





7

MOBILITY PRIORITIZE ACTIVE TRANSPORTATION MODES

INTRODUCTION

Mobility chapter refers to the system of infrastructure, amenities, and programs that allow people to arrive and move about the campus. Currently, some of the academic buildings are dispersed beyond a ten-minute walk, abundant parking is available at a low cost relative to other campuses, and numerous on-campus roads favor automobile travel over other modes. Envisioning the campus of the future through multiple planning sessions, the university chose an ambitious transportation scenario which develops campus infrastructure to prioritize resources for active transportation modes: pedestrians, bicycles, and transit.

The ambitious transportation scenario enhances the social and physical opportunities associated with walking, cycling, and transit, creating safer and more accessible mobility options for all users (placemaking). It provides connections among campus destinations, and to natural resource areas and regional activity centers. It more equitably allocates resources to achieve significant increases in active transportation modes. This scenario recognizes that providing additional on-campus housing further reduces vehicle travel. In combination, these strategies will reduce the campus' greenhouse gas emissions (stewardship).

This chapter first examines the regional transportation network and existing conditions to provide context. It then presents the features of the campus-wide circulation network that support an ambitious shift in travel activity on the campus. Finally, it presents recommendations for each mode of transportation as a component of the complete network.

GOALS

Create a transportation system that fosters health and wellness

Create a bicycle- and pedestrian-centric campus that encourages physical movement, connection to the outdoors, and community interaction.

Improve the safety of active transportation networks

Enhance the safety of active transportation networks for cyclists, pedestrians, and non-motorized vehicles.

Expand access within the campus and to neighboring communities

Expand the bicycle and pedestrian connections within the campus to neighboring communities and regional landmarks.

Reduce greenhouse gas emissions

Achieve a significant reduction in greenhouse gas emissions from campus travel.

Minimize vehicular traffic

Decrease vehicular traffic on external and internal campus roadways.

BACKGROUND

Regional Context

The efforts described below summarize the work of surrounding jurisdictions. These efforts provide the planning context necessary to organize the campus transportation networks and to expand network connections to the neighboring communities and regional landmarks.

Local Planning Efforts

The cities of Marina and Seaside have adopted plans which were considered in the development of the CSUMB Master Plan. Applicable planning documents relevant to the transportation and circulation around the campus include the General Plans and each city's Bicycle and Pedestrian Transportation Plans. The Bicycle and Pedestrian Transportation Plans have called for strengthened pedestrian and bicycle connections to the university campus. These plans are important for increasing the mobility and access of the campus by providing more attractive and safe routes to and from these communities.

City of Seaside General Plan

The City of Seaside General Plan (2004) calls for a collaborative approach to addressing transportation needs with neighboring cities and regional transportation agencies to encourage affordable transportation access to major destinations such as CSUMB. Additionally, transit-oriented development in the Gigling Specific Plan area (near CSUMB) and other appropriate areas is encouraged through the City's Circulation Element. The City also details a series of planned circulation improvements within the area, including on General Jim Moore Boulevard, Lightfighter Drive, First and Second Avenues, Gigling Road, and Eucalyptus Road.

City of Seaside Bicycle Transportation Plan

The City of Seaside Bicycle Transportation Plan (2007) calls for strengthened bicycle and pedestrian connections between Seaside and the CSUMB campus. These connections will be primarily located along General Jim Moore Boulevard, Second Avenue, First Street, and Third Street. Class I facilities, or bicycle paths, are planned for General Jim Moore Boulevard

and portions of Second Avenue. Class II facilities, or bicycle lanes, are proposed for Gigling Road, Lightfighter Drive, Third Street, Monterey Road, and Seventh Avenue. These planned facilities are designed to provide better access to businesses and residential areas within Seaside.

City of Marina General Plan

The City of Marina General Plan has a goal to reduce dependency on the private automobile by providing other transportation alternatives. The design guidelines in the General Plan aim to achieve this by providing more space to pedestrians and bicyclists than is currently allotted on many of Marina's existing streets. The General Plan includes a Class I bicycle path on Eighth Street, a major east-west pedestrian and bicycle corridor that serves as the northern boundary for the CSUMB campus. The General Plan also calls for Class I bicycle facilities parallel to Inter-Garrison Road and Second Avenue.

City of Marina Pedestrian and Bicycle Master Plan

According to the City of Marina Pedestrian and Bicycle Master Plan, the main roadways linking the city to campus should be designed or improved to safely accommodate bicycles. These roads include Reservation Road, Imjin Parkway, General Jim Moore Boulevard, and Inter-Garrison Road. Of these primary access roadways, only Reservation Road and Inter-Garrison Road have striped bicycle lanes. Currently, there are six Class I bicycle paths within the City of Marina. The largest is the Monterey Bay Sanctuary Scenic Trail which spans the entire length of the city and parallels Del Monte Boulevard and Highway 1. There are limited additional Class II and III bicycle lanes and routes in other areas of the city.

Fort Ord Base Reuse Plan

CSUMB can draw much from work in the Fort Ord Base Reuse Plan (BRP), specifically the Highway 1 Design Corridor Guidelines and the Regional Urban Design Guidelines.

The BRP circulation goal is to create and maintain a balanced transportation system, including pedestrian ways, bicycle paths, transit, and streets, to provide for the safe and efficient movement of people and goods to and throughout the former Fort Ord. (BRP Vol 1, p. 17).

The Fort Ord Highway 1 Design Corridor Guidelines address the Highway 1 Scenic Corridor along Fort Ord and the Imjin Parkway and Lightfighter entrances. Although the campus is east of the area where the guidelines apply, the Master Plan has considered the following elements of the design guidelines:

(2) “There shall be ample bicycle links throughout the corridor and adjacent areas. As each project is considered, the main routes, links, and bicycle amenities should be accommodated to develop a logical network”

(10) “Design efforts should encourage walkable streets with transit linkages”

The BRP environmental analysis requires the completion of several roadway projects to mitigate traffic upon the plan’s buildout. One of those roads is Eastside Parkway, which will link Inter-Garrison Road to Gigling and Eucalyptus Roads, supplementing the roadway capacity between the Salinas Valley and Monterey Peninsula. The Eastside Parkway is proposed to be a two- to four-lane roadway that would divert through traffic around the campus.

The BRP also calls for establishing “a pattern of landscaping of major and minor streets, including continuous street tree plantings to define gateways to the former Fort Ord and enhance the visual quality and environmental comfort within the community.” (BRP Vol 1, p. 71) The BRP calls for

a Gateway Regional Entertainment District that straddles both sides of the Main Gate interchange at Highway 1 and Lightfighter Drive. It is one of the primary entrances to CSUMB and the former Fort Ord. This district is identified as an entertainment-oriented regional retail center. Approximately twenty-eight acres have been set aside near the Main Gate interchange to enhance the visual gateway to this district along the Highway 1 Scenic Corridor. (BRP Vol 1, p. 162)

To achieve its community design vision around the campus, the BRP recommends that CSUMB and the City of Seaside do the following:

- 1. Coordinate to create a well-designed gateway at Lightfighter Drive. (BRP Vol 1, p. 162)*
- 2. Encourage the use of alternate transportation by providing convenient and direct transit access to campus activity centers. (BRP Vol 1, p. 161-162)*
- 3. Coordinate development within this district with the preparation of a Gateway Corridor Specific Plan that provides for an integrated gateway design concept to the former Fort Ord and CSUMB. (BRP Vol 1, p. 165)*

Regional Urban Design Guidelines

The Regional Urban Design Guidelines offer guidance for planning complete streets, road connectivity, trails, and transit facilities. The guidelines establish street characteristics that encourage development at the pedestrian scale, emphasizing minimal setbacks, appropriate height and massing on street frontages, and opportunities to create public places at intersections and other points of interest. The guidelines should specifically be considered for any development along campus boundaries.

Figure 7.1: FORTAG Plan

Regional Networks

The campus is within close proximity to a number of trails useful for commuting and recreation. Trail connections include a network of unpaved trails that are located within Monterey County’s Fort Ord Recreational Habitat Area and the Fort Ord National Monument properties administered by the Bureau of Land Management. The recently proposed FORTAG trail will provide a thirty-mile, twelve-foot-wide regional network of accessible paved trails and greenways that will connect communities and provide opportunities for recreation and access to open space. The FORTAG right-of-way is intended to have approximately 150 feet of open-space on each side of the paved trail. The northern loop is thirteen miles long, looping around the City of Marina. The southern loop circles around the City of Seaside and bisects Del Rey Oaks, creating fifteen miles of trails. Both loops connect to the existing Monterey Bay Sanctuary Scenic Trail. (See Figure 7.1.)

The Monterey Bay Sanctuary Scenic Trail is a partially constructed fifty-mile separated bicycle and pedestrian trail that will ultimately connect Santa Cruz and Monterey Counties along the Monterey Bay National Marine Sanctuary. In Monterey County, it currently runs between Pacific Grove and Marina, with access to the campus. It is a piece of the larger California Coastal Trail system and will coexist in some locations with planned light rail or bus rapid transit service.

In June 2015, TAMC adopted a conceptual Marina-Salinas Multimodal Corridor Plan (MMCP), which will create a multimodal connection between the cities of Marina and Salinas. The MMCP accommodates high-quality bus rapid transit as well as bicycles, while improving pedestrian and automobile safety. The design and alignment is along Reservation Road and Imjin Parkway just north of campus. (See Figure 7.2.)

