Connect the Coastside

San Mateo County Midcoast Comprehensive Transportation Management Plan

Final Administrative Draft – January 2021

COUNTY OF SAN MATEO

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1.Introduction

BACKGROUND

Connect the Coastside serves as the San Mateo County Midcoast Comprehensive Transportation Management Plan (Plan or CTMP). Connect the Coastside aims to improve the safety and mobility for Midcoast residents, businesses and visitors by recommending a suite of projects, policies, and programs to address current and future transportation conditions.

San Mateo County's Local Coastal Program (LCP) Policy 1.23 provides, in part, that the County shall "...limit the maximum number of new dwelling units built in the urban Midcoast to 40 units each calendar year until...A comprehensive transportation management plan, as described in Policy 2.53, is incorporated into the LCP." In addition, LCP policy 2.53 describes the required content of a comprehensive transportation management plan to address the cumulative traffic impacts of residential development on the San Mateo County Midcoast. Although the County plans to continue limiting the maximum number of dwelling units to 40 units each calendar year, the County has prepared this comprehensive transportation management plan for the San Mateo County Midcoast to address the mobility needs of Midcoast residents and visitors, to protect coastal resources and public access, and to improve the livability for Midcoast residents.

Since 2014, San Mateo County's Planning and Building Department has worked in collaboration with a team of consultants, community stakeholders, and agency partners on the Plan. Connect the Coastside was developed through an extensive public engagement process, building upon previous and current planning efforts, including the Highway 1 Safety and Mobility Study (Phases 1 and 2).

LCP POLICY 2.53 TRANSPORTATION MANAGEMENT PLAN

Develop a comprehensive transportation management plan to address the cumulative traffic impacts of residential development, including single-family, two-family, multi-family, and second dwelling units, on roads and highways in the entire Midcoast, including the City of Half Moon Bay. The plan shall be based on the results of an analysis that identifies the total cumulative traffic impact of projected new development at LCP buildout and shall propose specific LCP policies designed to offset the demand for all new vehicle trips generated by new residential development on Highway 1, Highway 92, and relevant local streets, during commuter peak periods and peak recreation periods; and policies for new residential development to mitigate for residential development's significant adverse cumulative impacts on public access to the beaches of the Midcoast region of San Mateo County.

The plan shall thoroughly evaluate the feasibility of developing an in-lieu fee traffic mitigation program, the expansion of public transit, including buses and shuttles, and development of a mandatory lot merger program.

The scope of the project included:

- Collecting data on existing transportation conditions
- Projecting future development
- Analyzing current and future transportation conditions
- Recommending projects, programs, and policies based on the findings

The figure below provides a snapshot of Connect the Coastside's development process, including the interim deliverables that informed and are referenced in the Plan, which are also available on Connect the Coastside's webpage: https://planning.smcgov.org/connect-coastside

Figure 1: Connect the Coastside Development Timeline and Interim Deliverables

The California Coastal Act and the County's certified Local Coastal Program direct the County to "protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources." Connect the Coastside informs the County's implementation of the public works and land use components of the Local Coastal Program and outlines the actions and partnerships that will be necessary to achieve recommended improvements. This Plan will support the County's efforts to pursue funding for priority projects and to prepare San Mateo County Midcoast communities to meet future transportation needs.

The Plan's recommendations seek to:

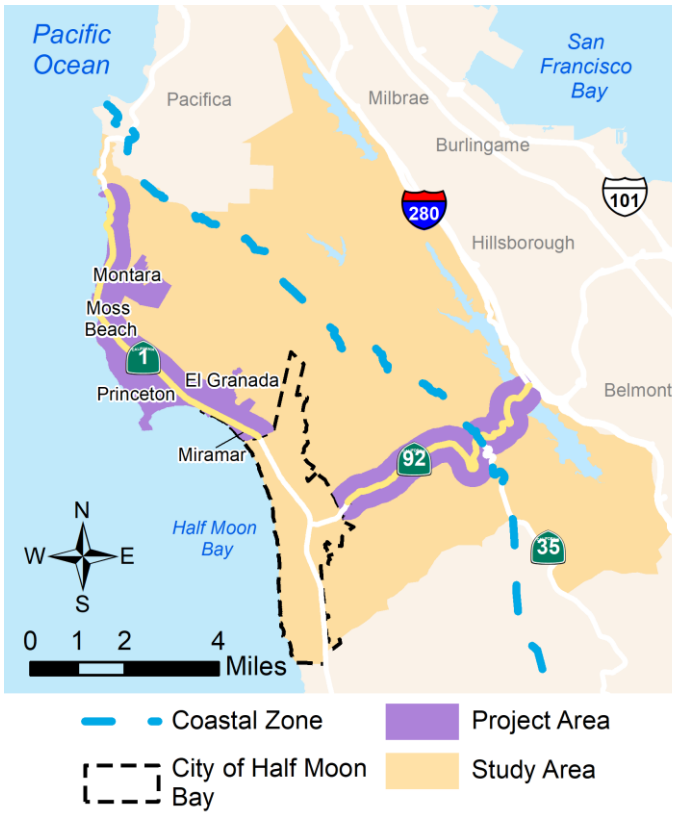
- Improve existing traffic conditions and public safety
- Expand transportation choices for residents and visitors
- Encourage environmentally-friendly transportation options that reduce car trips, such as walking, biking and public transit
- Respect the character of Midcoast communities and protect coastal resources
- Maintain and improve access to coastal resources for both residents and visitors

PLANNING AREA

Connect the Coastside's **project area** includes unincorporated San Mateo County along Highway 1 and the coastline between Devil's Slide and the northern border of Half Moon Bay – the area covered by the Midcoast Local Coastal Program. This includes the unincorporated communities of Montara, Moss Beach, El Granada, Princeton and Miramar. The Plan's project area also includes Highway 92 between Half Moon Bay and Interstate 280. Connect the Coastside's recommendations are focused within the project area.

The impacts of development and regional growth affect conditions in the Midcoast; therefore, the Plan's **study area** is larger and includes the City of Half Moon Bay and rural areas surrounding the study area. Future growth and development within the study area were considered in the traffic impacts analysis.

Map 1: Connect the Coastside Project and Study Areas



SAN MATEO COUNTY MIDCOAST COMMUNITY

SETTING

The San Mateo County Midcoast is a unique locale of low-density neighborhoods and eclectic commercial areas surrounded by open spaces with the vast Pacific Ocean to the west and the Santa Cruz Mountains to the east, setting these communities apart from the metropolitan Bay Area. The Midcoast is comprised of five distinct communities - **Miramar, El Granada, Princeton Moss Beach and Montara**, each with defining characteristics, but united by common features of developed areas interspersed with open space and agricultural lands, infusing the Midcoast with a rural character despite its suburban settlement pattern. Important natural resources and habitats in the Midcoast can be found in the Fitzgerald Marine Reserve and several federal, state and county parks and beaches. Because of these characteristics, the Midcoast is an extremely popular recreational destination for Bay Area residents and visitors.

Highway 1 has served as the primary vehicular Midcoast access route since its construction in 1934. Highways 1 and 92 form a "T" in Half Moon Bay, the neighboring city to the south of the Midcoast, and these two-lane highways provide the only access to the Midcoast from north, south and east. These two highways also serve as the only arterial roadways in the Midcoast and are critical to Midcoast mobility for most trips made by auto or transit, including emergency evacuations. As the Bay Area population has grown, the increasing popularity of the Midcoast as a place of residence or employment and as a recreational destination has brought into stark relief the limitations of Highways 1 and 92 to meet the increasing demands for commute, shopping, recreational and other automobile and transit trips.

Highways 1 and 92 are generally two-lane roads with left-turn pockets, acceleration lanes, and right-turn lanes at some intersections. Conditions vary from rural, undeveloped surroundings, where traffic movement is typically free, to more urbanized settings in the village areas, with cross traffic, parking, driveway access, and periods of congestion during school and work commute times. There are periods of gridlock on weekends with good weather and during annual events at Half Moon Bay Airport, Pillar Point Harbor and the City of Half Moon Bay.

On Highway 1, visitors park in designated lots and informally along the highway shoulder for trail and beach access. Through bicyclists make their way along the coast using the highway shoulder, which is narrow in topographically-constrained segments. Pedestrian and bicycle activity is prevalent in the community areas and at locations with access to beaches, surfing, hiking and trail-biking routes. Mass transit, originally provided by the railroad, is now limited to a few bus trips each day.

Posted speed limits on Highway 1 vary from 45 miles per hour (mph) heading south from Devil's Slide through Montara, to 50 mph south of Montara through Moss Beach, to 55 mph south of Moss Beach past Half Moon Bay Airport. At the northern end of the study area, a new tunnel

and bridges opened in 2012, bypassing the portion of the Highway 1 roadway at Devil's Slide. The bypassed portion was transferred to the County and converted to a public scenic area, and hiking and biking trail. Heading south, Gray Whale Cove State Beach and Montara State Beach are popular destinations and activity generators between Devil's Slide and Montara. Rancho Corral de Tierra east of Highway 1 is managed by the National Park Service and attracts limited recreational visitation to this area. Future plans for improved access are being developed and could increase recreational visitors.

In Montara, residential neighborhoods are accessed by the highway and concentrated on the east side. Point Montara Lighthouse, J.V. Fitzgerald Marine Reserve, and Seal Cove are popular destinations and activity generators in Moss Beach, where large neighborhoods flank both sides of Highway 1. Montara and Moss Beach commercial areas are small and concentrated along the east side of Highway 1.

El Granada is the largest Midcoast community with residential neighborhoods sprawling over the hillsides in a unique, formal plan laid out by Daniel Burnham. El Granada's small commercial districts are concentrated along Avenue Alhambra, one at Capistrano Road and another centered around Avenue Portola. Popular and heavily-used Surfer's Beach lies offshore of El Granada and in conjunction with nearby commercial attractions, generates high parking demand largely met by informal parking along Highway 1, in Caltrans unimproved right of way and undeveloped lands of the Granada Community Services District.

Princeton has the greatest concentration of commercial activity in the Midcoast with several popular restaurants, shops, a large hotel, Half Moon Bay Airport and Pillar Point Harbor, home to a small commercial fishing fleet and hosting international surf competitions at Mavericks offshore. Miramar, which adjoins Half Moon Bay in the southern Midcoast is characterized by neighborhoods straddling Highway 1 and a small but popular commercial area on Mirada Road. The most popular segment of the California Coastal Trail in the Midcoast traverses Miramar Surf Beach Park, connecting south to Half Moon Bay segments and extending north to El Granada and Princeton, creating a premier coastal recreational experience.

Between Half Moon Bay and Interstate 280, Highway 92 winds through the Coast Range as a narrow, mainly undivided two and three lane highway with a switchback turn. The east-bound uphill portion has a 1.5-mile-long long passing lane beginning 500 feet east of Pilarcitos Creek Road, ending just before the summit and the upper Highways 35/92 intersection. The unincorporated areas on the western slope and valley bottom support a mix of commercial and agricultural uses, many of which host seasonal events that attract thousands of visitors to the area, creating congestion and unsafe pedestrian conditions. The eastern slope facing I-280 is undeveloped and consists of San Francisco Public Utility Commission watershed lands forested with a mix of trees planted decades ago.

DEMOGRAPHICS

Residents of the Midcoast are primarily homeowners, with residents of Moss Beach tending to be younger, with a higher percentage speaking a language other than English at home as compared to Montara and El Granada. Most residents work outside of the Midcoast or telecommute. The primary local industries are agriculture, commercial fishing, and hospitality.

Table 1: Midcoast Residents Demographics

Community	Population	Median Age	Median Household Income	Percent Renters	Percent Homeowners	Percentage Who Speak Language Other than English at Home
Montara	2,504	58.9	$93,167	17.6%	82.4%	7.4%
Moss Beach	3,604	42.9	$108,860	25.1%	74.9%	25.1%
El Granada	6,102	46.8	$158,939	16.5%	83.5%	14.5%

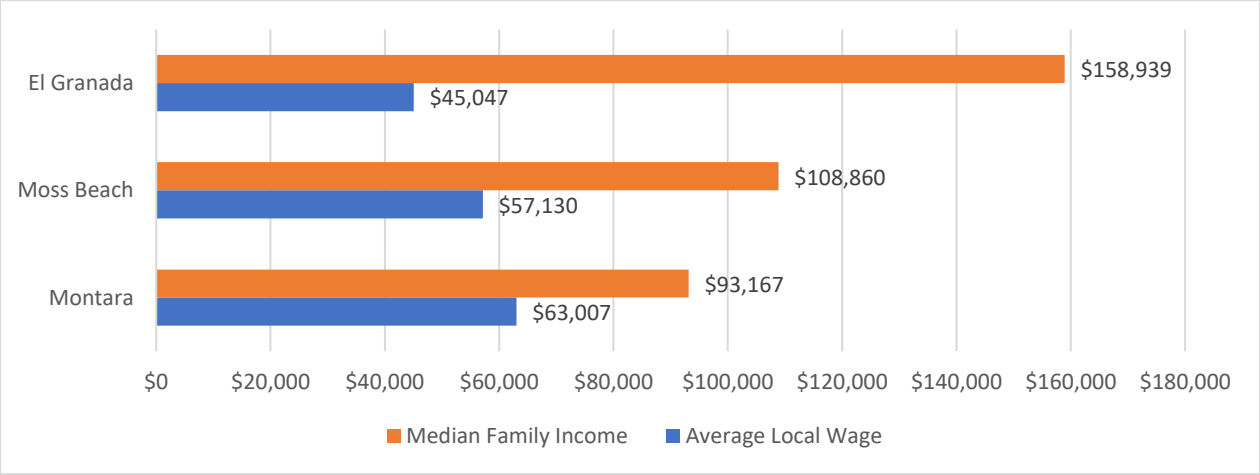
Source: U.S. Census Bureau, 2019: American Community Survey 5-year estimates
Note: Data for Princeton and Miramar is combined with Half Moon Bay and unavailable separately

Table 2: Midcoast Number of Businesses and Employees

Community	Businesses	Employees
Montara	57	275
Moss Beach	48	353
El Granada	66	426

Jobs on the Midcoast tend to pay less money, on average, than the median family income in each community. This means that those who work locally, especially single-income households, may have a harder time paying for living expenses or may be forced to live elsewhere and commute to work.

Figure 2: Midcoast Wages v. Family Income



TRAVEL BEHAVIORS

Most Midcoast residents commute to work by driving alone in a vehicle, with average commute times from 32.7 minutes (Moss Beach), 33.2 minutes (El Granada) to 39.3 minutes (Montara). Percentage of residents regularly working from home (telecommute) were 9.9% (Montara), 11.2% (El Granada), and 15.5% (Moss Beach), which can help reduce traffic impacts.

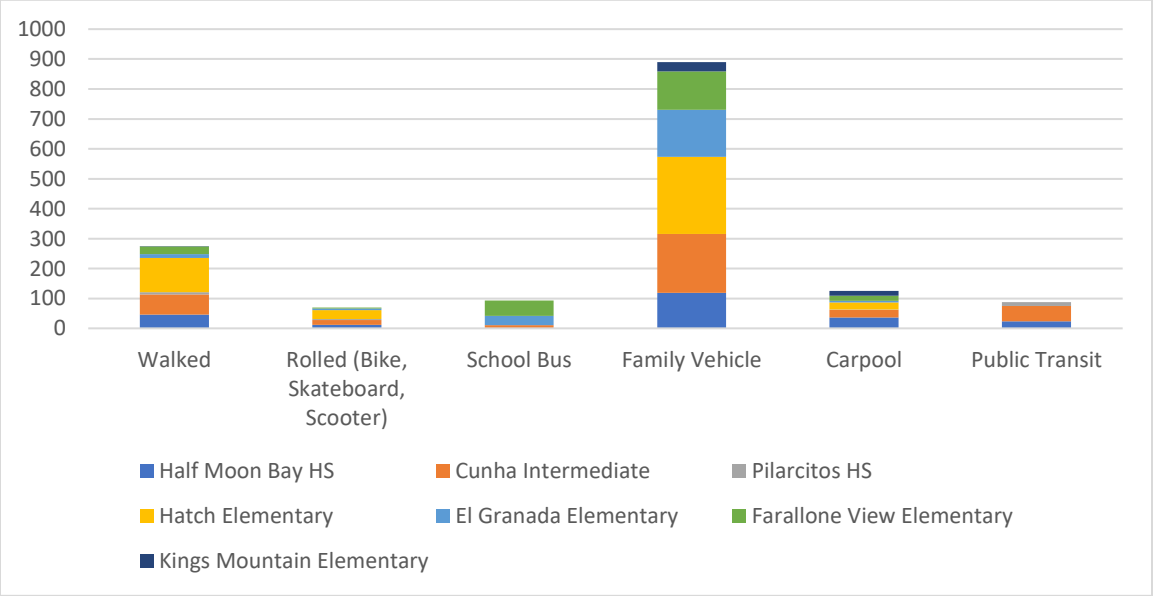
Table 3: Midcoast Commute to Work Mode

Community	Driving Alone (Car, Truck or Van)	Carpool	Transit	Walk	Bike	Other (Taxi or Motorcycle)
Montara	80.1%	-	9.9%	-	-	-
Moss Beach	58.3%	13.7%	5.8%	1.9%	4.9%	-
El Granada	78.1%	6.8%	1.0%	2.6%	-	0.3%

Source: U.S. Census Bureau, 2019: American Community Survey 5-year estimates subject tables
Note: Data for Princeton and Miramar is combined with Half Moon Bay and unavailable separately

Cabrillo Unified School District conducts a student and parent survey of students as part of its Safe Routes to School program to understand how students travel.[1] The student travel mode survey results from Fall 2019/2020 are shown below. Overall, most students travel to school by car (64%) with about 24% using an active mode (walking or rolling).

Figure 3: Cabrillo Unified School District SRTS Student Travel Mode Survey Results - Fall 2019/2020

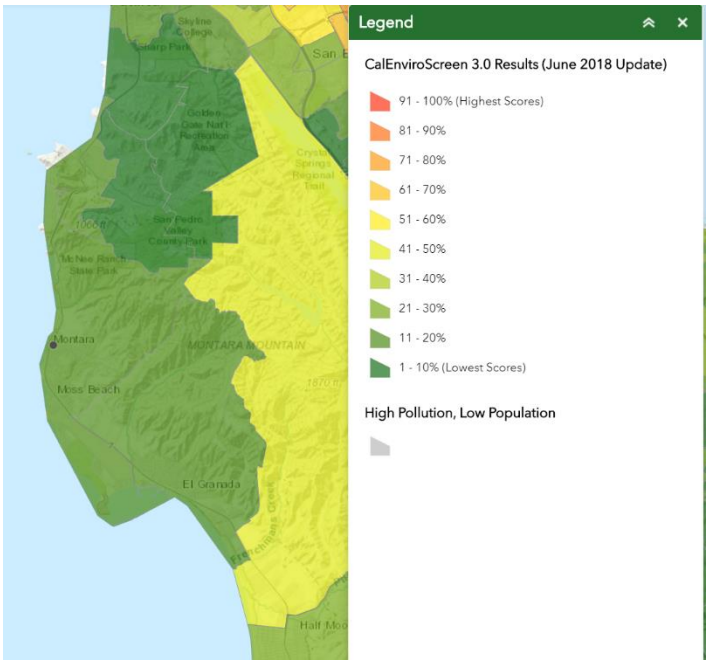


Notes:
(1) Source: Carlene Foldenauer, SRTS Coordinator, Cabrillo Unified School District
(2) Students in intermediate and high school travel to Half Moon Bay
(3) Tallies do not represent full student population; overall, about half were surveyed
(4) Results represent average number of students tallied over two days

[1]Cabrillo Unified School District Safe Routes to School (https://www.cabrillo.k12.ca.us/our_community/safe_routes_to_school)

OTHER

Map 2: CalEnviroScreen 3.0 Results for Midcoast Area



CalEnviroScreen is a tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. The scores are mapped so that different communities can be compared. An area with a high score is one that experiences a much higher pollution burden than areas with low scores. The Midcoast is considered to be less affected than most California communities, ranking in the 10-15% category. https://oehha.ca.gov/calenviroscreen

The **California Healthy Places Index** (HPI) combines 25 community characteristics into a single indexed HPI score. HPI scores for each census tract can be compared across the state to paint an overall picture of health and well-being in each neighborhood in California, with light and dark green areas indicating places with healthier community conditions compared to places symbolized in light and dark blue. This tract has healthier community conditions than 89.8% of other California census tracts. Source: https://map.healthyplacesindex.org/

Map 3: Montara Healthy Places Index (Score 89.8 Percentile)

OPPORTUNITIES AND CHALLENGES

The Midcoast has opportunities and challenges that will affect how well the mobility needs of the community can be met.

OPPORTUNITIES

Many Midcoast residents are engaged in local government and care passionately about the quality of life and future of the Midcoast, as evidenced by the Midcoast Community Council and engagement as part of this planning effort. Extensive past planning efforts have further developed community consensus around the type of mobility improvements Midcoast stakeholders want to see and community values. There is support for thinking about transportation differently and amplifying the need for active transportation, and a shared desire to not widen Highway 1. Many residents already use walking and bicycling for recreation and travel. There is also a shared community desire to reduce development and related impacts, with conservation and environmental considerations a widely-held value. As technology has evolved, so have transportation services and travel behaviors. A substantive number of residents (9 to 15%) already telecommute, helping to reduce the demand for peak-hour travel. Other transportation technologies, such as on-demand transit, could also make it easier to get around the Midcoast and travel to other areas.

CHALLENGES

The Midcoast faces challenges in realizing community goals and vision for transportation. Climate change has accelerated sea level rise, coastal erosion, and the number and severity of emergencies like wildfires. These changes impact the ability to evacuate and respond to emergencies, and the durability of transportation infrastructure. Some reinforcement projects and emergency work to repair and stabilize roads have proven to be short-term in their efficacy, signaling the need for additional comprehensive planning processes. In Sonoma County, Caltrans and partners are planning for the long-term realignment of Highway 1[2] due to consistent and more frequent damage due to erosion. The San Mateo County Office of Sustainability and Flood and Sea Level Rise Resiliency District have engaged in additional planning and modeling to understand the impacts and extent of sea level rise, flooding, and wildfire on Midcoast communities.

As it stands now, Highway 1 serves multiple uses (people traveling through, local access to neighborhood business district, and primary road for transit), and with little desire and opportunity to expand capacity, transportation solutions must be creative and encourage behavior change to make an impact. Regional pressures, such as the Bay Area population growth, have increased recreational demand and visitor traffic to the Midcoast. The COVID-19 pandemic has also created uncertainty about the future and what travel behavior changes may be here to stay, and technology (such as ability to telecommute and availability of rideshare

[2] Gleason Beach Roadway Realignment Project (https://gleasonbeachrealignment.org/) and https://www.latimes.com/california/story/2020-11-27/gleason-beach-managed-retreat

options like Uber or Lyft), have also changed the times at which people visit the Midcoast and how they get there.

Although there is a shared desire for increased transit services and use, ridership is currently low and development patterns are at the lower end of suburban-level density, making providing transit and service expansion expensive per rider. Because of constraints on Highways 1 and 92, buses are also stuck in traffic along with other vehicles, making express transit service more challenging to provide.

CalEnviroScreen is often used as a measure of disadvantaged community status to help prioritize State and Regional funding to areas of most need. Compared to the rest of the State and region, the Midcoast is not disadvantaged and will not compete as well for funding sources that prioritize investments in disadvantaged communities, making the funding strategy to implement recommendations in Connect the Coastside more complex.

Connect the Coastside attempts to build on the opportunities and strengths of the Midcoast to overcome the challenges that existing conditions create. Through ongoing, active community engagement, perseverance, and by leveraging the political will among decision makers, this Plan can lead to improved mobility conditions in the Midcoast in a way that protects the qualities of the place that make it so special and motivate residents to safeguard them.

Sea Level Rise and Erosion

In 2018 San Mateo County published a Sea Level Rise Vulnerability Assessment[3] for the County as part of the Sea Change SMC[4] initiative. The Assessment used three sea level rise scenarios to identify areas vulnerable to future flooding, and one scenario for coastal erosion projections to identify areas likely to be lost over time to erosion:

Table 4: Sea Change San Mateo County Sea Level Rise Scenarios

BASELINE SCENARIO	1% annual chance flood (present-day extreme flood also known as 100 year flood)
MID-LEVEL SCENARIO	1% annual chance flood + 3.3 feet of sea level rise
HIGH-END SCENARIO	1% annual chance flood + 6.6 feet of sea level rise
COASTAL EROSION	The projected extent of coastal erosion expected with 4.6 feet of sea level rise

These scenarios are visualized in the Sea Level Rise and Erosion Maps from the SMC Sea Level Rise Vulnerability Assessment below.

The County used sea level rise inundation data from the United States Geological Survey (USGS) and from Point Blue's Our Coast, Our Future tool, which still constitutes the best available sea level rise data for the County. The scenarios indicate the projected extent of flooding should the project area experience a 1% chance annual storm plus sea level rise. The erosion data are from

[3] Sea Change San Mateo County Vulnerability Assessment - https://seachangesmc.org/vulnerability-assessment/
[4] Sea Change San Mateo County - https://seachangesmc.org/

the Pacific Institute Study developed by Philip Williams and Associates, Ltd. in 2009. The erosion scenario illustrates potential future erosion with 4.5 feet of sea level rise and assumes no shoreline protective devices.

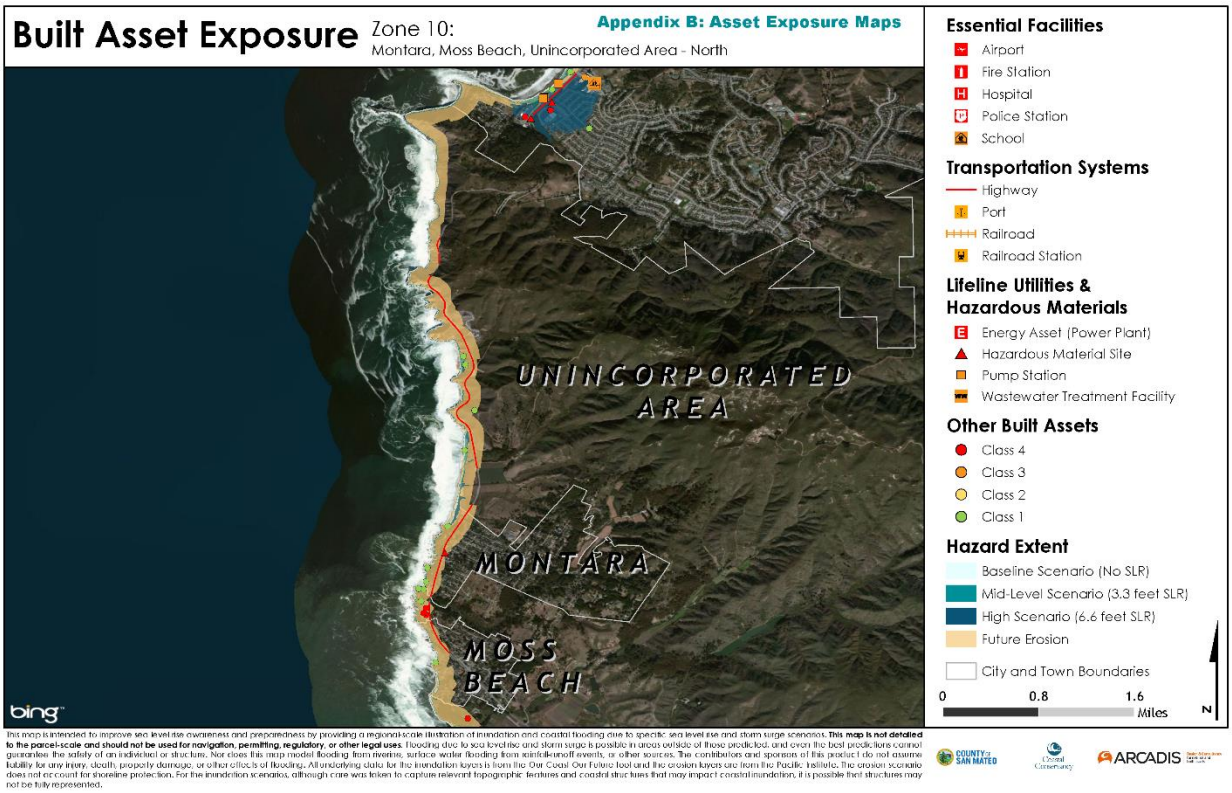
The Sea Change SMC report found that certain areas of the Midcoast were vulnerable to sea level rise and erosion. Areas of Montara, Moss Beach and Princeton were found to be risk of inundation under each of the three sea level rise scenarios. Areas of Montara, Moss Beach, Princeton, Mirada Road and State Route 1 at Surfer's Beach are all at risk of erosion. Sea level rise and erosion have the potential to impact beaches, parks, trails, roads and natural habitats in the Midcoast area.

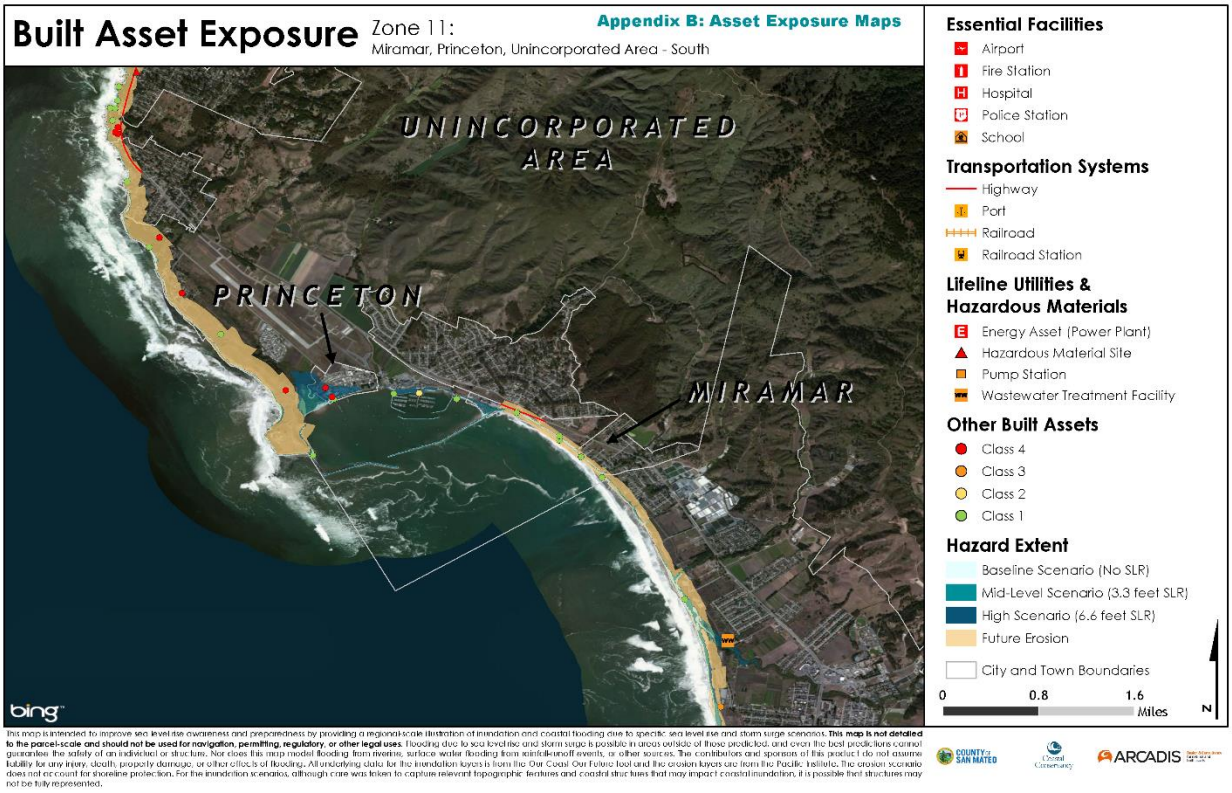
The Vulnerability Assessment included asset vulnerability profiles for both Mirada Road and Highway 1 at Surfer's Beach. The Mirada Road profile found the road highly vulnerable to sea level rise and erosion. Under current conditions, Mirada Road is exposed to high water levels and waves and has experienced erosion failures. Bluff erosion rapidly undercuts the road, making it very sensitive to storm conditions. This segment of Mirada Road is located within the area identified by the Pacific Institute Study as susceptible to erosion. Waves routinely overtop the bluff and throw water across the full width of Mirada Road during storm events. Higher water levels will likely increase the frequency with which Mirada Road and its adjacent properties are exposed to wave impacts and will increase erosion impacts on this section.

The Vulnerability Assessment found that Highway 1 at Surfer's Beach is highly vulnerable to sea level rise. It is currently exposed to erosive forces, such as waves and water levels, that will only grow more severe with sea level rise. This segment of Highway 1 is within the area identified by the Pacific Institute Study as susceptible to erosion by 2100. Highway 1 is highly exposed at Surfer's Beach; the beach itself is subject to daily high tides and wave action, which have caused significant beach erosion and created the need for repair and ongoing slope protection maintenance along this section of highway.

Future updates to Plan Princeton (described further on page 33) will include a more in-depth look at sea level rise and coastal erosion in the Princeton area. Initial findings indicate that sea level rise and storms will increase the rate of coastal erosion along the Princeton shoreline modifying sediment supply and movement, resulting in a loss of beach, impacts to habitat, public access and recreation, and development. The San Mateo County Harbor District is pursuing a beach nourishment project at Surfer's Beach to improve habitat and public access, and mitigate coastal erosion threatening Highway 1 and the Coastal Trail.

Map 4: Sea Level Rise and Erosion Maps from the SMC Sea Level Rise Vulnerability Assessment





2.Engagement

APPROACH

Recognizing that public understanding and support is important for the success of any planning effort, a guiding principle of the Connect the Coastside process was to follow a robust engagement strategy and incorporate feedback from the public and agency partners throughout the process. Stakeholder outreach was a critical part of the planning process, to ensure oversight for the assumptions, results of analysis, and final recommendations of the project. Each project was produced with considerable input from a Technical Advisory Committee, the Midcoast Community Council, online public surveys and public workshops.

In addition, the Coastal Act recognizes that the public has a right to fully participate in decisions affecting coastal planning and development, and that the planning and implementation of programs for coastal development should include the widest opportunity for public participation. Connect the Coastside also builds on the community outreach that informed the Highway 1 Safety and Mobility Study. This community-based process developed many of the ideas for transportation improvements included in Connect the Coastside.

The goals of the outreach efforts were to hear from as many different Coastside stakeholders as possible and to provide multiple ways to learn about and provide comments on the Plan. Several outreach opportunities focused on reaching a broad cross-section of Coastside stakeholders including youth, monolingual Spanish speakers, workers, renters, and low-income residents.

TIMELINE

Connect the Coastside was conducted in two phases. The first phase took place from 2014 to 2016, and included projecting future development on the Midcoast, analyzing current and future transportation deficiencies, and exploring potential transportation improvements for walking, biking, driving and riding transit. The first phase of the project included extensive community engagement efforts, such as a dedicated project website, a virtual workshop, public presentations, public workshops, and email updates. In 2017 and 2018, the project went on hiatus while a detailed roundabout analysis was conducted.

