’s also include a policy that requires a no-net-loss of public parking at coastal access areas.

POLICY CIR-4.6: Excess Right-of-Way Parking. Help accommodate the parking needs of the commercial establishments and the Veteran’s Hall through the use of excess right-of-way.

See the policies listed in the Land Use section regarding transportation/access/parking issues for inclusion.