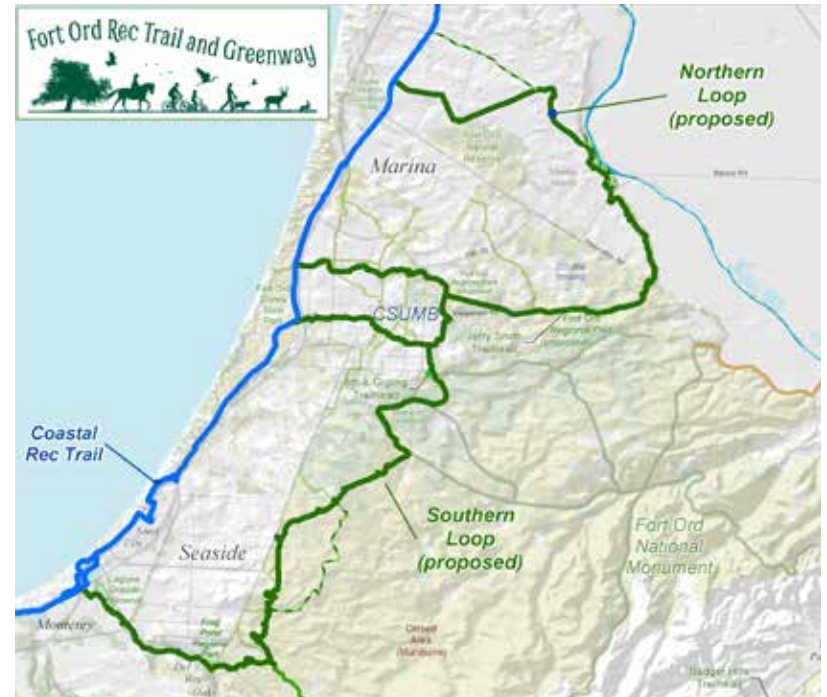
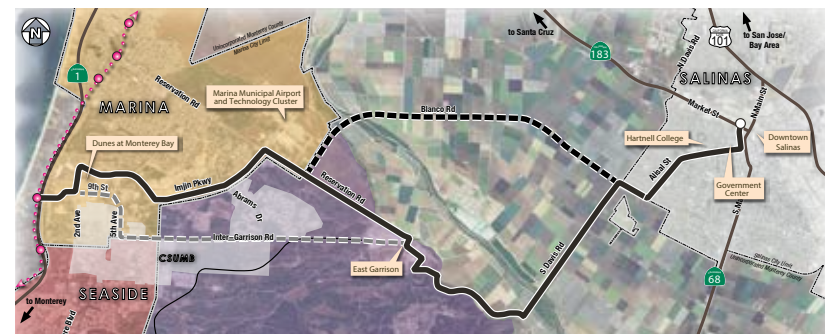


Figure 7.2: TAMC Multimodal Transportation Corridor



Existing Campus Access and Circulation

In 2014–15, only half of vehicle trips entering and exiting the campus were generated by the campus community. The volume of vehicles on campus roadways generated by both CSUMB and non-CSUMB drivers is a major safety concern for bicycles and pedestrians. Of the CSUMB-generated vehicles entering and exiting the academic core of the campus, 82 percent were single occupant vehicles.

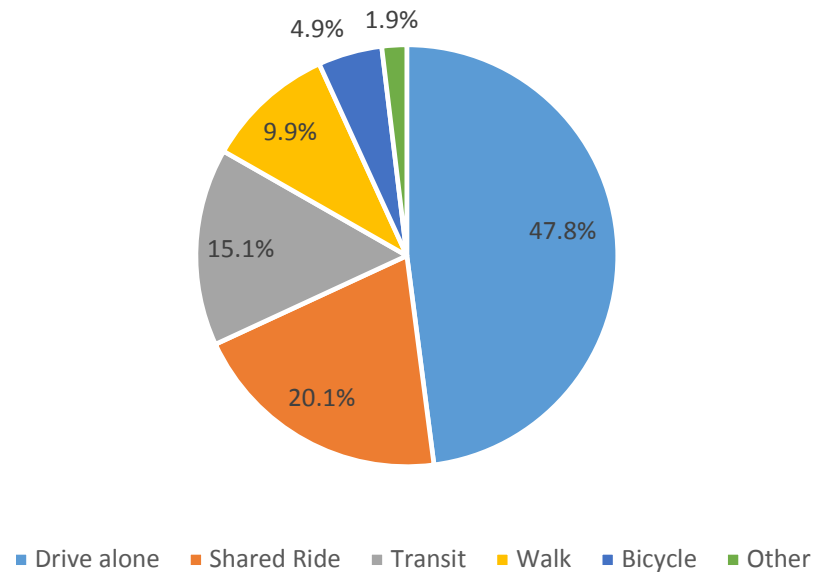
A campus commuter survey conducted in 2016, and shown in Figure 7.3, examined the mode split of staff, faculty, and students. It received over five hundred responses, and reflects similar trends in the traffic count study in relation to the percentage of vehicles that carpool. It supports the traffic count study to better understand the campus mode split as a whole and sets a baseline for future improvements.

Existing Vehicular Circulation

The campus currently has four major entrances: Imjin Road to the north, Inter-Garrison Road to the west and east, and General Jim Moore Boulevard to the south. The entrance at Lightfighter Drive and General Jim Moore Boulevard is marked by a gateway entrance sign. Most traffic from Seaside or the Monterey Peninsula accesses the campus from the General Jim Moore Boulevard entrance, while traffic from Salinas or Marina arrives through the Imjin Road or Inter-Garrison Road entrances, and traffic from Santa Cruz County arrives via the entrances at either Inter-Garrison Road and Second Avenue or Imjin Road.

Partial road closures to vehicles on General Jim Moore Boulevard, Fifth and Sixth Avenues, and Divarty Street, along with traffic calming measures have reduced driving on campus. However, a sufficient number of open roads and abundant low cost parking still encourage regional and campus traffic in the center of campus. This puts cyclists and pedestrians at risk and requires resources from the campus police department to provide traffic enforcement. There is a significant financial burden of managing streets that serve the entire region, including pavement, markings, and signage, without the financial resources afforded a local jurisdiction.

Figure 7.3: Campus Commuter Survey Mode Split



Visitor Access

Community engagement sessions revealed that the campus transportation network is difficult for campus visitors to navigate, likely as the result of inconsistent directional signage, lack of clear campus gateways, and dispersed parking lots throughout campus. Taken together, these factors create access challenges for visitors and guests.

Proposed Roadway Improvements

A project proposed for 2016-17 will install a roundabout at the Eighth Avenue and Inter-Garrison Road intersection and would also realign the Seventh Avenue, Eighth Street and Inter-Garrison Road intersection. The realignment would create a perpendicular all-way stop to improve safety for university-related vehicular, pedestrian, and bicycle traffic on the CSUMB campus. The proposed project would also improve on-campus circulation by aiding in calming traffic and by encouraging through traffic to use routes that bypass the core of campus.

Regional Through-traffic

In 2013, Inter-Garrison Road was linked to Reservation Road, providing a regional connection through CSUMB from the Marina-Salinas area to the Monterey Peninsula. After the connection was opened an additional one thousand daily vehicle trips were counted on Inter-Garrison Road. About 70 percent of the new vehicle trips used Eighth Avenue to bypass the campus.

Safety

Deteriorating traffic signage, fading pavement markings, worn pavement, and insufficient lighting in parking lots are all issues that can make circulation confusing and may result in safety concerns for users.

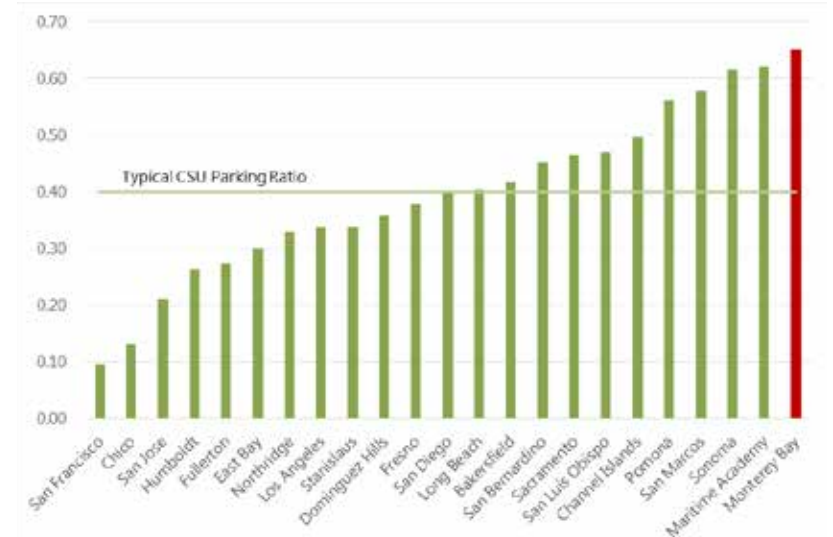
Parking

Driving has traditionally been the primary element of CSUMB’s transportation system. Low-cost parking permits and abundant spaces encourage the majority of faculty, staff, and visitors to arrive by private vehicle. Small lots interspersed between buildings force bicyclists and pedestrians to travel on indirect routes through parking lots and areas where there are few sidewalks or pathways.

In January 2012, CSUMB conducted a survey of available parking. This survey counted 4,000 parking spaces on campus, or 4,413, if special designation parking spaces such as disabled, service vehicle, and visitor parking facilities are included. This aggregate parking supply of 0.65 parking spaces per FTE student is much higher than the CSU average of 0.4 stalls per FTE (see Figure 7.4). Additionally, CSUMB’s current annual parking fee of \$168 is about half the CSU system average parking rate of \$300 per year. The campus also charges visitors for short-term and daily parking permits. The relatively low cost of parking encourages driving; it is also a missed opportunity for revenue building that could be used to fund transportation measures for all campus users.