The second phase took place from 2019 to 2021 and included the preparation and release of a complete draft of Connect the Coastside, gathering extensive input and feedback from the Midcoast community, updating the plan based on that input, and presenting the final version of the plan to the community and key decision makers.

The bulk of recent Connect the Coastside outreach efforts took place from April to August 2020 and are summarized in this section. In-person outreach events were originally planned for March and April 2020, but due to the COVID-19 pandemic, the project team postponed and reimagined outreach efforts to ensure the safety of participants. The table below summarizes activities with engagement activities in bold.

Table 5: Timeline of Connect the Coastside Planning

Timeframe	Planning Progress
2014 (May – Aug)	• Consultant Contract for Connect the Coastside • **Midcoast Community Council (MCC), Technical Advisory Committee (TAC), Board of Supervisors (BOS,) Workshop**
2014 (Sep – Nov)	• TAC, MCC Workshop #1
2014 (Dec)	• Buildout Analysis & Traffic Projections Report • **Planning Commission**
2015 (Jan)	• Transportation Alternatives Memo
2015 (Mar – Apr)	• **Workshop #2 MCC, TAC, City of Half Moon Bay** • Evaluation of Alternatives to Address Buildout Deficiencies Report
2015 (Jul)	• **Board of Supervisors**
2015 (Oct)	• Alternative Development Forecast, Alternative Transportation Standards • **MCC Workshop #3**
2015 (Nov)	• Development Forecast for the San Mateo County Comprehensive Transportation Management Plan Report • **Planning Commission**
2016 (Feb – Mar)	• Evaluation of Recommended Alternative to Address Potential Future Transportation Deficiencies Report • **TAC, MCC, Half Moon Bay**
2016 (Apr – May)	• **Workshop #4, Planning Commission**
2017 (May)	• **Board of Supervisors**
2018 (Nov)	• **MCC Study Session**
2019 (Sep)	• **Technical Advisory Committee**
2020 (Jan)	• Connect the Coastside Public Draft • **MCC**
2020 (Jun)	• **Virtual Conversations (3)**
2020 (Jul)	• **MCC (2)** • **Youth Focus Group**
2020 (Aug)	• **Spanish Language Outreach** • Response to Inquiries Report
2020 (Sep)	• Meeting Outreach Summary Report • **MCC, ALAS Youth Group**
2020 (Oct)	• **Moss Beach Transportation Improvement Evaluation**

ENGAGEMENT ACTIVITIES

PROJECT WEBSITE

A project website was used to share information and provide an opportunity for people to provide comments. The project website included:

- Background information on the Connect the Coastside project
- Project updates, including announcements about report releases and public meetings
- A document library with relevant documents & meeting materials
- A comment box for community members to submit comments and sign up for the CTC emailing list
- A list of Frequently Asked Questions (FAQs) with answers
- Informational materials such as factsheets and video presentations
- Next steps for the planning process
- Contact information for project staff

EMAIL UPDATES & SOCIAL MEDIA

In both phases of the project, the project team used email and social media to keep interested parties informed about Connect the Coastside and future meetings. These efforts included:

- Blast emails to interested Coastside residents, businesses and stakeholders
- Posting information on Nextdoor.com, Patch and other social media sites
- Posting short videos about the plan on Facebook

ONLINE SURVEYS

Virtual Workshop

In 2014, the project team hosted a virtual workshop where interested stakeholders could submit comments. The project team identified 11 sub-areas of interest in which participants could choose to focus their comments, questions, or concerns; participants could also choose to submit general comments regarding Connect the Coastside. Comments received were preserved verbatim, for recording accuracy, and catalogued by sub-area as well as primary topic of concern (i.e., bike lanes, pedestrian access, traffic and roadway improvements).

Listening to the Midcoast Survey

In 2020, the project team participated in and reviewed the findings from the Listening to the Midcoast Mobility online survey, which was led by the Midcoast Community Council and Supervisor Horsley's office. These findings helped to inform and shape the Connect the Coastside outreach efforts.

Public Workshops & Community Meetings

The County held 7 public workshops while developing and refining Connect the Coastside. During the first phase of the project from 2014 to 2016, the County held four (4) in-person public workshops. The purpose of these workshops was to inform participants about the purpose and goals of the Plan, update participants on Plan milestones, and solicit their comments and concerns regarding known circulation and development issues in the area.

Between May and June 2020, the Connect the Coastside project team held three (3) virtual community meetings with Coastside stakeholders to share information about the draft Plan and to gather input to inform the Plan's goals and proposed projects. Each meeting included the following:

- Welcome from County District 3 Supervisor Don Horsley
- Presentation on Connect the Coastside
- Polls to learn about the participants and their transportation priorities
- Question and answer session
- Breakout rooms for small group discussions with feedback recorded by notetakers
- Report out to the larger group from the small group discussions
- Explanation of next steps for moving forward with the Plan

The virtual community meetings were conducted in English and were not translated into Spanish, as the project team heard feedback that bilingual virtual meetings with real time translation did not provide the best experience for Spanish speakers. In total, about 132 community members participated across the three public workshops. Some participated in all three workshops while others attended one or two.

Table 6: Connect the Coastside Community Meetings

Date	Topic	Format	Approximate # of Attendees
November 10, 2014	Opportunities and Constraints	In-person	60
April 15, 2015	Transportation Alternatives	In-person	100
October 22, 2015	Alternative Development-Potential Forecast and Transportation Performance Standards	In-person	n/a
April 7, 2016	Recommended Transportation and Land Use Improvements	In-person	n/a
May 30, 2020	Overview of Connect the Coastside	Virtual	40
June 15, 2020	Moss Beach, Montara	Virtual	60
June 30, 2020	El Granada, Princeton, Miramar	Virtual	32

Strategies for Promoting the Plan

County staff, members of the Midcoast Community Council (MCC) and several organizations on the Midcoast helped spread the word to community members about the Connect the Coastside Plan and the community meetings. Efforts were made to reach a broad range of community members from the Midcoast, including people who were familiar with Connect the Coastside and those who were less familiar with the project. The meetings were promoted through the following methods:

- Email invitations sent to people who expressed interest in receiving updates on Connect the Coastside
- Personalized emails from County staff to community connectors (representatives of local schools, agencies, community groups and organizations) asking them to spread the word about the meetings
- Articles in the Half Moon Bay Review and Coastside Buzz
- Posting on the County of San Mateo Nextdoor page
- Postings on the San Mateo County Planning & Building website, the San Mateo County District 3 website, and Midcoast Community Council website
- Flyers posted at post offices, apartments, and shared at Midcoast food distribution events
- Announcements at public meetings including the San Mateo County Planning Commission and the Midcoast Community Council

Public Meeting Presentations

The County has presented information on the Connect the Coastside project at numerous public meetings, including meetings of the Midcoast Community Council, the San Mateo County Planning Commission, the San Mateo County Board of Supervisors, Half Moon Bay City Council, and the Montara Water and Sanitary District Board.

Moss Beach Transportation Improvement Evaluation

The County held an evaluation meeting to study Moss Beach with Caltrans staff, three members of the Midcoast Community Council, a member of the Planning Commission, and County staff from Public Works, Planning and Building, Office of Sustainability, and Office of Supervisor Don Horsley. The goals of the meeting were to build connections among key partners, gather input on the feasibility of proposed transportation improvements, and identify critical constraints.

Technical Advisory Committee

To engage specific stakeholders, the County formed a Technical Advisory Committee. Members of the committee met six (6) times during the course of the project to provide input. Advisors included representatives from transportation, infrastructure and public safety agencies, schools, businesses and community organizations, and are identified in the acknowledgements section of this Plan. Members reviewed and helped refine plan proposals prior to public meetings and workshops.

PRESENTATIONS TO COMMUNITY GROUPS

The County presented Connect the Coastside to several community groups, including Half Moon Bay Rotary Club, Sonrisas, Youth Leadership Institute youth group, and the Ayudando Latinos A Soñar (ALAS) youth group.

Youth Group Meetings

The project team collaborated with the Youth Leadership institute (YLI) and Ayudando Latinos A Soñar (ALAS) to host two (2) virtual Zoom meetings to connect with youth who live, work, and/or visit the Coastside, hear about their transportation experiences and needs, and ensure that their needs are incorporated in CTC. At the meetings, the County provided an overview presentation on Connect the Coastside, and youth participants shared their perspectives on what's working well and what is challenging when it comes to transportation, which Plan ideas are most important, how to improve access to their favorite places, and their vision for transportation on the coast. Youth also responded to several poll questions about how they get around. Biking, walking and transit improvements were most important to this group who rely on family members and friends to get around since they cannot drive.

Outreach Method	Views and Responses
July 7, 2020 YLI Youth focus group	7 youth and 2 staff members from YLI
September 16, 2020 ALAS Youth Group	14 youth and 2 staff members from ALAS

Spanish Language Outreach

To hear from monolingual Spanish speakers who live and work on the Midcoast, the project team used a combination of strategies to provide information about the Plan and ask for input. Outreach was designed to make participation easy and accessible by reaching people in places they already visited and by providing multiple options for participation. The Spanish language options for learning about Connect the Coastside and providing feedback included:

- A Spanish language Connect the Coastside **webpage**
- Seven (7) Spanish language Connect the Coastside **factsheets**
- A 20-minute recorded **presentation** in Spanish that provides an overview of Connect the Coastside and was posted to the Spanish language CtC webpage
- Short (2-3 minute) **videos** in both Spanish and English posted to the ALAS and Coastside Hope Facebook pages, describing Connect the Coastside and asking for input
- A **paper survey** in Spanish and English distributed through the Coastside Hope front desk and food distribution, ALAS food distribution, Pillar Ridge, and El Granada Elementary School lunch service
- **Phone and online surveys** conducted in Spanish

These efforts were successful in reaching a number of people, including:

Outreach Method	Views and Responses
20-minute recorded presentation	14 views
ALAS Facebook Spanish video & comments	137 views, 2 comments
Coastside Hope Spanish video & comments	77 views
Coastside Hope English video & comments	92 views
Paper Survey	25 returned, 16 in Spanish and 9 in English
Online Survey	8 responses
Phone Survey	6 phone surveys completed in Spanish

WHAT WE HEARD

Community input was instrumental in shaping Connect the Coastside. While under development, the Plan evolved in several ways based on the input from the community.

Early community feedback that shaped the Plan included input regarding the proposed development forecast and transportation standards for the project. There was significant stakeholder feedback focused on the level of potential residential and non-residential development identified in the Maximum Buildout Forecast. This led to formulation of the Constrained Development Forecast. Stakeholders were concerned with the high level of potential development that may exceed the transportation, water and wastewater systems capacity. Commenters were also concerned that the current transportation standards might lead to projects that did not fit the context of the Midcoast, leading to the development of alternative evaluation standards.

In general, commenters were supportive of projects that create safer places to walk, bike, and take transit. These include:

- The Multimodal Parallel Trail
- Marked crossings of Highway 1 with other safety features like median islands and lights
- Safe routes to school
- Bicycle lanes and bicycle parking
- Shelters and benches at bus stops
- More frequent and express buses

Commenters were more divided on the Plan's recommendations to improve driving. There were different opinions about the following:

- Whether intersections should have roundabouts, traffic signals or any control
- Providing additional parking and where it should be located
- The roadway design treatments that are best for the Midcoast

Several commenters focused feedback on specific locations in Moss Beach, including the proposed recommendations for Carlos Street. Others had concerns about the transportation and land use data used to inform the Plan's recommendations and wanted to know more about the impact of projects on traffic congestion. Several commenters were concerned about

inconsistencies between the recommendations in the draft Plan and other planning efforts, like Plan Princeton and the Highway 1 Safety and Mobility Study Phases 1 and 2. Many commenters were concerned about how long it would take to implement projects and wanted to know more about how projects would be funded. A few commenters were interested in the land use policy recommendations and suggested making them mandatory.

Changes Made To Plan In Response to Community Input

Below are some of the ways the project team updated the Plan to respond to community input:

- Added a Constrained Development Forecast to project the amount of potential development in the Midcoast to the year 2040 to provide additional information and context and for use in recommended program development.
- Proposed and applied new transportation performance standards that avoid widening Highway 1 as a solution to deficiencies.
- Ensured consistency with ongoing and past planning efforts (like Plan Princeton and the Highway 1 Safety and Mobility Study Phases 1 and 2), including updating maps and project descriptions.
- Added information on the history of Connect the Coastside, including past outreach efforts.
- Revised the Plan's goals and included more context to address environmental sustainability, accessibility for all ages and abilities, emergency response, and evacuation.
- Updated and/or changed specific project recommendations.
- Expanded the implementation chapter to include a phased approach for project implementation, including a description of the community engagement process that will need to accompany certain projects during future project-level implementation.

VISION, GOALS, AND OBJECTIVES

Connect the Coastside's vision, goals, and objectives reflect the requirements of the County General Plan and LCP Policies, feedback from Midcoast stakeholders, and findings of the Highway 1 Safety and Mobility Study (Phases 1 and 2). Connect the Coastside's vision statement represents a shared image of what Midcoast stakeholders hope the transportation system looks like in the future. The Plan's goals set the general direction toward achieving the vision, and objectives are measurable steps that contribute to reaching each goal.

VISION

Create a safe and functional multi-modal transportation system that preserves the existing character of the Midcoast, serves both Coastside residents and visitors and accommodates existing and anticipated future traffic.

GOALS AND OBJECTIVES

Goal 1: Improve existing traffic and roadway conditions on the Midcoast.

- Objective 1.1: Identify existing trouble spots on the Midcoast roadway system and propose mitigation measures.
- Object 1.2: Consider the impact on emergency response and evacuation when designing and implementing mitigation measures.

Goal 2: Lessen the cumulative traffic impacts from future development on the Midcoast.

- Objective 2.1: Evaluate the likely development potential of the Midcoast to identify future impacts to the transportation system and propose measures to offset those impacts.
- Objective 2.2: Evaluate the feasibility of developing an in-lieu fee traffic mitigation program so projects can pay to offset traffic impacts.
- Objective 2.3: Implement a mandatory lot merger program that would reduce development potential by merging adjacently-owned substandard lots.
- Objective 2.4: Evaluate the potential of a lot retirement program for subdivisions to reduce development potential.

Goal 3: Increase opportunities for walking, biking, and riding transit on the Midcoast to provide an alternative to motor vehicles, reduce roadway traffic, promote environmental sustainability, and ensure people of all ages and abilities can travel.

- Objective 3.1: Propose pedestrian projects that address safety and circulation concerns, while meeting relevant performance standards.
- Objective 3.2: Propose bicycle projects that address safety and circulation concerns, while meeting relevant performance standards.
- Objective 3.3: Identify potential improvements to transit service and bus stops on the Midcoast.
- Objective 3.4: Propose pedestrian, bicycle, and transit projects that include age-friendly improvements.

Goal 4: Respect the character of Midcoast communities and protect coastal and environmental resources.

- Objective 4.1: Integrate community input into Plan proposals.
- Objective 4.2: Select improvements to avoid damage of Midcoast habitat and maintain visual resources.

Goal 5: Maintain and improve access to coastal resources for both residents and visitors.

- Objective 5.1: Identify popular Coastside destinations with access issues and propose solutions to improve access.
- Objective 5.2: Evaluate project ideas for enhanced shoreline public access.

3.Planning Context

ACTORS, PARTNERS, AND STAKEHOLDERS

Although San Mateo County has led the effort to develop Connect the Coastside, there are many agencies that can implement its recommendations. Actors are agencies that have responsibility or ownership for improving or maintaining infrastructure and services in the Midcoast. Partners can work with actors to help implement projects, and often have resources to support implementation. Stakeholders have an interest in the outcomes of implementation. Collaborators may play a wide range of roles, including:

- Owning the land where Connect the Coastside recommends projects
- Overseeing the construction of recommended projects
- Playing a part in permitting improvements
- Providing recommended transportation services
- Providing money to help pay for projects
- Providing support or guidance to ensure plan goals are met

ACTORS

San Mateo County

San Mateo County serves as the local government for the unincorporated communities of Montara, Moss Beach, El Granada, Miramar, and Princeton, as well as the unincorporated rural lands in the Midcoast. Multiple San Mateo County departments will play a role in implementing the recommendations in Connect the Coastside, including the Departments of Planning and Building, Public Works, and Parks, and the Office of Sustainability. The Planning and Building Department will play a part in moving forward and championing CTC recommendations, as well as project permitting. The Department of Public Works builds and maintains county roads and infrastructure and manages the county's rights-of-way. The Parks Department operates county parks and trails, including Fitzgerald Marine Reserve, Pillar Point Bluff, Quarry Park, Mirada Surf, and Devil's Slide Trail. The Office of Sustainability works to improve sustainability in the county, including through alternative transportation and greenhouse gas emission reductions, and maintaining the County's Active Transportation Plan and Climate Action Plan.

Caltrans

Caltrans is the State's transportation agency and the manager of Highways 1 and 92. Many of the projects contained in Connect the Coastside rely on active partnerships between the County of San Mateo and Caltrans. Caltrans must approve all modifications within the Highway 1 and Highway 92 rights of way. Caltrans may also construct many of the improvements within the right of way envisioned in Connect the Coastside. Caltrans manages competitive state and federal funding sources for improvements, as well. The County will need Caltrans' assistance for design, planning, approval, funding and constructing these improvements.

SamTrans

Connect the Coastside will rely on a partnership with SamTrans, San Mateo County's transit agency. SamTrans provides bus service to the Coastside and broader county community. Any expansion of transit service will require investments by SamTrans in vehicles, maintenance and labor. In addition, SamTrans is currently conducting "Reimagine SamTrans," a planning effort that could identify further improvements to Coastside service.

California State Parks Departments

The California State Parks Department provides recreational opportunities at beaches, parks and nature preserves on the Coastside. Some of the improvements in Connect the Coastside, including segments of the Coastal Trail and recreational parking lots, and will be located in state parks. Park managers can obtain grant funds, secure entitlements, conduct environmental review, construct, maintain, and manage these Connect the Coastside improvements.

San Mateo County Harbor District

Pillar Point Harbor, adjacent to El Granada and Princeton, is under the San Mateo County Harbor District's jurisdiction. The County can partner with the Harbor District on several Connect the Coastside recommended projects, including improvements to the Coastal Trail.

Granada Community Services District

The Granada Community Services District provides a number of services to the unincorporated areas of El Granada, Princeton, Princeton-by-the-Sea, Clipper Ridge, and Miramar, including parks and recreation services. The District is currently working on a park plan for the Burnham Strip parcel in El Granada, which creates opportunities for the County and the District to coordinate the Burnham Park planning with planning for the Multimodal Parallel Trail.

PARTNERS

National Parks Service

Rancho Corral de Tierra was recently made part of the Golden Gate National Recreation Area under the management of the National Parks Service. Several improvements (Highway 1 bike lanes, bike parking, the Parallel Trail and the California Coastal Trail) proposed in Connect the Coastside will improve access to Rancho Corral de Tierra. Ongoing coordination with the National Parks Service will be important during the implementation of these projects.

San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD or OneShoreline)

The San Mateo County Flood and Sea Level Rise Resiliency District (https://resilientsanmateo.org/) is an agency that addresses sea level rise, flooding, coastal erosion, and large-scale stormwater infrastructure improvements through integrated regional planning, project implementation, and long-term maintenance.

City of Half Moon Bay (HMB)

San Mateo County will coordinate with the City of Half Moon Bay on key transportation investments and management strategies. Half Moon Bay is an important partner in alleviating the traffic congestion on Highways 1 and 92 that can hamper coastal access and affect quality of life for residents. Half Moon Bay can collaborate with the county, plan, design and fund improvements, including obtaining grant funding for its own projects.

San Mateo County Transportation Authority (TA)

The San Mateo County Transportation Authority administers the proceeds from Measure A, which is a voter-approved half-cent sales tax that funds many different transportation-related projects and programs. The County can apply to the Transportation Authority for Measure A funds to help pay for many of the recommended improvements in the Connect the Coastside plan.

City/County Association of Governments, Congestion Management Agency (C/CAG-CMA)

The City/County Association of Governments (C/CAG), is a Joint Powers Authority whose membership includes San Mateo County and its 20 cities. C/CAG works on multiple issues that affect quality of life in general and is the Congestion Management Agency (CMA) for San Mateo County. As the Congestion Management Agency, C/CAG prepares a Congestion Management Program every two years. This program identifies future transportation needs and incorporates projects intended to ease and control congestion. The Congestion Management Program also includes priority allocations of federal, state and regional monies for City and County transportation projects. The Congestion Management and Environmental Quality Committee (CMEQ) provides guidance and recommendations on all matters relating to traffic congestion management, travel demand management, coordination of land use and transportation planning, mobile source air quality programs, energy resources and conservation, and other environmental issues facing the local jurisdictions in San Mateo County to the C/CAG Board of Directors. The committee provides.

The Metropolitan Transportation Commission (MTC)

The Metropolitan Transportation Commission is the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area. MTC collaborates with a network of other public agencies to help support the streets, roads, highways, transit systems and other transportation resources that help millions of people get to where they need to be. MTC and the Association of Bay Area Governments (ABAG) lead the preparation of Plan Bay Area 2050, which includes the regional transportation plan and allocates and prioritizes a variety of transportation funding.

California Coastal Commission (CCC)

The California Coastal Commission implements the California Coastal Act and oversees development within the Coastal Zone. Much of the Connect the Coastside study area is located within the Coastal Zone and the jurisdiction of the California Coastal Commission. The County's Local Coastal Program (LCP), which is certified by the Coastal Commission, includes a policy requiring preparation of the Connect the Coastside plan. The LCP includes policies that address roads and transit, promoting coastal access and protecting coastal resources. These policies will be used in evaluating transportation projects within the Coastal Zone.

State Coastal Conservancy

The Coastal Conservancy is a State agency that protects coastal resources and helps the public to enjoy them. Coastal Conservancy has been tasked by the state legislature to help complete the Coastal Trail. The Conservancy pursues this mandate in part by awarding grants to public agencies and nonprofit organizations to acquire land rights, and to develop, operate, or manage lands for public access to and along the coast.

STAKEHOLDERS

Midcoast Community Council (MCC)

Midcoast Community Council is an elected Municipal Advisory Council to the San Mateo County Board of Supervisors. The MCC represents Montara, Moss Beach, El Granada, Princeton, and Miramar and provides the Midcoast Community with a more effective means to express its views to the County of San Mateo and other governmental agencies. The MCC assists the Midcoast community in developing and expressing a long-range vision of the Midcoast, which meets the goals of its residents for an improved quality of life, protection of the environment, and sound economic planning. The MCC was instrumental in the preparation of Connect the Coastside and will play an important guiding role in its implementation.

Midcoast Residents, Workers & Visitors

The improvements proposed in Connect the Coastside are intended to service Midcoast residents, workers and visitors. The perspectives and preferences of the people who live, work, and visit on the Midcoast were integral to shaping the final plan and recommendations. The implementation of Connect the Coastside recommendations will require the continued input and involvement of stakeholders.

POLICY CONTEXT

Connect the Coastside was shaped by previous planning efforts and will help inform future planning on the Coastside. Several existing laws, community plans and regulatory frameworks have guided the creation of Connect the Coastside, including the:

- California Coastal Act
- San Mateo County Local Coastal Program
- San Mateo County General Plan
- Montara - Moss Beach - El Granada Community Plan
- Highway 1 Safety and Mobility Study

The implementation of Connect the Coastside will continue to be guided by the principles and policies contained in these planning documents.

The list of potential infrastructure improvements recommended in Connect the Coastside was compiled from a variety of sources, including several past and concurrent planning efforts. These planning efforts include Plan Princeton, the Highway 1 Safety and Mobility Study Phases 1 and 2, the Highway 1 Congestion and Safety Improvement Project, the Coastside Access Study, SamTrans Coastside Transit Study, and others. Additionally, some of the proposed infrastructure improvement recommendations were developed during the Connect the Coastside process.

There are several concurrent planning efforts that will also influence transportation on the Midcoast. These projects include Reimagine SamTrans, the Unincorporated San Mateo County Active Transportation Plan, Plan Princeton, County Climate Action Plan, Granada Community Services District Burnham Strip park plan, and the Half Moon Bay Bicycle and Pedestrian Master Plan. The Connect the Coastside project team has been working to make sure the various plans are appropriately coordinated and complement each other.

Once Connect the Coastside is adopted by the Board of Supervisors, the recommended projects will need to be incorporated into local, regional, and state transportation plans to secure funding. These plans include:

- San Mateo County Transportation Authority Strategic Plan
- San Mateo County Congestion Management Plan
- San Mateo County Road Fund
- San Mateo County Road Design Standards
- County of San Mateo's Five-Year Capital Improvement Plan (CIP)
- Plan Bay Area
- State Transportation Improvement Program

Following adoption of Connect the Coastside by the Board of Supervisors, a priority action for County staff will be to integrate Connect the Coastside projects in local and state transportation plans and develop needed amendments to the LCP. The table below provides a timeline of key planning and policy efforts.

Table 7: Planning and Policy Efforts Timeline

Year	Plan or Policy
1978	• Montara, Moss Beach, El Granada Community Plan
1980-Present	• San Mateo County Local Coastal Program and amendments
2001	• San Mateo County Trails Plan
2002	• Midcoast Recreational Needs Assessment
2010	• Highway 1 Safety & Mobility Study Phase 1 • California Coastal Trail Midcoast Pillar Point to Mirada Surf
2011	• San Mateo County Congestion Management Program 2011 (C/CAG)
2012	• CA Coastal Trail MCC Concept Plan • Highway 1 Safety and Mobility Improvement Study Phase 2
2013	• San Mateo Local Coastal Program • San Mateo County Traffic Impact Study Requirements
2014 (May – Aug)	• Plan Princeton Existing Conditions
2015 (Mar – Apr)	• San Mateo County Coastside Access Study
2015 (Aug)	• Highway 1 Congestion and Safety Improvement Project
2018 (Apr)	• Caltrans Transportation Concept Report SR1 South • Caltrans D4 Bike Plan
2018 (May)	• Half Moon Bay Bicycle and Pedestrian Master Plan
2018 (Aug)	• SamTrans Coastside Transit Study
2020	• Half Moon Bay Local Coastal Land Use Plan Update
Ongoing	• C/CAG Bike/Ped Plan Update • Plan Princeton • Unincorporated San Mateo County Active Transportation Plan • Caltrans District 4 Pedestrian Plan • San Mateo County Sustainable Streets Plan • County Climate Action Plan • Southern Skyline Boulevard Ridge Trail Extension (SFPUC) • Reimagine SamTrans • Plan Bay Area 2050

Summary of Relevant Plans & Policies

California Coastal Act

Adopted in 1976, the California Coastal Act is a state law that directs the planning and management of the California coastal zone, the statewide stretch of coastline along the Pacific Ocean. The Coastal Act establishes a number of foundational goals that aim to protect the coastal environment and ensure maximum public access to the coast. The California Coastal Commission and local governments are responsible for carrying out the Coastal Act and for coastal management. The implementation of Coastal Act policies is accomplished primarily through the preparation of Local Coastal Programs (LCPs), which when completed by cities and counties located in the coastal zone, allow local governments to administer the Coastal Act within their jurisdiction, subject to certain retained powers held by the Coastal Commission.

Local Coastal Program

San Mateo County's Local Coastal Program (LCP) is used to guide development in the coastal zone while protecting coastal resources. Any and all development projects in the Coastal Zone require either a Coastal Development Permit or an exemption from Coastal Development Permit requirements. For a permit to be issued, the development must comply with the policies of the LCP. Before any of the transportation infrastructure proposals in Connect the Coastside are constructed, they must be evaluated and found to be consistent with the policies of the Local Coastal Program and authorized by a Coastal Development permit.

In 2012, the Board of Supervisors adopted significant amendments to San Mateo County's Local Coastal Program regarding the Midcoast. One of these amendments was Policy 2.53, which called for the preparation of a "Comprehensive Transportation Management Plan" to address the cumulative impacts of Midcoast development. Connect the Coastside is designed to fulfill the requirements of Policy 2.53 and inform the County's implementation of several other components of the Local Coastal Program, including the public works and new development components. Some of the standards proposed in Connect the Coastside, such as the Delay Index, need to be incorporated into the Local Coastal Program through an amendment.

San Mateo County General Plan

The San Mateo County General Plan guides decision making and the physical development of the unincorporated areas of the county. The General Plan contains several chapters that contain policies related to Connect the Coastside, including:

- Vegetative, Water, Fish and Wildlife Resources
- Park and Recreation Resources
- Visual Quality
- Urban Land Use
- Water Supply
- Transportation
- Housing
- Energy and Climate Change

The General Plan has a goal to plan for a transportation system that provides for the safe, efficient, and convenient movement of people and goods throughout San Mateo County. The General Plan includes policies that guide County participation in regional and local transportation planning, articulating an active role within the County to achieve transportation improvements that support all modes of travel.

Montara-Moss Beach-El Granada Community Plan

This plan sets goals and policies for the growth of Montara, Moss Beach, and El Granada. The Community Plan contains relevant policies on circulation, road standards, trails, conservation and open space, and community appearance.

Caltrans Transportation Concept Report (TCR) for SR 1 South

The purpose of the Transportation Concept Report is to evaluate current and projected conditions along state routes and communicate the vision for development in each Caltrans District over a 25-year planning horizon. TCRs are part of Caltrans System Planning. The TCR for SR 1 South is from San Mateo/Santa Cruz County to the Golden Gate Bridge. The TCR's strategies include supporting Connect the Coastside, completing the California Coastal Trail, implementing new Traffic Operations Systems including variable message signs, improving coastal community safety and mobility with consistent roadway edges, pedestrian crossings, and monitoring and planning for sea level rise.

Highway 1 Safety and Mobility Study

The Highway 1 Safety and Mobility Improvement Study Phases 1 and 2 are community-based transportation studies with recommended improvements to Highway 1 in the unincorporated communities of Princeton, El Granada, Miramar, Montara, and Moss Beach. The Phase 1 effort was funded through a Caltrans Community-Based Transportation Planning Grant in partnership with the Local Government Commission. The Plan was developed through an extensive community process that included a focus groups, community workshops, walk audits, and a design charette. Many of the recommendations in Connect the Coastside are from these studies.

Unincorporated San Mateo County Active Transportation Plan

The Unincorporated San Mateo County Active Transportation Plan provides a framework to improve active transportation conditions for people walking and biking throughout unincorporated county communities, and includes proposed projects, programs, and policies to do so. The Plan prioritizes projects in unincorporated areas across the Bay Side and Coast side. As of December 2020, the Draft Plan was available for review, with a Final Plan is anticipated to be released and submitted for approval by the County Board of Supervisors in 2021.

Plan Princeton

Plan Princeton is a study being conducted by San Mateo County to update the land use plan for Princeton. The project will focus on the area west of and including Highway 1, between Pillar Point Harbor and Moss Beach. The purpose of this project is to make a comprehensive update to the policies, plans, and standards regulating the Princeton study area. The Connect the Coastside project team has coordinated with the Plan Princeton project team to ensure consistency between the two plans.

Reimagine SamTrans

In summer 2019, SamTrans launched "Reimagine SamTrans" an effort to undergo a comprehensive operational analysis (COA) to identify the challenges in the current bus system using data and public engagement and identify opportunities to improve SamTrans service. The overarching goals of Reimagine SamTrans are to improve the transit experience, grow new and more frequent ridership, and build SamTrans' efficiency as a mobility provider. Recommendations from Reimagine SamTrans could include route, system, and/or vehicle size changes, improved connectivity with regional providers, new service models or pilot programs, and more. The effort provides an opportunity for Midcoast residents to share their transit needs and concerns directly with SamTrans and identify potential solutions. SamTrans put a hold on the effort due to the COVID-19 public health crisis and plans to restart the project in 2021.

Granada Community Services District Burnham Strip Park Plan

The Granada Community Services District has developed a Preliminary Burnham Park Plan for the creation of a park on the Burnham Strip in El Granada between Highway 1 and Obispo Road, with plan submission targeted for the first quarter of 2021. The Connect the Coastside project team will continue to coordinate with the Granada Community Services District on creating connections between the future park and the multimodal parallel trail and addressing parking needs.

Plan Half Moon Bay

In summer 2013, the City of Half Moon Bay initiated a process to update its General Plan, Local Coastal Program, and Zoning Ordinance. At their October 20, 2020 regular meeting, the City Council voted to approve the Half Moon Bay Local Coastal Land Use Plan Update and submit it to the California Coastal Commission for certification. The Land Use Plan contains the primary policies governing land use and development within the city limits, including policies on transportation.

4. Existing and Projected Land Use Conditions

BACKGROUND

The way we use land has a major impact on traffic and the way people travel. A key objective of Connect the Coastside is to identify the land use policies and transportation improvements that can be implemented to mitigate the traffic impacts of future growth (per Local Coastal Program Policy 2.53). In order to do this, the project team had to engage in several steps:

First, the project team evaluated **existing conditions** to understand current development patterns and the associated traffic impacts. The existing conditions analyses clarifies what is already a traffic problem or concern that might need to be addressed now, and that might be made worse in the future as the population and number of visitors to and within the Study Area grows.

Next, the project team **projected the future development potential** of the Study Area by creating buildout forecasts. This is an estimate of how more residential units and commercial square footage could be expected in the future. The buildout forecast is an input to a travel demand model, which can be used to project future transportation conditions, forecast the need for and potential effectiveness of transportation projects and infrastructure improvements, and identify the traffic impacts of land use development.

This chapter describes existing land use conditions and the future projected land use and development conditions that serve as the backdrop for the transportation analysis. The processes summarized here are described in more detail in the "Development Forecast for the San Mateo County Comprehensive Transportation Management Plan Public Review Draft" (October 2015) and "Buildout Analysis and Traffic Projections Report" (September 2014).

EXISTING LAND USE AND DEVELOPMENT

Land uses in the unincorporated Connect the Coastside study area include a mix of residential, commercial, agriculture, industrial, institutional, recreational, and airport. Most land in the unincorporated Connect the Coastside study area is reserved for Open Space and Agriculture. Many of the traffic generating uses (residential, commercial, industrial, and recreation) in the unincorporated study area are concentrated in the Midcoast Planning Area along Highway 1.

Map 5: Midcoast and Unincorporated Study Area General Plan Land Uses

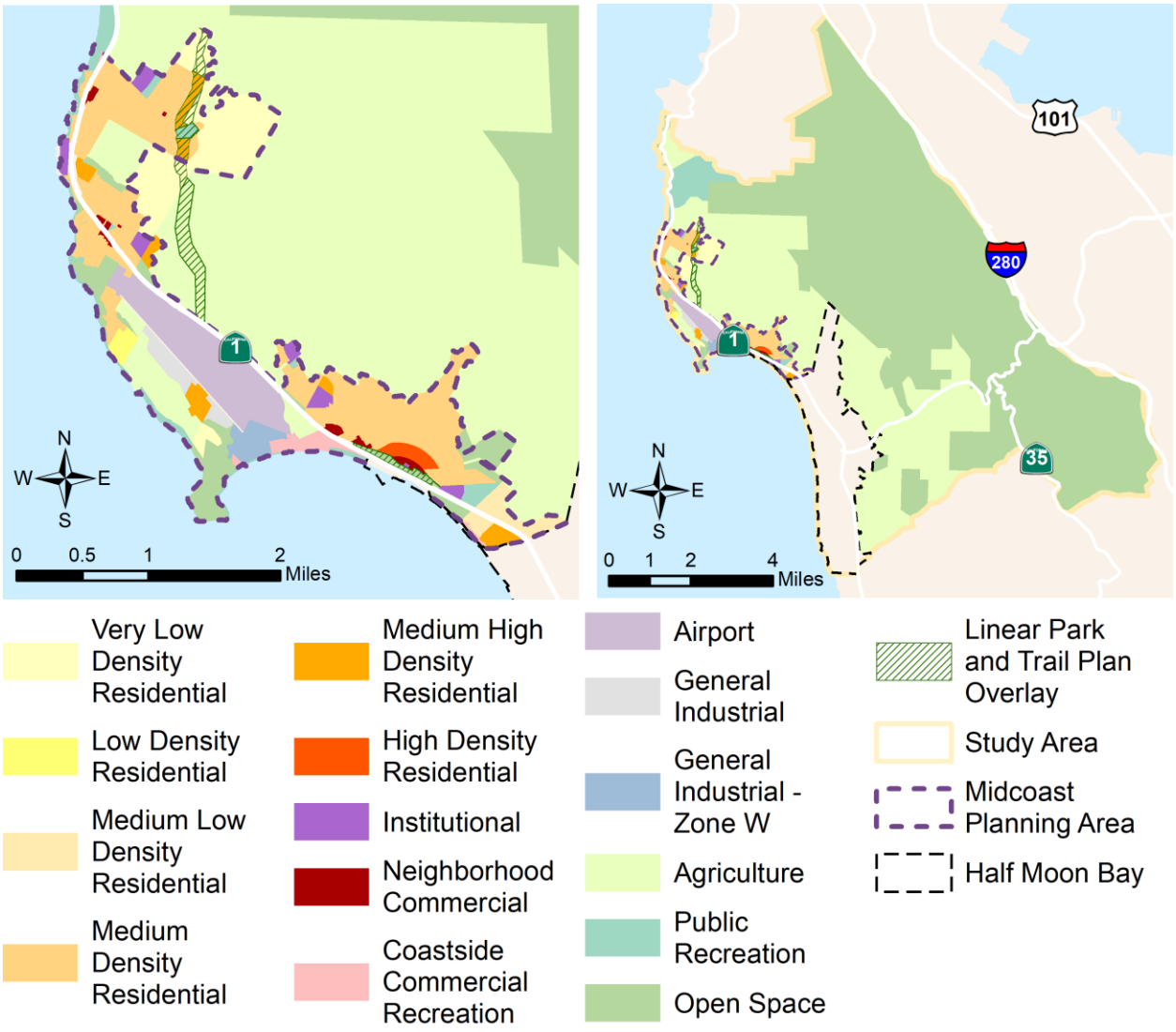


Table 8: Study Area General Plan Land Uses (Unincorporated)

Land Use Type	Percentage
Open Space	65.14%
Agriculture	27.81%
Residential	3.27%
Recreation	2.29%
Airport	0.72%
Linear Park and Trail Plan Overlay	0.31%
Industrial	0.25%
Institutional	0.16%
Commercial	0.06%

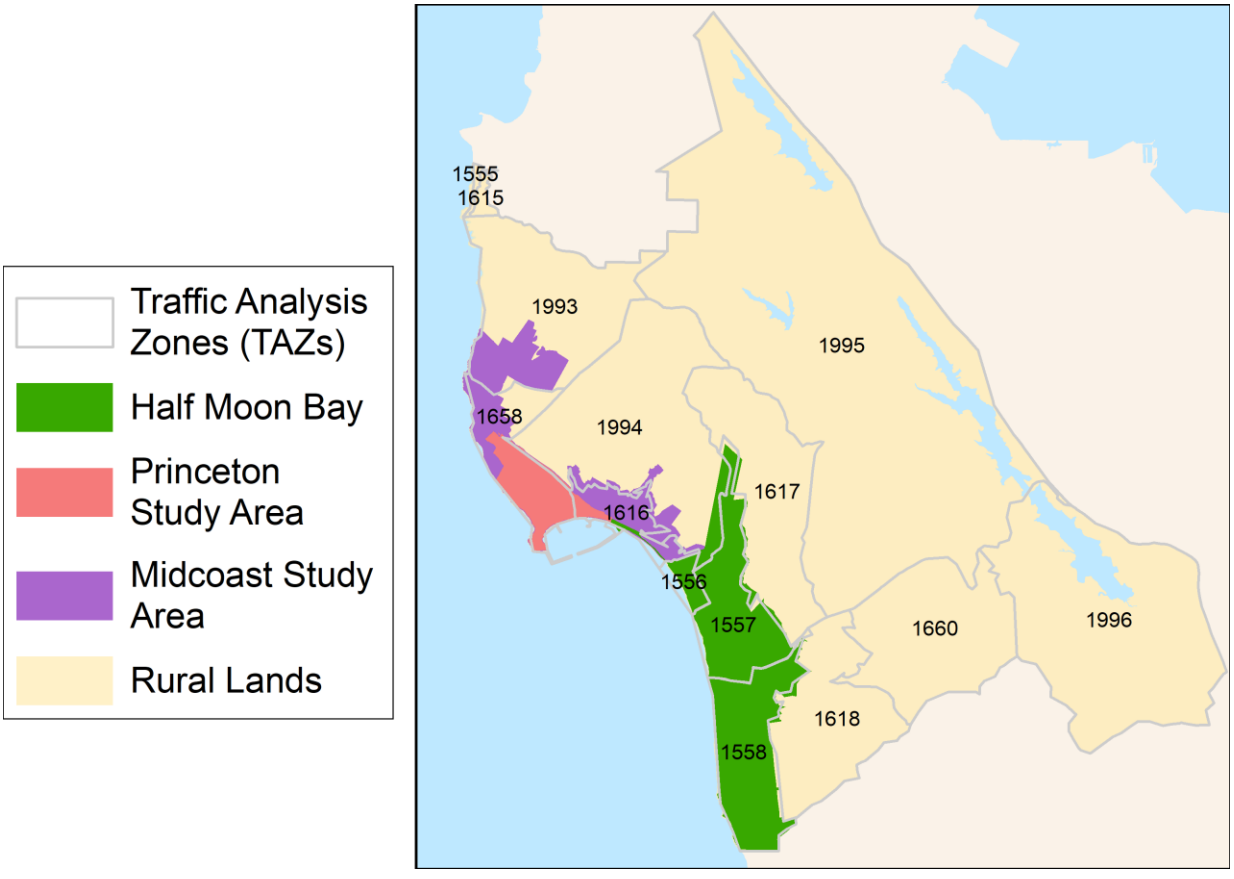
PROJECTED LAND USE AND DEVELOPMENT

MAXIMUM BUILDOUT FORECAST

The project team developed a **Maximum Buildout Forecast (MBF)** in 2014 to use as an input for the travel demand model and make estimates about future traffic conditions on the Midcoast. The buildout analysis identifies the theoretical maximum amount of development that could occur if all available land is developed to its full potential under current regulations. In other words, **buildout is the planned endpoint in a community's growth**. LCP Policy 2.53 specifically requires that Connect the Coastside analyze the traffic impacts of projected new development at LCP buildout, which means using the current land use policies and zoning rules of Local Coastal Program to calculate buildout.

The Maximum Buildout Forecast looked at both residential and non-residential uses in order to create a holistic estimate about future traffic conditions. The forecast included four subareas: the Midcoast; Princeton; Rural Lands; and Half Moon Bay. The City of Half Moon Bay was included in the forecast because development in Half Moon Bay can impact traffic in the unincorporated Midcoast and Highway 92 project area. The boundaries of the development analysis were determined by the Traffic Analysis Zones (TAZ) used by the travel demand model.

Map 6: Subareas and Traffic Analysis Zones



The Maximum Buildout Forecast was created using the following information:

- Existing parcel data
- Existing zoning
- Natural features data
- Public lands data
- County Assessor data: existing land use and (to the extent available) existing building square footage, assessed building and land value, and property ownership

The development analysis also included assumptions to estimate:

(1) the amount of existing development, for parcels for which this data was not included in the Assessor's data file, and
(2) the amount and type of future development projected on "opportunity sites."

Opportunity sites were identified for each subarea. Opportunity sites are parcels that are undeveloped or underutilized and which likely be developed in the future. Assumptions followed those of the San Mateo County Midcoast LCP Update and the Plan Princeton effort, where relevant. Development assumptions for both residential and non-residential development were refined based on what is allowed by zoning, the typical density and intensity of existing development, and regulatory constraint factors.

Table 9: Residential Development in 2014 and at Maximum Buildout

Subarea	Existing (2014) Housing Units	Maximum Buildout Housing Units
Half Moon Bay	4,072*	5,258
Princeton	264	384
Midcoast	3,961	6,558
Rural Lands	76	152
Total	**8,373**	**12,352**

*409 existing mobile homes were not accounted for in the November 2014 Existing Conditions Report.

Table 10: Non-Residential Development in 2014 and at Maximum Buildout Forecast

	Existing (2014)		Maximum Buildout	
Subarea	*Non-Residential Sq. Ft.*	*Total Jobs*	*Non-Residential Sq. Ft.*	*Total Jobs*
Half Moon Bay	3,668,093	4,904	5,097,000	6,616
Princeton	1,205,000	1,112	2,276,00	1,987
Midcoast	958,200	933	1,161,100	1,212
Rural Lands	-	82	-	82
Total	**5,831,293**	**7,032**	**8,533,906**	**9,897**

CONSTRAINED DEVELOPMENT FORECAST

There are many existing constraints that make achieving the Maximum Buildout Forecast unlikely due to policies that restrict development in the Study Area. In response to feedback from stakeholders, a **Constrained Development Forecast (CDF)** was created in 2015 to project development until the year 2040, which is consistent with other local and regional forecasts. As part of this effort, a modified Maximum Buildout Forecast was created to account for updated data and assumptions, including corrections to data on existing and proposed development and reconsideration of employment density assumptions. The CDF used the modified Maximum Buildout Forecast as a starting point, and then took into account the following potential constraints:

- San Mateo County LCP Policy 1.23, which limits residential development in the unincorporated Midcoast to 40 units per year, and
- The market demand for new housing and non-residential development in Half Moon Bay based on the market analysis conducted in 2014 for the Half Moon Bay General Plan Update.

The CDF also considered Half Moon Bay Measure D, which limits residential growth to 1 percent annually in Half Moon Bay and 1.5 percent Downtown. For Half Moon Bay, the zoning-based forecast resulted in a lower level of residential development than would be allowed under Measure D. Thus, zoning would be the most limiting factor for residential development in Half Moon Bay.

Table 11: Residential Constrained Development Forecast for 2040

Subarea	Existing (2014) Single-family Units	Existing (2014) Multi-family Units	Existing (2014) Total Housing (Single + Multifamily) Units	Projected 2040 Housing Units
Half Moon Bay	3,493	988	4,481*	5,335
Princeton	250	13	263	289
Midcoast	3,679	282	3,961	4,975
Rural Lands	76	-	76	152
Total	**7,498**	**1,283**	**8,781**	**10,750**

*Existing development in Half Moon Bay has been corrected since November 2014 Existing Conditions Report. Existing mobile homes were not accounted for in that report; this results in increase of 409 units.

Table 12: Non-Residential Constrained Development Forecast for 2040

	Existing (2014)		Projected 2040	
Subarea	*Non-Residential Sq. Ft.*	*Total Jobs*	*Non-Residential Sq. Ft.*	*Total Jobs*
Half Moon Bay	1,597,200	5,334	1,928,680	5,704
Princeton	583,500	1,385	1,579,900	3,437
Midcoast	655,600	1,084	811,400	1,467
Rural Lands	-	82	-	82
Total	2,836,300	7,885	4,319,980	10,690

The Constrained Development Forecast represents a more realistic projection of future development to the year 2040 than the Maximum Buildout Forecast. However, many factors will contribute to the amount of actual development that will take place by 2040, and the Constrained Development Forecast represents just one estimate of future conditions.

DEVELOPMENT BETWEEN 2015 AND 2020

Since 2014, 102 additional units were constructed in the unincorporated Midcoast, averaging 17 new housing units each year. This is well below the limit of 40 new housing units in Midcoast required by LCP 1.23 and below the amount of yearly new units predicted by the Constrained Development Forecast. The amount of non-residential development in the unincorporated Midcoast is also less than the amount predicted by the Constrained Development Forecast for that period of time.

Table 13: Annual Development from 2015 to 2020

Year	New Midcoast Housing Units Constructed	New Midcoast Non-Residential Sq. Ft. Constructed
2015	12	6,318
2016	10	3,980
2017	22	-
2018	25	-
2019	16	-
2020	17	2,286
Total	**102**	**12,584**

CITY OF HALF MOON BAY LAND USE PLAN UPDATE

In 2020, the City of Half Moon Bay (HMB) updated their Local Coastal Land Use Plan (LCLUP). The updated HMB LCLUP includes a development analysis that forecasts development for both the year 2040 and for maximum theoretical buildout. The HMB LCLUP development analysis differs from the CTC development analysis in the following ways:

- The HMB LCLUP development analysis accounts for the new policies in the updated HMB Land Use Plan
- The CTC development analysis uses 2014 as a starting year, while the HMB development analysis uses 2018 as a starting year
- The two development analyses use different assumptions to estimate future development

While policies in the updated plan will impact the amount and location of future development, overall the HMB LCLUP maximum theoretical buildout forecast estimates a 1,315 unit decrease from what the previous 1996 Land Use Plan anticipated. HMB LCLUP policies that impact future development include:

- A Town Center concept that concentrates future development in a walkable core area with a diverse mix of land uses, including businesses, shops, housing, and public spaces. Concentrating new development in the Town Center ensures that future homes and jobs will generate less traffic and other impacts.
- A workforce housing overlay that creates affordable housing sites for agriculture, specified churches, public schools, and State parklands. The Workforce Housing Overlay is intended to reduce vehicle trips by providing housing closer to places of employment on the coast.
- Several substantially developed Planned Developments were re-designated to reflect their actual land uses.

Table 14: City of Half Moon Bay 2020 Local Coastal Land Use Plan Development Forecast Summary

	Existing (2018)	2040 Projection	Maximum Theoretical Buildout
Housing Units	4,830	5,612	7,051
Jobs	5,379	6,053	7,684

Source: https://www.half-moon-bay.ca.us/DocumentCenter/View/3153/Appendix-B_Buildout_HMB-LCLUP_2020-Final-CC-Draft_Sept-2020

5.Transportation Performance Measures and Standards

COMMON PERFORMANCE MEASURES

This section describes common ways to measure transportation system performance, including current methods and standards and Connect the Coastside's proposed revisions. The performance standards are important because "what gets counted counts." The performance standards show what is considered deficient now and what would be considered deficient in the future. They also influence where solutions are needed and what those solutions could be.

LEVEL OF SERVICE

A common way to measure **roadway performance is to use Level of Service or "LOS"**. LOS generally describes operating conditions of a road from the perspective of the driver and is described in terms of speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.[5]

LOS looks at the level of congestion during a **peak travel period compared to free-flow conditions.** Peak periods are when highest number of people are often traveling the most, like the:

- weekday morning commute (7:00 – 9:00 am),
- weekday evening commute (4:00 – 6:00 pm), and the
- weekend recreational peak period (10:00 am – 2:00 pm),

LOS is measured in letter grades where "A" represents free-flow conditions and "F" represents extremely long delays. LOS can be applied to both intersections and roadway segments.

LOS definitions for **signalized and unsignalized intersections** are shown in Table 15.

Table 15: Intersection Level of Service Definitions

Level of Service	Signalized Intersection Average Delay (sec/veh)	Unsignalized Intersection Average Delay (sec/veh)	Description
A	≤ 10	≤ 10	Free flow/Insignificant Delay
B	> 10 and ≤ 20	> 10 and ≤ 15	Stable Operation/Minimal Delay
C	> 20 and ≤ 35	> 15 and ≤ 25	Stable Operation/Acceptable Delay
D	> 35 and ≤ 55	> 25 and ≤ 35	Approaching Unstable/Tolerable Delay
E	> 55 and ≤ 80	> 35 and ≤ 50	Unstable Operation/Significant Delay
F	> 80	> 50	Forced Flow/Excessive Delay

Source: Highway Capacity Manual, Transportation Research Board, 2000.
Notes: *Worst Approach Delay (in seconds per vehicle) for Unsignalized Intersections

[5] Highway Capacity Manual, Transportation Research Board, 2000

Roadway segment level of service is based upon the peak traffic volume (v) relative to the capacity of the roadway or intersection (c). "Capacity" is the maximum traffic flow that a roadway can accommodate under normal conditions. Roadway segment level of service is expressed as a "v/c ratio" and the amount of capacity filled by traffic volumes determines the level of service.

$$\frac{Peak\ Traffic\ Volume\ (v)}{Roadway\ Capacity\ (c)} = \frac{v}{c}\ Ratio$$

Roadway segment level of service thresholds are different depending on the roadway type:

- A two-lane highway is a roadway with one lane for use by traffic in each direction.[6]
- A multi-lane highway is one which has more than one lane in each direction.

On a **two-lane highway**, a driver must use the opposing lane of traffic to pass a slower vehicle. As traffic volumes increase, the ability to pass a slower car goes down and platoons of vehicles are formed, increasing the delay experienced by motorists. Therefore, for two-lane highways, the volume and capacity used to calculate the v/c ratio **combines both directions**: the capacity used in Connect the Coastside for two-lane roads is 2,800 vehicles per hour (1,400 vehicles per lane per hour in each direction).[7]

On a **multi-lane highway**, the roadway level of service criteria is for **each direction of travel separately**. The capacity used in Connect the Coastside for multilane highway segments is 2,200 vehicles per hour per lane and is evaluated per lane and per direction, so a four-lane highway has a 4,400 vehicle per hour total capacity in each direction. The specific roadway LOS criteria for two-lane and multi-lane highways are shown below in Table 16.

Table 16: Roadway Level of Service Definitions

	Two-Lane Highways			Multi-Lane Highways		
Level of Service	**% Time Delay**	**Max v/c ratio[1]**	**Average Travel Speed[2]**	**% Time Delay**	**Max v/c ratio[3]**	**Average Travel Speed[2]**
A	30	0.00 – 0.04	54	30	0.00 – 0.30	50
B	45	0.04 – 0.16	51	45	0.30 – 0.50	50
C	60	0.16 – 0.32	48	60	0.50 – 0.70	50
D	75	0.32 – 0.57	46	75	0.70 – 0.84	49
E	>75	0.57 – 1.00	41	>75	0.84 – 1.00	47
F	100	> 1.00	< 41	100	> 1.00	< 47

Source: San Mateo County Congestion Management Program, 2011 with thresholds based on Highway Capacity Manual

Notes:

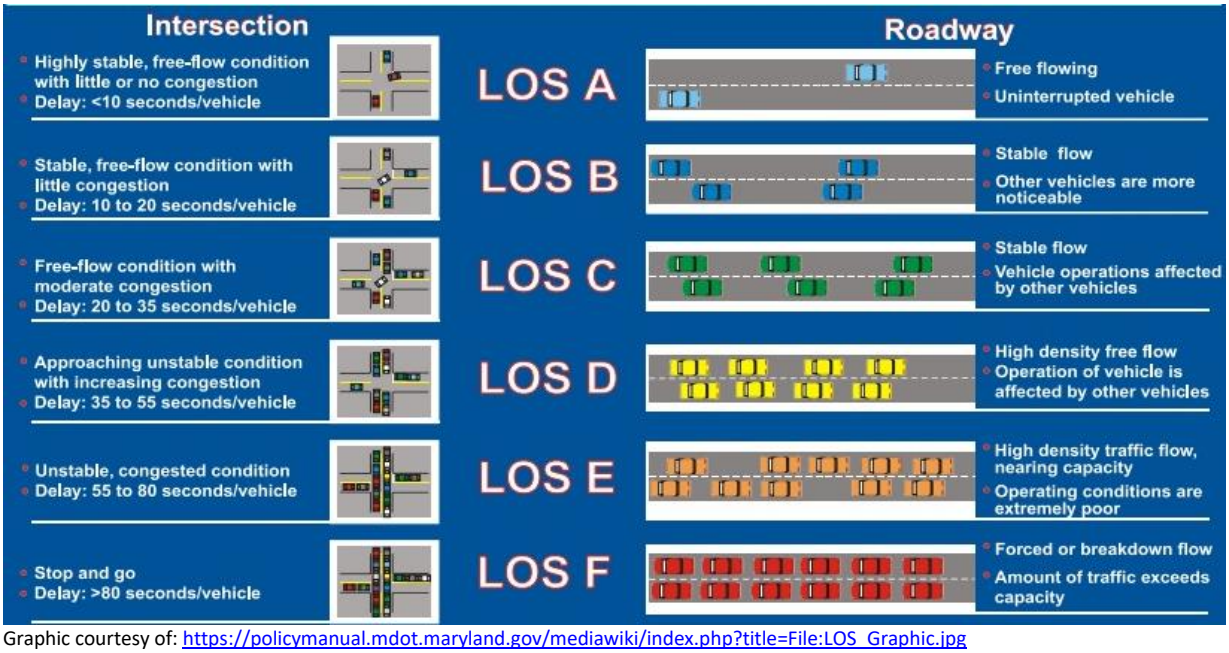
1. Ratio of flow rate to an ideal capacity of 2,800 passenger cars per hour in both directions.
2. Average travel speed of all vehicles for highways with design speed 60 mph; for highways with lower design speeds, reduce speed by 4 mph for each 10-mph reduction in design speed below 60 mph; assumes that speed is not restricted to lower values by regulation.
3. Ratio of flow rate to an ideal capacity of 2,200 passenger cars per hour per lane.

[6] Defined by the San Mateo County Congestion Management Program

[7] Defined volumes are from the 1994 Highway Capacity Manual

Below is an example of what level of service can look like for each letter.

Figure 4: Intersection and Roadway Level of Service Visualization



Graphic courtesy of: https://policymanual.mdot.maryland.gov/mediawiki/index.php?title=File:LOS_Graphic.jpg

In order to **improve level of service, generally traffic volumes need to decrease, or roadway capacity needs to increase.** Increasing the capacity of a roadway usually means adding lanes to a road, removing obstacles to travel (like cars waiting to turn by adding turn lanes), changing signal timing so more cars can get through at a certain location, or improvements like lane widening to make it easier for cars to go faster.

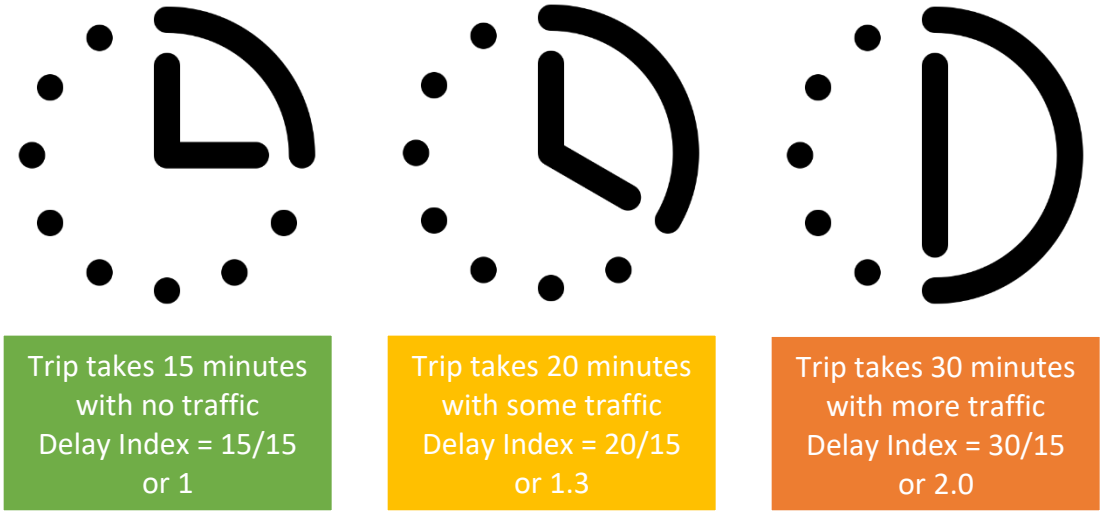
Delay Index

Level of service does not fully explain traffic operations, and improving LOS often results in projects out of step with other goals – like sustainability and minimizing impacts to the environment. Delays in travel can occur anytime there is a change in capacity; for example, a car having to wait to take a turn or a lane dropping. Another method to measure roadway performance from the perspective of the driver is to use a **delay index**, which is defined as the ratio of the peak period travel time on a corridor to the free-flow travel time.

$$\frac{Peak\ Period\ Travel\ Time}{Free\ Flow\ Travel\ Time} = Delay\ Index\ Value$$

A delay index focuses on travel times and the user experience for people driving, rather than capacity of a roadway. For example, the delay index value would be 2.0 if a trip takes 10 minutes during a morning commute time (peak period), instead of 5 minutes during the middle of the night (typically a free flow travel time). The graphic on the next page illustrates different delay index values for a trip.

Figure 5: Illustration of Delay Index



Clock faces created by Alexander Wiefel from Noun Project

Using a Delay Index allows for more flexibility and creativity in transportation solutions than Level of Service because it is not dictated by the roadway capacity.

Vehicle Miles Traveled

Vehicle miles traveled or VMT measures the amount of driving instead of the impact on drivers. One car traveling 10 miles would be 10 VMT, and four cars traveling 10 miles each would be 40 VMT. California Senate Bill 743 (SB 743) initiated an update to the California Environmental Quality Act (CEQA) Guidelines to change how agencies evaluate transportation impacts under CEQA. As of July 1, 2020, agencies analyzing the transportation impacts of new projects must now use vehicle miles traveled (VMT) instead of level of service (LOS) for determining significant traffic impacts from projects. Measuring vehicle miles traveled better captures the collective impact of driving, such as greenhouse gas emissions, impacts to air quality, and access to goods and services, which are critical to addressing the State's goals.

San Mateo County is working to develop and adopt its own VMT thresholds of significance (the level at which the impacts of a project are deemed significant under CEQA) and has produced interim guidelines.[8] Projects in Connect the Coastside would be subject to this analysis during the implementation process. Transportation projects that make it easier to walk, bicycle, or take transit would typically be screened out from a VMT analysis.

[8] https://publicworks.smcgov.org/documents/traffic-impact-analysis-requirements

OTHER

Level of service and the delay index do not directly address how well a road performs for other modes of travel, such as those who are walking, bicycling, or taking public transit. Measuring vehicle miles traveled can indicate how well an area supports those who choose not to drive (for example, an area with low VMT typically means that there are other travel options available) but does not allow for a clear direction of how to improve conditions for those not driving. Agencies have taken different approaches to better understand conditions and performance for other modes. Examples include:

- 2010 Highway Capacity Manual Multimodal Level of Service – Method for evaluation multimodal level of service to estimate LOS for auto, bus, bicycle, and pedestrian level of service in urban contexts.
- Pedestrian Environmental Quality Index (PEQI)– First developed by the San Francisco Department of Public Health, the PEQI is an observational tool used to assess the quality of the physical pedestrian environment and provides a score. The PEQI considers things like sidewalk connectivity, lighting, shade, and areas to rest.
- Bicycle Environmental Quality Index (BEQI) – Similar to PEQI, the BEQI is an observational survey that looks at indicators of whether an area is supportive of bicycling, such as availability of a bikeway, pavement type, traffic volume, number of vehicle lanes, and others.
- Public Transit – Public transit operators use a variety of different metrics to measure system performance and make changes, including overall ridership, passengers per mile or hour, miles between accidents, and on-time performance.

None of these have been incorporated into local regulatory frameworks to date.

CURRENT PERFORMANCE STANDARDS

The following policies include performance standards that apply to roads in the San Mateo County Midcoast:

- San Mateo County Congestion Management Program[9]
- San Mateo County Traffic Impact Analysis Requirements[10]
- San Mateo County's Local Coastal Program[11]

SAN MATEO COUNTY CONGESTION MANAGEMENT PROGRAM

The City/County Association of Governments (C/CAG) is the Congestion Management Agency for San Mateo County and is responsible for the countywide Congestion Management Program (CMP). The CMP includes strategies to respond to future transportation needs, including addressing congestion. CMP legislation requires the use of level of service to measure roadway performance and sets standards for how well all roadway segments (including highways) in San Mateo County can perform before being considered deficient:

- Roadway segment – Level of Service E
- Intersection – Level of Service E

SAN MATEO COUNTY TRAFFIC IMPACT ANALYSIS REQUIREMENTS

The County of San Mateo Department of Public Works requires that traffic and circulation impacts of proposed developments must be analyzed and defines the minimum acceptable design intersection level of service is "C," with no individual movement operating at less than LOS D. The requirements state that on occasion, LOS D may be allowed for peak periods.

In 2020, the County adopted interim criteria to determine transportation-related environmental impacts under the California Environmental Quality Act using vehicle miles traveled (VMT). Projects that exceed VMT thresholds based on their project type may have a significant impact that would require mitigation; the baselines are:

- For residential projects – 13.60 home-based trip VMT per resident
- For office – 16.65 home-based work trip per VMT per worker

Transportation projects must have a 0-net increase in Total VMT.

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[9] San Mateo County Congestion Management Program, 2019, San Mateo City/County Council of Governments (C/CAG) (https://ccag.ca.gov/programs/transportation-programs/congestion-management/)

[10] San Mateo County Traffic Impact Analysis Requirements, 2013 and 2020, County of San Mateo, Department of Public Works, Roadway Services (https://publicworks.smcgov.org/documents/traffic-impact-analysis-requirements)

[11] County of San Mateo Local Coastal Program Policies, 2013, County of San Mateo, Planning and Building Department

San Mateo County Local Coastal Program

The County's Local Coastal Program (LCP) Transportation policy 2.43 states that when considering roadway expansion, roadway level of service "D" is acceptable for peak periods, and Level of Service "E" is acceptable during recreational peak periods. Since the language in the LCP is related to roadway expansion, the LOS referenced is for roadway segment; however, it has been interpreted that this standard applies to intersection performance as well.

Current Performance Standards Summary

The roadway standards that apply to Midcoast roads are summarized in the table below: Local Coastal Program (LCP) standards apply to Highways in the coastal zone and San Mateo County standards apply to County-owned roads.

Table 17: Existing Midcoast Roadway Standards

Application	Performance Measure	Threshold for Deficiency on Weekday Peak	Threshold for Deficiency on Weekend Peak
Signalized Intersection	Level of Service	C (SMC) or D (LCP)	C (SMC) or D (LCP)
Unsignalized Intersection	Level of Service	C (SMC) or D (LCP)	C (SMC) or D (LCP)
Roadway Segment	Level of Service	D (LCP) or E (C/CAG)	E (LCP)

PROPOSED PERFORMANCE STANDARDS

The current performance standards are aimed at improving conditions from the perspective of a driver. For example, improving level of service requires things that increase the capacity of the roadway and increase vehicle speeds -- things like widening roads to add travel lanes.

In the early stages of Connect the Coastside, the project team presented improvements aimed to address current performance standards (LOS). Suggested improvements included things like widening Highway 1, which would further impact natural environments and take away space for other roadway users, including pedestrians and cyclists. These solutions were rejected by stakeholders because they did not align with the community's vision and transportation goals. Therefore, the project team proposed updated performance standards designed to better describe the transportation system's performance in the Midcoast.

Using a different performance standard that better aligns with Midcoast stakeholder values allows for a more diverse set of transportation solutions; which are described further below.

INTERSECTION PERFORMANCE STANDARD

Most intersections within the study area are unsignalized minor approach roads intersecting with Highways 1 and 92, and most are controlled by stop signs for minor approaches or are uncontrolled. Therefore, any deficiency or required mitigation due to intersection level of service should balance the need of the minor street traffic with the flow of traffic along the highways. To address this, the **proposed intersection standard** for the Midcoast requires **unsignalized intersections to meet a peak-hour signal warrant to be considered deficient.** This helps ensure that the volume of traffic using the minor approach is large enough to warrant additional intersection control and the associated disruption to traffic flow along Highway 1.

Example of a minor and stop-controlled intersection at Highway 1 and 8th Street in Montara; 8th street is the "minor and stop-controlled" street.

ROADWAY PERFORMANCE STANDARD

There are no alternate routes to Highways 1 or 92 with comparable roadway capacity, so any deficiencies using roadway level of service as a standard would lead to highway widening. Highways widening is not in line with the Midcoast vision and is largely infeasible due to environmental constraints.

To avoid traffic mitigations that require adding highway lanes, the **proposed roadway standard** for the Midcoast is the **delay index**. Using the delay index allows for a range of mitigations which can be focused on specific trouble spots and allow different thresholds for different types of corridors.

Connect the Coastside proposes the maximum acceptable Delay Index is 2.0 for the Highways 1 and 92 corridors in the Study Area during the peak periods (weekday AM and PM, and weekend midday). Under the delay index, a corridor that took 10 minutes to drive with no congestion would be deficient if it took over 20 minutes to drive during peak times. Connect the Coastside proposes that the Delay Index be increased to 3.0 for segments that have adjacent Class I bicycle facilities or Class II bicycle facilities along at least 80% of the length. The higher standard allows for increased delay to motorists but encourages improvements that provide mobility across multiple modes. This is in accordance with statewide and County General Plan Complete Streets policies that encourage provision of capacity for all modes of travel.

Table 18: Proposed Midcoast Roadway Performance Standards

Application	Performance Measure	Threshold for Deficiency
Signalized Intersection	Level of Service	LOS C with no individual movement operating at worse than LOS D[1]
Unsignalized Intersection	Level of Service	Same as signalized and must meet a peak-hour signal warrant[2]
Roadway Segment that serves vehicles only	Delay Index	Greater than 2.0 (Example: 10 minutes to drive with no congestion would be deficient if it took over 20 minutes to drive during peak commute times)
Roadway segment with adjacent Class 1 or Class II Bikeway for at least 80% of length	Delay Index	Greater than 3.0 (Example: 10 minutes to drive with no congestion would be deficient if it took over 30 minutes to drive during peak commute times)
New land use or transportation projects	Vehicle miles traveled	Final guidelines to be developed by San Mateo County in collaboration with C/CAG[3]

[1]As defined by the San Mateo County Traffic Impact Study Requirement and San Mateo County Local Coastal Program
[2]Signal warrant: https://dot.ca.gov/programs/safety-programs/camutcd/traffic-manual-ch9
[3]Interim guidelines for application are available at: https://publicworks.smcgov.org/documents/traffic-impact-analysis-requirements

Other Modes

Data on other modes of travel is limited, making measurements both challenging to do and less useful in identifying deficiencies. In addition, to meet local and state goals related to advancing equity and addressing climate change, common sense improvements to increase access for walking, bicycling, and transit are critical. Connect the Coastside recommends using the following guidelines to identify improvements related to parking, walking, bicycling, and transit.

Parking

The Midcoast is an important regional recreational destination and recreational parking can increase public access and help prevent overflow parking into residential areas. Connect the Coastside used weekend peak-period parking occupancy to assess parking need and aims that beach access points should have no more than 95% parking occupancy in the associated recreational parking facility during the recreational peak. Recreational destinations include Gray Whale Cove State Beach, Montara Beach, and Surfer's Beach.