CSUMB increased the cost of parking in the 2015/16 academic year; this increase is expected to encourage alternative transportation choices. Fees are expected to continue to rise in the future. However, the cost of parking is still much lower than the CSU system average and will continue to be an important issue for the campus to address.

Figure 7.4: California State University Parking Ratios



Source: California State University Financing and Treasury Department (July 2013) and California State University Analytic Studies (2013-2014).

While there is no readily available parking utilization data, field observations suggest that most parking lots near the campus core are operating close to capacity and drivers may be circulating looking for close parking spaces. Lots just outside of the core area (such as Lot 508 on Divarty Street, or Lot 71 at Sixth Avenue and Inter-Garrison Road) can also reach capacity at certain times of day. The smaller peripheral parking lots are typically underutilized.

Lack of a cohesive parking management plan contribute to the challenge of reducing the demand for parking. There are also obstacles to raising parking fees. Many CSUMB students work, and their inability to pay higher fees could be a deterrent to working while attending university. Also, specific bargaining units have contracts with the CSU that severely restrict the campus’s ability to charge higher parking fees.

Existing Transit Circulation

Transit Services

The public transit system that connects the campus to regional activity centers is operated by Monterey-Salinas Transit (MST) (see Figure 7.5). Currently all CSUMB ID holders receive free, unlimited access on all MST routes from King City to San Jose while enrolled or employed on campus.

There are six bus routes that serve three main bus stops on the campus: Lines Marina 16, Monterey 18, Monterey Late Night Weekend 19, Salinas 25, Campus Shuttle 26, and Presidio-Preston Park 74. Line 26 currently serves as the campus shuttle looping between main campus and east campus housing. All routes connect at the Alumni & Visitors Center Transit Exchange, centrally located west of the Main Quad on Fourth Avenue, adjacent to the university's Alumni & Visitors Center.

Lines 19, 25, and 26 operate only during the fall and spring semesters when classes are in session. Service schedules are adjusted periodically to adapt to ridership, fluctuations in funding, and negotiated costs with MST. There is no consistently dedicated funding source for university-funded transit services.

Data from MST for the 2015/16 academic year shows that ridership on campus-serving routes is highest in September at the beginning of the school year and drops off as the fall semester progresses. Ridership increases again at the beginning of the spring semester, though not at the same levels as September. Ridership is at its lowest in May, when the academic year is coming to a close.

Between August 2015 and May 2016, CSUMB ID holders took 280,953 trips on thirty-two of MST's bus lines. Top ridership was on campus serving lines. The highest ridership lines were Lines 16, 18, 26, and 25, followed by non-campus serving lines Monterey-Salinas (20), Jazz A Sand City-Hilby-Aquarium (901), and Jazz B Sand City-Broadway-Aquarium (902). (See Table 7.1)

Accessibility

Students, faculty, and staff with physical disabilities have access to the MST paratransit program MST RIDES. This service operates on a point-to-point basis. Appointments are required to guarantee service. Furthermore, the paratransit service accommodates both on- and off-campus scheduled stops. MST's on-call service may function as a secondary option for individuals with special mobility needs, but it experiences significant delays when K-12 school is in session. In addition, it provides services only to specific areas.

The campus offers an electric wheelchair accessible cart that is available only to university departments, group tours, campus-wide orientations, and major events such as commencement. Accessibility for those with mobility limitations continues to be problematic because of the lack of dedicated paratransit service on campus.

Infrastructure

There are eight transit stops in Main Campus, and ten in East Campus, but few stops have high quality amenities or bus shelters. Two shelters are located on campus at the Tanimura & Antle Family Memorial Library and the Alumni & Visitors Center Transit Exchange.

The Alumni & Visitors Center Transit Exchange is a hub for all connecting lines on campus and receives the highest volume of riders. The library stop receives the second highest volume of traffic and has a real-time bus arrival board. The other bus shelters are located in East Campus housing. One is on Manassas Drive north of Wilderness Court. The other four are located along Schoonover Drive. Some on-campus transit stops do not have benches; however, most of these are on-call pickup locations. Ridership data for the 2015 calendar year (Table 7.1) shows the top six highest on-campus ridership stops.

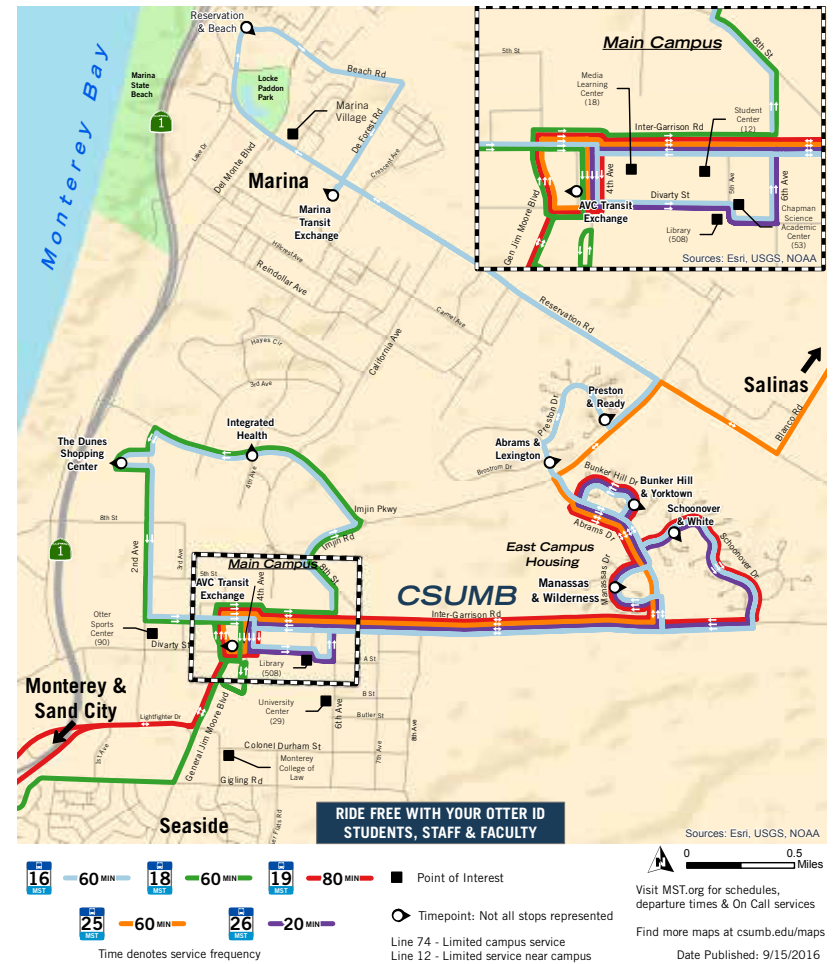
Table 7.1: Top Six Highest On-campus Ridership Bus Stops (2015)

Bus Stop	Riders
Fourth Avenue / Alumni & Visitor Center	65,700
Divarty / Library	19,500
Manassas / Wilderness Drive	17,700
Manassas / Antietam Court	10,700
Bunker Hill / Yorktown	10,400
Bunker Hill / Princeton Court	9,700



Monterey-Salinas Transit (MST) bus at the Alumni & Visitors Center Transit Exchange

Figure 7.5: Existing Transit Serving the CSUMB Campus



Existing Bicycle Circulation

Campus topography presents some challenges for bicycling (see Figure 6.1). The natural grade in some areas on campus are steep, and the connection between Main Campus and East Campus has a gradual but not insignificant gradient. In addition, steady winds from the west can make bicycling difficult and may discourage bicycle ridership.

The existing bicycle routes on the CSUMB campus and in surrounding areas are comprised of bicycle routes or boulevards, bicycle lanes, and separated bicycle paths or trails.

Bicycle Routes/Boulevards

On-campus bicycle routes, known as Class III facilities, include approximately 3.8 miles of bicycle boulevards: Divarty Street from Second Avenue to A Street, A Street from Divarty Street to Seventh Avenue, Seventh Avenue from Inter-Garrison Road to Colonel Durham Street, and Inter-Garrison Road from Seventh Avenue to Second Avenue. Bicycle boulevards give bicycles priority on campus roadways and allow them to use the whole lane. Bicycle boulevards use signs and pavement markings to inform motorists.

Bicycle Lanes

Bicycle lanes, known as Class II facilities, are provided on Second Avenue, General Jim Moore Boulevard from Lightfighter Drive to Inter-Garrison Road, Fifth Avenue from Divarty Street to Inter-Garrison Road, and Inter-Garrison Road from Seventh Avenue to Schoonover Drive.

Separated Bicycle Paths

The campus recently constructed its first separated bicycle path, or Class I facility—a pathway between the Promontory housing and Inter-Garrison Road. On the campus periphery, separated bicycle paths constructed by the City of Marina exist on the east side of Second Avenue between Lightfighter Drive to Imjin Parkway, and off campus along Imjin Parkway between Second Avenue and Imjin Road, at which point it transitions to a bicycle route.

Regional Bicycle Connections

The large areas of open space surrounding the campus create an opportunity to incorporate separated (Class I) facilities that take advantage of the campus's own Southern Oak Woodland area, the Fort Ord National Monument, Fort Ord State Dunes Park, and scenic vistas. The bicycle network also connects to destinations in Marina and Seaside.

To access the CSUMB campus from Marina, cyclists can use bicycle lanes on California Avenue to access the Imjin Parkway bicycle path and enter on Imjin Road and Eighth Street, or they can continue south on the bicycle route along California Avenue, which becomes Fifth Avenue on campus.