Walking

Providing safe and comfortable walking facilities and crossings can increase the overall number of people who choose to walk and create a more accessible community. Some areas will have lower demand for walking, such as roadways near vacant land. Other areas, such as commercial corridors and residential streets, could be accessed more frequently by people walking. Hotspots for pedestrian activity are key destinations such as beaches, commercial areas, view-points, and transit stops.

In general,

- Areas with low demand do not need large infrastructure improvements and could be addressed through trail connections and shared-use paths.
- Areas with pedestrian-oriented land uses (e.g., commercial strips) and hot spots (e.g., beach access point) need greater intersection and street segment improvements.
- Locations with medium to high pedestrian demand and at hot spots need safe pedestrian crossings that should be located no more than a half mile apart.
- As traffic volumes increase, the level of improvement needed to provide a safe crossing increases, from a simple marked crosswalk at the lowest traffic volumes, to a high visibility crosswalk with curb extensions and a pedestrian activated signal or beacon at locations with high traffic volumes.

Bicycling

People of different ages and abilities prefer different types of bikeway facilities. A family with young children riding to school may only be comfortable on a bike path that is completely separated from vehicles, whereas an experienced cyclist commuting to work might prefer an on-street facility. In general, the greater the speeds and volumes of a roadway, the more important it is to provide a bikeway of high quality that is separated from roadway traffic. The National Association of City Transportation Officials (NACTO) recommends that bike lanes are most helpful on streets with posted speed limit greater than or equal to 25 mph, while on streets with higher speed limits of 35 mph or more, treatments that provide greater separation between bicycles and vehicular traffic should be considered, such as left-side bike lanes, buffered bike lanes and bike paths.[12]

Bicycle parking should be provided at all key destinations, including beach access points, parks, trailheads, schools and central business districts. The San Mateo County Zoning Regulations[13] states that "bicycle parking spaces shall be provided at a rate of one locker, rack, or other device to secure and park bicycles for ten vehicle spaces required, but in no case less than one bicycle parking space per parcel." This regulation will help increase the amount of bicycle parking provided as a part of future development. The County's LCP includes policies requiring bicycle parking in all Coastal Zone parking lots, including specific requirements for several coastal access points.

Transit

In July 2019, SamTrans launched *Reimagine SamTrans*, which will study SamTrans services in-depth, including strengths, challenges, and community needs. Ultimately, the project will recommend a new Service Policy Framework, such as new or re-routed bus lines and goals for ridership and use that are tailored to the areas of lower-density development, such as the Midcoast. Since new performance standards will be established as part of Reimagine SamTrans and current transit ridership is low on the Midcoast, Connect the Coastside recommends a goal of increasing transit ridership to alleviate traffic congestion, reduce greenhouse gas emissions, and promote healthier communities. In order to do so, Connect the Coastside focuses on creating a more comfortable waiting experience and recommends that all bus stops have a paved waiting platform to support those with disabilities, and that all bus stops should have a bench, while heavily used bus stops in areas susceptible to inclement weather conditions should have a full shelter.

[12] https://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/conventional-bike-lanes/

[13] Zoning Regulations, Section 6254.4 (11), Planning and Building Department, County of San Mateo; https://planning.smcgov.org/sites/planning.smcgov.org/files/SMC_Zoning_Regulations.pdf

6. Existing and Projected Transportation Conditions

BACKGROUND

As described in the Existing and Projected Land Use Conditions chapter (page 36), Connect the Coastside aims to identify the land use policies and transportation improvements that can be implemented to mitigate the traffic impacts of future growth (per Local Coastal Program Policy 2.53).

In order to determine transportation impacts, first the project team evaluated **existing conditions** and collected data (like vehicle counts) to assess traffic conditions. The existing conditions analyses clarifies what is already a traffic problem or concern that might need to be addressed now, and that might be made worse in the future as the population and number of visitors to and within the Study Area grows.

In order to project future transportation impacts, the **maximum buildout forecast described in the land use chapter was inputted into a travel demand model**. In San Mateo County, C/CAG in partnership with the Valley Transportation Authority (VTA) is responsible for developing and maintaining the countywide travel demand model. The model is updated every 5 years and projects conditions 25 years into the future. Although the C/CAG-VTA transportation model does not include regional growth projections beyond 2040, and the maximum buildout forecast will not occur by then, the maximum buildout forecast was used to assess traffic impacts, consistent with the directives of LCP Policy 2.53.

The outputs of the travel demand model were further processed using additional transportation software to **identify the traffic impacts of the maximum buildout forecast scenario**. The project team could then compare existing conditions to projected future conditions to understand what type of transportation and land use solutions might be needed.

Based on the findings of the data analysis and community's vision of the future of transportation on the Midcoast, the project team **recommended different ways to measure transportation performance** (page 51) and then identified **solutions to address the impacts** (Chapter 7).

This section provides an overview of existing transportation conditions, existing performance, and the future transportation impacts associated with projected development. The processes summarized here are described in more detail in the "Evaluation of Recommended Alternative to Address Potential Future Transportation Deficiencies Report" (March 2016), "Development Forecast for the San Mateo County Comprehensive Transportation Management Plan Public Review Draft" (October 2015) and "Buildout Analysis and Traffic Projections Report" (September 2014).

EXISTING TRANSPORTATION CONDITIONS

DRIVING

As described in the introduction, driving is the primary mode of transportation in the Study Area. The main roadway corridors are:

- Cabrillo Highway (Highway 1), in the north-south direction and
- San Mateo Road (Highway 92) in the east-west direction.

Highways 1 and 92 are owned and managed by Caltrans and provide regional connections to San Francisco (north), San Mateo (east) and Santa Cruz (south). Highways 1 and 92 are largely one lane in each direction, with limited areas for passing, left-turn pockets for turning, and right-turn lanes. The remainder of the roadway network is comprised of two-lane County roads that range from arterials, such as Airport Street in Princeton-Moss Beach, to narrow rural roadways, such as Beach Way in Moss Beach. Many local roadways do not have center-lane striping or edge striping.

The roadway network serves to connect people and goods within the Midcoast and to the rest of the region, with Highways 1 and 92 operating at higher speeds, accommodating traffic and goods movement, and other roadways serving neighborhoods with typically lower speed traffic. The roadway network connects to nearly all Midcoast resources, including beaches, marine reserves, harbors, surf breaks, parks, businesses and other destinations. There are no existing formal bicycle or bus facilities as part of the roadway network, so both share roads with motorists.

Many Coastside residents feel that the traffic during peak hours and during nicer weather on weekends is challenging, and that conditions have gotten worse over time. The project team collected vehicle count data in 2014 on weekdays and weekends for Connect the Coastside to calculate existing performance standard deficiencies (Existing Transportation Performance Standard Deficiencies on page 71). Vehicle volumes at key locations along Highway 1 have not changed significantly when compared to 2017 and 2019 counts (see Appendix D).

Map 7: Roadway Network

PARKING

Vehicular parking on the Midcoast ranges from on-street parking in neighborhoods, along Highway 1, with some off-street parking lots for recreational use, and some parking provides by local businesses that are open to public use (see Table 19: Study Area Parking Inventory on page 60).

The San Mateo County Coastside Access Study conducted a recreational parking inventory and use survey near park sites along the coast between Devil's Slide (north) and El Granada (south). When designated lots fill to capacity, visitors often park on the roadside, which is legally permitted (as long as the vehicle is outside of the travel way). These vehicles were counted as "overflow" parking to the designated nearby parking area.

The study found an estimated 396 parking spaces in designated parking areas. During the data collection period, a total of 423 parked vehicles were observed in the designated and overflow parking areas – or a 107% occupancy rate. Out of all study locations, the highest overflow was observed at Montara State Beach and McNee Ranch (137%), while Quarry, Wicklow, and Mirada Surf saw the least occupancy rate at 26%.

Many parking lots are not paved and lack striped spaces, leading to inefficient use. Some private parking lots are required to provide parking for public use, but do not necessarily have signs showing visitors that parking is available.

Table 19: Study Area Parking Inventory

Lot Name	Area	Spaces	Public / Private	Notes
Devil's Slide Trail 1	North of Montara	15	Public	Free
Devil's Slide Trail 2	North of Montara	9	Public	Free
Gray Whale Cove State Beach	North of Montara	72	Public	Free
Gray Whale Cove Surplus	North of Montara	35	Public	Free
McNee Range State Park	North of Montara	7	Public	Free
Martini Creek	North of Montara	42	Public	Free
Montara State Beach	North of Montara	8	Public	Free
La Costanera	North of Montara	40	Public / Private	Restaurant parking after 5 pm
Point Montara Lighthouse Hostel	Montara	25	Private	Hostel guests only
Montara Water & Sanitary District	Montara	15	Private	MWSD only
Fitzgerald Marine Reserve	Moss Beach	40	Public	Free
Church of Jesus Christ LDS	Moss Beach	170	Private	Church only
Moss Beach Distillery	Moss Beach	43	Public / Private	Restaurant parking. 14 spaces public.
Harbor Lot A	Pillar Point and HAF Airport	322	Public	Free/Permit
Harbor Lot B	Pillar Point and HAF Airport	52	Public	Free
Harbor Lot C	Pillar Point and HAF Airport	147	Public	Permit
Boat Launch and Trailer Lot	Pillar Point and HAF Airport	135	Public	Fishermen only
Harbor Commercial Fishermen Lot	Pillar Point and HAF Airport	40	Public	Permit
Pier	Pillar Point and HAF Airport	20	Public	
Launching Facility	Pillar Point and HAF Airport	18	Public	
Harbor Village Lot	Pillar Point and HAF Airport	488	Public / Private	
Pillar Point Inn	Pillar Point and HAF Airport	12	Private	
Barbara's Fish Trap	Pillar Point and HAF Airport	37	Private	
Half Moon Bay Brewing Company (SE)	Pillar Point and HAF Airport	43	Private	
Half Moon Bay Brewing Company (NW)	Pillar Point and HAF Airport	50	Private	
Half Moon Bay Yacht Club	Pillar Point and HAF Airport	14	Private	Open to public when club is closed
Nasturtium	Pillar Point and HAF Airport	12	Private	
American Legion	Pillar Point and HAF Airport	27	Private	
Mezza Luna	Pillar Point and HAF Airport	37	Private	
Pillar Point Recreation Area	Pillar Point and HAF Airport	35	Public	
Jean Lauer Trailhead	Pillar Point and HAF Airport	10	Public	
West Point Ave & Stanford Lot	Pillar Point and HAF Airport	20	Public	
Scenic Overlook	Highway 92	12	Public	
Lower Crystal Springs Reservoir	Route 35	18	Public	

Source: Appendix A of Connect the Coastside Buildout Analysis and Projections Final Report, November 20, 2014

WALKING

Network

There are many areas where people already walk. Stakeholders shared a desire to walk more to Midcoast destinations. Key destinations are largely spread along Highway 1 and are primarily near the coast. Destinations include beaches, trails, viewpoints and surfing areas, as well as businesses and services, such as the Post Office.

The pedestrian network generally consists of intermittent sidewalks along local roads, roadway shoulders, and trails, occasionally connected with a marked crosswalk. The pedestrian network is discontinuous: in some locations, sidewalks require maintenance, while in others sidewalk or trail facilities are absent altogether. In places without pedestrian facilities, pedestrians walk along paved or unpaved shoulders or in the roadway. Given the higher traffic speeds, coastal access, and the many community-serving destinations along Highway 1, the lack of pedestrian accommodation causes safety concerns and discourages people from walking. It also conflicts with the County's policy on Complete Streets and fails to comply with guidelines for paths of travel to key locations (including transit stops) per the Americans with Disabilities Act of 1990 (ADA).

MIDCOAST MULTI-MODAL PARALLEL TRAIL

The Parallel Trail was conceptualized in the Highway 1 Safety and Mobility Improvement Study (Phase 1) and is envisioned to be a bicycle and pedestrian path alongside Highway 1, spanning from Montara and connecting with the Naomi Patridge Trail in Half Moon Bay. The Parallel Trail will allow Midcoast residents and visitors of all ages and abilities to access neighboring communities, town centers, schools and recreational destinations on foot or bike.

The first section of the Parallel Trail, from Mirada Road north to Coronado Street, has been funded and implementation should begin in 2021. The Trail would be easily accessed by residents living on the east side of Highway 1, require no highway crossings and act as a Safe Route to School for children at El Granada Elementary School. By providing residents the opportunity to walk and bicycle, congestion on the highway should improve.

To learn more, visit the County's website or see more documents associated with County PLN 2015-00325.

Map 8: Key Destinations and Pedestrian Demand

RIDGE TRAIL

The Southern Skyline Boulevard Ridge Trail Extension Project led by the San Francisco Public Utilities Commission will extend the Ridge Trail south from SR-92 alongside Skyline Boulevard to Henrik Ibsen Road. The trail would help extend the Bay Area Ridge Trail, which would provide 100 miles of continuous trail from Marin County to southern San Mateo County.

Currently, there are limited and discontinuous shoulders and no pedestrian facilities (sidewalks and crosswalks) or bikeways on Highways 92 and 35. In order to fully connect the trail, a safe crossing of Highway 92 is needed.

Crossings

There are three marked pedestrian crossings within the Study Area at signalized intersections of Highway 1 and local streets: Coronado Street, Capistrano Road (S), and just south of the Tom Lantos Tunnel to access the Devil's Slide Trail. There is an uncontrolled pedestrian crossing at Virginia Avenue in Moss Beach. Existing crossings at signalized intersections are just two parallel transverse lines, a design that has been shown to have lower visibility for drivers than alternatives, such as continental crosswalks (also known as zebra striping). There are no marked or controlled (e.g., at a stop sign or signal) crossings of Highway 1 in the communities of Miramar and Montara. The existing crossings are located near areas of dense residential and commercial land use and are notably missing from most recreational access points, such as trailhead parking lots and designated vista points. Caltrans has posted pedestrian crossing signs in a few of these high activity locations along Highway 1 throughout the Midcoast, but with no pavement markings.

Every intersection is considered a legal crossing for pedestrians, even if unmarked (e.g., no crosswalk). Visitors to coastal beaches who park east of Highway 1, including on the eastern shoulder, must cross Highway 1 without marked crossings or sidewalks with little or no signage to alert drivers of people crossing. Similarly, on Highway 92, during seasonal spikes in commercial activity, many people cross the highway to access businesses and activities with no marked crossings. Despite these unsafe conditions and high weekend traffic volumes, many people walk to and cross Highways 1 and 92, and several collisions have occurred as a result[14].

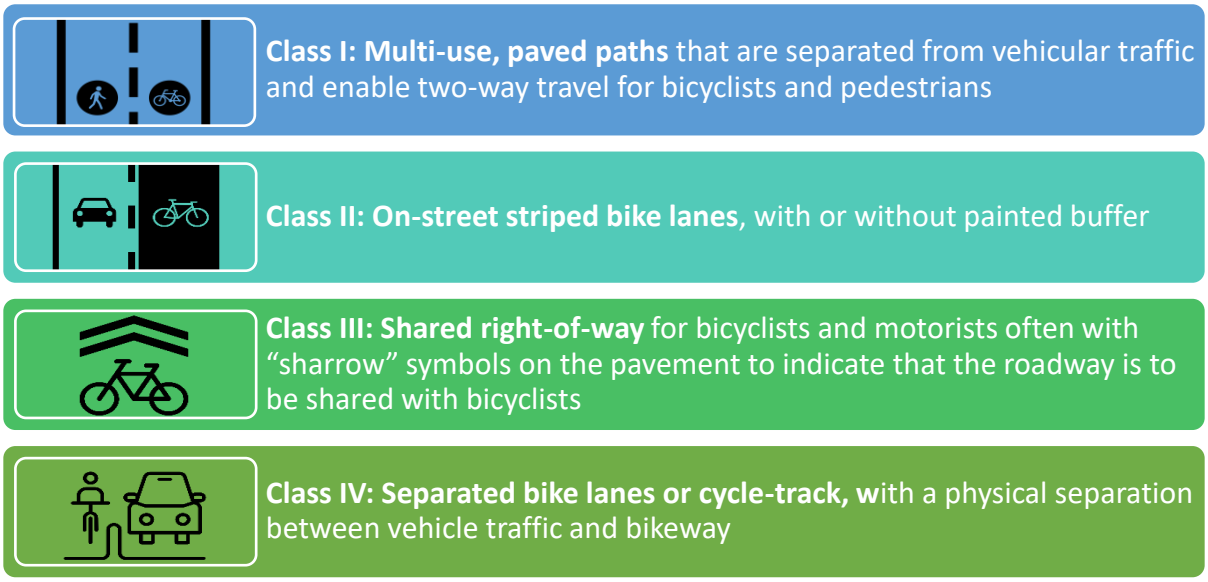
[14] From 1/1/14 to 12/31/18, there were 4 pedestrian-involved collisions and 7 bicycle-involved collisions on Highways 1 and 92. Of the 4 pedestrian-involved collisions, 3 were crossing in a legal crosswalk at an intersection and 1 was crossing not in a crosswalk. Data from SWITRS GIS Map, Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2021. https://tims.berkeley.edu/

Parking lot with no marked crossing of Highway 1 to reach Gray Whale Cove

Marked pedestrian crossing of Highway 1 at Virginia Avenue

BICYCLING

The Caltrans Highway Design Manual categorizes bicycle facilities into four classes:



Icons courtesy of The Noun Project. Class I icon "Bike and Pedestrian Path" created by Bence Bezeredy from Noun Project. https://thenounproject.com/

There are few dedicated bicycle facilities with some local roads signed as Class III Bike Routes without sharrows. Some bicyclists use Highway 1 as an intercommunity route along the coast, since it is the only direct and continuous north-south connection. Highway 1 has paved shoulders (typically 8-feet wide) in some areas, but no defined bikeway. There are safety concerns for bicyclists along Highway 1 due to high vehicle speeds and parked cars often blocking the shoulder. Intersections along Highway 1 typically have wide cross-sections and large corner radii that are designed for fast-moving vehicles and turns, and generally make conditions more inaccessible and uncomfortable for both bicyclists and pedestrians. Some avid cyclists use Highway 92 as one of a handful of potential coastal access routes between eastern and western San Mateo County. Highway 92 has paved shoulders in some areas, but these are narrow or disappear along significant segments of the route, and the roadway has portions of steep grades, some with high speed traffic.

There is also a lack of bicycle parking at recreational and other destinations within the Study Area. Some public short-term bicycle parking is available at Pillar Point Harbor, Sam's Chowder House, and at a few of the County parks.

The lack of bicycle facilities along key routes, through intersections, and availability of bicycle parking, conflicts with the County's Complete Streets Policy and exacerbates vehicle congestion, especially during commute hours and peak summer tourist times. People on the Midcoast have few safe options to get around other than by car.

Trails and Coastal Access

The Midcoast has an extensive trail network and recreational areas, making it an important regional and local destination. Coastside recreational areas include several parks, beaches, scenic viewpoints, tidepools and other attractions along the coastline. The California Coastal Trail (CCT) a scenic, recreational public trail system envisioned to be continuous along the California coast is a popular resource. The CCT is intended to primarily serve people walking, but also accommodates other users, including cyclists, wheelchair users, and equestrians on some trail segments. Existing portions of the CCT run in a north-south direction west of Highway 1 north of Montara, in Princeton, Moss Beach and Miramar. Existing portions of the CCT range from Class I facilities to unclassified dirt paths in various sections along the coastline. The trail is currently paved and separated from the highway between the City of Half Moon Bay and Pillar Point Harbor, transitioning to an on-street route through Princeton, to a multi-purpose dirt path along the Pillar Point bluffs to Seal Cove in Moss Beach.

Trails can and do serve as transportation facilities, especially because the roadway network does not support people walking or bicycling as well as it could. When recreational destinations are accessed by foot, pedestrians often walk directly there via local streets, parking lots, or, at times, privately-owned property (for example, where owners allow users to access public beaches).

Pillar Point Bluff

TRANSIT

San Mateo County Transit District Services

Existing transit service is provided by the San Mateo County Transit District, which operates SamTrans, the regional bus service; and RediCoast, a paratransit service. Fixed route transit services follow a specific route, time table, and pick up at pre-designated stops. Dial-a-ride are demand-responsive services, where transit services are available to pick-up at specific locations and times under certain conditions of eligibility.

While providing mobility options for some travelers, transit does not function as a primary mode of transportation for most discretionary transit riders because of its limited coverage and long headways (time between buses). Transit service has continued to change due to the COVID-19 pandemic, as transit agencies face reduced ridership and additional protocols to ensure passenger safety. Some services, like the City of Pacifica's Devil's Slide Ride shuttle, all school-day only routes (e.g., Route 18), and Route 118 have been temporarily suspended.

Table 20: Transit Services Serving the Study Area

Route	Description	Peak Headway (min)	Off Peak Headway (min)	Span of Service (weekdays listed first)
SamTrans 17 (fixed route)	Linda Mar Park & Ride (Pacifica) – Pescadero	30	60 (weekdays) 120 (weekends)	5:30 AM – 9:30 PM
SamTrans 18 (fixed route)	Montara – Half Moon Bay	30	N/A	7:00 AM – 9:20 AM 3:15 PM – 4:20 PM
SamTrans 110 (fixed route)	Linda Mar Park & Ride – Daly City BART	60	60	5:45 AM – 11:00 PM 6:30 AM – 9:00 PM
SamTrans 112 (fixed route)	Linda Mar Park & Ride – Colma BART	60	60	6:00 AM – 9:45 PM 8:00 AM – 8:45 PM
SamTrans 294 (fixed route)	Pacifica – Miramontes Point	60	120	5:30 AM – 9:00 PM
SamTrans FLX Pacifica (on demand)	Linda Mar and Southern Pacifica	45	N/A	6:15 AM – 6:50 PM
RediCoast (on demand)	Devil's Slide - Santa Cruz County			6:30 AM – 8:00 PM 8:00 AM – 5:00 PM

SamTrans Route 17 is the primary transit service serving the Midcoast. It runs weekday service connecting Pacifica (just north of the Study Area) to Montara, Moss Beach, El Granada, Half Moon Bay, and Pescadero. Weekend service ends at Miramontes Point, before reaching Pescadero. Route 17 operates along Cypress Avenue, Airport Street, and Capistrano Road.

SamTrans Route 18 is a school day only bus that runs service connecting Montara, Moss Beach, El Granada, and Half Moon Bay. Route 18 operates along 6th Street/Harte Street, Sunshine Valley Road, Etheldore Street, Cypress Avenue, Airport Street, Capistrano Road, Ave Alhambra, and Highway 1 in the Study Area, operating school days between 7:00 AM and 9:20 AM and between 3:15 PM and 4:20 PM. This line runs four buses in the AM and two buses in the PM.

SamTrans Route 294 is a regional express bus that operates along Highway 92, connecting Half Moon Bay to the Hillsdale Caltrain station in San Mateo. This line operates all days of the week and is an important regional link and could serve as a connection for visitors to the coast.

SamTrans Routes 110 and 112 connect from the Linda Mar Park and Ride to BART stations. This requires a transfer for Midcoast residents from Route 17 to the Linda Mar Park and Ride to these routes.

SamTrans FLX Pacifica service offers a mix of fixed and flexible routing in the Linda Mar neighborhood of Pacifica. The shuttle travels clockwise serving bus stops from the Linda Mar Park & Ride along Highway 1 to Crespi Drive, Fassler Avenue, Terra Nova Boulevard, Oddstad Boulevard and back to Linda Mar Park & Ride. Shopping centers, parks, community centers, libraries, schools and other key destinations can be accessed riding the FLX. FLX picks up riders directly for their homes or other locations within one-half mile of the service route.

SamTrans OnDemand was a pilot microtransit service that launched on May 6, 2019 and served a five square-mile area around the Linda Mar community in Pacifica. It replaced the FLX Pacifica shuttle through May 2020. Trips were requested via smartphone application, enabling real-time dispatching and routing of vehicles to pickup and drop-off locations. The SamTrans customer service center is also equipped to process trip requests over the phone. Service was available between 6:15 AM and 6:30 PM. OnDemand ultimately served fewer overall passengers, operated more vehicle revenue miles, garnered more customer complaints and required higher operating costs. The pilot analysis determined that OnDemand was not as effective for school service or first/last mile trips.

RediCoast is a paratransit service that provides curb-to-curb transportation for disabled citizens living between Devil's Slide to the north and the border of Santa Cruz County to the south. Travel outside of these areas is possible by pre-arranging with other paratransit providers (e.g. Redi-Wheels for eastern San Mateo County, Outreach for Santa Clara County, etc.). Citizens qualify for RediCoast services under certain accessibility conditions.

Route 17 bus stop at California Avenue and Etheldore Street in Moss Beach

Transit Stop Amenities

Most bus stops are identified by a pole with sign in the study area. Some are lacking ADA accessible boarding platforms, and very few have benches or shelters.

SamTrans Ridership Trends

In 2018, SamTrans completed the Coastside Transit Study,[15] which studied bus service on the coastside, recommended new ways to serve residents, and identified future avenues of study. The study reported that 96-99% of Midcoast households own cars, indicating there is a very low "transit-dependent" population and thus a lower propensity to ride transit. The Study found that ridership declined on all coastside routes in 2017 compared to 2016. Route 17 had the largest drop in ridership with a 28 percent drop in the ridership per service hour. Route 294 was the least productive at 7.1 riders per service hour, followed closely by the FLX Pacifica route at 8 passengers per service hour. Route 110 is among the most productive in terms of ridership per service hour at 27 riders per service hour.

[15] SamTrans Coastside Access Study webpage. Available at: https://www.samtrans.com/Planning/Planning_and_Research/Coastside_Transit_Study.html (Accessed 12/1/20)

Cabrillo Unified School District Student Transportation

At one point, the Cabrillo Unified School District provided school bus service for students traveling to Farallone View Elementary School; the District currently and will continue to provide transportation services to students with special needs. Providing dedicated bus service is costly to the District, especially with budget cuts and adapting to distance learning during the COVID-19 pandemic. The District anticipates reduced demand for transit services as it recently changed its approach to school choice, allowing more residents to attend the school closer to their home and student enrollment is projected to decrease by 347 students[16] over the next five years.

Discussion

Currently, none of the fixed route transit routes have enough ridership to meet SamTrans minimum ridership goals, nor for provision of amenities at stops.[17] Midcoast stakeholders indicated that frequent and direct access to BART stations was the highest transit service priority while some requested mid-day and weekend service to reach other activities. Others requested coordination between SamTrans and Cabrillo Unified School District to ensure transit serves student needs, including to reach after-school activities, and is safe for students with additional staff or chaperone support. Additional transit service (particularly for major visitor events), improved stop access, enhanced bus stop amenities, and targeted marketing could serve to increase transit ridership within the area. Every transit stop could be viewed as an opportunity to provide an enhanced and effective pedestrian crossing, since transit users typically need to cross the street at either the beginning or the end of their trips.

[16] Projected enrollments 2020 to 2025, November 12, 2020 Cabrillo Unified School District Board Presentation by Thomas Williams of Enrollment Projection Consultants

[17] SamTrans 2016 Title VI Program, p.G10 (p.95 of 270). Criteria is stops with more than 200 passengers boarding per day for shelters and benches.
(https://www.samtrans.com/Assets/TitleVI/SamTrans+2016+Title+VI+Program+Complete.pdf)

EXISTING TRANSPORTATION PERFORMANCE STANDARD DEFICIENCIES

In order to identify potential improvements, the project team first assessed existing conditions based on the current and recommended performance standards (see Chapter 5 for definitions). This section describes the findings of this analysis and existing deficiencies.

INTERSECTION LEVEL OF SERVICE

Data, including vehicle volumes and turning movements to calculate existing conditions Level of Service (LOS) was collected for 23 intersections along Highways 1 and 92 in 2014. The intersection LOS analysis was conducted using the criteria discussed in the Current Performance Standards section on page 49.

Table 21 includes the following information by peak period:

- Intersection location
- Control Type – Describes the type of control at each intersection, including two-way stop control on the minor street (TWSC) or signalized
- Delay – Is the additional travel time experienced by a driver that is attributable to the presence of a traffic signal and/or conflicting traffic.
- Level of Service
- Warrant analysis – Whether the intersection meets conditions necessary for a peak-hour signal warrant, per the California Manual of Uniform Traffic Control Devices

All signalized intersections within the Midcoast region operate above LOS C; however, several unsignalized intersections along Highway 1 have minor street approaches that operate below LOS D during weekday peak periods or below LOS E during weekend peak periods, per the existing performance standards. These are denoted in red in the table.

All intersections that operate below the existing performance standard are minor-street, stop-controlled and only have one lane of approach. None of the intersections operating below the existing performance standard meet a peak-hour signal warrant. Only Cypress Avenue has more than 50 vehicles per hour on an approach turning onto Highway 1. The County's Draft Intersection Control Evaluation analysis found that Cypress Avenue and Highway 1 meets the 8-hour vehicular volume warrant (Warrant 1) and 4-hour vehicular volume warrant (Warrant 2).[18]

Highway 92 and Skyline Boulevard (west) does not meet the existing performance standard for intersection LOS during any period; Skyline Boulevard has a channelized-yield right turn onto Highway 92 and less than 50 vehicles turning left onto Highway 92. Neither Skyline Boulevard nor Muddy Road/Ox Mountain Landfill Road meet signal warrants so are not considered deficient under the proposed performance standard for intersection LOS.

[18] Warrant definitions in the Manual of Uniform Traffic Control Devices (https://mutcd.fhwa.dot.gov/htm/2009/part4/part4c.htm)

Table 21: Existing Conditions Intersection Level of Service

Street Names	Control Type	AM Peak Hour			PM Peak Hour			Weekend (Midday) Peak Hour		
		Delay[1]	LOS	Meets Peak Hour Warrant[2]	Delay[1]	LOS	Meets Peak Hour Warrant[2]	Delay[1]	LOS	Meets Peak Hour Warrant[2]
HIGHWAY 1										
SR-1 / 2nd St	TWSC	16.1 (WB)	C	N	15.7 (WB)	C	N	22.4 (WB)	C	N
SR-1 / 7th St	TWSC	12.6 (EB)	B	N	13 (EB)	B	N	14.8 (EB)	B	N
SR-1 / 8th St	TWSC	18.7 (WB)	C	N	32.5 (WB)	D	N	45.3 (WB)	E	N
SR-1 / 16th St	TWSC	31.6 (EB)	C	N	39.5 (EB)	E	N	42.6 (WB)	E	N
SR -1 / Carlos St	TWSC	12.3 (WB)	B	N	12.1 (WB)	B	N	12.7 (WB)	B	N
SR-1 / Vallemar St	TWSC	17.6 (EB)	C	N	24.5 (WB)	C	N	21.8 (WB)	C	N
SR-1 / California Ave	TWSC	25.6 (WB)	D	N	44.4 (WB)	E	N	53.7 (WB)	F	N
SR-1 / Virginia Ave	TWSC	22.6 (WB)	C	N	38.5 (WB)	E	N	57.1 (WB)	F	N
SR-1 / Vermont Ave (WB)	TWSC	27.5 (WB)	D	N	45 (WB)	E	N	50.1 (EB)	F	N
SR-1 / Cypress Ave (EB)[3]	TWSC	44.2 (EB)	E	N	104.6 (WB)	F	N	146 (EB)	F	N
SR-1 / St Etheldore St	TWSC	23.2 (WB)	C	N	34.1 (WB)	D	N	37.1 (WB)	E	N
SR-1 / Capistrano Rd (North)	TWSC	17.4 (EB)	C	N	22.1 (EB)	C	N	30.6 (EB)	D	N
SR-1 / Coral Reef Ave	TWSC	16.3 (WB)	C	N	24.5 (WB)	C	N	28.7 (WB)	D	N
SR-1 / Capistrano Rd (South)	Signalized	19.1	B	N/A	17.5	B	N/A	20.7	C	N/A
SR-1 / Coronado St	Signalized	21.7	C	N/A	14.4	B	N/A	11.4	B	N/A
Obispo Rd / Coronado St	TWSC	12.9 (EB)	B	N	10.2 (WB)	B	N	12.3 (WB)	B	N
SR-1 / Magellan Ave	TWSC	53.5 (EB)	F	N	78.5 (EB)	F	N	102.2 (EB)	F	N
SR-1 / Medio Ave	TWSC	104.5 (WB)	F	N	73.9 (WB)	F	N	254.8 (WB)	F	N
SR-1 / Miramar Dr	TWSC	21.3 (EB)	C	N	91.7 (EB)	F	N	46.9 (EB)	E	N
SR-1 / Mirada Rd	TWSC	126.2 (WB)	F	N	112.7 (WB)	F	N	282.3 (WB)	F	N
HIGHWAY 92										
SR-92 / Muddy Rd (Ox Mt Landfill)	TWSC	64.7 (SB)	F	N	92.6 (SB)	F	N	33.5 (SB)	D	N
SR-92 / Skyline Blvd (West, Upper)	TWSC	35.5 (NB)	E	N	72.9 (NB)	F	N	626.9 (NB)	F	N
SR-92 / SR-35 (East, Lower)	Signalized	11.7	B	N/A	22.0	C	N/A	41.9	D	N/A

Notes:
[1]Signalized intersections and all-way stop controlled (AWSC) intersections are reported by the average delay and LOS for the intersection; two-way stop controlled (TWSC) intersections are reported with the worst approach's delay and LOS
[2]Section 4C.04 of the CA-MUTCD describes the conditions necessary to meet a peak hour signal warrant (https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/ca-mutcd/rev-5/camutcd2014-part4-rev5.pdf)
[3]DKS prepared a Draft Intersection Control Evaluation memorandum for the intersection of Cypress Avenue and Highway 1. The intersection was found to meet signal warrants 1 and 2 based on data collection completed in 2019.

Roadway Level of Service

As described on page 44, roadway Level of Service is based on the volume (v) and capacity (c) of the roadway segment, where capacity is defined by the number of lanes per direction and the volume is measured. The v/c is then calculated and compared to the threshold range described in the City/County Association of Governments (C/CAG) Congestion Management Program; the existing LOS thresholds are in Table 16 on page 45; roadway LOS D is acceptable for peak weekday periods and LOS E is acceptable for weekend periods.

Deficient roadway segments according to the existing performance standards are highlighted in red in Table 22. All roadway segments are considered sufficient along Highway 1 except for Coronado Street to Medio Avenue, Medio Avenue to Miramar Drive, and Miramar Drive and Mirada Road during the weekday peak periods. On Highway 92, the segments between R Rd and Muddy Road, and Muddy Road and Skyline Blvd are considered deficient during the weekday peak periods.

Table 22: Existing Conditions Roadway Segment Level of Service

Location	Class	Capacity	AM			PM			Weekend (Midday)		
			Volume (veh/hr)	v/c	LOS	Volume (veh/hr)	v/c	LOS	Volume (veh/hr)	v/c	LOS
Highway 1											
1st St and 2nd St	Two-Lane Highway	2,800	963	0.34	D	1,401	0.50	D	1,426	0.51	D
2nd St and 7th St	Two-Lane Highway	2,800	965	0.34	D	1,357	0.48	D	1,395	0.50	D
7th St and 9th St	Two-Lane Highway	2,800	930	0.33	D	1,227	0.44	D	1,424	0.51	D
9th St and Carlos St	Two-Lane Highway	2,800	893	0.32	C	1,237	0.44	D	1,512	0.54	D
Carlos St and Vallemar St	Two-Lane Highway	2,800	1,058	0.38	D	1,298	0.46	D	1,496	0.53	D
Vallemar St and California St	Two-Lane Highway	2,800	1,018	0.36	D	1,247	0.45	D	1,454	0.52	D
California St and Vermont St	Two-Lane Highway	2,800	1,205	0.43	D	1,355	0.48	D	1,518	0.54	D
Vermont St and Cypress Ave	Two-Lane Highway	2,800	1,182	0.42	D	1,394	0.50	D	1,540	0.55	D
Cypress Ave and Etheldore St	Two-Lane Highway	2,800	1,123	0.40	D	1,356	0.48	D	1,544	0.55	D
Etheldore St and Capistrano Rd N	Two-Lane Highway	2,800	1,181	0.42	D	1,414	0.51	D	1,547	0.55	D
Capistrano Rd N and Coral Reef Ave	Two-Lane Highway	2,800	1,201	0.43	D	1,408	0.50	D	1,607	0.57	E
Coral Reef Ave and Capistrano Rd S	Two-Lane Highway	2,800	1,115	0.40	D	1,294	0.46	D	1,502	0.54	D
Capistrano Rd S and Coronado St	Two-Lane Highway	2,800	1,132	0.40	D	1,442	0.52	D	1,250	0.45	D
Coronado St and Medio Ave	Two-Lane Highway	2,800	1,662	0.59	E	1,947	0.70	E	2,017	0.72	E
Medio Ave and Miramar Dr	Two-Lane Highway	2,800	1,682	0.60	E	1,961	0.70	E	2,112	0.75	E
Miramar Dr and Mirada Rd	Two-Lane Highway	2,800	1,650	0.59	E	1,932	0.69	E	2,205	0.79	E
Highway 92											
R Rd and Muddy Road	Two-Lane Highway	2,800	1,670	0.60	E	1,873	0.67	E	1,689	0.60	E
Muddy Road and Skyline Blvd	Two-Lane Highway	2,800	1,663	0.59	E	1,890	0.68	E	1,553	0.55	D
Skyline Blvd and SR 35	Two-Lane Highway	2,800	1,259	0.45	D	1,220	0.44	D	1,258	0.45	D
SR 35 and I-280	Two-Lane Highway	2,800	1,495	0.53	D	1,705	0.61	E	1,859	0.66	E

DELAY INDEX

Connect the Coastside proposes using the Delay Index to measure roadway segment performance (see page 52). A Delay Index was calculated for Highway 1 corridor from 1st Street in Montara to Mirada Road in Miramar, and for Highway 92 from west of Ox Mt Landfill Road, near the City of Half Moon Bay border, to east of Highway 92 and Highway 35 (Lower) intersection.

Most Highway 1 intersections are uncontrolled, resulting in low off-peak free-flow travel times. Although certain segments have slower traffic during peak hours, the entire corridor is evaluated as one segment to calculate the Delay Index and determine impacts. Under existing conditions, both directions of travel along Highway 1 show a Delay Index below the proposed performance standard of 2.0 for all time periods. While discrete segments along Highway 1 are not held to any defined standard, it can be noted that none of them currently exceed the standard. For Highway 92, the entire segment in the study area is below the standard of 2.0 during all periods.

This reflects that most of delay occurs at intersections, which have a separate (LOS) evaluation metric and standard. Measures to reduce delay for the highways are therefore most effective at the corridor level. Delay Index values and travel times are provided below.

Table 23: Existing Conditions Delay Index for Highway 1

	FREE FLOW~	AM		Midday (Weekend)		PM	
Highway 1 - Southbound	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
1st Street to 16th Street	01:00	00:29	0.49	00:33	0.55	00:32	0.53
16th Street to Capistrano (North)	02:59	03:40	1.23	03:56	1.32	03:50	1.28
Capistrano (North) to Mirada Road	02:29	03:10	1.27	03:21	1.35	03:16	1.31
Total	**06:28**	**07:19**	**1.13**	**07:50**	**1.21**	**07:37**	**1.18**
Highway 1 - Northbound	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
Mirada Road to Capistrano (North)	02:36	03:05	1.18	03:29	1.34	03:27	1.32
Capistrano (North) to 16th Street	02:59	03:24	1.14	03:27	1.16	03:28	1.16
16th Street to 1st Street	00:54	01:00	1.11	01:00	1.10	00:56	1.04
Total	**06:29**	**07:28**	**1.15**	**07:56**	**1.22**	**07:51**	**1.21**

~ Free Flow is segment length divided by the speed limit and an output of Synchro

Table 24: Existing Conditions Delay Index for Highway 92

	FREE FLOW~	AM		Midday (Weekend)		PM	
Highway 92	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
HMB City Limit to I-280 Ramp (EB)	08:42	12:51	1.48	12:51	1.48	12:43	1.46
I-280 Ramp to HMB City Limit (WB)	08:42	12:25	1.43	12:25	1.43	12:49	1.47

PROJECTED TRANSPORTATION CONDITIONS

BACKGROUND

In order to identify future transportation deficiencies (i.e., where performance measures are not met), the project team had to develop future travel forecasts at intersections and along roadway segments. The forecasts for future traffic demand on weekdays were developed using the San Mateo County C/CAG-VTA Travel Demand Model. The Travel Demand model can forecast traffic volumes for a general area called a Transportation Analysis Zone (TAZ) (see map on page 38). Since having area-wide volumes does not tell us the actual impact on key performance indicators at specific locations, the Furness process[19] was used to spread the volumes out to intersections along the corridor based on land use. The general process for projecting future transportation conditions on weekdays is as follows:

1. Run travel demand model for current year (2014) → **Existing weekday peak hour traffic volumes**
2. Run travel demand model for horizon year (2040) → **Forecasted weekday peak hour traffic volumes based on regional growth and other factors by TAZ**
3. Update travel demand model for horizon year (2040) with Maximum Buildout Forecast land use → **Forecasted weekday peak hour traffic volumes based on assumption of Maximum Buildout by TAZ**
4. Compute the future segment volumes by adding growth-related traffic to existing volumes, and use the Furness process to assign volumes to intersections → **Forecasted weekday peak hour traffic volumes by intersection and segment**
5. Analyze the forecasted traffic data using additional software (e.g., Synchro and Simtraffic) → **Forecasted weekday peak hour intersection and roadway Level of Service and delay**

The C/CAG Travel Demand Model is intended to represent conditions on an average weekday, rather than modeling weekend travel conditions. Therefore, the project team used a different approach to determine future weekend traffic volumes. The general process for projecting future transportation conditions on weekends is as follows:

1. Conduct 7-day vehicle counts along Highways 1 and 92 → **Determine weekday midday and Saturday midday peak-hour volumes conversion factor**
2. Use updated travel demand models for 2040 with Maximum Buildout Forecast and apply conversion factor to weekday model volumes into weekend model volumes based on counts → **Forecasted weekend peak hour traffic volumes**

[19] Assessing "trip distribution" is part of the transportation modeling process and involves matching a trip maker's origin with destinations in different zones to create a "trip matrix," or the number of trips that have the same origins and destinations. The Furness method is a matrix modification method used to extrapolate trip distribution based on future growth.

3. Compute the future segment volumes by adding growth to existing volumes, and use the Furness process to assign volumes to intersections → **Forecasted weekend peak hour traffic volumes by intersection and segment**
4. Analyze the forecasted traffic data using additional software (e.g., Synchro and Simtraffic) → **Forecasted weekend peak hour intersection and roadway segment Level of Service and delay**

The results of the transportation analysis based on the projected Maximum Buildout Forecast is described further in the following section. Travel demand models are just that – models – and all models have limitations. Travel demand models cannot replicate the nuances of human behavior and travel choices, nor can they effectively consider the physical environment. The purpose of the model is to provide a sense of what will happen based on the future changes that is reasonable based on the assumptions.

PROJECTED DEFICIENCIES

There are two ways growth affects transportation conditions:

1. **Increase in number of vehicles wanting to access highways from within the Study Area causing increased delays**. Development within the Study Area increases the number of vehicles wanting to turn on Highways 1 and 92 from side streets within the Study Area. This growth is spread along multiple access points but can result in increased delay at intersections along Highways 1 and 92, most of which only have a single lane of access and are controlled by minor-street stop signs.
2. **Growth in regional pass-through traffic, leading to increased congestion**. While development within the Study Area results in an increase in traffic volumes along Highway 1, some traffic is also due to regional pass-through trips which do not start or end within the Study Area.

The sections below describe when transportation conditions become deficient under the Maximum Buildout Forecast based on the existing and recommended performance standards.

Intersection Level of Service

Connect the Coastside uses intersection LOS D for intersections during the weekday peak hours and LOS E for weekend peak hours as the performance standard, per the Local Coastal Program. The operation of study intersections under Maximum Buildout Forecast conditions as compared to Existing Conditions is shown in Table 25. Intersections that operate below the LOS D during weekday peak periods or below LOS E during weekend peak periods are denoted in red.

Under Maximum Buildout Forecast conditions, the signalized intersection of Highway 1 and Coronado Street will operate at LOS D during the weekday peak hours. The majority of unsignalized intersections along Highway 1 have minor street approaches that will operate below the LOS D standard. All of these unsignalized intersections are minor-street, stop-

controlled and only have one lane of approach. Of these intersections, California Avenue and Cypress Avenue are projected to have more than 75 vehicles per hour on an approach turning onto Highway 1 and satisfy signal warrants 1 and 2 under Maximum Buildout Forecast conditions. While adding additional approach lanes may facilitate the movement of right-turning vehicles onto Highway 1, the main cause for intersections failing LOS under Maximum Buildout Forecast conditions is the high through volume along Highway 1. This results in left-turning vehicles on the minor streets needing to wait a long time for a sufficient gap between cars to safely enter Highway 1. This could be mitigated by controlling intersections with high minor street volumes and combining low volume minor street approaches where feasible.

Table 25: Maximum Buildout Forecast Intersection Level of Service Compared to Existing Intersection Level of Service

			AM Peak Hour LOS		PM Peak Hour LOS		Weekend (Midday) Peak Hour LOS	
Street Names	**Existing Control Type**	**LOS Standard[1]**	**Max. Buildout[2]**	**Existing[2]**	**Max. Buildout[2]**	**Existing[2]**	**Max. Buildout[2]**	**Existing[2]**
Highway 1								
SR-1 / 2nd Stº	TWSC	C(D)	F	C	F	C	F	C
SR-1 / 7th St	TWSC	C(D)	C	B	C	B	C	B
SR-1 / 8th Stº	TWSC	C(D)	F	C	F	D	F	E
SR -1 / 16th St^º	TWSC	C(D)	F	C	F	E	F	E
SR -1 / Carlos St	TWSC	C(D)	C	B	C	B	C	B
SR-1 / Vallemar Stº	TWSC	C(D)	D	C	F	C	E	C
SR-1 / California Aveº	TWSC	C(D)	F	D	F	E	F	F
SR-1 / Virginia Aveº	TWSC	C(D)	F	C	F	E	F	F
SR-1 / Vermont Ave (WB)º	TWSC	C(D)	F	D	F	E	F	F
SR-1 / Cypress Ave (EB)º	TWSC	C(D)	F	E	F	F	F	F
SR-1 / Etheldore St (South)º	TWSC	C(D)	F	C	F	D	C	E
SR-1 / Capistrano Rd (North)	TWSC	C(D)	C	C	C	C	D	D
SR-1 / Coral Reef Aveº	TWSC	C(D)	F	C	F	C	F	D
SR-1 / Capistrano Rd (South)	Signalized	C(D)	C	B	C	B	C	C
SR-1 / Coronado Stº	Signalized	C(D)	D	C	D	B	E	B
Obispo Rd / Coronado St	TWSC	C(D)	B	B	B	B	B	B
SR-1 / Magellan Aveº	TWSC	C(D)	F	F	F	F	F	F
SR-1 / Medio Aveº	TWSC	C(D)	F	F	F	F	F	F
SR-1 / Miramar Drº	TWSC	C(D)	E	C	F	F	F	E
SR-1 / Mirada Rdº	TWSC	C(D)	F	F	F	F	F	F
Highway 92								
SR-92 / Ox Mt. Landfill Rd	TWSC	C(D)	E	F	F	F	F	D

SR-92 / Skyline Blvd (West, Upper)	TWSC	C(D)	F	E	F	F	F	F
SR-92 / SR-35 (East, Lower)	Signalized	C(D)	D	B	F	C	F	D

Notes:
[1]LOS standard provided within parenthesis are for any one individual movement
[2]Signalized intersections and all way stop-controlled (AWSC) are reported by the LOS for the intersection; two-way stop controlled (TWSC) intersections are reported with the worst approach's level of service
ºIntersection falls below the existing intersection LOS standard under maximum buildout forecast conditions
^ Level of Service analysis was done as part of draft Intersection Control Evaluation memos; LOS for existing and buildout for each time period are reported for HCM 2010 TWSC

Roadway Level of Service

Table 26 shows roadway segment LOS under Maximum Buildout Forecast conditions compared to existing conditions. Local Coastal Program Policy 2.43 sets LOS D as the acceptable level of service for roadway segments during weekday peak periods, and LOS E as acceptable during weekend (recreational peak periods when assessing the need for road expansion.

Under Maximum Buildout Forecast Conditions, both Highways 1 and 92 do not meet the defined LOS standard for any roadway segment. These are highlighted in red. This is due to the forecasted high-through volumes on Highways 1 and 92. Connect the Coastside does not recommend using Roadway Level of Service as a performance measure moving forward.

Table 26: Maximum Buildout Forecast Roadway Segment Level of Service Compared to Existing Roadway Segment Level of Service

			AM				PM				Weekend (Midday)			
Location	**Class**	**Capacity**	**Max. Volume (veh/hr)**	**Max v/c**	**Max. LOS**	**Existing LOS**	**Max. Volume (veh/hr)**	**Max v/c**	**Max. LOS**	**Existing LOS**	**Max. Volume (veh/hr)**	**Max v/c**	**Max. LOS**	**Existing LOS**
Highway 1														
1st St and 2nd St	Two-Lane Highway	2800	1867	0.67	E	D	2162	0.77	E	D	2421	0.86	E	D
2nd St and 7th St	Two-Lane Highway	2800	1688	0.60	E	D	1940	0.69	E	D	2265	0.81	E	D
7th St and 9th St	Two-Lane Highway	2800	1737	0.62	E	D	2019	0.72	E	D	2297	0.82	E	D
9th St and Carlos St	Two-Lane Highway	2800	1886	0.67	E	C	2154	0.77	E	D	2397	0.86	E	D
Carlos St and Vallemar St	Two-Lane Highway	2800	1876	0.67	E	D	2151	0.77	E	D	2396	0.86	E	D
Vallemar St and California St	Two-Lane Highway	2800	1800	0.64	E	D	2068	0.74	E	D	2323	0.83	E	D
California St and Vermont St	Two-Lane Highway	2800	1873	0.67	E	D	2166	0.77	E	D	2428	0.87	E	D
Vermont St and Cypress Ave	Two-Lane Highway	2800	1956	0.70	E	D	2178	0.78	E	D	2388	0.85	E	D
Cypress Ave and Etheldore St	Two-Lane Highway	2800	1871	0.67	E	D	2136	0.76	E	D	2428	0.87	E	D
Etheldore St and Capistrano Rd N	Two-Lane Highway	2800	1756	0.63	E	D	2312	0.83	E	D	2061	0.74	E	D
Capistrano Rd N and Coral Reef Ave	Two-Lane Highway	2800	1637	0.58	E	D	2264	0.81	E	D	1961	0.70	E	E
Coral Reef Ave and Capistrano Rd S	Two-Lane Highway	2800	1598	0.57	E	D	2170	0.78	E	D	2059	0.74	E	D
Capistrano Rd S and Coronado St	Two-Lane Highway	2800	1835	0.66	E	D	2244	0.80	E	D	2291	0.82	E	D
Coronado St and Medio Ave	Two-Lane Highway	2800	2505	0.89	E	E	2897	1.03	F	E	2925	1.04	F	E

Medio Ave and Miramar Dr	Two-Lane Highway	2800	2559	0.91	E	E	2955	1.06	F	E	2962	1.06	F	E
Miramar Dr and Mirada Rd	Two-Lane Highway	2800	2596	0.93	E	E	2743	0.98	E	E	3190	1.14	F	E
Highway 92														
R Rd and Muddy Road	Two-Lane Highway	2800	2078	0.74	E	E	2360	0.84	E	E	2266	0.81	E	E
Muddy Road and Skyline Blvd	Two-Lane Highway	2800	2156	0.77	E	E	2474	0.88	E	E	2457	0.88	E	D
Skyline Blvd and SR 35	Two-Lane Highway	2800	2657	0.95	E	D	3030	1.08	F	D	3117	1.11	F	D
SR 35 and I-280	Two-Lane Highway	2800	2237	0.80	E	D	2516	0.90	E	E	2669	0.95	E	E

Delay Index

A delay index was calculated for study segments along entire lengths of Highways 1 and 92 within the study area under Maximum Buildout Forecast conditions per the proposed use of the Delay Index as a performance measure.

Delay Index and travel times for study segments along Highway 1 and Highway 92 under Maximum Buildout Forecast Conditions compared to existing conditions are shown on the next page. The Highway 1 southbound segment exceeds the delay index performance standard of 2.0 during the weekday PM peak hour, mainly on the southern portion of the route from Capistrano (North) to Mirada Road. Highway 92 meets the delay index performance standard of 2.0 for the entire route under both existing and Maximum Buildout Forecast conditions.

Table 27: Maximum Buildout Forecast Conditions Delay Index Compared to Existing Conditions for Highway 1

	FREE FLOW~	EXISTING						MAXIMUM BUILDOUT*					
		AM		Midday (Weekend)		PM		AM		Midday (Weekend)		PM	
Highway 1 - Southbound	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
1st Street to 16th Street	01:00	00:29	0.49	00:33	0.55	00:32	0.53	00:34	0.58	00:48	0.80	00:39	0.66
16th Street to Capistrano (North)	02:59	03:40	1.23	03:56	1.32	03:50	1.28	03:34	1.19	04:02	1.35	03:41	1.23
Capistrano (North) to Mirada Road	02:29	03:10	1.27	03:21	1.35	03:16	1.31	05:43	2.30	07:45	3.12	10:39	4.28
Total	**06:28**	**07:19**	**1.13**	**07:50**	**1.21**	**07:37**	**1.18**	**09:51**	**1.52**	**12:35**	**1.94**	**14:59**	**2.32**
Highway 1 - Northbound	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
Mirada Road to Capistrano (North)	02:36	03:05	1.18	03:29	1.34	03:27	1.32	03:29	1.34	04:54	1.88	04:32	1.74
Capistrano (North) to 16th Street	02:59	03:24	1.14	03:27	1.16	03:28	1.16	03:15	1.09	03:20	1.12	03:24	1.14
16th Street to 1st Street	00:54	01:00	1.11	01:00	1.10	00:56	1.04	01:09	1.28	01:08	1.25	01:06	1.21
Total	**06:29**	**07:28**	**1.15**	**07:56**	**1.22**	**07:51**	**1.21**	**07:53**	**1.22**	**09:22**	**1.44**	**09:01**	**1.39**

~ Free Flow is segment length divided by the speed limit and an output of Synchro

* In Maximum Buildout conditions, segments that do not meet the delay index standard of 2.0 are highlighted in red

Table 28: Maximum Buildout Forecast Conditions Delay Index Compared to Existing Conditions for Highway 92

	FREE FLOW~	EXISTING						MAXIMUM BUILDOUT*					
		AM		Midday (Weekend)		PM		AM		Midday (Weekend)		PM	
Highway 92	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
HMB City Limit to I-280 Ramp (EB)	08:42	12:51	1.48	12:51	1.48	12:43	1.46	12:48	1.47	12:39	1.45	12:40	1.46
I-280 Ramp to HMB City Limit (WB)	08:42	12:25	1.43	12:25	1.43	12:49	1.47	12:21	1.42	12:44	1.46	12:45	1.47

~ Free Flow is segment length divided by the speed limit and an output of Synchro

* In Maximum Buildout conditions, segments that do not meet the delay index standard of 2.0 are highlighted in red; all of Highway 92 meets thresholds

OTHER

Based on the guidelines discussed on page 53, the following concerns should be addressed, as safety concerns and the need for multimodal facilities will increase in the Maximum Buildout Forecast condition and are critical to reduce traffic congestion and meet the community's vision and goals:

- **Driving**
  - Conflicting pavement markings (e.g., left-turn pockets) and lack of pavement markings leads to increased speeds and safety concerns, and driver confusion, adding to congestion.
- **Parking**
  - Poor parking utilization due to lack of signage and pavement markings, leads to poor occupancy at existing lots and congestion as drivers circle for parking.
- **Walking Network**
  - Lack of continuity in sidewalks and pathways creates an inhospitable walking environment, deterring both visitors and residents to walk for short trips, like to school or to the Post Office.
- **Pedestrian Crossings**
  - Few controlled marked crossings of Highways 1 and 92 near important destinations, such as recreational areas, trailheads, bus stops and to/from parking lots, creates additional safety concerns and deters walking.
  - Existing marked crossings lack supportive safety infrastructure for the volumes and speeds along highways, creating safety concerns and further deterring walking.
- **Bikeways**
  - Few designated bikeways (most are Class III Signed Bike Routes) and little bicycle parking makes bicycling as a primary mode of transportation challenging.
- **Trails**
  - California Coastal Trail is a state and regional priority and is incomplete and lacks a consistently defined alignment.
  - Trails will continue to be major trip-generators with additional trail-roadway crossings and amenities needed. Trails often follow roadway network alignments, so must be considered in any transportation recommendations.
- **Transit**
  - Low frequency of buses, lack of amenities at bus stops, and limited hours of operation deter transit ridership for those who have the option to drive, and do not serve students well.
  - Lack of visitor-serving transit options to travel to Midcoast or get around while there encourages driving as the primary mode for visitors to the coast.

7.Recommendations

BACKGROUND

This chapter includes proposed projects, policies and programs intended to meet community-identified needs; offset the demand for all new vehicle trips generated by new residential development on Highway 1, Highway 92, and relevant local streets during commuter peak periods and peak recreation periods; and to mitigate for existing and future development's significant adverse cumulative impacts on public access to the beaches of the Midcoast region of San Mateo County. It is important to note that just because a location does not meet a deficiency as defined by the current and proposed performance standards, it does not mean a recommendation is not appropriate. Recommended projects are intended to address community needs and traffic safety concerns, which are not captured by the current and proposed performance standards. Accordingly, Connect the Coastside includes project proposals to improve walking, bicycling, transit service and driving to improve mobility and safety for Midcoast residents.

Connect the Coastside's proposed projects, programs, and policy recommendations are preliminary and at the planning-level. Some projects are not intended for implementation in the near-term, as they would address future deficiencies. It is beyond the scope of this Plan to develop final designs and engage at the individual project-level; graphics depicting projects are conceptual only and not reflective of final design. All projects involving construction will require a community engagement process and detailed design process that will consider environmental, regulatory, topographic, fiscal and other constraints.

Quantifying mode shifts when new active transportation facilities are provided where they did not exist is challenging; therefore, Connect the Coastside cannot project the benefits from a modal shift. As more effective data collection and analysis tools emerge, future updates to this plan will include assessments of multimodal improvements.

This chapter is organized as follows:

DEVELOPING RECOMMENDATIONS

Connect the Coastside's recommendations come from various sources and have been refined over time. In general, recommendations were developed as follows:

1. Determine where deficiencies occur in existing and projected (Maximum Buildout Forecast) conditions based on the performance standards.
2. Gather information on transportation concerns, priorities, and potential projects from stakeholders, such as Technical Advisory Committee, Midcoast Community Council, and community members.
3. Review relevant past and ongoing plans and studies to inform recommendations, such as Highway 1 Safety and Mobility Improvement Study (Phases 1 and 2), Unincorporated San Mateo County Active Transportation Plan, and Plan Princeton.
4. Review forthcoming transportation projects led by other actors, such as Caltrans, and proposed development projects, such as Big Wave.
5. Identify limitations to potential project recommendations, such as topography, environmental resources and available right-of-way.
6. Identify a suite of potential improvements based on findings to meet proposed standards while advancing community goals.
7. Share potential improvements with stakeholders for feedback and refinement.
8. Develop the final list of recommendations in Connect the Coastside.

The potential improvements are based upon the ability to address performance standard deficiencies (existing and projected), preliminary feasibility, cost, consistency with the Local Coastal Program (including environmental considerations), community character, traffic safety, and ability to reduce overall demand for driving.

RECOMMENDED INFRASTRUCTURE AND SERVICE IMPROVEMENTS

Recommended improvements are intended to increase mobility, address safety concerns, and resolve performance standard deficiencies. Improvements are detailed in separate sections by mode (roadway (R), pedestrian (Pe), bikeways (B), transit (T), parking (Pa), recreational trails, and other), and are not in any particular order of priority within each section. The following table summarizes recommendations, followed by a series of maps by community, and then detailed discussion of each project. This section concludes with a performance standards assessment.

Table 29: Recommended Infrastructure Projects

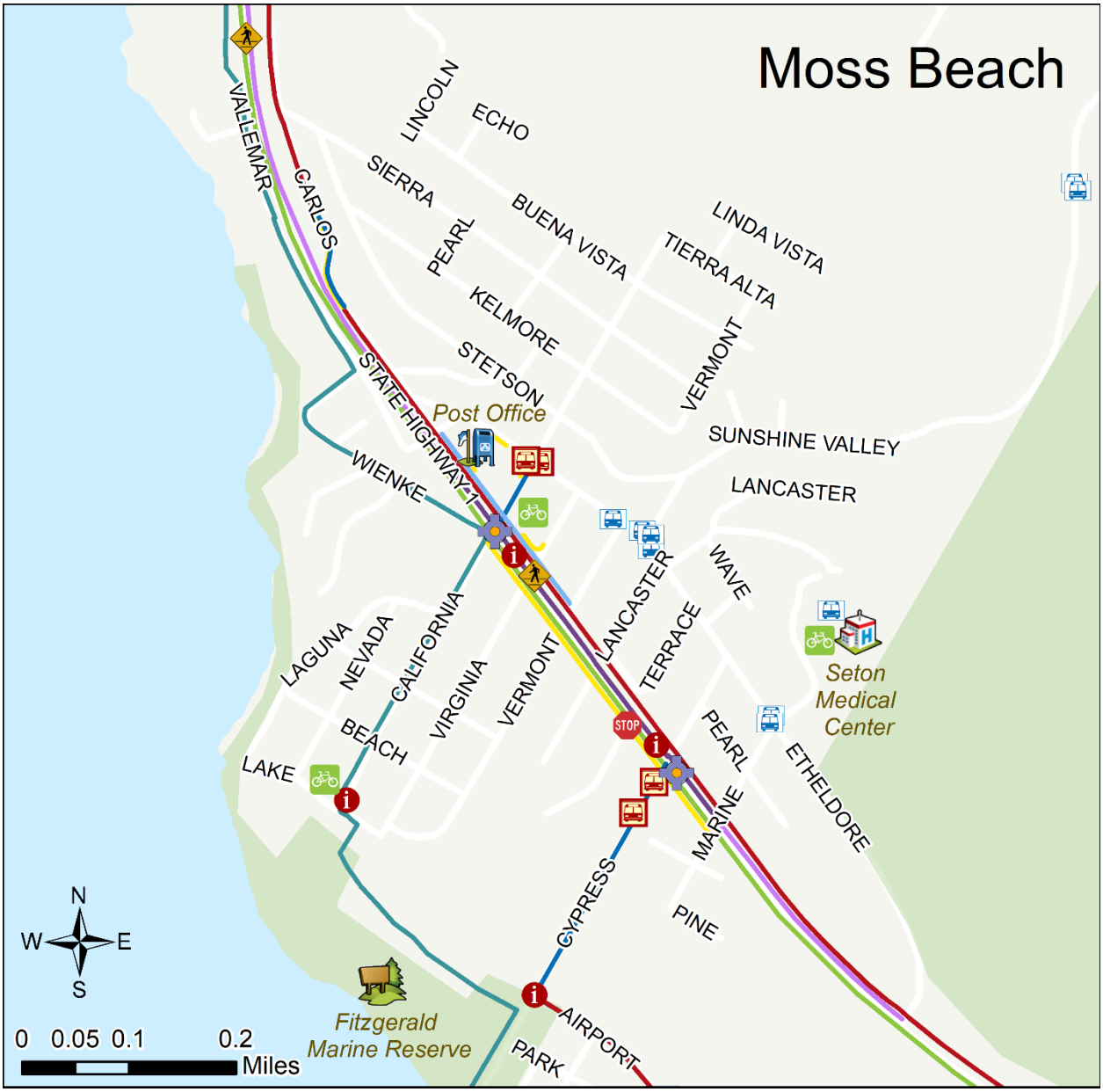
Proj. #	Project Name	Brief Description	Community
R1	Highway 1 Shoulder Treatment	Construct consistent shoulder treatment of curb and gutter in "Village" and “Fringe” in designated areas of Highway 1	All
R2	Highway 1 Side Street Stop Signs	Install stop signs and pavement markings at all side streets of SR-1 where missing	All
R3	Gray Whale Cove Turn and Acceleration Lanes	Install left-turn bay with painted island to provide storage area for left-turn movements in and out of Gray Whale Cove parking lot (from southbound Highway 1) and acceleration lane to turn left out of parking lot and continue southbound on Highway 1	North of Montara
R4	Highway 1 Turn and Acceleration Lanes at 8th Street	Modify striping to create left-turn lane into 8th St from Highway 1 southbound and acceleration lane out of 8th St to continue Highway 1 southbound	Montara
R5	16th St / Highway 1 Intersection Control	Intersection control, with preliminary recommendation of single-lane roundabout	Moss Beach
R6	California Ave / Highway 1 Intersection Control	Intersection control, with preliminary recommendation of single-lane roundabout	Moss Beach
R7	Cypress Ave / Highway 1 Intersection Control	Intersection control, with preliminary recommendation of multi-lane roundabout	Moss Beach
R8	Main Street Traffic Calming and Bicycle/Pedestrian Connectivity	Pedestrian access, traffic calming and bicycle improvements in Central Montara between 7th and 11th Streets, including: curb extensions, sidewalks, marked crossings, mini traffic circle, and bike route.	Montara
R9	Carlos Street Realignment to 16th Street	Realign northern terminus of Carlos Street at Highway 1 to connect to 16th Street.	Moss Beach
R10	Carlos Street Traffic Calming	Striping, signage, and completion of missing sidewalk, with conversion to one-way southbound with parking reoriented facing south on Carlos Street to accommodate the Parallel Trail and calm traffic in central Moss Beach	Moss Beach
R11	Highway 92 / Highway 35 (East, Lower) Intersection Improvements	Intersection improvements to facilitate pedestrian and bicycle crossings and improve signal timing	Highway 92
R12	Highway 92 / Highway 35 (West, Upper) Intersection Control	Add traffic signal and crossing improvements to facilitate connections for trail users and turning movements for motorists.	Highway 92
R13	Highway 92 Truck Signs	"Trucks Use Right Lane" signage along Highway 92	Highway 92

R14	Highway 92 Left-turn Pockets	Provide left-turn pockets at local businesses on Highway 92	Highway 92
Pe1	New and Improved Crossings of Highways 1 and 92	Improve existing and add new pedestrian crossings on Highways 1 and 92 including marked crossings with flashing beacons, overcrossing of Highway 1 / south of Carlos St, and improve Highway 1 / Coronado St	All
Pe2	Highway 1 Multimodal Parallel Trail	Connected walking and bicycling facilities along the east side of Highway 1 through connected Class I Path, sidewalks, and Class III Bike Route, with marked crossings of intersecting streets with the path	All
Pe3	Midcoast Alignment Completion of California Coastal Trail	Recommended California Coastal Trail alignment and improvements in the Midcoast including: wayfinding signage, Class I Path, Class III Bike Route, trails, and paths.	All
Pe4	Highway 1 Sidewalks in Moss Beach and Montara	Add sidewalks in central Montara and Moss Beach in front of businesses located on Highway 1 and marked crossings of side streets intersection with Highway 1	Montara, Moss Beach
Pe5	Central Moss Beach Bicycle and Pedestrian Improvements	Add sidewalk on west side where missing on Etheldore St (north of California Ave) and California Ave (south of Etheldore) to connect to existing sidewalks, and add Class III Bike Route on California Ave from Etheldore St to Highway 1	Moss Beach
Pe6	Montara Safe Routes to School	Various improvements to make it easier to walk and bike to Farallone View Elementary School, including sidewalks, Class III Bike Routes, improved crossings, and stop signs	Montara
Pe7	El Granada Safe Routes to School	Various improvements to make it easier to walk and bike to El Granada Elementary School and the Wilkinson School, including sidewalks, Class III Bike Routes, traffic calming, and improved crossings.	El Granada
Pe8	Capistrano Road (South) Intersection Improvements	Improve intersection for pedestrian access including high visibility crosswalks, refuge islands and guide signs	El Granada, Princeton
B1	Highway 1 Bikeway	Bikeway designation on Highway 1 of Class II Bike Lanes	All
B2	Airport Street Bikeway and Princeton Connections	Bicycle and pedestrian connections from Moss Beach to Princeton via Cypress and Airport St.	Princeton
B3	Capistrano Road Bikeway	Bikeway designations on Capistrano Road, including Class III Bike Route with paved shoulders, Class III Bike Route with sharrows, and Class II Bike Lanes.	Princeton
B4	Highway 92 Bikeway	Bikeway designation on Highway 92 of Class III and widening shoulders where feasible	Highway 92
B5	Bicycle Parking	Install short-term bicycle parking at key destinations throughout the Midcoast	All
T1	Transit Stop Improvements	Ensure all bus stops have ADA accessible pad, with additional amenities at higher use stations including benches, shelters, and lighting	All
T2	Recreational Shuttle	Recreational weekend shuttles that run from 1) Hillsdale Caltrain Station to the Midcoast via Highway 92, continuing north to Gray Whale Cove and returning, and 2) Colma BART to Highways 1 and 92 intersection and returning	All
T3	Increased Midcoast Bus Service	Additional bus service on the Route 17 and new express bus service during peak hours between the Midcoast and Colma BART	All
Pa1	Upper Gray Whale Cove Parking Lot Improvements	Improve parking lot with pervious concrete to improve drainage and increase parking use	North of Montara
Pa2	Wayfinding	Install wayfinding signage to help orient drivers to navigate the Midcoast, including to find parking	All