Access from Seaside is available via the separated path parallel to General Jim Moore Boulevard. This path transitions to a bicycle route at Normandy Road, at which point cyclists can continue or use local roads to access Parker Flat Cut Off Road and head north towards Colonel Durham Street and campus. Navigating this gap is challenging for most cyclists.

From the East Campus neighborhood, cyclists can use the Class II bicycle lanes provided on Inter-Garrison Road. Inter-Garrison Road is a 35-mph street with wide travel lanes and narrow bicycle lanes. There is no physical separation from traffic.

To connect to the Monterey Bay Sanctuary Scenic Trail, bicyclists must use Divarty Street, which is classified as a bicycle route between Second Avenue and the trail.

Bicycle Parking

The campus continues to install bicycle racks adjacent to academic and residential buildings. It currently has 912 outdoor, and 463 indoor bicycle parking spaces. Of the indoor spaces, 429 are located in Promontory and are only available to Promontory residents; 22 are located in the Student Center at the Otter Cycle Center; and 12 are in bicycle lockers.

Bicycle Amenities

Two outdoor fix-it stations are located at the library and next to the Bicycle Bunker. These stations provide repair tools and air pumps. The Otter Cycle Center also provides maintenance services, along with short-term or long-term bicycle rentals and sponsored group rides. Showers are located within the Otter Sports Center, Aquatic Center, and Joel and Dena Gambord Business and Information Technology buildings.

Bicycle Safety

Due to gaps in both the campus and regional networks, cyclists can be forced to use bicycle routes (Class III) that share space with vehicles in the roadway. Some of these roadways contain no shoulders, have poor pavement quality, collect debris in the bicycle lanes, or experience a combination of high traffic volume and travel speeds. Once riders are on main campus, traffic speed limits are reduced to 25 mph. This reduction provides only a marginal increase in bicyclist comfort, as the volume of traffic, lack of dedicated bicycle facilities, and stop signs introduce additional conflict points between cyclists and other travel modes. Bicycle boulevard symbols are painted on some roadways to increase driver awareness of the presence of cyclists.

Existing Pedestrian Circulation

The CSUMB campus has a broad variety of pedestrian accommodations. Some portions of the campus, such as the existing pedestrian malls on Divarty Street and Sixth Avenue, where automobile access is restricted, provide a high-quality walking environment, with many destinations within a close walking distance. However, other areas of campus lack sidewalks or other basic pedestrian amenities, and destinations are spaced further apart.

Accessibility

While the university has made improvements to the pedestrian network, many locations still lack direct, accessible pedestrian connections. In order to improve mobility for pedestrians and address major accessibility barriers for the mobility-impaired, accessibility issues have been cataloged as part

Figure 7.6: CSUMB Community Bike Map



of an ongoing effort of the campus American Disabilities Act (ADA) Transition Plan.

In many areas, such as along Fifth and Sixth Avenues and portions of Inter-Garrison Road, the natural topography is more than a 5 percent grade, making the construction of ADA-accessible pathways challenging.

Safety

Pedestrians face many opportunities on campus for pedestrian-vehicle conflicts. Flashing crosswalks and stop signs have been installed at high-traffic locations to increase pedestrian visibility.

Although there have been a number of lighting improvements along Inter-Garrison Road, pathways, and in parking lots, some areas continue to have inadequate lighting. The University Police Department offers a night walk service to personally escort anyone on campus at all hours, seven days a week.

Existing Transportation Demand Management Program

CSUMB's Transportation Demand Management (TDM) program provides services and resources that encourage cycling, public transit use, and ride-sharing. Various types of travel resources are available to students, faculty, and staff, including ridesharing, guaranteed ride home, bicycle support resources, and an unlimited MST ridership program. Information about these programs is provided on the CSUMB website.

Parking revenue is managed and collected by the University Police Department while transportation and TDM efforts are managed by Campus Planning & Development. There is currently no long-term planning strategy to link parking revenue with TDM strategies.

Campus and Community Comments

The following is a summary of the key themes shared by members of the campus community concerning CSUMB's transportation and mobility systems:

- The campus should provide more connected, convenient, and accessible bicycle and pedestrian facilities
- There is a need for a more efficient, reliable, and accessible transit and shuttle service
- Accessibility at existing and future facilities should be improved, going beyond ADA compliance to incorporate universal design principles
- Connections to developments near the campus and regional facilities (e.g., the Monterey Bay Sanctuary Scenic Trail and the proposed FORTAG trail) need improvement
- The campus should have clear gateways and wayfinding to promote a welcoming campus and reduce regional cut-through traffic
- Amenities to improve pedestrian and bicycle safety, such as lighting, are needed, and there is a need to improve areas where vehicle and pedestrian conflicts occur
- Additional bicycle parking locations are needed around campus
- The current oversupply of parking and its low cost make driving a relatively easy travel option and discourage travel by non-automobile modes

RECOMMENDATIONS

Three distinct transportation scenarios were developed to address current transportation challenges facing the campus. The scenarios were focused on TDM and mode-share goals to determine how to prioritize transportation infrastructure and what aspects of circulation and access were most important to the community. All scenarios and related mode-share goals assume that CSUMB will house 60 percent of students and 65 percent of staff and faculty on campus, and will substantially reorient its vision for the campus towards a sustainable transportation system. These assumptions were developed in conjunction with CSUMB staff, faculty, and students to reflect the University’s increasing commitment to becoming a regional example for sustainability.

After consultation with the campus community, the ambitious transportation scenario was selected.

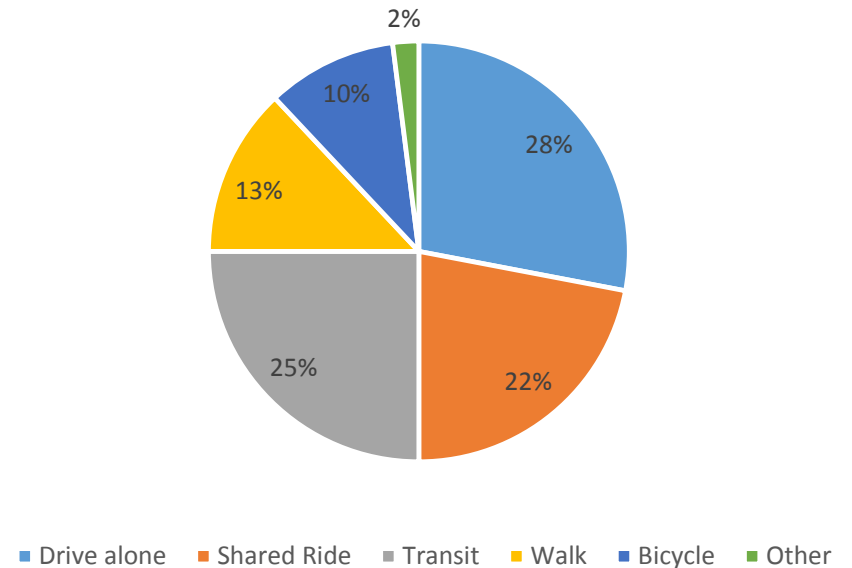
The following recommendations seek to improve campus travel options, prioritize pedestrian and bicycle movement, and reach the campus’s desired mode split.

Pursue an Ambitious Transportation Scenario

This scenario will address the issues raised by campus and community stakeholders and will demonstrate regional leadership in sustainable transportation. The scenario’s 2016–2026 goal is a mode split as follows: 28 percent drive alone, 22 percent shared ride, 25 percent transit, 13 percent walk, 10 percent bicycle, 2 percent other (see Figure 7.7). To reach this mode-split goal, many TDM strategies will need to be employed. Assumptions for the ambitious scenario were as follows:

- Pedestrian travel will be prioritized over other modes of travel
- The transit program will continue to offer unlimited free rides for CSUMB ID card holders
- CSUMB will house 60 percent of students and 65 percent of staff and faculty on campus

Figure 7.7: 2016-2026 Mode Share Goals



- Parking will be limited and consolidated to the campus periphery
- Vehicle travel will be separated from bicycles and pedestrians where possible
- Academic buildings will be concentrated in the campus core within a quarter-mile walking distance
- Accessibility will be improved on existing streets and corridors, and will be a primary consideration on new facilities
- New TDM strategies will be introduced and funded

Expand Transportation Demand Management Program

Strengthening and expanding TDM offerings will increase rates of walking, cycling, transit use, and ridesharing. It will also reduce the amount of land needed for parking, and lessen traffic impacts on local and regional roads.

Table 7.2 outlines options for a more robust, comprehensive TDM program. The program should include a planning effort that establishes specific means of reaching the mode split objectives. Its success will require dedicated personnel and monitoring over time.

Expand campus trail network and connect to regional pathways and destinations

Improving the connections to regional pathways and destinations increases access to amenities and furthers regional economic development. Trail expansion should connect to Marina, Seaside, FORTAG, Presidio of Monterey and Monterey County.

Integrate universal design principles

Universal design principles should be applied to meet the mobility needs of the entire community. These principles recognize the changing diversity of needs important to all people regardless of their age, ability, or condition, during an entire lifespan, rather than focusing on addressing the unique special needs of a few people. They focus on the complicated interrelationships between the physical environment and the user, espousing barrier-free design, user-friendly architecture, and comfortable environments. CSUMB can create a universally accessible campus by utilizing these principles.