Map 9: Recommended Infrastructure Improvements North of Montara

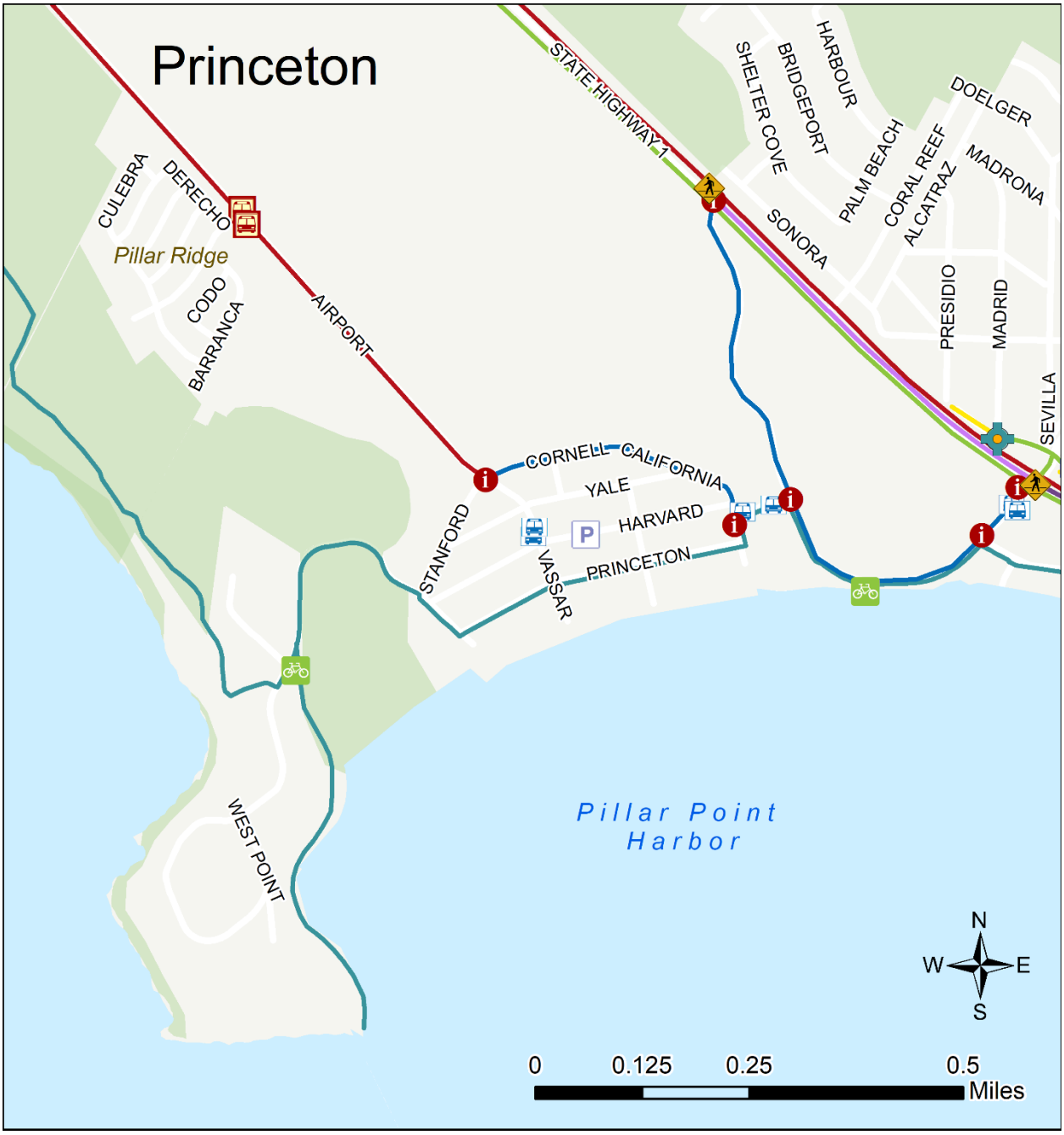
Map 10: Recommended Infrastructure Improvements Montara

Map 11: Recommended Infrastructure Improvements Moss Beach



- Proposed Bike Parking
- Improved & New Highway Crossings
- Proposed Wayfinding Signage
- Proposed Intersection Control
- Bus Stop Improvements
- Existing Bus Stops
- Proposed Stop Signs
- Proposed Sidewalks
- Carlos St Improvements
- Fringe Zone Shoulder Treatment
- Village Zone Shoulder Treatment
- Multimodal Trail
- Shared Street Bike Route
- Proposed Striped Bike Lane
- Recommended California Coastal Trail Alignment

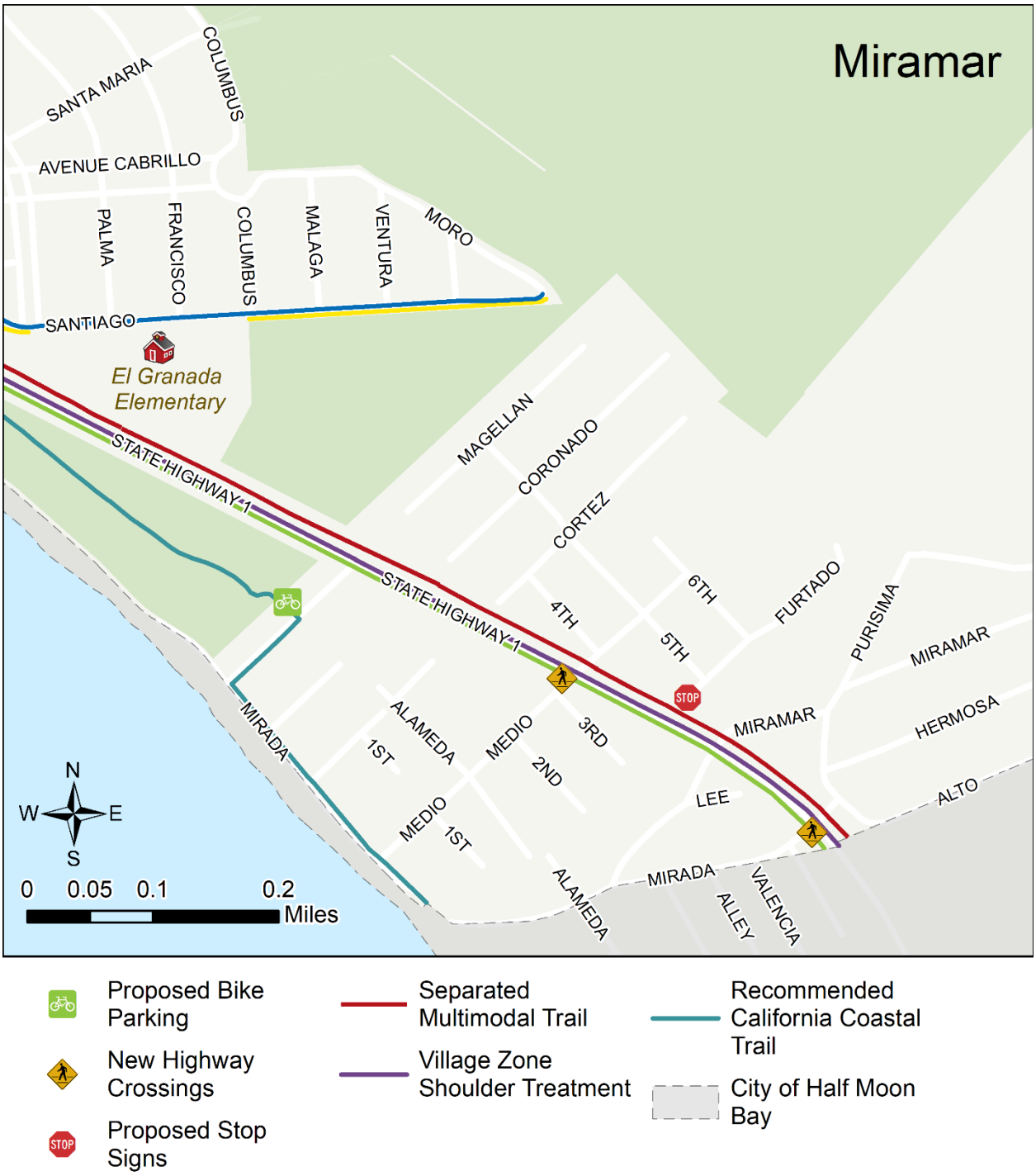
Map 12: Recommended Infrastructure Improvements Princeton



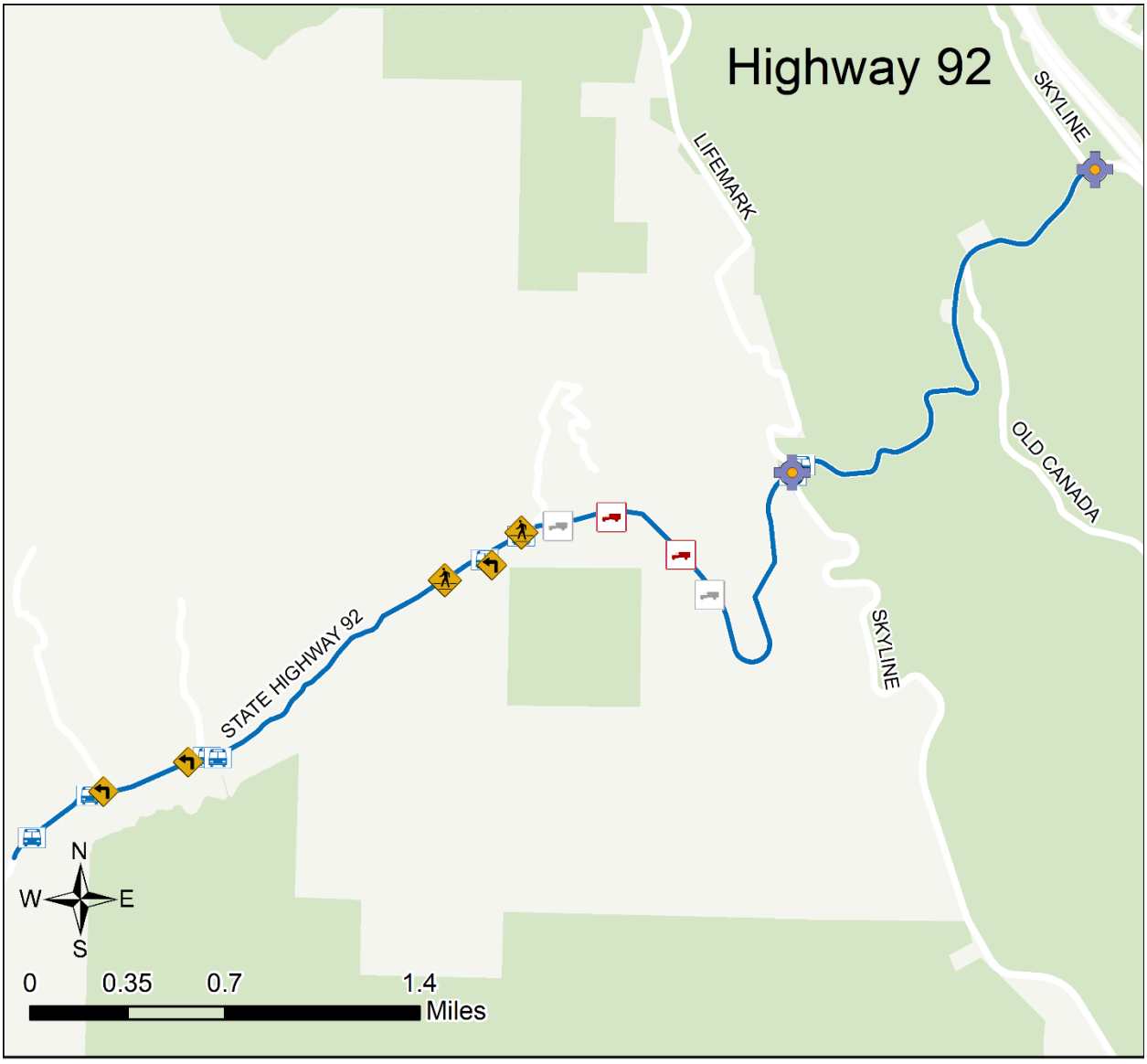
- Parking Study
- Proposed Bike Parking
- Improved & New Highway Crossings
- Proposed Wayfinding Signage
- Intersection Improvements
- Bus Stop Improvements
- Existing Bus Stops
- Separated Multimodal Trail
- Proposed Striped Bike Lane
- Shared Street Bikeway
- Fringe Zone Shoulder Treatment
- Village Zone Shoulder Treatment
- Recommended California Coastal Trail

Map 13: Recommended Infrastructure Improvements El Granada

Map 14: Recommended Infrastructure Improvements Miramar



Map 15: Recommended Infrastructure Improvements Highway 92



ROADWAY (R)

R1. HIGHWAY 1 SHOULDER TREATMENT

Description: Construct consistent shoulder treatment of curb and gutter in "Village" and valley gutter in “Fringe” in designated areas of Highway 1
Source: Highway 1 Safety & Mobility Study Phase 2 (p.13)
Rationale: Traffic safety concern - address high vehicle speeds
Location: Village: Highway 1 between: 7th St and 11th St, Vallemar St and Marine Blvd, and Capistrano Rd (S) and Mirada Rd. Fringe: Highway 1 between: 1st St and 7th St, 11th St and Vallemar St, Marine Blvd and Etheldore St (S), and Capistrano Rd (N) and Capistrano Rd (S).
Discussion: The Highway 1 Safety and Mobility Improvement Study identified three Context Zones to guide improvements:

- ***Rural zones*** are sparsely developed and primarily agricultural or recreational uses. An example includes Route 1 between the southern fringe of Moss Beach and access to Princeton, north of El Granada. In rural zones, there are generally few pedestrians, bicyclists, and access points. Vehicle speeds tend to be high.
- ***Fringe zones*** are transitional segments on approaches and exits at village edges, where rural context attributes begin changing. Pedestrian and bicycle activity is likely to increase in the fringe areas, and more traffic turns on and off Highway 1 to access residential and commercial areas. Driver speeds should begin to lower as drivers become aware of the changing context and anticipate potential conflicts or seek access to local sites. In many places, mixed and undefined adjacent land uses provide few cues to trigger speed reduction.
- ***Village zones*** include the coastal communities of Montara, Moss Beach, Princeton, El Granada, and Miramar. In Villages, potential traffic conflicts increase as visitors and residents seek parking, recreation, retail, transit stops, and restaurant sites. Pedestrian and bicycle traffic increase, and traffic movements at major intersections may be controlled with signs or signals.

The Highway 1 Safety and Mobility Improvement Study recommends various improvements by zone, such as consistent and narrower Highway 1 lane widths, implementation of raised medians, and implementation of edge treatments. Connect the Coastside’s project is limited to the edge treatment for village and fringe zones, since roadway reconfiguration due to other projects (e.g., bicycle lanes on Highway 1 and intersection controls) will influence lane widths and ability to include medians. Additional engagement with residents and coordination with Caltrans will be necessary to define the specific extents of proposed curb and gutter and valley gutter.

R2. Highway 1 Side Street Stop Signs

Description: Install stop signs and pavement markings at all side streets of Highway 1 where missing
Source: Connect the Coastside
Rationale: Traffic safety concern - address standard signage and marking deficiency
Location: Highway 1 at 1st St (1 sign, east of highway), Seacliff Court (1 sign, west of highway), 11th St (1 sign, west of highway), 13th St (1 sign, west of highway), 16th St/Lighthouse Dr (1 sign, west of highway), Terrace Ave (STOP pavement markings, east of highway), and Furtado Lane (1 sign, east of highway)
Discussion: Signage providing accurate information makes drivers and pedestrians more alert and improves the safety of intersections and roadway segments. The Highway 1 Safety and Mobility Improvement Study acknowledges the lack of signage along Highway 1 for bicycle and pedestrian safety. This project rectifies this concern by adding stop signs where missing on stop-controlled side streets on Highway 1.

R3. Gray Whale Cove Turn and Acceleration Lanes

Description: Install left-turn bay with painted island to provide storage area for left-turn movements in and out of Gray Whale Cove parking lot (from southbound Highway 1) and acceleration lane to turn left out of parking lot and continue southbound on Highway 1
Source: Highway 1 Safety and Mobility Study Improvement Phase 2 (p.37)
Rationale: Circulation concern – improve highway traffic flow at key destinations
Location: Highway 1 at Gray Whale Cove Parking Lot
Discussion: Turn Lanes and acceleration lanes on the highway will improve circulation and prevent turning vehicles from restricting vehicle flow, since there is only one-lane in each direction on Highway 1. Turns and acceleration lanes at Gray Whale Cove to make access to the beach safer and reduce slowdowns along Highway 1. This project complements the funded pedestrian crossing of Highway 1 at Gray Whale Cove.

Figure 6: R3. Gray Whale Cove Turn and Acceleration Lanes Concept Diagram

R4. Highway 1 Turn and Acceleration Lanes at 8th Street

Description: Modify striping to create left-turn lane into 8th St from Highway 1 southbound and acceleration lane out of 8th St to continue Highway 1 southbound.
Source: Highway 1 Safety and Mobility Study Phase 2 (p.46)
Rationale: Circulation concern – improve highway traffic flow and safety at key destinations
Location: Highway 1 at 8th Street
Discussion: Turn Lanes and acceleration lanes on the highway will improve circulation, safety and prevent turning vehicles from restricting vehicle flow, since there is only one-lane in each direction on Highway 1. Turns and acceleration lanes at 8th Street make access to central Montara safer and reduce slowdowns along Highway 1.

R5. 16th Street / Highway 1 Intersection Control

Description: Intersection control, with preliminary recommendation of single-lane roundabout. Final design to include pedestrian and bicycle accommodation, such as high-visibility marked crossings, curb ramps, lighting, and more.
Source: Connect the Coastside
Rationale: Traffic safety concern – poor sight distance and crossing of the California Coastal Trail and anticipated future increase in traffic volumes.[20]
Location: Highway 1 and 16th Street
Discussion: Connect the Coastside recommends a future intersection control at Highway 1 and 16th Street to accommodate the anticipated 1) increased traffic due to future development in Moss Beach, 2) increased traffic due to the proposed realignment of Carlos Street to 16th Street, and 3) California Coastal Trail crossing at this location if the proposed overcrossing connecting south on Carlos Street is not built. This proposed project is a companion to projects R9. Carlos Street Realignment to 16th Street; Pe1. New and Improved Crossings of Highways 1 and 92; and Pe2. Highway 1 Multimodal Parallel Trail.

If intersection control at Highway 1 and 16th St is warranted in the future, Connect the Coastside recommends a roundabout due to safety benefits and community support. Roundabouts eliminate left turns by requiring traffic to exit to the right of the circle and reduce vehicular speeds, thereby improving safety at intersections. Roundabouts improve bicycle and pedestrian safety with lower vehicle speeds, shorter crossing distances and greater visibility. Funding availability for right-of-way purchase, utility relocation, and construction are key considerations in choosing the ultimate improvement, as is the outcome of a Caltrans-required Intersection Control Evaluation (ICE). Additional data will be gathered and analyzed to compare the tradeoffs among different intersection options as part of a future analysis, if a control is warranted at all. If a signal is the method of control selected, Highway 1 may need to be widened to four lanes in the vicinity of the intersection; the length of additional stacking lanes needed would be determined as part of a future operations and design study.

[20] Cypress Point Affordable Housing Community Project Draft Transportation Impact Analysis (https://planning.smcgov.org/cypress-point-affordable-housing-community-project)

R6. California Avenue / Highway 1 Intersection Control

Description: Intersection control, with preliminary recommendation of single-lane roundabout. Final design to include pedestrian and bicycle accommodation, such as high-visibility marked crossings, curb ramps, lighting, and more.
Source: Connect the Coastside
Rationale: Performance standard and traffic safety concern – increase access to central Moss Beach and does not meet intersection LOS under PM and weekend peaks, and all under Maximum Buildout Forecast conditions, and meets a signal warrant in Maximum Buildout Forecast conditions.
Location: Highway 1 and California Avenue
Discussion: Connect the Coastside recommends intersection control at Highway 1 and California Ave to 1) address intersection LOS deficiencies, 2) accommodate anticipated increased traffic at this location due to future development in Moss Beach, and 3) accommodate existing vehicular traffic and multimodal connections to downtown Moss Beach. Connect the Coastside recommends a roundabout for the reasons described under project R5. 16th Street / Highway 1 Intersection Control. Similarly, the final project recommendation is dependent upon resolving final design constraints and outcomes from a future Caltrans-required ICE. If a signal is the method of control selected in the ICE process, it is likely Highway 1 will be widened to four lanes in the vicinity of the intersection; the length of additional stacking lanes needed would be determined as part of a future operations and design study. Additional design considerations were discussed in the Moss Beach Charette (see Appendix A).

R7. Cypress Avenue / Highway 1 Intersection Control

Description: Intersection control, with preliminary recommendation of multi-lane roundabout. Final design to include pedestrian and bicycle accommodation, such as high-visibility marked crossings, curb ramps, lighting, and more.
Source: Connect the Coastside
Rationale: Performance standard and traffic safety concern – increase access to Princeton and does not meet intersection LOS in existing or future conditions, and meets signal warrant under existing and Maximum Buildout Forecast conditions
Location: Highway 1 and Cypress Avenue
Discussion: Connect the Coastside recommends intersection control at Highway 1 and Cypress Ave to: 1) address intersection LOS deficiencies; and 2) accommodate existing vehicular traffic and multimodal connections to Princeton and destinations like Fitzgerald Marine Reserve. Connect the Coastside recommends a roundabout for the reasons described under project R5. 16th Street / Highway 1 Intersection Control. Similarly, the final project recommendation is dependent upon final design constraints and outcomes from a future Caltrans-required ICE. If a signal is the method of control selected in the ICE process, it is likely Highway 1 will be widened to four lanes in the vicinity of the intersection; the length of additional stacking lanes needed would be determined as part of a future operations and design study. Additional design considerations were discussed in the Moss Beach Charette (see Appendix A).

Figure 7: R6. California Avenue and Highway 1 Single-Lane Roundabout Concept Diagram

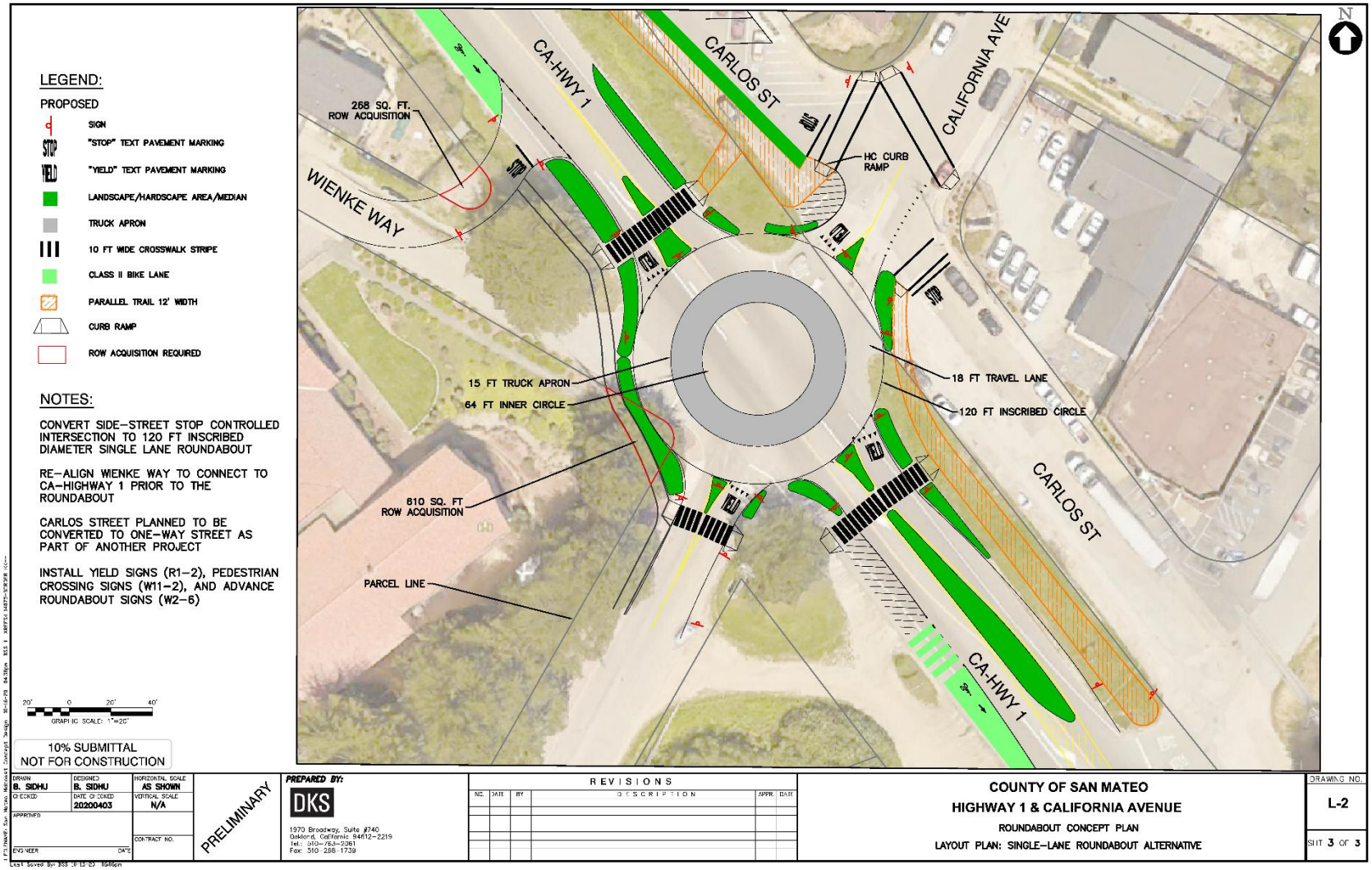
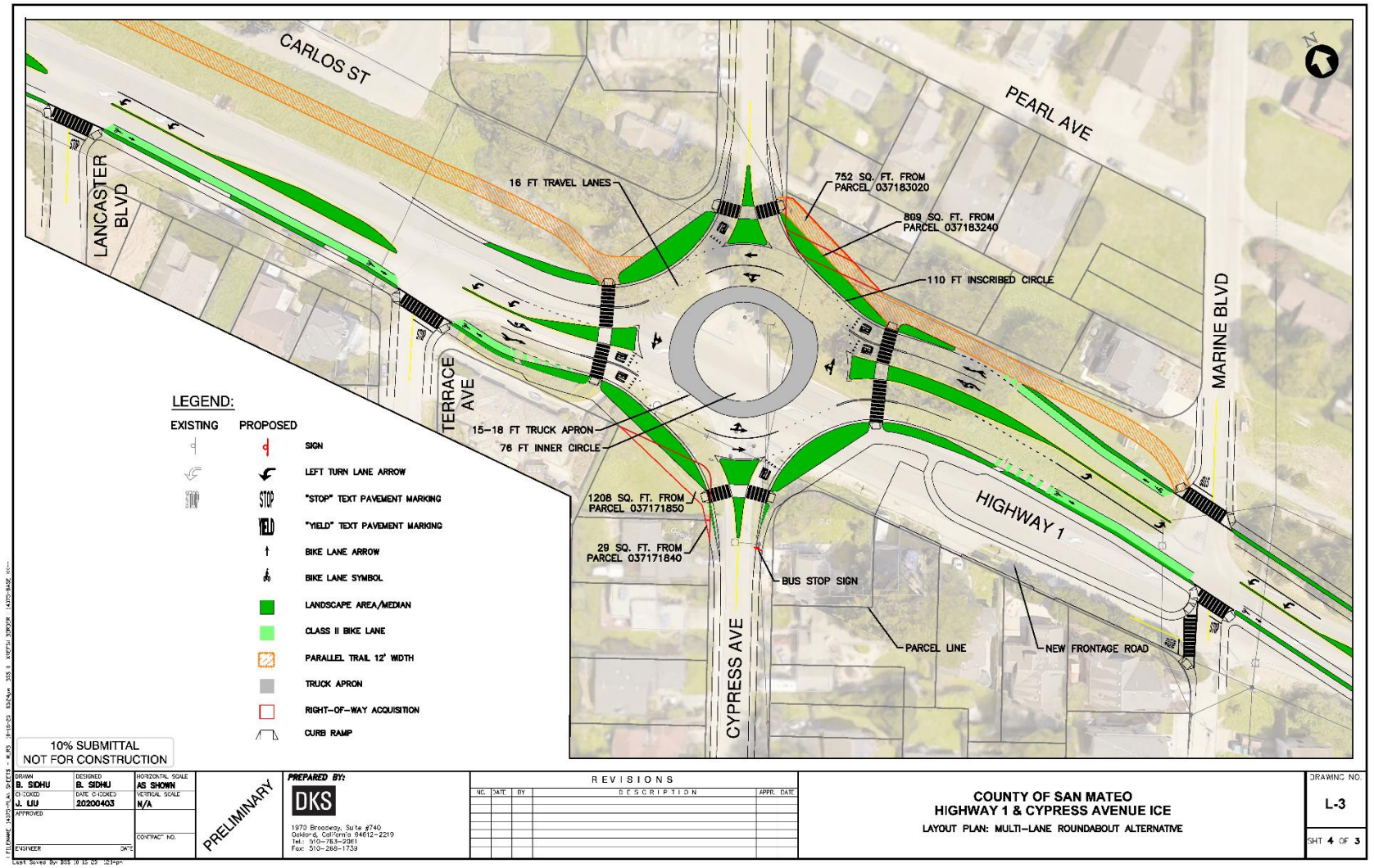


Figure 8: R7. Cypress Avenue and Highway 1 Multi-Lane Roundabout Concept Diagram



R8. Main Street Traffic Calming and Bicycle/Pedestrian Connectivity

Description: Pedestrian access, traffic calming and bicycle improvements in central Montara between 7th and 11th Streets, including curb extensions, sidewalks, marked crossings, mini traffic circle, and bike route.
Source: Highway 1 Safety & Mobility Improvement Study Phase 2 (p.46)
Rationale: Traffic safety concern and bicycle and pedestrian access – reduce traffic speeds in central Montara, enhance access to local businesses, and to the Parallel Trail.
Location: Main Street in Montara from 7th St to 11th St
Discussion: The recommended project aims to address traffic safety concerns of neighborhood speeding and unsafe conditions for people walking and bicycling. The project would include curb extensions and marked crosswalks with advanced yield markings and signs at uncontrolled locations at all intersections on Main Street from 7th St to 10th St, and a mini circle at Main and 7th Street. Sidewalks (where they do not currently exist) and ADA curb ramps would be constructed on both sides of Main Street from 7th Street to 9th Street, and on the east side of the roadway from 9th Street to 11th Street, and Class III Bike Route for extent. This project is a companion project to Pe2. Highway 1 Multimodal Parallel Trail and Pe3. Midcoast alignment of California Coastal Trail, since the alignment for both trails will follow Main Street in Montara. The design of all features will accommodate SamTrans buses.

Example of an ADA-compliant curb ramp, high-visibility crosswalk, and advanced stop bar

R9. CARLOS STREET REALIGNMENT TO 16TH STREET

Description: Realign northern terminus of Carlos Street at Highway 1 to connect to 16th Street.
Source: Connect the Coastside
Rationale: Traffic safety and circulation concerns – address conflicting turning movements on Highway 1 at Carlos St / 16th St and poor sight distance, improve pedestrian and bicycle circulation
Location: Highway 1 and Carlos Street
Discussion: Carlos Street provides direct access to central Moss Beach, residential areas, and will be the future alignment of the proposed Parallel Trail (Pe2). The recommended project aims to: 1) address the poor sight distance for turning vehicles from Carlos Street onto Highway 1 (northbound or southbound); 2) eliminate the current conflict of left-turning vehicles from Highway 1 southbound to Carlos Street and Highway 1 northbound to Lighthouse Drive; 3) improve future circulation by directing vehicles to a future controlled intersection (16th St), and 4) improve bicycle and pedestrian connections via the Parallel Trail. The project will close the terminus of Carlos Street with a guard rail, acquire right-of-way, and extend Carlos Street north to 16th Street (western edge of realigned right of way will be approximately 150 feet from eastern paved edge of Highway 1). Access to Carlos Street at its northern terminus will be via 16th Street and the future Highway 1 and 16th Street intersection control (R5).

Informal gravel road connecting Carlos Street to 16th Street

R10. CARLOS STREET TRAFFIC CALMING

Description: Striping, signage, and completion of missing sidewalk, with conversion to one-way to accommodate the Parallel Trail and calm traffic in central Moss Beach.
Source: Highway 1 Safety & Mobility Improvement Study Phase 2 (p.58-59), Connect the Coastside
Rationale: Traffic safety, circulation, and deficiency concern – addresses vehicular speeding in central Moss Beach and accommodating Parallel Trail, which addresses deficiencies in delay index on Highway 1
Location: Carlos Street between Etheldore Street/Vallemar Street and Vermont Avenue
Discussion: The recommended project aims to: 1) address vehicular speeding in central Moss Beach, 2) accommodate the Parallel Trail to address the forecasted deficiency in the delay index, 3) address traffic circulation and safety concerns due to the forecasted intersection control at California Avenue and Highway 1; 4) promote walking and bicycling to the area; and 5) increase the parking supply by defining parking spaces. The project would convert Carlos Street to one-way southbound from Etheldore Street to California Avenue, and change the orientation of existing angled car parking to face south. The project would also change the orientation of Carlos St between California and Vermont Avenues to one-way northbound to accommodate the proposed roundabout at California Avenue and Highway 1 (R6). The project would designate parallel car parking spaces along the west side of Carlos Avenue, add stop signs on Virginia and Vermont Avenues southbound, east of Carlos St, and complete the missing sidewalk between Etheldore Street and California Avenue (near restaurant). The project includes striping crosswalks at Carlos Street and California Avenue.

Carlos Street, south of Etheldore Street

R11. Highway 92 / Highway 35 (East, Lower) Intersection Improvements

Description: Intersection improvements to facilitate pedestrian and bicycle crossings and improve signal timing.
Source: Connect the Coastside
Rationale: Performance standard and traffic safety concern – add appropriate pedestrian and bicycle infrastructure to allow for safe crossings and improve signal timing to address deficiencies
Location: Highway 92 and Highway 35 at eastern, lower intersection
Discussion: The existing signalized intersection of Highways 92 and 35 (eastern, lower) near I-280 does not have any marked crossings or infrastructure to support walking and bicycling and connect the Crystal Springs Trail on opposite sides of Highway 92. Under projected conditions, this intersection will not meet intersection level of service performance standards. The proposed project would improve the intersection, including marked pedestrian crossings, pedestrian signal heads, ADA curb ramps, sidewalk to connect to the trail, and modified signal timing.

Example of a pedestrian countdown signal head

R12. HIGHWAY 92 / HIGHWAY 35 (WEST, UPPER) INTERSECTION CONTROL

Description: Add intersection control and crossing improvements to facilitate connections for trail users and turning movements for motorists.
Source: Connect the Coastside, SFPUC Southern Skyline Ridge Trail Extension Project
Rationale: Performance standard, traffic safety and circulation concerns - add appropriate pedestrian and bicycle infrastructure to allow for safe crossings and add intersection control to address projected deficiencies.
Location: Highway 92 and Highway 35 at western, upper intersection
Discussion: A section of the Bay Area Ridge Trail currently runs north of this intersection and the San Francisco Public Utilities Commission (SFPUC) released a draft Environmental Impact Report (DEIR) in June 2020 for the Southern Skyline Boulevard Ridge Trail Extension[21], which would extend the Bay Area Ridge Trail north and south of Highway 92. As described in the SFPUC's DEIR, Caltrans has explored various options to address existing congestion at Highway 92 and Highway 35 (west, upper) due to Level of Service F for vehicles northbound on Highway 35 turning left to westbound Highway 92 during weekday peak hours. Options explored include a grade separated interchange intersection, traffic signals, roundabout, marked crossing with flashing beacon, and bridge crossing; however, there have been concerns with conceptual designs due to speeds, sight distances, and topography as well as the environmental impacts of alternatives considered.

Connect the Coastside's traffic analysis based on the Maximum Buildout Forecast shows that in the future, the intersection of Highway 92 and Highway 35 (western, upper) would not meet intersection level of service standards, so intersection control would likely be needed in the future. For the purposes of the Mitigated Transportation Performance analysis on p.133, Connect the Coastside assumes implementation of a traffic signal, pending an Intersection Control Evaluation, but recognizes the challenges associated with this design. Due to the complexity of this location and need for additional study to accommodate trail users, pedestrians, bicyclists, transit riders, and turning vehicles, and in addition environmental and right of way constraints, Connect the Coastside recommends that Caltrans, San Mateo County, SFPUC, and others lead a collaborative community process to formulate a detailed recommendation and execute an agreement on the design, funding, and construction of the preferred solution(s).

[21] Draft Environmental Impact Report for proposed SFPUC Southern Skyline Boulevard Ridge Trail Extension Project available at https://ceqanet.opr.ca.gov/1998082030/10

R13. Highway 92 Truck Signs

Description: Add signage to Highway 92 to direct trucks to stay in the right lane
Source: Connect the Coastside
Rationale: Circulation concern
Location: Highway 92 prior east of Pilarcitos Creek (37.493197, -122.380490), and before the start of the retaining wall section between Pilarcitos Creek and SR-35 (37.491298, -122.375909)
Discussion: Trucks typically travel at slower speeds and this low-cost recommendation can help improve circulation and reduce delay in Highway 92 by having trucks stay to the right, allowing other vehicles to pass.

Figure 9: Trucks Use Right Lane Signage (R4-5

R14. Highway 92 Left-turn Pockets

Description: Provide left-turn pockets at local businesses with high traffic on Highway 92.
Source: Connect the Coastside
Rationale: Circulation and traffic safety concern – promote efficient highway traffic flow so turning vehicles do not block the single-lane of travel.
Location: Highway 92 at key activity generators such as: Half Moon Bay Nursery (11691 San Mateo Rd), Sun Studios Garden Center (12001 San Mateo Rd), Lemos Farm / Repetto's Florist (12320 San Mateo Rd), Pastorino Farms (513 San Mateo Rd), Repetto's (381 San Mateo Rd), and Spanish Town (276 San Mateo Rd).
Discussion: Left-turn pockets at major businesses along Highway 92 can improve business access and promote safe and efficient highway traffic flow by preventing turning vehicles from restricting flow. The recommended locations are subject to change based on future demand. Some locations may require highway widening, grading/fill, utility relocation, and/or retaining walls.

PEDESTRIAN (PE)

PE1. NEW AND IMPROVED CROSSINGS OF HIGHWAYS 1 AND 92

Description: Improve existing and add new pedestrian crossings on Highways 1 and 92, including: new overcrossing south of the Highway 1 and Carlos Street intersection, additional striping at existing crossings at Highway 1 and Coronado Street intersection, additional flashing beacon at Highway 1 and Virginia Ave, and new marked crossings with flashing beacons at other locations.
Source: Highway 1 Safety and Mobility Improvement Study Phase 2 (p.24-27), Highway 1 Safety & Mobility Improvement Study Phase 2 (p.51), and Connect the Coastside.
Rationale: Traffic safety, circulation, and accessibility concerns – consolidate pedestrian crossing locations based on key destinations and improve existing crossing to create more predictable pedestrian crossings and improve safety.
Location:

- New and improved marked pedestrian crossings with flashing beacons and signage at uncontrolled (no signal, roundabout, or stop sign) locations on Highway 1 at: north of Gray Whale Cove Parking lot, Montara Mountain Trailhead/McNee Ranch Parking Lot, Montara State Beach (1st St), 2nd St, 7th St, Virginia Ave (improve existing), Capistrano Road (N), 2 locations to-be determined between Sam's Chowder House and Coronado St, Medio Ave, and Mirada Rd; Highway 92 at Pilarcitos Creek Road and Pilarcitos Quarry Road
- New pedestrian and bicycle overcrossing of Highway 1 south of Carlos Street
- Improve existing controlled crossing[22] at Highway 1 and Coronado Street

Discussion: Without safe and accessible crossings, walking and taking transit for transportation becomes unsafe and challenging. There is one marked crossing at Highway 1 and Virginia Avenue that is uncontrolled with no flashing beacon, and otherwise no marked crossings for the nearly six-mile stretch between the Tom Lantos Tunnel and Capistrano Road (south). There are no marked pedestrian crossings of Highway 92.

Marked pedestrian crossings must be accompanied with additional infrastructure for safety. Connect the Coastside recommends using pedestrian hybrid overhead beacons or Rectangular Rapid Flash Beacons (RRFBs) to accompany any uncontrolled marked pedestrian crossing. Additional infrastructure, such as raised medians per the Highway 1 Safety and Mobility Study, should be evaluated as part of future detailed design at the project-level. Crossing locations are recommended based on pedestrian demand, including: access to northbound or southbound bus stops on either side of Highways 1 and 92, connecting trailheads and/or recreational destinations to their adjacent parking areas or neighborhood, and access to central business districts in each community.

[22] Note: Connect the Coastside recommends improvements to the Highway 1 and Capistrano Road (S) intersection, which is listed separately as project Pe8 as it includes additional infrastructure recommendations

Example of both RRFB and overhead Pedestrian Hybrid Beacon in San Anselmo, California

Initially recommended by the Highway 1 Safety and Mobility Study, the proposed overcrossing of Highway 1 south of Carlos Street would create a continuous and safe crossing for the California Coastal Trail across Highway 1, connecting with the Multimodal Parallel Trail. The natural grade on either side of Highway 1 would likely make providing the overcrossing cost less than at other locations by reducing ramps necessary to provide appropriate grades for accessibility.

Highway 1 and Coronado Street is an existing signalized location that includes one marked crossing of the freeway. The proposed project would improve the crossing by adding high-visibility crosswalk markings on all legs, advanced stop bars, pedestrian signal heads, and signage.

PE2. HIGHWAY 1 MULTIMODAL PARALLEL TRAIL

Naomi Patridge Trail in Half Moon Bay

Description: A continuous walking and bicycling facility along the east side of Highway 1 consisting of Class I paths, sidewalks, and Class III Bike Route, with marked crossings of streets intersecting streets with the path.
Source: Highway 1 Safety and Mobility Improvement Study Phase 2 (p.23, 25-27), Connect the Coastside
Rationale: Performance standard deficiency for delay index, traffic safety concerns, and multimodal accessibility
Location: Primarily Class I Bicycle and Pedestrian Path on the east side of Highway 1 from Mirada Road to 2nd Street in Montara, with Class III Bike Route with Sharrows and pedestrian path (sidewalk or trail) on Main St from 2nd to 11th and Carlos St north of Alley to Sierra.
Discussion: The Midcoast Multimodal Parallel Trail (Parallel Trail) will provide a continuous, car-free way to safely access Midcoast communities, town centers, schools and recreational destinations without having to travel on the highway. The Multimodal Trail was conceptualized in the community-developed Highway 1 Safety and Mobility Improvement Study in Phase 1. The Trail will be separated from the highway and have minimal interaction with vehicular traffic allowing it to serve residents of all ages and abilities. The Trail will span from Montara south to Miramar where it will connect with the Naomi Patridge Trail in Half Moon Bay. The Multimodal Parallel Trail segment from Coronado to Mirada Road (approximately 0.8 miles) has been funded and construction is expected to begin in 2021 and will serve as a safe route for students attending El Granada Elementary School and the Wilkinson School.

By providing residents the opportunity to walk and bicycle throughout the urbanized Midcoast, congestion on the highway should improve. Providing a high-quality continuous facility also serves to meet a performance standard deficiency for the delay index for Highway 1. The Parallel Trail would primarily be a Class I Bicycle and Pedestrian Path (12'-wide path with decomposed granite shoulders), with a combination of Class III Bike Route and sidewalks in locations where the Class I Path is not feasible to implement due to right of way constraints. Where the trail crosses side streets, marked crossings and ramps would be provided. The section of Highway 1 between 14th Street and 16th Street is narrow and may require bridging to provide a Class I Path. Additional design considerations were discussed at the Moss Beach Charette (Appendix A), with the presence of endangered species between Highway 1 and Carlos Street in Moss Beach as a key consideration for the alignment of the trail due to the challenges of relocation and/or mitigation for impacts.

PE3. MIDCOAST ALIGNMENT COMPLETION OF CALIFORNIA COASTAL TRAIL

Description: Recommended California Coastal Trail alignment and improvements in the Midcoast including: wayfinding signage, Class I Path, Class III Bike Route, sidewalks, trails, and paths.
Source: Highway 1 Safety and Mobility Improvement Study Phase 2 (p.24-27), Connect the Coastside
Rationale: Traffic safety and multimodal circulation concern – implementing appropriate signage, marked crossings, sidewalks, bike routes, and other infrastructure to define the alignment and access points for the California Coastal Trail, improving circulation and safety for this important Midcoast destination.
Location: Various streets and trails between Point San Pedro (north of Devil's Slide Trail) and Half Moon Bay Coastal Trail
Discussion: The California Coastal Trail (CCT) is envisioned as a continuous, interconnected public trail system spanning over 1,200 miles from Oregon to Mexico made up of a network of public trails, streets, and bikeways for walkers, bikers, equestrians, wheelchair riders and others along the coastline. In the Midcoast, the planned CCT route is approximately 10 miles long from Point San Pedro to Half Moon Bay. Some sections of the Midcoast CCT trail alignment have been built and each section's configuration varies considerably. In some areas, it traverses roadways on the landside of Highway 1, such as in Montara where it is designated on Pedro Mountain Road, and in others it is an earthen blufftop hiking trail, such as in Pillar Point Bluff, a San Mateo County Park.

The CCT is and continues to be an important destination for residents and visitors. Defining a preferred alignment and adding infrastructure to support trail use and access (e.g., marked crossings, sidewalks, and paths where needed) will create safer conditions for trail users and more predictable conditions for motorists. Connect the Coastside recommends a Midcoast CCT alignment as shown in the map below, with an emphasis on completing sections that overlap with multimodal transportation needs (south of Highway 1 and 1st Street). Where the alignment of the trail is on local roads, Connect the Coastside recommends a combination of decomposed granite paths (if sidewalks are not present), with Class III Bikeway and wayfinding signage. In some areas, new paths would need to be constructed (such as connecting the two ends of Vallemar Street in Moss Beach). In some cases, the alignment overlaps with other recommended projects (such as the Multimodal Parallel Trail (Pe2)); recommended improvements are described in those projects. Alternate alignments of the CCT from path erosion due to sea level rise would need to be considered in a future planning study recommended by this Plan.

Map 16: Recommended California Coastal Trail (Pe3) and Multimodal Parallel Trail (Pe2) Alignments and Pedestrian Crossings (Pe1)

Figure 10: Before and after visualization of recommended improvements at Highway 1 and 1st Street in Montara

BEFORE

AFTER – End of Multimodal Parallel Trail and marked crossing of Highway 1 to connect to continued alignment of California Coastal Trail

Mock-up courtesy of Christopher Hurte

Note: visualization is for conceptual illustrative purposes only

PE4. HIGHWAY 1 SIDEWALKS IN MOSS BEACH AND MONTARA

Description: Add sidewalks in central Montara and Moss Beach in front of businesses located on Highway 1 and marked crossings of side street intersections with Highway 1
Source: Connect the Coastside
Rationale: Traffic safety concern and multimodal access – create a safe way for pedestrians to access local businesses and reduce vehicular/pedestrian conflicts
Location: Highway 1 between 7th Street and 9th Street, and California Avenue and Marine Boulevard.
Discussion: There are local businesses that front Highway 1 in Moss Beach and Montara that are unsafe to access by walking due to a lack of sidewalk or pathway and many driveways access points. Connect the Coastside recommends adding sidewalks on the east side of Highway 1 between 7th and 9th Streets and the west side of Highway 1 between California Avenue and Marine Boulevard, consolidating driveways where feasible and adding ADA-compliant curb ramps. This will encourage walking to local businesses, increase pedestrian safety and visibility, and minimize vehicular/pedestrian conflicts. This project should be implemented concurrently with R1. Highway 1 Shoulder Treatment.

PE5. CENTRAL MOSS BEACH BICYCLE AND PEDESTRIAN IMPROVEMENTS

Description: Add sidewalk on west/north sides on Etheldore Street (north of California Avenue) where missing and on California Avenue (south of Etheldore Street) to connect to existing sidewalks. Add Class III Bike Route on California Avenue from Etheldore Street to Highway 1.
Source: Connect the Coastside
Rationale: Traffic safety concern and multimodal access – create a safe way for pedestrians to access local businesses and to transit stop, and reduce vehicular/pedestrian conflict
Location: California Avenue from Etheldore Street to Highway 1 and Etheldore Street, north of California Avenue.
Discussion: Central Moss Beach is an important destination, accessed primarily from Highway 1 at Vallemar Street and California Avenue. There are discontinuous biking and walking connections from the neighborhood to this destination and no paved waiting area for the bus stops at California Avenue and Etheldore Street. This project would improve multimodal access in this area of Moss Beach and reduce vehicular and pedestrian conflict by providing continuous sidewalks.

Class III Bike Route with Sharrows on Carlos Street in Moss Beach

Pe6. Montara Safe Routes to School

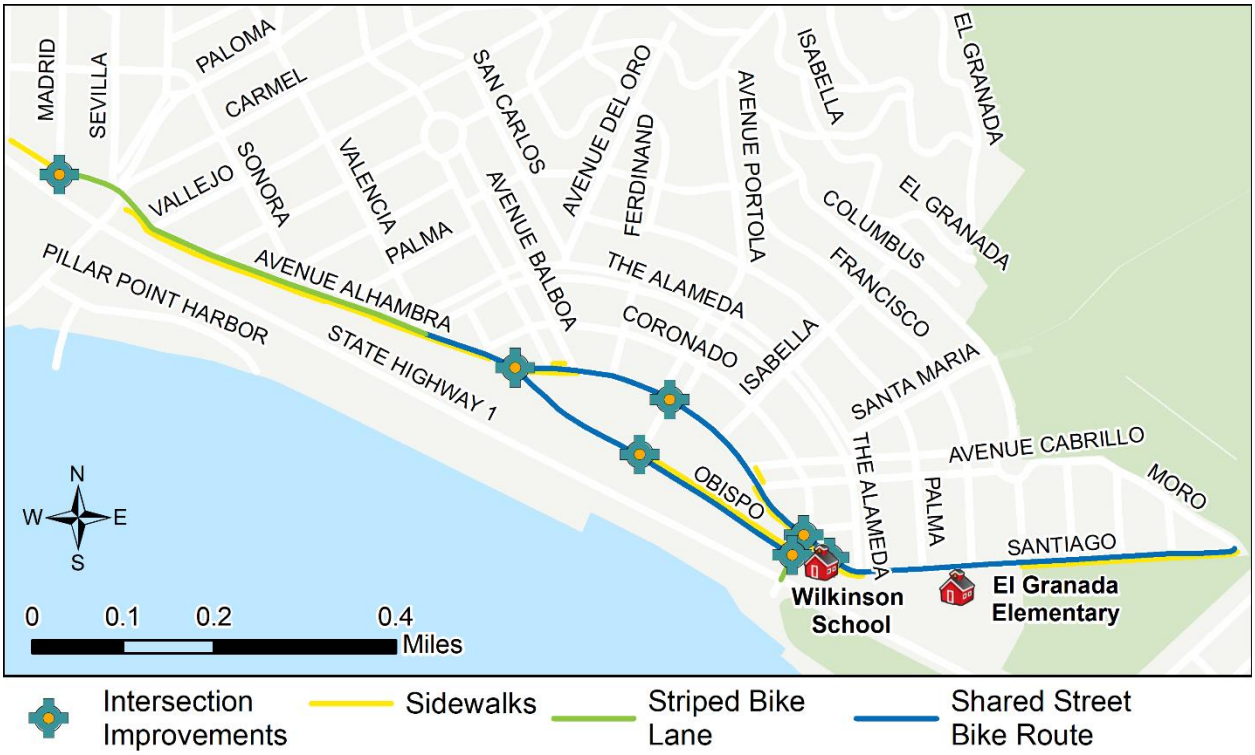
Description: Various improvements to make it easier to walk and bike to Farallone View Elementary School, including sidewalks on one side of the street, Class III Bike Routes, improved crossings, bicycle parking and stop signs.
Source: Connect the Coastside and Farallone View Walk and Bike Audit Final Report (2014)
Rationale: Traffic safety concern, circulation, and multimodal access; add appropriate infrastructure to increase the number of students walking and bicycling to school to improve peak hour circulation and congestion issues
Location: 5th Street from Main Street to Le Conte Avenue, Le Conte Avenue from 6th Street to Kanoff Avenue, and 6th Street from Le Conte Avenue to Sunshine Valley Road
Discussion: Parents dropping off and picking up their children from school can contribute to peak hour traffic congestion and neighborhood safety concerns, such as children crossing the street at various locations. Safe Routes to School (SRTS) is a comprehensive approach to enable and encourage students to walk or bicycle to school. An integral part of SRTS is making physical improvements to increase student safety. In 2014, the San Mateo County Office of Education through its SRTS program sponsored a walk and bike audit of Farallone View. The results of this report are available at: http://cusd-hmb.org/CUSD_file/SR2S_FV-Walk-Audit_3-17-14.pdf
Connect the Coastside recommends implementing key recommendations from the audit, including continuous walking and bicycling infrastructure to Farallone View (to connect to existing on north side of 5th St from Farallone Ave to East Ave), marked crossings where missing on route, all-way stop at Le Conte/5th and on 5th at East Ave, ramps, and Class III Bike Routes.

Map 17: Pe6. Montara Safe Routes to School

PE7. EL GRANADA SAFE ROUTES TO SCHOOL

Description: Various improvements to make it easier to walk and bike to El Granada Elementary School and the Wilkinson School, including sidewalks, Class III Bike Routes, traffic calming, and improved crossings.
Source: Connect the Coastside
Rationale: Traffic safety concern, circulation, and multimodal access – add multimodal infrastructure to increase the number of students walking and bicycling to school to improve peak hour circulation and congestion issues
Location: Avenue Alhambra, Obispo Road from Avenue Alhambra to Coronado Street, and Coronado Street from Highway 1 to Avenue Alhambra
Discussion: As described in project Pe6, Connect the Coastside recommends continuous walking and bicycling infrastructure to support Safe Routes to School. This project complements the Parallel Trail improvements by recommending continuous sidewalks, Class III Bikeways, and crossing improvements from the northern area of El Granada to walk to the Wilkinson School and El Granada Elementary School. The proposed improvements would also enable better access to transit stops. Crossing improvements would be subject to further detailed design and are recommended to include high-visibility marked crossings, advanced stop bars, ADA curb ramps, and painted islands at some locations. Connect the Coastside recommends engaging in SRTS-efforts with a walk and bicycle audit to confirm the approach.

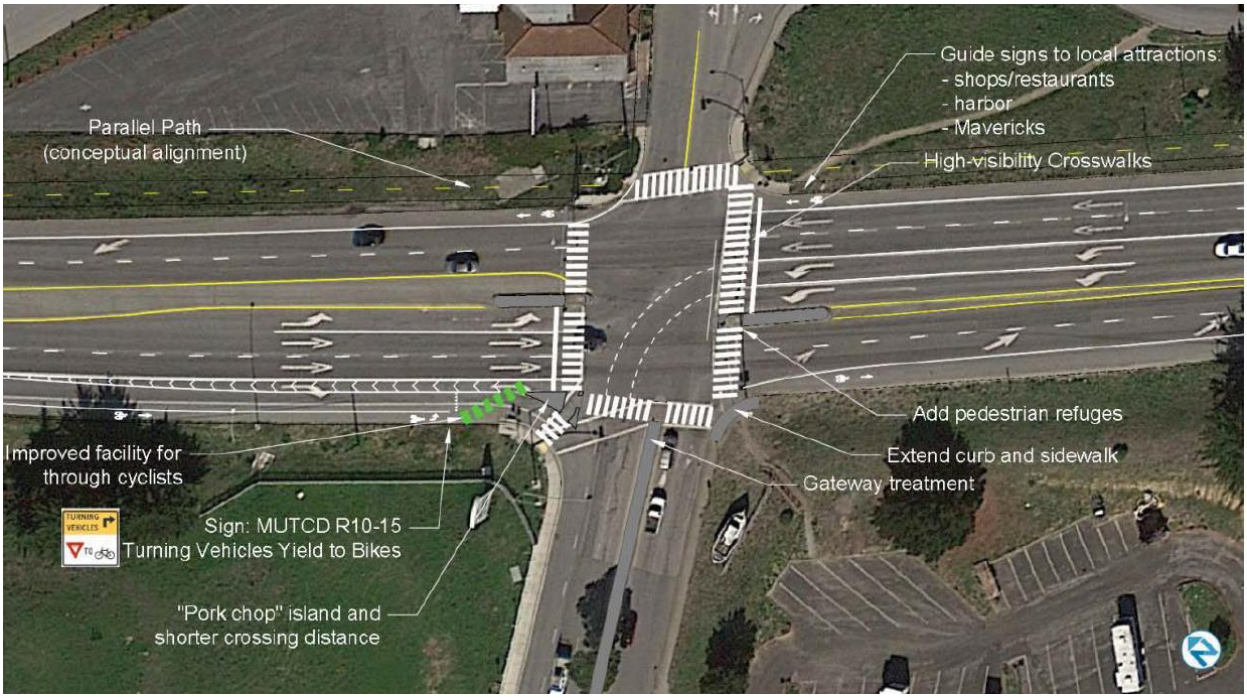
Map 18: Pe7. El Granada Safe Routes to School



PE8. CAPISTRANO ROAD (SOUTH) INTERSECTION IMPROVEMENTS

Description: Improve intersection for pedestrian access including high visibility crosswalks with advanced stop bars, pedestrian refuge islands, MUTCD R10-15 Signs, guide signs, and pork chop island.
Source: Connect the Coastside and Plan Princeton (draft)
Rationale: Traffic safety concern and multimodal access – enhance pedestrian and bicycle connectivity between Princeton and El Granada
Location: Highway 1 and Capistrano Road (south)
Discussion: The intersection of Capistrano Road (S) and Highway 1 is currently signalized and is not forecasted to be deficient under Maximum Buildout Forecast conditions for intersection LOS, but could be improved for people walking and bicycling since it is an important entry point to both Princeton and El Granada and connects the two. The proposed project would: improve pedestrian and bicyclist visibility by adding high visibility marked crossings and signage; create safe spaces for pedestrians and shorten crossing distances with pedestrian refuge islands and pork chop island; and improve circulation by adding wayfinding signage. The conceptual design may change with further community input on Plan Princeton. This project complements project B3. Capistrano Road Bikeways.

Figure 11: Highway 1 and Capistrano Road (S) Conceptual Improvements



BIKEWAYS (B)

B1. HIGHWAY 1 BIKEWAY

Description: Class II Bike Lanes on Highway 1
Source: Highway 1 Safety and Mobility Improvement Study Phase 2 (p.24-27), Unincorporated San Mateo County Active Transportation Plan (Draft), C/CAG Comprehensive Bicycle and Pedestrian Plan (Draft)
Rationale: Traffic safety concern, multimodal access, and performance standard deficiency – provide a designated bikeway for confident cyclists traveling longer distances and define consistent lane widths on Highway 1 with the restriping
Location: Highway 1 from Tom Lantos Tunnel to Mirada Road (County boundary)
Discussion: Although there are no designated and continuous bicycle facilities connecting Midcoast communities on Highway 1, it continues to serve as an important bikeway for commuting and events such as the AIDS/LifeCycle fundraiser. Various past and ongoing planning efforts have recommended Class II Bike Lanes along Highway 1 to create safer cycling conditions and encourage bicycling for transportation, especially for cyclists going long distances and traveling at higher speeds. The recommended Class II Bike Lanes would provide an alternate bikeway to the Parallel Trail and could help address the delay index performance standard deficiency under Maximum Buildout Forecast conditions.

Photo of cyclists on Highway 1 in the Midcoast courtesy of AIDS/LifeCycle

B2. Airport Street Bikeway and Princeton Connections

Description: Bicycle and pedestrian connections from Moss Beach to Princeton via Cypress and Airport St.
Source: Highway 1 Safety and Mobility Improvement Study Phase 1, Plan Princeton (Draft), Unincorporated San Mateo County Active Transportation Plan (Draft), and Connect the Coastside.
Rationale: Traffic safety concern and multimodal access – provide traffic calming measures and designated bikeways and walkways to connect residents and visitors to key destinations in Princeton and reduce vehicular speeds
Location:

- Cypress Ave from Highway 1 to Airport St: Class III Bike Route with pedestrian path on north side
- Airport St from Cypress Ave to Cornell Ave options: (1) Class I Path on east side, (2) Class II Bike Lanes with sidewalk on west side, or (3) Class III Bike Route with sidewalk on west side
- Class III Bike Route on Cornell Ave from Airport St to Broadway, and Broadway from Cornell Ave / California Ave to Prospect Way.

Discussion: Cypress Avenue and Airport Street are bypasses to Highway 1 and connect to destinations like Princeton, Fitzgerald Marine Reserve, Pillar Point Bluff Park, and SamTrans Route 17. Airport Street provides access to Pillar Ridge Manufactured Housing Community and abuts the Half Moon Bay Airport. During Connect the Coastside's 2020 community engagement, stakeholders shared their concerns around traffic safety including excessive speeding and lack of continuous walking or bicycling facilities. There are no sidewalks (except in front of Pillar Ridge) and shoulders are often blocked by parked cars, making it unsafe for residents to walk the short distance to Princeton. Residents on Cypress Avenue started Safe Streets Coastside Change.org petition to address these concerns, and has over 300 signatures as of November 2020[23]. Connect the Coastside recommends a future planning study to engage residents and other stakeholders, including local business owners, Department of Public Works, Federal Aviation Administration, SamTrans, and County Parks, to determine the design of bicycle and pedestrian facilities. Preliminary recommendations for cost estimate purposes are described under "Location" above.

SamTrans bus stop across from Pillar Ridge Manufactured Housing Community (Photo courtesy of Google)

[23] Safe Streets Coastside Change.org petition as of 11/28/20 - https://www.change.org/p/county-of-san-mateo-safe-streets-coastside-4bed45c1-9f38-4480-b1cc-a1b7e901c6c2?redirect=false

B3. Capistrano Road Bikeway

Description: Bikeway designations on Capistrano Road, including Class III Bike Route with paved shoulders with sharrows.
Source: Highway 1 Safety and Mobility Improvement Study, Plan Princeton (Draft), Unincorporated San Mateo County Active Transportation Plan (Draft)
Rationale: Traffic safety concern and multimodal access – provide a designated bikeway to connect residents and visitors to key destinations in Princeton and reduce vehicular speeds
Location: Capistrano Road from Highway 1 (northern end) to Avenue Alhambra:

- Highway 1 north to Prospect Way: Class III Bike Route with Paved Shoulders
- North of Prospect Way to Highway 1 south: Class III Bike Route with Sharrows
- Highway 1 south to Avenue Alhambra: Class II Bike Lanes

Discussion: Capistrano Road connects those traveling southbound on Highway 1 directly into Princeton and is a particularly important connection for cyclists and those who may want to access any future Denniston Creek trail facilities at Capistrano Road (N) and Highway 1. It allows Highway 1 southbound cyclists to avoid turning at the intersection at Capistrano Road (S) and bike on a lower-volume street. Providing a designated bikeway will increase access to local businesses and increase the number of trips taken by bicycle, contributing to reduced congestion.

B4. Highway 92 Bikeway

Description: Bikeway designation on Highway 92 of Class III and widening shoulders where feasible
Source: Connect the Coastside, Unincorporated San Mateo County Active Transportation Plan (Draft), and C/CAG Comprehensive Bicycle and Pedestrian Plan (Draft)
Rationale: Traffic safety concern and circulation – increase safety for bicyclists traveling on Highway 92 and shoulders for breakdowns and passing in emergencies
Location: Highway 92 between Half Moon Bay (County boundary) and Canada Road
Discussion: Highway 92 is the primary connection between the coastside and the bayside, and provides access to trailheads and local businesses, and SamTrans Route 294 bus stops. Aside from transit, there are no multimodal connections along Highway 92 and no alternate bikeways connecting the San Mateo County bayside to coastside. Providing a separated bikeway along Highway 92 would likely require extensive grading and fill and impacts to environmental resources. Connect the Coastside recommends providing widened shoulders and Class III Bike Route were feasible to facilitate multimodal connections to existing bus stops, local businesses, and the anticipated increased demand for cycling to and from the Bay Area Ridge Trail.

B5. Bicycle Parking

Description: Install short-term bicycle parking at key destinations throughout the Midcoast
Source: Connect the Coastside and Unincorporated San Mateo County Active Transportation Plan (Draft)
Rationale: Multimodal accessibility – provide adequate bicycle parking as an end-of-trip facility to encourage more bicycling.
Location: Various locations throughout the Midcoast at key destinations including central areas of Montara, Moss Beach, El Granada, Princeton, and Miramar; trailheads; parks; schools; public facilities and transit stops.
Discussion: Secure bicycle parking as a key element of the bicycle network especially at end-trip locations. Two common types of bicycle parking are

- Inverted U-racks, which are typically used for short-term trips and support the bicycle to stand upright at two points, and
- Bicycle lockers, which are typically used for longer-term trips (such as full-day of work) and enclose the bicycle completely.

Map 19: Recommended Bicycle Parking

The proposed project would add short-term bicycle parking at all Midcoast destinations to make bicycling a viable form of transportation, much like vehicular parking is needed to make travel by car easy. The County can partner employers, such as Seton Coastside Medical Center to encourage the implementation of long-term bicycle parking.

TRANSIT (T)

T1. TRANSIT STOP IMPROVEMENTS

Description: Work with San Mateo County Transit District to provide various amenities at existing transit stops to increase safety and comfort, including, where applicable: benches, shelters, signage, and lighting.
Source: Connect the Coastside
Rationale: Multimodal access and transit stop guidelines – providing greater transit stop amenities could encourage more residents to take transit
Location: Midcoast bus stops, primarily for SamTrans Route 17
Discussion: As described in the Transit section of Existing Conditions (page 67), bus frequencies are between 30 and 120 minutes and nearly all bus stops in the Midcoast are a pole with a sign with no additional amenities. Connect the Coastside recommends improving all transit stops with ADA-accessible boarding zone, signage and benches; current estimates assume that 95% of stops require such upgrades. Shelters and lighting should be prioritized at high ridership locations, especially at employment sites and in central business areas (about 5% of stops). Providing amenities can make waiting for transit less onerous and could support additional ridership in the future. Older and disabled persons are more likely to be transit-dependent, making benches critical amenities for health and safety.

T2. RECREATIONAL SHUTTLE

Description: Work with San Mateo County Transit District to implement recreational Shuttle(s) that run from 1) Hillsdale Caltrain Station to the Midcoast via Highway 92, continuing north to Gray Whale Cove and returning, and 2) Colma BART to Highways 1 and 92 intersection and returning.
Source: Connect the Coastside and previous Coastside Beach Shuttle[24]
Rationale: Performance standard deficiency and multimodal access – provide alternate means for those living outside of the Midcoast to visit and to travel without a car to key coastside destinations
Location: Highways 1 and 92
Discussion: A portion of Midcoast congestion leading to projected deficiencies is due to regional growth and visitors to the coast during weekend peak periods. Public transportation to and along the coastside is limited and does not provide the flexibility or frequency necessary to make it viable for visitors outside of the Midcoast. In 2017, the San Mateo County Transit District funded a Coastside Beach Shuttle program, which connected SamTrans Route 17 bus stops in Half Moon Bay to other destinations such as the Fitzgerald Marine Reserve. Connect the Coastside recommends expanding upon this by providing weekend recreational shuttles to improve weekend peak hour conditions. The shuttles would stop at several key destinations on the Coast and connect to local Route 17 transit stops.

[24] https://cmo.smcgov.org/local-shuttle-bus-coast-san-mateo-county-transportation-authority

T3. Increased Midcoast Bus Service

Description: Work with San Mateo County Transit District to provide additional bus service on existing lines serving the Midcoast, new commute express bus service between the Half Moon Bay and the Colma BART station, and align bus schedules to support student travel needs.
Source: Connect the Coastside
Rationale: Additional service will encourage more residents to take transit for everyday transportation and support the implementation of project T2 to address first/last mile connections.
Location: Highway 1, SamTrans Route 17
Discussion: Although current SamTrans ridership does not support expansion to bus service, addressing traffic congestion and climate change will necessitate a significant reduction in trips by automobile and a dramatic increase in transit trips. Connect the Coastside recommends working with regional partners, including the Transit District, C/CAG, and others, to expand transit service on the Midcoast and increasing weekday peak hour frequencies of Route 17 to 20 minutes, aligning service with student travel needs, and increasing weekend frequencies. This project would also increase the frequency of buses that travel to and from the coastside. Lastly, the project would create an Express Bus service from the intersection of Highways 1 and 92 to Colma BART station and back during the weekday peak periods. Providing express bus service should be coordinated with the establishment of necessary park and ride locations; Connect the Coastside does not recommend any specific locations. This is an aspirational project, necessary to achieve the County's greenhouse gas emission targets and to improve mobility in the Midcoast for residents and visitors alike.

PARKING (PA)

The lack of parking capacity for weekday commuters and the large amount of weekend recreational parking demand discourages commuter and visitor use of transit, reducing service viability and results in a spillover of recreational demand into community parking areas. The San Mateo County Coastside Access Study conducted in 2015 demonstrates a need for additional parking in the Midcoast.

The Local Coastal Program recommends formalized parking with clear signage for visitors and park and ride users, and includes several policies related to parking:

- 2.52(b) to provide public access parking that is not time restricted and signage indicating parking is available.
- 2.54 to encourage the use of transit by developing a park and ride facility near the intersection of Highways 1 and 92.
- 10.22(c) details specific criteria when developing or relocating new off-street parking facilities for shoreline access areas, such as preference for sites that are currently used for informal shoreline access parking.
- Table 10.6 which includes site specific recommendations for shoreline destinations, which specifies developing or expanding parking at locations including Montara State Beach, Point Montara, at Vallemar Street and Juliana Avenue, Pillar Point Harbor, Princeton Beaches, and others.

Connect the Coastside recommends improvements as stated below and the need for a future comprehensive parking study to confirm the locations, amounts, and design of parking. Park and ride lots should be established in conjunction with expanded transit service or provision of express buses. Similarly, Connect the Coastside does not include recommendations for parking on Highway 1 due to necessary future coordination; for example, establishing formal parking lots to serve Surfer's Beach.

PA1. UPPER GRAY WHALE COVE PARKING LOT IMPROVEMENTS

Description: Improve existing dirt parking lot with pervious concrete, improve drainage and increase parking spaces; provide path of travel to pedestrian crossing of Highway 1
Source: San Mateo County Coastside Access Study (2015)
Rationale: Circulation and traffic safety concerns – defining parking stalls will help increase parking capacity, and reduce parking alongside Highway 1, improving highway circulation
Location: Gray Whale Cove Trail Parking Lot (south of Gray Whale Cove State Beach, east of Highway 1)
Discussion: Connect the Coastside recommends adding pervious pavement and marking parking stalls to ensure that this beach access parking lot is usable year-round and maximizes parking capacity. Paving and marking parking stalls for the Gray Whale Cove Parking Lot can reduce unsafe behaviors along the Highway and reduce delay and congestion caused by visitors parking on the shoulder. This project would complement the planned pedestrian crossing of Highway 1 at Gray Whale Cove and turn and acceleration lanes.