- Equitable use: design and build a network within the campus core that is accessible using the same means of use for all users—identical when possible, equivalent when not
- Flexibility in use: accommodate a wide range of individual preferences and abilities
- Simple and intuitive use: eliminate unnecessary complexity; be consistent with user expectations
- Perceptible information: communicate necessary information regardless of the ambient conditions or user's sensory abilities

- Tolerance for error: minimize hazards and adverse consequences of unintended actions
- Low physical effort: design for efficient and comfortable use
- Size and space for approach and use: provide adequate space and clear lines of sight
- Emerging technologies: stay ahead of accessibility regulations for emerging technologies where standards are not yet in place

Improve wayfinding

Clear wayfinding allows visitors and new students to easily navigate the campus. Updating the campus wayfinding plan to adapt to the new master plan layout and including bicycle, pedestrian, and accessibility signage with walking times and distances will contribute greatly to the ease of navigation. The campus wayfinding plan should incorporate off-campus signage placement and refer to regional standards for consistency.

Divert regional through-traffic

Diverting traffic around the periphery of campus will help to prioritize pedestrian and bicycle safety within the campus core. This recommendation recognizes that regional cut-through traffic is a campus-wide safety concern, and it detracts from the quality and character of the campus environment. The roundabout on Inter-garrison Road and Eighth Avenue will address this issue on the east side of campus; restoring the connection of Eighth Street to Second Avenue will do the same on the west side of campus, when it is completed.

Build multimodal hubs

The master plan introduces two multimodal hubs, which will serve as the main points of arrival to the campus and facilitate the transition to active modes of travel. The hubs contain amenities for regional transit, such as bus bays, shelters, pay stations, seating, and maps, and they will also serve the campus shuttle system. With these hubs, the master plan creates the opportunity to re-configure the circulation system, consolidate parking, facilitate a “park once” policy, and improve options for multimodal travel.

MOBILITY PLANS

Vehicular Circulation Plan

Access and Circulation Framework

The access and circulation framework has been designed to divert cut-through traffic by means of restricted access, signage, and road closures. The framework recommends several road network improvements and changes to create a campus more pedestrian- and cyclist-friendly. The changes require separating vehicles from other users to keep all users safe and create convenient bicycle and pedestrian routes. Service and emergency vehicles remain able to access all areas of campus.

Figure 7.8 illustrates the proposed vehicle circulation plan for the campus.

The City of Marina plans to complete Eighth Street between Third Avenue and General Jim Moore Boulevard. This will create a continuous roadway connecting Second Avenue to Inter-Garrison Road near Seventh Avenue, diverting regional traffic that would otherwise cut through the campus. In addition, Inter-Garrison Road at its intersections with both Eighth Street and Seventh Avenue will be redesigned to encourage east-west through traffic to use Eighth Street or Eighth Avenue and promote Inter-Garrison Road as a bicycle- and pedestrian-priority street.

Vehicle traffic is removed from the campus core to create a more bicycle- and pedestrian-oriented environment. To support these strategies, restricted access is proposed on Fourth and Fifth Avenues, and portions of Divarty Street, Inter-Garrison Road and Sixth Avenue.

A new extension of Fifth Street east toward Eighth Street is proposed on the north side of campus to provide improved access to north campus housing for service, emergency, and transit vehicles.

In addition to restricted access on the streets mentioned above, limited access for through traffic is recommended at the intersection of Eighth Street and General Jim Moore Boulevard. This entry point will be designed to discourage through traffic from using General Jim Moore Boulevard, remaining open for campus access to parking facilities, and emphasizing

low-speed vehicle travel with high-quality bicycle, pedestrian, and transit facilities. Service and emergency vehicles are able to access all areas of campus, and drop-off and move-in access is available at all student housing locations.

Seventh Avenue between Colonel Durham Street and Butler Street will be designated one-way northbound to reduce vehicular traffic adjacent to the Charter School, and to create a safer crossing of the FORTAG trail.

The master plan also introduces two multimodal hubs, which serve as the main points of arrival to the campus, facilitate the transition to active modes of travel, and contain campus shuttle and regional transit facilities. The multimodal hubs also include pick-up and drop-off areas for taxi service. Amenities should include maps and wayfinding signage, bicycle services and resources, and preferential parking for rideshare, car share, electric, and low emission vehicles. Charging stations for electric vehicles should also be provided.

The western hub, serving Monterey Peninsula commuters and visitors, is located in the athletics and recreation area at General Jim Moore Boulevard and Divarty Street, not far from the Alumni & Visitors Center Transit Exchange. This hub will be regionally oriented to accommodate additional transit routes and parking. Transit will connect the campus to the multimodal corridor where future bus rapid transit service will link the campus to both Peninsula and Salinas Valley destinations.

The eastern hub is located on the northeastern edge of the campus at Sixth Avenue and Inter-Garrison Road. This hub may be smaller than the western multimodal hub and is likely to be used primarily by students, staff, and faculty living on campus and traveling to other destinations, as well as commuters from the Salinas Valley.

Both hubs are currently planned with surface parking lots. However, structured parking, which is the most efficient use of space, would serve the campus well if it grows beyond 12,700 students or begins hosting large events.

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Table 7.2: Transportation Demand Management (TDM) Strategies

TDM Measure	Description
BICYCLE	
Bike Buddy Program	A bicycle buddy program helps connect new bicycle riders with others, thus providing a mutual encouragement and motivation. Group cycling also increases the visibility and safety of cyclists.
Bicycle Parking*, Showers and Lockers	Cyclists are reassured by guaranteed secure bicycle parking that their bicycles will not be stolen. Showers and changing rooms help promote bicycling (and walking) as an alternative commute option by providing a place to clean up after a ride (or walk).
Bicycle Riders Guide*	A guide showing bicycle routes, lanes, and paths to campus along with locations of on-campus bicycle parking makes it easier for people to bicycle and walk to work.
Bike Sharing	A bicycle-share program provides employees and students with campus bicycles and free bicycle helmets, helping to eliminate trips made by car during the day.
Bike-to-Work day	A regional event to introduce bicycle commuting can get people to start bicycling more frequently.
Electric Bicycle Charging Station	Electric bicycles can be used for longer trips than standard bicycles. Providing the infrastructure to support them facilitates more bicycling options.
CAMPUS DESIGN	
On-Campus Amenities and Services	Amenities help to reduce the number of trips people need to make off campus during the day. They may include the following: cafes or coffee shops, a general store, banking, dry cleaning, health and wellness, etc.
On-Site Bike Repair Facilities*	Bicycle repair stands offer an air pump and basic tools to keep your bicycle in good shape.
Wayfinding	Improved signage adds to the character of campus by using branding, and also makes it easier for bicyclists and pedestrians to navigate the campus.
FINANCIAL	
Parking Cash-Out	Paying employees the cash equivalent of employer-provided parking if they elect to forgo parking provides a financial incentive to use a mode other than driving alone to work.
Pre-Tax Commuter Benefits	Passing employer tax benefits to employees who use non-drive-alone modes provides a financial incentive to use alternative modes.
PARKING	
Priced Parking*	Introducing a tiered parking permit price structure helps educate drivers that parking is not included in formal employee benefits, but is a service with incurred costs.
Parking Supply	Managing parking supply to prevent over-parking a site reduces the convenience of driving.

Table 7.2: Transportation Demand Management (TDM) Strategies (cont.)

TDM Measure	Description
RIDESHARING	
Car sharing*	People who bicycle or walk or use transit, carpools, or vanpools can utilize a car-share vehicle located on campus for errands or meetings in order to reduce concerns and inconveniences of not having a vehicle.
Expanded Carpool Matching	Rideshare programs help to form carpools and vanpools by matching drivers and passengers. By going beyond using 511.org to customize matching services to the campus, CSUMB can potentially increase its success in forming new carpools and vanpools.
One-way Car share	One-way car sharing allows users to pick up a vehicle on one location and drop it off at another location. One-way car sharing provides an additional level of convenience beyond traditional car sharing.
TDM RESOURCES	
Commute Ambassadors	An ambassador/buddy program eases people into commuting alternatives, and it can provide incentives for new commuters referred by a friend.
Foster Competition and Engagement	Competitions can help engage people in a given TDM option. These competitions may include prize drawings, and may center on any mode (bike-to-work competition, pedometer/walking challenges). They may also include recognition programs (Commuter of the Month, etc.).
Guaranteed Ride Home Program*	Employees and students who use transit, carpools, or vanpools are guaranteed a ride home in case of emergency or if they need to work late. A guaranteed ride home program helps to reduce concerns about using alternative modes.
Marketing and Information*	Marketing the TDM program keeps alternative mode choices on the forefront of people's minds and helps encourage trip-reducing behavior. A marketing program can include the following:
	- "Welcome" packets that include resources
	- Website with information and links to relevant agencies, forms and services
	- Information boards or kiosks located in centralized places such as the quad
	- Regularly published electronic or printed newsletter
On-Site Transportation Coordinator*	Transportation coordinators are responsible for developing, marketing, implementing, and evaluating TDM programs. Having dedicated personnel that people can turn to for resources and information helps make using alternative modes easier.
Surveys*	Surveys conducted on an annual basis provide the transportation coordinator with the information necessary to understand the effectiveness of the TDM programs and the preferences of the people they serve.
Transportation Fairs	Transportation fairs provide alternative mode information in a fun event.

Note: An asterisk (*) indicates that the TDM measure has already been implemented to some degree.

Campus Gateways

Gateways declare the arrival on campus, define the campus edges, improve campus identity, and discourage cut-through traffic. The major vehicular entries to the campus from the west are located at Divarty Street and Second Avenue, and on General Jim Moore Boulevard at Lightfighter Drive. The major entry on the east is at Inter-Garrison Road and Sixth Avenue. These entries should be marked as gateways with monument signage and attractive landscaping that evokes the CSUMB character and identity.

Parking

The master plan goals for parking are to proactively manage the parking supply, make parking more efficient, and remove non-essential lots from the campus core. These goals will be achieved by consolidating parking incrementally as new development occurs, and by implementing complementary TDM strategies.

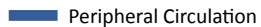







There is currently an oversupply of parking, despite a perceived need for more. Many of the inefficient, dispersed surface parking lots can gradually be closed without impacting overall parking supply as the campus consolidates its parking supply into parking lots at the campus periphery.

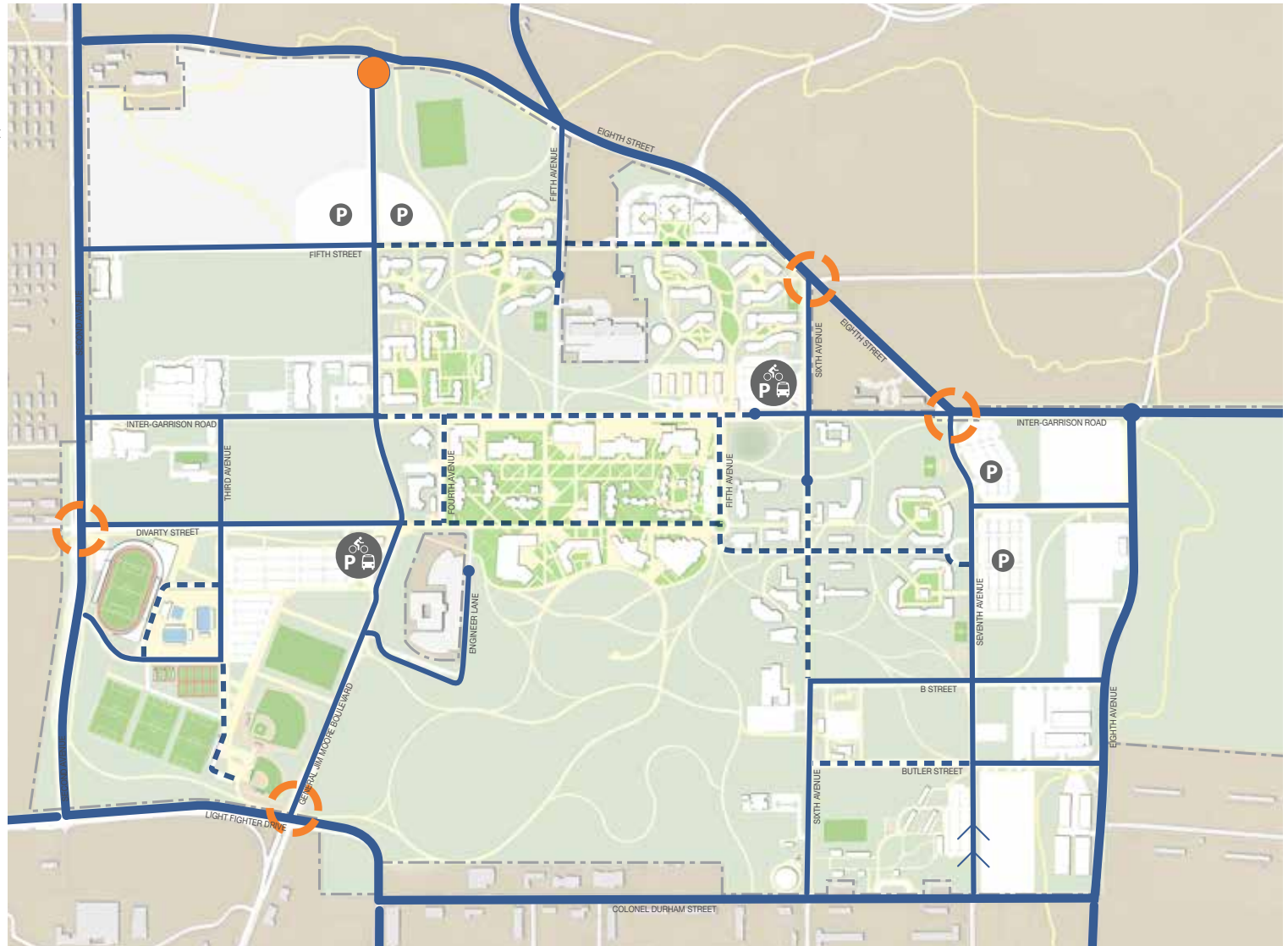
Short-term lots will be located primarily at the multimodal hubs, where they will serve visitors and carpooling commuters. Long-term satellite lots will serve as residential parking areas and overflow lots. Special parking stalls will be provided to accommodate service vehicles, deliveries, loading and unloading activities, and trash pick-up. Appropriate numbers of accessible stalls will be allocated near campus buildings. Installation of solar panel canopies over surface parking lots should be evaluated for energy generation.

Parking Management Plan

CSUMB should develop a parking management plan that is aligned with the expansion of the TDM strategies. See Chapter 12: Implementation for further detail.

Figure 7.8: Vehicular Circulation

-  Peripheral Circulation
-  Campus Vehicular Street
-  Campus Vehicular Street, 1-way
-  Campus Restricted Access Street (Shuttle, Transit, Service, Emergency)
-  Campus Entry
-  Restricted Entry
-  Multimodal Hub
-  Parking Area



Transit Circulation Plan

Transit service provides affordable short- and long-distance access to campus for commuters, to off-campus recreation, service learning opportunities for campus residents, and critical regional mobility access for specific populations, such as International Students. A transit system paired with other modes of transportation can significantly reduce single-occupant vehicle trips and support the achievement of the mode split goal.

There are several opportunity areas to reach potential CSUMB transit riders, including providing live transit information through apps or digital sign boards, and utilizing every counter interaction with a staff office to inform students of transit services. The university should also address, during orientation and housing department programs, the cultural stigmas that have led to few students having much experience riding a bus before college.

The master plan proposes several improvements to transit and shuttle systems. The proposed routes are illustrated in Figure 7.9. In addition to the multimodal hubs with new transit amenities, increased frequency of shuttle service will be implemented throughout the campus. Expanded transit services and an analysis of unmet needs will be considered in concert with the proposed parking management plan and a bicycle and pedestrian plan.

Regional Transit

Regional transit services are provided by MST. Buses access the campus primarily via Inter-Garrison Road and Divarty Street. Some buses that provide service to Salinas or Marina will be more efficient if they use Inter-Garrison Road. These buses can help to supplement the shuttle service, increasing the overall frequency of service at the two multimodal hubs. Buses will be safely separated from bicycles and pedestrians where a high volume of students will be crossing the road from future housing areas to the Main Quad.

Transit will connect the campus to the proposed Marina-Salinas multimodal corridor where future bus rapid transit service will link the campus to both the Peninsula and Salinas Valley destinations.

Campus Shuttle Service

Shuttle service will continue to serve East Campus Housing, the campus core, and the parking lots east of Seventh Avenue. Once the Fifth Street extension and new housing are completed on the north side of campus, a second route will be added to supplement service. This new route will include a larger loop serving both East Campus and North Campus housing. The result will be frequent and continuous shuttle service circulating around the campus core, with peak shuttle service serving campus housing.

The university wishes to improve transit ridership. Increasing parking revenue and disallowing cars for lower classmen would help do so. Transportation and parking revenue may be used to fund the campus-run operation of transit services. A feasibility study should be conducted to make this determination.

Transit shuttle size must also consider the accommodation of high levels of ridership during peak class times. Additional shuttles may be required to ensure reliably frequent service.

Paratransit Service

The campus will provide additional paratransit services to supplement MST RIDE and On Call services to better serve the campus. CSUMB will continue to work with external stakeholders to provide external paratransit services.

Transit Infrastructure

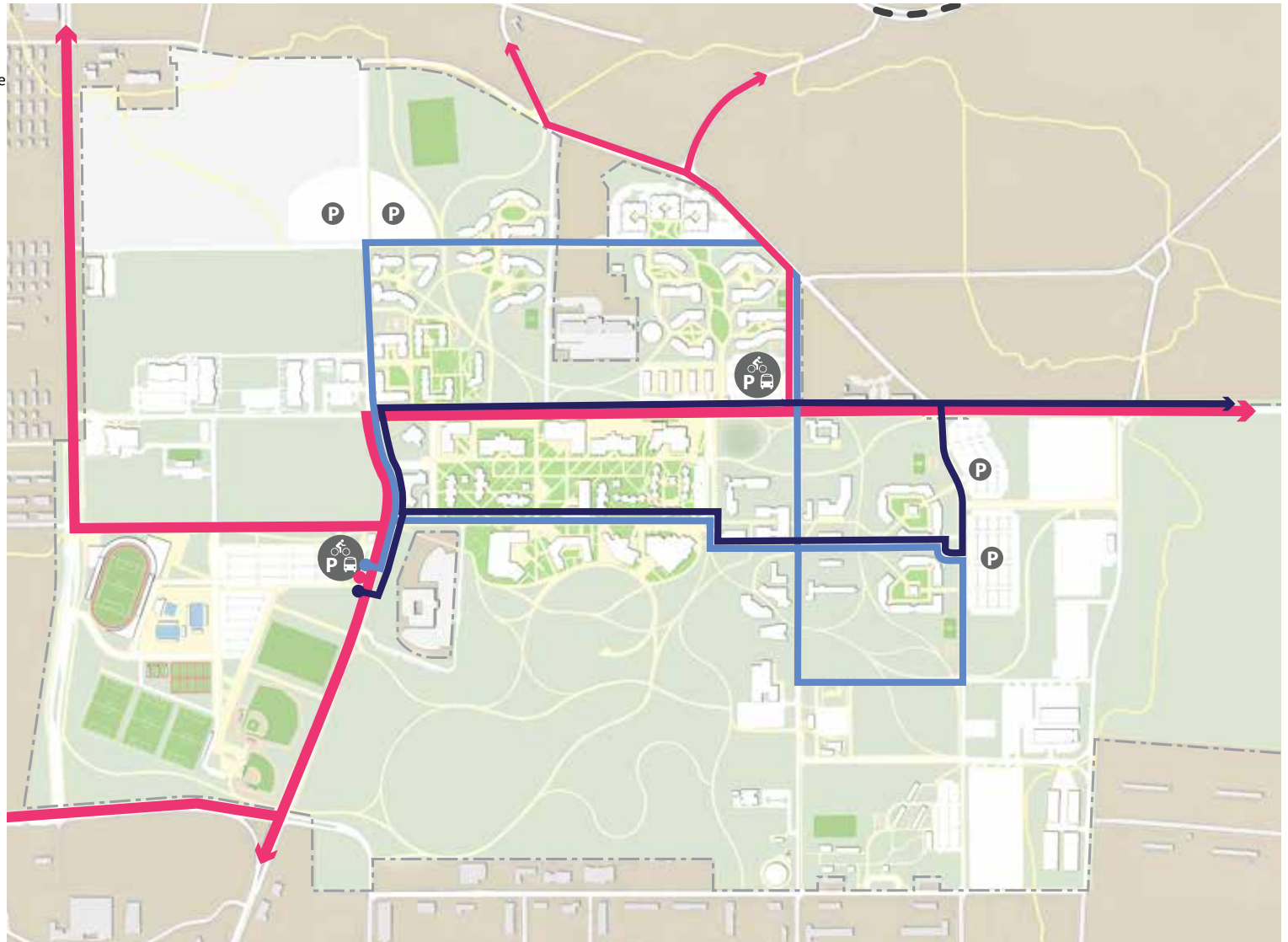
Bus stop access should be safe and accessible. Stops must meet ADA standards and allow easy loading of wheelchair passengers. When possible, crossings should be located behind the bus. Adequate lighting should be provided at bus stops and along pathways linking stops with housing and academic buildings.

Shelters should be provided and prioritized based on boarding rates. Room for wheelchairs should be provided inside bus shelters, along with accessible paths of travel to shelters. Real-time arrival boards or additional route information may be installed at high ridership locations. High usage stops should accommodate ridership with larger-capacity bus shelters. Benches or standing rails should be provided at stops without bus shelters as an intermediary solution.

Figure 7.9: Transit and Shuttle Circulation

- Multi-modal Corridor
- Regional Transit Route
- East Campus/Campus Core Route
- Main Campus Route
- Ⓜ Multimodal Hub
- Ⓟ Parking Area

Note: All routes are conceptual and subject to review prior to implementation



Bicycle Circulation Plan

Bicycling promotes health, happiness, and well-being; it also provides a convenient way to get to and around campus. Travel to and from CSUMB and nearby community destinations is beyond the acceptable walking distance for most pedestrians, but is within acceptable bicycling distances. Pedestrians tend not to walk distances of more than one-half mile, but bicyclists often ride three to five miles for trips.

The current dispersed nature of the facilities and destinations on the CSUMB campus makes bicycling an attractive alternative to walking and driving. The campus community has expressed a great deal of interest in increased bicycle infrastructure on campus, creating a significant opportunity for the university to support and promote bicycling for commutes and on-campus trips.

Centrally located between Seaside, Marina, the Pacific coast, and the Fort Ord National Monument, CSUMB is in an ideal location to connect with regional destinations. Safe, efficient, and attractive regional bicycle paths through the CSUMB campus should connect to regional trail networks, employment, and activity centers.

A shift from car culture to bicycle culture is necessary to double ridership in the first development horizon. The Bicycle Circulation Plan (Figure 7.10) and larger Regional Trail Connections (Figure 7.11) illustrate planned improvements to the bicycle networks.

Bicycle Network

Bicycle improvements include a system of separated (Class I) facilities that provide connections within campus and to nearby cities and regional trails. A majority of these planned facilities are greenways with native landscape planting that extend through campus open spaces and infiltrate storm-water runoff. Some of these paths are dual-use facilities that accommodate both pedestrian and bicycle traffic.

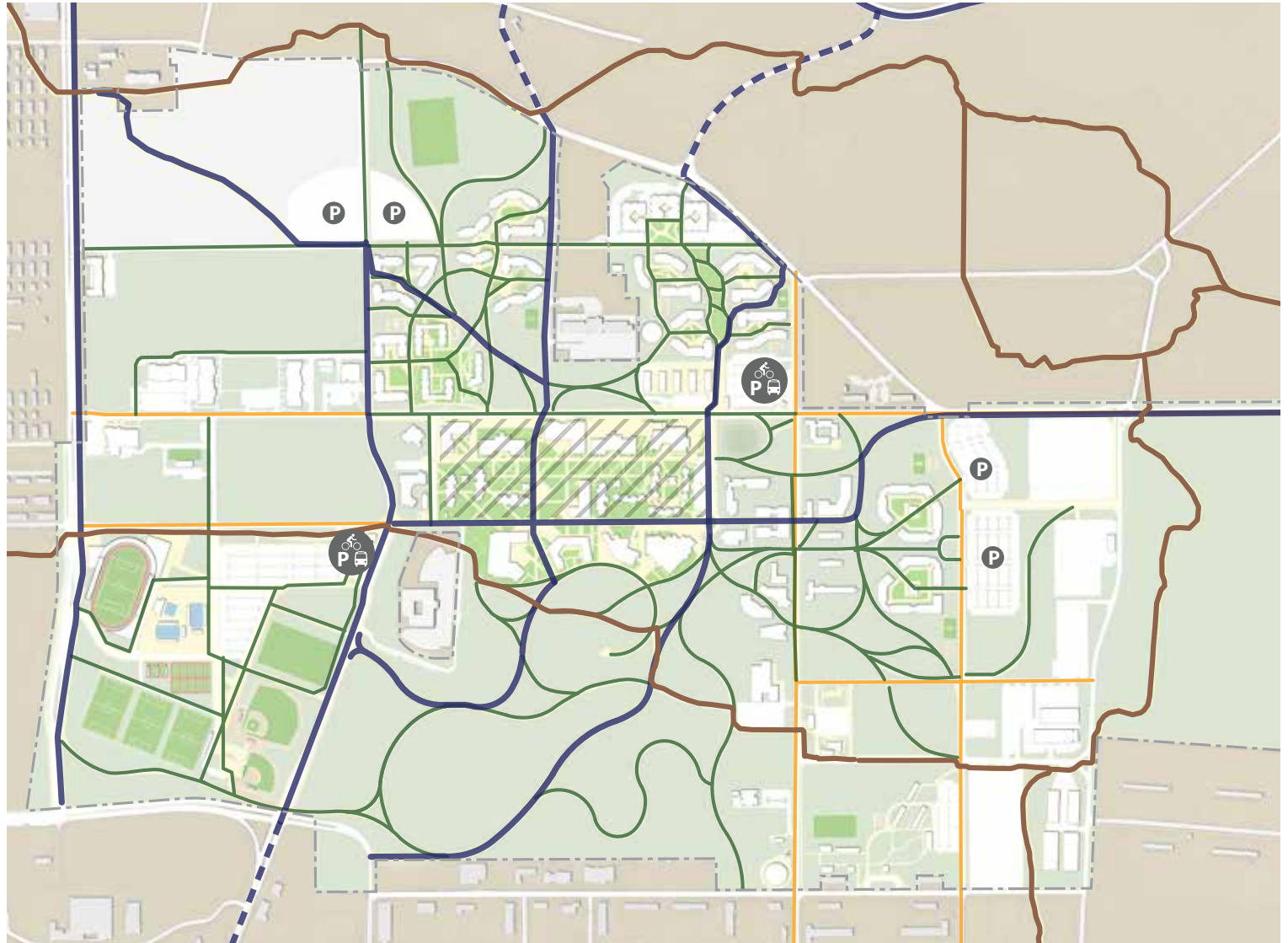
The master plan supports improved bicycle connections within the campus and to existing and planned regional networks. A number of connections

and specific projects were identified during the planning process. Major connections include:

- **Inter-Garrison Road Improvements:** Improved east-west bicycle access via Inter-Garrison Road will be promoted as part of the master plan. Initially, Inter-Garrison Road should have Class II bicycle lanes, but a Class I path may be appropriate once automobile traffic is restricted.
- **Divarty Street Class I Path:** This project creates a multi-use bicycle and pedestrian pathway along the south side of Divarty Street west of General Jim Moore Boulevard to create a safe, separated connection to Second Avenue. West of Second Avenue (off campus), the project coordinates with Seaside to connect to the entrance of Fort Ord Dunes State Park and the Monterey Bay Sanctuary Scenic Trail, just west of First Avenue.
- **Fort Ord Rec Trail and Greenway:** The FORTAG is being developed in partnership with many regional agencies. Its proximity to CSUMB and the region's attractions make these connections invaluable to the campus community. Priority should be made to develop the FORTAG where it travels through the campus, and connect to it where it meets the campus edges.
- **City of Seaside Connection:** A potential bicycle connection from the campus core to the city of Seaside links the library through the Southern Oak Woodland to the city of Seaside. One possible connection runs along a PG&E corridor south of Gigling Road, eventually merging into General Jim Moore Boulevard.

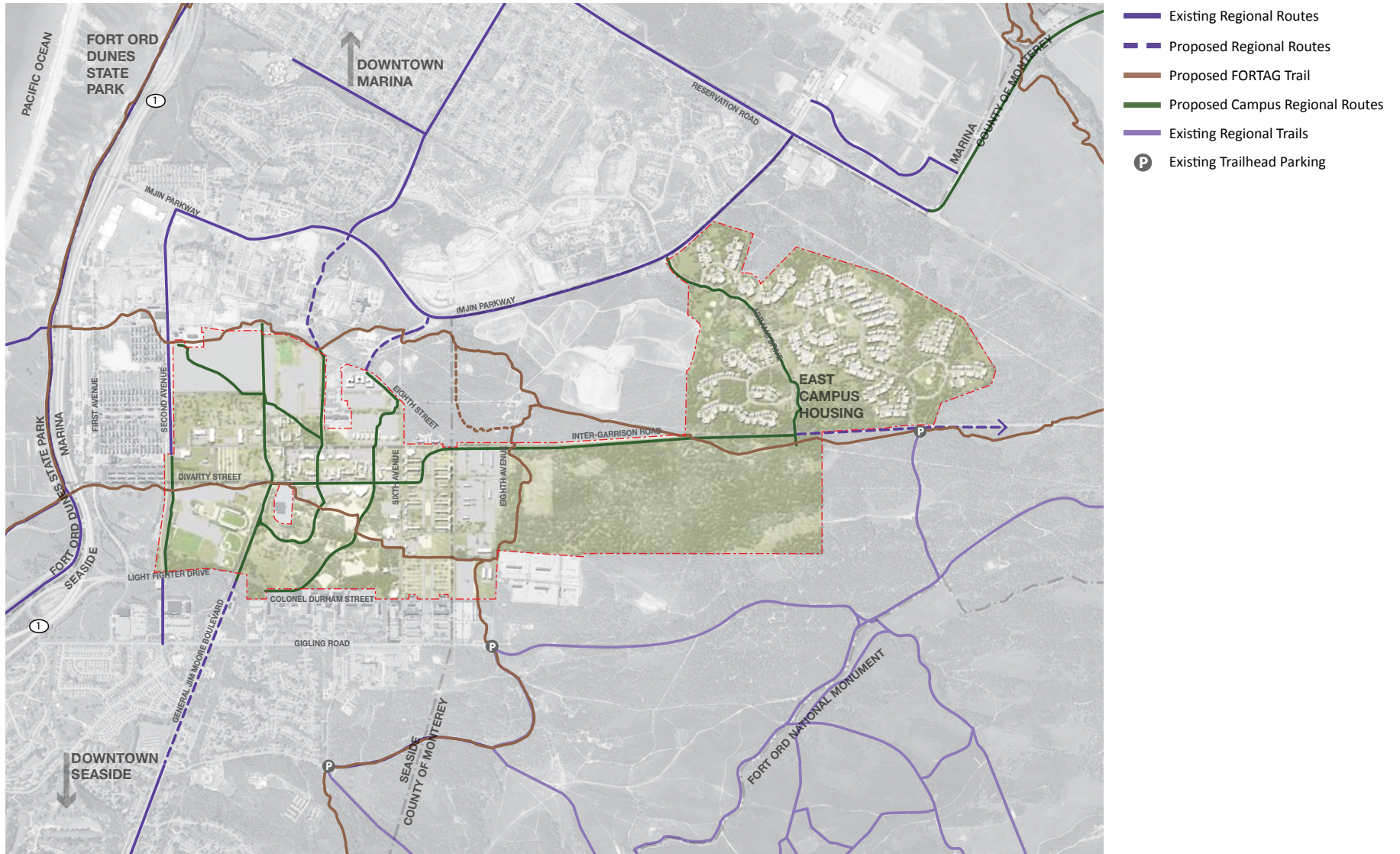
Figure 7.10: Bicycle Circulation

-  Proposed Campus Regional Bicycle/Pedestrian Path
-  Proposed Campus Bicycle/Pedestrian Path
-  Proposed Regional Routes
-  Proposed FORTAG Trail
-  Existing Shared Roadway/Bicycle Boulevard
-  Dismount Zone
-  Multimodal Hub
-  Parking Area



7 MOBILITY | PRIORITIZE ACTIVE TRANSPORTATION MODES

Figure 7.11: Regional Trail Connections



Bicycle Parking and Amenities

The salty coast air is harsh on uncovered bicycles, quickly corroding chains and other components. Providing long term covered bicycle parking for residential halls inside or adjacent to buildings will be necessary to protect bicycles. The campus should develop short- and long-term bicycle parking standards for all buildings and amenities. Also, additional Fix-it stations should be installed throughout campus, particularly near residential halls.

Bicycle Share Program

The implementation of campus bicycle sharing and greenways or separated paths, combined with less than twenty-minute shuttle service, can facilitate multimodal travel options. These improvements will be supported by a campus bicycle share system, which will allow people to plan for multimodal trips without committing to one particular mode.

Bicycle Safety

With the creation of the Divarty Mall and a bicycle- and pedestrian-oriented Inter-Garrison Street, and the addition of multimodal hubs, traffic volume flowing through campus will decrease. However, there will still be conflict points where proper safety measures will be required. The campus will separate bicycle travel from pedestrians where possible. The campus will also limit vehicular traffic speeds in high pedestrian or bicycle zones. Crossings should be at grade to increase bicycle visibility. Lighting should be installed along multi-use paths to increase visibility. Bicycle signage should also be installed to alert drivers and communicate traffic regulations.

Bicycle and Pedestrian Plan

The university should develop a bicycle and pedestrian plan to identify, prioritize, and design improvements. The plan should include a maintenance plan that creates a system for maintaining pavement quality, signage, bicycle racks, painted markings.

CSUMB should apply for and obtain a League of American Bicyclists bicycle-friendly university rating to ensure high bicycle safety standards and expand the bicycle culture on campus.



Students, faculty, staff and community members enjoy the safety of Sixth Avenue, which is closed to vehicular traffic (upper), as well as the nearby regional trail networks (lower).

Pedestrian Circulation Plan

The master plan prioritizes pedestrian travel as the primary mode of travel on campus. To ensure a comfortable pedestrian experience, the plan calls for safe, attractive, and inviting pathways and open spaces throughout campus.

The pedestrian circulation plan (Figure 7.12) proposes an expanded pathway network to enhance connectivity within the campus and to regional destinations. The plan includes a network of multi-use greenways and pedestrian pathways that create direct and efficient connections between destinations. The plan highlights pathways with less than 5 percent grade and outlines a dismount zone for bicyclists in the campus core.

Divarty Street will be further developed as a pedestrian mall that will strengthen connections through the campus, and serve as an inviting destination. The existing Sixth Avenue pedestrian mall will be expanded to A Street. Inter-Garrison Road will be converted from a regional vehicle way into a transit, bicycle, and pedestrian corridor.

The pedestrian circulation plan creates intentional linkages to the unpaved trails in the Southern Oak Woodland south of the Crescent. The future Student Recreation Building on Divarty Mall could expand exercise programs outdoors by providing a fitness trail with exercise stations along improved trails through the woodlands. Connections to the Athletics and Recreation District are also provided.

Separated bicycle and pedestrian paths have been identified for Inter-Garrison Road between Eighth Avenue and Abrams Drive, and paths have been partially built along Imjin Parkway. The campus will continue to work with local jurisdictions to implement and improve bicycle and pedestrian routes between the Main Campus and the East Campus Housing.

Joining to the larger regional trail network provides both commuter connectivity and major recreation benefits. One FORTAG route runs through campus, from Butler Street on the east, through the scenic Southern Oak Woodland, and along Divarty Street to the ocean. Additional campus connections link up with the northern FORTAG route in multiple locations.

Accessibility

The master plan recognizes that the term “pedestrian” includes disabled persons, including those assisted by wheelchairs, and sight-impaired users. The university will prioritize improving accessibility throughout the campus in both indoor and outdoor environments. The Campus ADA Transition Plan will provide useful guidance in identifying barriers and prioritizing improvements. Universal design principles will be applied and when campus topography does not allow direct access along a corridor, an alternative path will be provided.

Pedestrian Safety

The safety aspects described in the Bicycle Plan description above apply to pedestrian safety as well. Removing small parking lots and preventing vehicular circulation in the campus core will help eliminate vehicle, pedestrian, and bicycle conflicts. Pedestrian-scale lighting should be provided throughout campus, especially along the corridors connecting the main activity centers and housing.

Protection from Elements

The pedestrian network will attempt to provide maximum protection from inclement weather by providing trees planted as windrows to block wind heading east along the major pathways. The tree canopy should provide shelter but not interfere with bicyclists or create security concerns.







Educational Signage

Including informational signage about flora, fauna, stormwater management, or views along pedestrian pathways and multi-use greenways will add to the goal of creating a learning laboratory of the campus. Interpretative signage will also be important part of the culture shift moving people to walk instead of drive.

Equestrian Travel

Pathways should be considered for equestrian travel, and should be separated from bicycle and pedestrian facilities for safety where appropriate. In particular, on-campus equestrian activity should allow easy access to and from the Equestrian Center, as well as to regional trails to the east and south of campus.

Figure 7.12: Pedestrian Circulation

-  Proposed FORTAG Trail
-  Bicycle/Pedestrian Path
-  Sidewalk or Walkway
-  Grades < 5%
-  Multimodal Hub
-  Parking Area