Gray Whale Cove Parking Lot

PA2. WAYFINDING

Description: Install wayfinding signage to help orient drivers seeking various Midcoast destinations, including locations of public parking.
Source: San Mateo County Coastside Access Study (2015), Plan Princeton (draft)
Rationale: Circulation and traffic safety concerns – clarifying available parking locations and destinations will reduce circling and behavior that could lead to additional congestion
Location: Various locations throughout the Midcoast
Discussion: Drivers slowing down and blocking travel lanes while searching for parking can add to traffic congestion. Wayfinding signage can help minimize confusion by providing clear and recognizable signage that points people to potential destinations, such as access points to beaches and local businesses, and to direct people to public parking lots and discourage parking along Highway 1. Wayfinding is especially important in the El Granada and Princeton area, where there are many destinations and public parking lots and informal parking. Connect the Coastside recommends a wayfinding study and set-aside for implementation.

Gateway signage at Pillar Point Harbor

MITIGATED TRANSPORTATION PERFORMANCE

The software tools used to assess the impact of mitigations are limited in what they can consider; primarily, they account for projects that impact traffic operations (e.g., a new roundabout, signal timing changes) or increase intersection or roadway capacity (e.g., if lanes were added to the highway). There is a substantial body of research that shows infrastructure interventions that increase the safety of and promote walking, bicycling, and transit use will ultimately reduce the amount of driving and can improve overall traffic. However, these interventions cannot be modeled effectively and are not incorporated in the analysis of transportation performance. Non-infrastructure approaches (policies, planning efforts, and programs) are critical to reducing the overall demand for driving and can improve overall conditions in the long-term. Connect the Coastside's recommended plans, policies, and programs begin on page 139.

INTERSECTION LEVEL OF SERVICE

The table below compares intersection Level of Service (LOS) under existing, maximum buildout forecast, and mitigated maximum buildout forecast conditions. Only intersection operating improvements are incorporated into the model, therefore, the only differences between maximum buildout and mitigated maximum buildout is where intersection controls are recommended (Highway 1 and 16th Street, California Avenue, and Cypress Avenue; and Highway 92 and Highway 35 upper) and locations with signal timing changes (Highway 92 and Highway 35 lower).

As noted in previous sections, the intersection LOS reported for any uncontrolled location is the LOS of the worst approach, which is typically the minor street where vehicles are attempting to turn onto the Highway. Volumes are low on these minor street approaches, except for Cypress Avenue (current and future) and California Avenue (future).

Table 30: Mitigated Maximum Buildout Forecast Conditions Intersection Level of Service Compared to Existing and Maximum Buildout Forecast Conditions

				AM Peak Hour LOS			PM Peak Hour LOS			Weekend (Midday) Peak Hour LOS		
Street Names	**Existing Control Type**	**Mitigated Control Type**	**LOS Standard[1]**	**Existing[2]**	**Maximum Buildout[2]**	**Mitigated Max. Buildout[3]**	**Existing[2]**	**Maximum Buildout[2]**	**Mitigated Max. Buildout[3]**	**Existing[2]**	**Maximum Buildout[2]**	**Mitigated Max. Buildout[3]**
Highway 1												
SR-1 / 2nd St	TWSC	TWSC	C(D)	C	F	F	C	F	F	C	F	F
SR-1 / 7th St	TWSC	TWSC	C(D)	B	C	C	B	C	C	B	C	C
SR-1 / 8th St	TWSC	TWSC	C(D)	C	F	F	D	F	F	E	F	F
SR -1 / 16th St^	TWSC	RAB (1 L)	C(D)	C	F	B	E	F	C	E	F	C
SR -1 / Carlos St	TWSC	TWSC	C(D)	B	C	C	B	C	C	B	C	C
SR-1 / Vallemar St	TWSC	TWSC	C(D)	C	D	D	C	F	F	C	E	E
SR-1 / California Ave	TWSC	RAB (1 L)	C(D)	D	F	B	E	F	C	F	F	B
SR-1 / Virginia Ave	TWSC	TWSC	C(D)	C	F	F	E	F	F	F	F	F
SR-1 / Vermont Ave (WB)	TWSC	TWSC	C(D)	D	F	F	E	F	F	F	F	F
SR-1 / Cypress Ave (EB)	TWSC	RAB (2 L)	C(D)	E	F	A	F	F	A	F	F	A
SR-1 / Etheldore St (South)	TWSC	TWSC	C(D)	C	F	F	D	F	F	E	C	C
SR-1 / Capistrano Rd (North)	TWSC	TWSC	C(D)	C	C	C	C	C	C	D	D	D
SR-1 / Coral Reef Ave	TWSC	TWSC	C(D)	C	F	F	C	F	F	D	F	F
SR-1 / Capistrano Rd (South)	Signalized	Signalized	C(D)	B	C	C	B	C	C	C	C	C
SR-1 / Coronado St	Signalized	Signalized	C(D)	C	D	D	B	D	D	B	E	E
Obispo Rd / Coronado St	TWSC	TWSC	C(D)	B	B	B	B	B	B	B	B	B

SR-1 / Magellan Ave	TWSC	TWSC	C(D)	F	F	F	F	F	F	F	F	F
SR-1 / Medio Ave	TWSC	TWSC	C(D)	F	F	F	F	F	F	F	F	F
SR-1 / Miramar Dr	TWSC	TWSC	C(D)	C	E	E	F	F	F	E	F	F
SR-1 / Mirada Rd	TWSC	TWSC	C(D)	F	F	F	F	F	F	F	F	F
Highway 92												
SR-92 / Ox Mt. Landfill Rd	TWSC	TWSC	C(D)	F	E	E	F	F	F	D	F	F
SR-92 / Skyline Blvd (Upper)	TWSC	Signalized	C(D)	E	F	C	F	F	D	F	F	D
SR-92 / SR-35 (Lower)[4]	Signalized	Signalized	C(D)	B	D	B	C	F	C	D	F	C

[1]LOS standard provided within parenthesis are for any one individual movement
[2]Signalized intersections and all way stop-controlled (AWSC) are reported by the LOS for the intersection; two-way stop controlled (TWSC) intersections are reported with the worst approach's level of service
[3]Mitigations are applied at 16th, California, and Cypress (EB); other intersections LOS are the same as Maximum Buildout since no operational improvements are assumed. Intersection LOS are from SIDRA reports (overall LOS for all vehicles).
[4]Signal timings were updated to better serve demand, improving level of service; signal timings are generally optimized when looking at cumulative conditions.
^ Level of Service analysis was done as part of draft Intersection Control Evaluation memos; LOS for existing, buildout, and mitigated buildout for each time period are reported for HCM 2010 TWSC

DELAY

The table below compares delay under existing, maximum buildout forecast, and mitigated maximum buildout forecast conditions. Delay is measured in terms of travel time for free-flow conditions compared to peak period conditions. Delay can be impacted through interventions that smooth traffic flow, such as adjusting signal timing, adding stacking lanes (allowing more lanes at intersections where queues build up), and turn lanes at uncontrolled intersections.

Highway 1 meets the delay index threshold of 3.0 for all peak periods under Mitigated Buildout Conditions. Highway 92 meets the delay index threshold of 2.0 for all peak periods under Mitigated Buildout Conditions. Like the Intersection Level of Service Analysis, the projects contributing to changes in delay under Mitigated Buildout Conditions are where intersection controls are recommended (Highway 1 and 16th Street, California Avenue, and Cypress Avenue; and Highway 92 and Highway 35 upper) and locations with signal timing changes (Highway 92 and Highway 35 lower). The analysis also accounts for the addition of turn and acceleration lanes along Highways 1 and 92.

Table 31: Mitigated Maximum Buildout Forecast Delay Index Compared to Existing and Maximum Buildout for Highway 1

	FREE FLOW~	EXISTING						MAXIMUM BUILDOUT*						MITIGATED MAXIMUM BUILDOUT^					
		AM		MD		PM		AM		MD		PM		AM		MD		PM	
Highway 1 - Southbound	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
1st Street to 16th Street	01:00	00:29	0.49	00:33	0.55	00:32	0.53	00:34	0.58	00:48	0.80	00:39	0.66	01:17	1.29	01:20	1.34	01:29	1.49
16th Street to Capistrano (North)	02:59	03:40	1.23	03:56	1.32	03:50	1.28	03:34	1.19	04:02	1.35	03:41	1.23	08:02	2.70	04:11	1.40	05:44	1.92
Capistrano (North) to Mirada Road	02:29	03:10	1.27	03:21	1.35	03:16	1.31	05:43	2.30	07:45	3.12	10:39	4.28	03:52	1.55	04:15	1.71	03:42	1.49
Total	**06:28**	**07:19**	**1.13**	**07:50**	**1.21**	**07:37**	**1.18**	**09:51**	**1.52**	**12:35**	**1.94**	**14:59**	**2.32**	**13:11**	**2.04**	**09:46**	**1.51**	**10:56**	**1.69**
Highway 1 - Northbound	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
Mirada Road to Capistrano (North)	02:36	03:05	1.18	03:29	1.34	03:27	1.32	03:29	1.34	04:54	1.88	04:32	1.74	03:25	1.31	03:46	1.45	03:42	1.42
Capistrano (North) to 16th Street	02:59	03:24	1.14	03:27	1.16	03:28	1.16	03:15	1.09	03:20	1.12	03:24	1.14	03:46	1.26	03:55	1.32	03:56	1.32
16th Street to 1st Street	00:54	01:00	1.11	01:00	1.10	00:56	1.04	01:09	1.28	01:08	1.25	01:06	1.21	01:16	1.40	01:16	1.39	01:13	1.35
Total	**06:29**	**07:28**	**1.15**	**07:56**	**1.22**	**07:51**	**1.21**	**07:53**	**1.22**	**09:22**	**1.44**	**09:01**	**1.39**	**08:26**	**1.30**	**08:57**	**1.38**	**08:52**	**1.37**
~ Free Flow is segment length divided by the speed limit and an output of Synchro																			
* In Maximum Buildout conditions, segments that do not meet the delay index standard of 2.0 are highlighted in red																			
^ In Mitigated Maximum Buildout conditions, all segments meet the proposed delay index standard of 3.0 because parallel bicycle and pedestrian facilities are provided																			

Table 32: Mitigated Maximum Buildout Forecast Delay Index Compared to Existing and Maximum Buildout for Highway 92

	FREE FLOW~	EXISTING						MAXIMUM BUILDOUT*						MITIGATED MAXIMUM BUILDOUT*					
		AM		MD		PM		AM		MD		PM		AM		MD		PM	
Highway 92	*Travel Time*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*	*Travel Time*	*Delay Index*
HMB City Limit to I-280 Ramp (EB)	08:42	12:51	1.48	12:51	1.48	12:43	1.46	12:48	1.47	12:39	1.45	12:40	1.46	17:12	1.98	13:10	1.51	13:12	1.52
I-280 Ramp to HMB City Limit (WB)	08:42	12:25	1.43	12:25	1.43	12:49	1.47	12:21	1.42	12:44	1.46	12:45	1.47	12:32	1.44	13:06	1.51	13:05	1.50

RECOMMENDED PLANNING STUDIES

PLANNING FOR SEA LEVEL RISE AND COASTAL EROSION

Addressing the impacts of climate change in the Midcoast, and specifically sea level rise and subsequent impacts on evacuation, will require additional community-engaged planning studies to allow for deeper stakeholder engagement and collaboration with agency partners, data collection and analysis, and identification of specific improvements that incorporate climate resiliency. The County's new Flood and Sea Level Rise Resilience District will take a lead role in planning for and adapting to sea level rise and coastal erosion in the County.

Plan Princeton (described on page 33) is an ongoing community-based planning process to develop a land use plan, update zoning and create a shoreline management strategy that assesses vulnerabilities and identifies policies and improvements necessary to address the impacts of climate change and sea level rise in Princeton. The Princeton shoreline includes areas of unauthorized rip-rap and other measures to protect properties from erosion; however, this piece-meal approach may have exacerbated erosion in unprotected shoreline areas of the harbor. The intent of the Plan Princeton's Shoreline Management Plan is to address sea level rise and coastal erosion in a sustainable, coordinated, adaptable, environmentally acceptable, and economically viable manner, and to restore the beach for public access and habitat. The Plan will provide important data that can support future sea level rise and coastal erosion assessments. Connect the Coastside recommends the following additional planning efforts and studies.

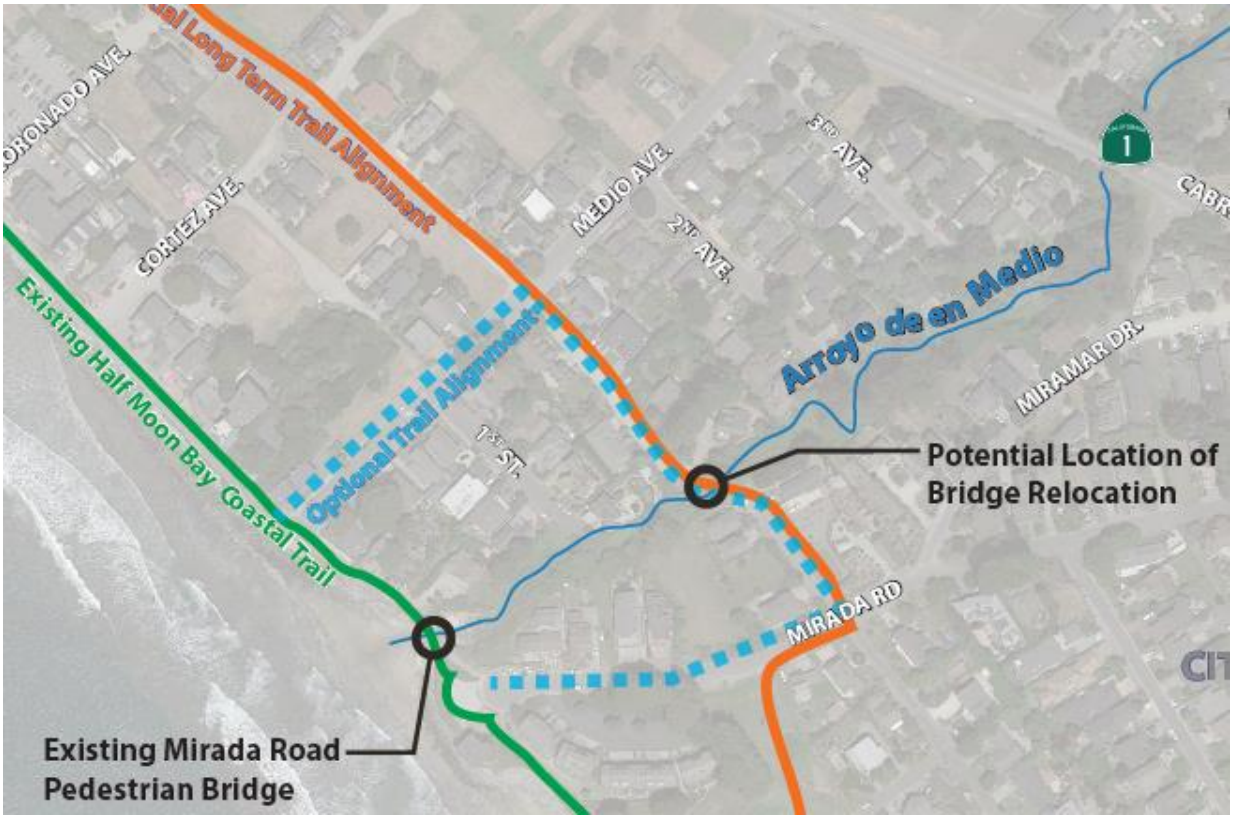
Highway 1 Realignment Plan
Caltrans recognizes the threat of climate change and sea level rise to the transportation system, and in particular to coastal communities, and has developed resources to support local agencies in assessing sea level rise threats as part of the Caltrans project delivery.[25] Highway 1 in the Midcoast is vulnerable to sea level rise, especially in El Granada. Long-term realignment of Highway 1 may be necessary to comprehensively address sea level rise threats. Connect the Coastside recommends that in partnership with Caltrans, Granada Community Services District, and others, the County engage in a community-based planning process to assess future realignment options of Highway 1 due to impacts from climate change and sea level rise.

California Coastal Trail Realignment Plan
Sea level rise and coastal erosion has and will continue to impact the California Coastal Trail. The closure of the Medio Creek bridge on the Coastal Trail in 2020 was necessary due to corrosion weakening structural elements of the bridge. As part of the bridge replacement

[25]California Department of Transportation (Caltrans) webpage on Sea Level Rise and the Transportation System in the Coastal Zone. https://dot.ca.gov/programs/environmental-analysis/coastal-program/coastal-act-policy-resource-information/coastal-hazards/sea-level-rise. Accessed 12/21/20.

project, the County Department of Public Works proposes to replace damaged riprap shoreline protection with shotcrete wall and riprap toe shoreline protection near the bridge.
The rate of shoreline erosion in Miramar is uncertain because existing rip-rap shoreline protection has prevented erosion. Interim repair of the Medio Creek bridge is being pursued to restore public access; however, long-term realignment and route alternatives will be necessary in the future. In particular, the segment of the Coastal Trail from Surfer's Beach to Alcatraz Avenue in Half Moon Bay is vulnerable. Connect the Coastside recommends that, in partnership with California Coastal Commission, Coastal Conservancy, Caltrans, San Mateo County Parks, and others, the County engage in a community-based planning process to assess future realignment options of the California Coastal Trail due to impacts from climate change and sea level rise. As identified in the Highway 1 Safety and Mobility Study, and suggested by community stakeholders, Alameda Avenue from Cortez Avenue to the Half Moon Bay border could be an alternate route and would require a bridge to cross the ravine that separates the two segments of Alameda Avenue.

Potential long-term alignment for California Coastal Trail (excerpt from presentation by San Mateo County Department of Public Works on 12/9/20 to Midcoast Community Council)



EL GRANADA AND PRINCETON PARKING STUDY

The section of Highway 1 between Capistrano Road and Mirada Road experiences the greatest delay along Highway 1 in the Study Area and is projected to be deficient under the Maximum Buildout Forecast conditions. There is a need for additional recreational and new park-and-ride parking in El Granada and Princeton, particularly near Surfer's Beach. Drivers park along the Highway 1 shoulder and in informal lots, often causing congestion and safety concerns by slowing down, blocking travel lanes, and as pedestrians cross at various locations.

There are several concurrent projects and interrelated concerns in this area of Highway 1, including Burnham Park (north of Surfer's Beach) led by the Granada Community Services District, impacts of sea-level rise and coastal erosion on the alignment of Highway 1, implementing the Parallel Trail, emergency services and access provided by fire station on Obispo Road and Coronado Street, and more. There is also an opportunity to evaluate "paper lots"[26] as potential candidate sites for future parking. Due to the complex nature of the area, the competing needs and interests, Connect the Coastside recommends a community-based future study to update the 2015 San Mateo County Coastside Access Study with a focus in El Granada and Princeton to address overflow parking at beaches and other popular destinations, parking in central El Granada, and identify necessary resources for implementation. County staff will also continue to participate in studies led by others that can help resolve parking and mobility issues in this area.

[26]Paper lots refer to land parcels that can be bought and sold like other land properties, but the lots only exist on paper and are not necessarily buildable.

RECOMMENDED POLICIES AND PROGRAMS

Connect the Coastside recommends the following programs and policies to further improve traffic conditions on the Midcoast. In general, programs and policies aim to limit new development and fund transportation improvements, promote alternative modes of travel and reduce vehicle use, and improve traffic safety with a focus on multimodal users.

LIMIT NEW DEVELOPMENT AND FUND TRANSPORTATION IMPROVEMENTS

LOT MERGER

Land use policies such as lot merger program would reduce transportation demand by reducing potential buildout, and therefore the potential traffic impacts. The San Mateo County Board of Supervisors adopted a lot merger program in 2006, but it was never implemented. The Lot Merger Program will establish a process for contiguous substandard parcels under the same ownership to be merged in the R-1, R-3, and RM-CZ zoning districts on the Midcoast and will begin as voluntary.

A mandatory lot merger program could be challenging to carry out in the context of the uncertain legal status of many of the substandard lots in the Midcoast study area. The effect of this reduction in lots is already accounted for in the estimate of Maximum Buildout Forecast, because lot mergers were assumed to take place in the Midcoast Local Coastal Program. The project team estimated that a lot merger program could reduce the number of developable residential lots by up to 216 lots (see Table 1). Connect the Coastside recommends the Board authorize implementation of the following policy, first proposed in 2006:

Policy

In accordance with the County Subdivision Regulations, Chapter 9 – Parcel Mergers (Sections 7116-7119 and 7123) and in order to implement the General Plan and Local Coastal Program, the following shall be the policy of the San Mateo County Board of Supervisors:

1. The Staff is hereby authorized to initiate a lot merger process for the applicable Midcoast properties that are: (a) zoned Single-Family Residential (R-1), Multiple-Family Residential (R-3), or Resource Management-Coastal Zone (RM-CZ); and (b) comprised of "substandard" lots created by a recorded major subdivision. Substandard lots located within the Caltrans owned Devil's Slide Bypass property are excluded from this lot merger process.

2. Affected properties are lands that possess the following conditions:
   a. At least two contiguous parcels in the same ownership;
   b. At least one parcel is undeveloped, or is developed only to the extent described in Subdivision Regulations Section 7118; and

c. The area of at least one lot is less than 4,500 square feet in the R-1 or R-3 districts, and less than 5,000 square feet in the RM-CZ district.

3. Lots meeting these criteria in R-1 or R-3 districts shall be merged to create a parcel or parcels that meet the minimum parcel size requirements a. or b. below, whichever is larger:
   a. At least 5,000 square feet plus the area of any remaining contiguous lots that cannot be merged along existing lot lines into a separate parcel that is at least 5,000 square feet; or
   b. At least the minimum parcel size for the applicable zoning district, plus the area of any remaining contiguous lots that cannot be merged along existing lot lines into a separate parcel that is at least the minimum parcel size for the zoning district.

4. Lots on applicable properties zoned RM-CZ shall be merged with a goal to reach at least 5 acres in lot area in the district.

Procedure

1. For undeveloped parcels comprised of at least two substandard lots and developed parcels comprised of at least three substandard lots, the following two-phased lot merger process shall occur:

   a. Phase 1 – Voluntary Merger

   (1) Phase 1 shall begin on the effective date of the resolution adopting Connect the Coastside and last for 12 months

   (2) Within three months of the effective date of the resolution adopting Connect the Coastside, County Planning Staff shall complete the following:

   a) Mail a notice to the owner of each parcel containing lots eligible for merger under the terms of this policy. The notice shall explain the phased process in this policy, including the voluntary merger incentives provisions, and how to apply for voluntary lot merger.

   b) Coordinate with the County Assessor to establish a Phase 1 monitoring program to identify when a substandard lot eligible for changes ownership such that it is no longer eligible for merger.

   (3) No later than three months after the effective date of Connect the Coastside, a voluntary lot merger period shall begin. The voluntary lot merger period shall be 9 months unless terminated in accordance with the following provision. If at any time during the voluntary merger period, more than five (5) ownership changes occur such that lots eligible for merger are no longer eligible, Phase 1 shall terminate immediately, and Phase 2 shall begin.

   (4) During the voluntary lot merger period, any property owner who requests merger shall receive a non-expiring voucher that entitles the

bearer to the benefits described below. The voucher may be applied to a new housing unit or improvement of an existing unit on the merged parcel.

a) up to 250 square feet of bonus floor area, or
b) $2,000 (new unit) $1,000 (existing unit) or 5% reduction in building permit fees, whichever is greater, or
c) One required covered parking space may be provided uncovered,
d) for an affordable housing unit, i.e., subject to an income, cost or rent restriction contract with San Mateo County, all of the following:
    - Up to 200 square feet of bonus area
    - One required covered parking space mayb e provided uncovered
    - Ability to obtain a priority reserved water connection, and
    - Waive permit fees, expedited permit processing.

The voucher would be redeemed at the time of building permit application, at which time, the bearer of the voucher will select the benefit to be received. The process for voluntary merger shall be in accordance with the provisions of the Subdivision Regulations Section 7123.

b. Phase 2 - Mandatory Merger

(1) Phase 2 shall begin when Phase 1 terminates, and in no case later than 12 months from the effective date of the resolution adopting Connect the Coastside.

(2) Qualifying substandard lots not voluntarily merged during Phase 1 shall be merged in accordance with the process mandated by Subdivision Regulations Section 7119.

2. For developed parcels comprised of two substandard lots, lot merger shall occur at the time when an application has been received to construct, enlarge or demolish a house on the parcel. The merger shall be in accordance with the process mandated by Subdivision Regulations Section 7119.

Figure 12: Estimated Development Potential Reduction Resulting from a Lot Merger Program (excerpt from Land Use Policy Options report by Dyett & Bhatia, January 2016, Connect the Coastside)

Table 1: Estimated Development Potential Reduction Resulting from a Lot Merger Program

	Vacant Substandard Lots	*Contiguously Owned Substandard Lots*[1]	*Lot Reduction as a Result of Merging*[2]	*Percent Reduction in Vacant Substandard Lots*
San Mateo County Unincorporated Midcoast				
Residential Districts	403	212	165	41%
Resource Management-Coastal Zone District (RM-CZ)	136	65	51	38%
Planned Agriculture District (PAD)	0	0	0	NA
Total, San Mateo County Midcoast	***539***	***277***	***216***	***40%***

Notes:

1 Contiguously owned lots of less than 4,500 square feet in residential districts, less than 5,000 square feet in resource management, planned development, or urban reserve districts. At least one of the contiguously owned lots must be undeveloped.

2 Lots are assumed to be combined to create lots that conform to the criteria outlined in the previous section, or to reduce non-conformance.

LOT RETIREMENT

Based on the outcome of the lot merger program, the County will evaluate a lot retirement program, where subdivisions of Midcoast lands zoned for Planned Agricultural District (PAD) and Resource Management (RM), both in the Coastal Zone, would be required to retire an equal number of lots as those to be developed to extinguish development rights on the retired lots, reducing the potential for forecasted buildout and lessening the effect of new development on the transportation network. Lot retirement could be required only when new residential subdivisions are proposed. This would further support a priority for infill development and for visitor-serving and other commercial development.

The lot retirement program would be designed to provide flexibility to project applicants by allowing them to either:

- Directly purchase existing lots from willing sellers, and extinguish development rights;
- Donate lots to a land trust or similar organization that would do the same; or
- Pay an in-lieu fee to the City or County to acquire and retire development rights from willing sellers at a 1:1 ratio. For the in-lieu fee to function properly, an appropriate price per development credit would need to be established, periodically reviewed and updated.

Acquisition of lots for lot retirement would be through donation or purchase: no property owner would be forced to sell their land for the purposes of this program. Mandatory lot retirement at a one-to-one ratio (1:1) as a condition of approval for some proposed residential

subdivisions could be an effective strategy to mitigate impacts to the transportation system and public access to the coast but will be reevaluated following implementation of the Lot Merger program.

The lot retirement program could support LCP Policy 1.18, which calls on the County to "concentrate new development in urban areas and rural service centers by requiring the 'infilling' of existing residential subdivisions and commercial areas." The program evaluated here would specify potential donor sites as undeveloped legal parcels having at least one of the following characteristics:

- Located outside of existing residential subdivisions where development has taken place, and outside of existing commercial areas;
- Containing sensitive habitat;
- Located in an area designated for Conservation, Open Space, Recreation or Agriculture in General Plans or Local Coastal Land Use Plans

Focusing lot retirement of development rights in undeveloped areas, and not in urban areas, would help support conservation of sensitive habitat areas, agriculture, and priority open spaces, and focus development in infill areas. A successful lot retirement program will require a partnership with a land management agency or organization, such as a park and open space agency or a community land trust to manage the lands where development rights are retired. The project team preliminarily estimates that approximately 148 "donor lots" exist, i.e., undeveloped lots where development rights might be extinguished in the study area (see Figure 13).

Figure 13: Estimated Development Potential Reduction Resulting from a Lot Retirement Program (excerpt from Land Use Policy Options report by Dyett & Bhatia, January 2016, Connect the Coastside)

Table 2: Estimated Development Potential Reduction Resulting from a Lot Retirement Program

	Eligible Donor Lots[1]
San Mateo County Midcoast	
Residential Districts	0
Resource Management-Coastal Zone District (RM-CZ)	104
Planned Agriculture District (PAD)	44
Total, San Mateo County Midcoast	***148***

Notes:

1 Undeveloped legal lots. Each retired lot is assumed to reduce Buildout by one unit.

Development Review

The County's development review process helps to address the traffic or mobility impacts of proposed developments. Projects subject to the County's development review process must conform to County policies and regulations. In most cases, conformance is achieved, in part, by meeting County-imposed permit conditions that modify a project application, including in some cases requirements to build or contribute funding towards new transportation infrastructure or transportation demand measures (TDM).

Measures set forth by the City/County Association of Governments (CCAG) and LCP Policy include, but are not limited to: establishing a shuttle service for employees, subsidizing transit for employees or residents, charging for non-public access parking, establishing a carpool or vanpooling program, having alternate work schedules, providing bicycle storage facilities and showers for employees or residents, and establishing a day care program. Prior to approval of a coastal development permit, the County must be able to make the finding that the project's proposed mitigation measures are adequate to offset new vehicle trips generated by the project to the extent feasible. The County will continue to use the development review process and permit requirements to improve transportation conditions based on appropriate findings.

Transportation Impact Mitigation Fee

A Transportation Impact Mitigation Fee (TIMF) program would collect fees for new residential and non-residential development on a per-housing-unit basis for residential and per-square-foot basis for non-residential development. Attaching a mitigation fee to development can lead to reduced development as a result of the additional costs to develop. For the developments that do occur, these fees assist in providing a portion of funding for transportation projects. The TIMF would only apply to new development and would not be charged to residents.

In order to implement a Transportation Impact Mitigation Fee, the County will need to document the "nexus" or linkage between the fees being charged to new development, the benefits to mitigate impacts, and cost allocation. These legal requirements are in California Government Code section 66000-66025 and commonly called the "Mitigation Fee Act" or "AB 1600 requirements." TIMF rates must be based on a specific list of projects needed to mitigate the impacts of the growth, the total estimated capital cost of those projects, and the amount of new development expected. An assessment of the portion of total project need attributable to growth will determine what a legally defensible rate structure might be for a Transportation Impact Mitigation Fee Program.

Connect the Coastside recommends a new TIMF and has done initial analysis based on the projects in this Plan to inform the future nexus study. The Transportation Impact Mitigation Fee is described further on page 180. Once completed, the San Mateo County Local Coastal Program should be amended to address the TIMF.

PROMOTE ALTERNATIVE MODES OF TRAVEL AND REDUCE VEHICLE USE

SAFE ROUTES TO SCHOOL

The San Mateo County Office of Education already has a robust Safe Routes to School Program (SRTS). The overall goal of the program is to enable and encourage children to walk or bicycle to school by implementing projects and activities to improve health and well-being, safety, and reduce traffic congestion due to school-related trips. Successful programs use a multi-disciplinary approach and engage a wide variety of school stakeholders including parents, students, school facilities staff, law enforcement, and jurisdiction staff to educate students and parents on safe walking and bicycling skills, establish encouragement programs to make walking and bicycling to school fun, use data and evaluation to support program objectives, and build infrastructure to support safe multimodal travel.

Cabrillo Unified School District has a dedicated program and SRTS coordinator and is already implementing encouragement and evaluation programs at local schools, including Farallone View Elementary School in Montara. Connect the Coastside's recommended Safe Routes to School infrastructure improvements support existing SRTS efforts and recommends continued investment in the program by the San Mateo County Transit District, County, and other funding partners. The Plan recommends that the LCP be amended to acknowledge Safe Routes to School as a strategy, alongside others, to reduce the overall demand for driving.

To learn more about SRTS, visit:

- San Mateo County Office of Education SRTS: https://www.smcoe.org/for-schools/safe-and-supportive-schools/safe-routes-to-school/
- Cabrillo Unified School District SRTS: https://www.cabrillo.k12.ca.us/our_community/safe_routes_to_school

TRANSPORTATION DEMAND MANAGEMENT & LCP POLICY 2.52

Transportation Demand Management or TDM refers to policies and strategies that aim to reduce travel demand, particularly single occupant vehicles, or to redistribute that demand to off-peak times. Reducing the demand for single occupant vehicle trips and shifting those trips to carpools, bicycles, pedestrians, and transit trips are ways to reduce congestion and make more efficient use of the existing transportation system.[27]

In 2000, the City/County Association of Governments of San Mateo County (C/CAG) adopted a policy that provided guidelines for analyzing the impacts of land use decisions made by local jurisdictions. This policy is implemented during the environmental review process and applies

[27] C/CAG Transportation Demand Management webpage (Accessed 11/29/20) https://ccag.ca.gov/programs/transportation-programs/transportation-demand-management/#:~:text=Transportation%20Demand%20Management%20or%20TDM,demand%20to%20off%2Dpeak%20times.

to developments that generate 100+ peak-hour trips on the Congestion Management Program (CMP) roadway network. Highways 1 and 92 are part of the CMP roadway network. The policy requires that the TDM plan include strategies that have the capacity to fully reduce the demand for new peak-hour trips; thus, the guidelines also provides a menu of TDM measures and corresponding trip reduction credits.[28] The County adopted the C/CAG TDM Ordinance and implements it as part of the County's development review and permitting process, including for County projects in the Coastal Zone.

The San Mateo County Local Coastal Program (LCP) Policy 2.52[29] complements C/CAG's TDM Ordinance and Policy 2.53, the catalyst for Connect the Coastside. Policy 2.52 requires applicants for new development that generate any net increase in vehicle trips on Highways 1 and/or 92, except for a single-family dwelling, a second dwelling unit, or a two-family dwelling, to develop and implement a traffic impact analysis and mitigation plan (TIMP). The LCP generally states the TIMP must include: (1) traffic mitigation measures, (2) enough information for the County to assess if the mitigation measures are adequate to offset new vehicle trips generated by the project, and (3) project's cumulative impacts combined with other reasonably foreseeable future projects, especially in regards to beach access. Traffic mitigation measures (2.52a) could include shuttle services for employees of the development, subsidizing transit, providing bike storage, and others. C/CAG is responsible for countywide congestion management and recommends TDM measures and the potential number of trips offset as part of its annual Congestion Management Program.[30]

As described in the Development Review section, mobility projects in Connect the Coastside can be considered as part of Transportation Demand Management strategies. The State's adoption of the Vehicle Miles Traveled (VMT) standard to characterize and address impacts under the California Environmental Quality Act will require additional mitigations for projects that have high VMT, or effectively stop those projects from happening. LCP amendments related to VMT will need to be established and are described further in the Recommended Standards and Evaluation section on page 152.

EMERGING TRANSPORTATION TECHNOLOGY

Emerging transportation technology, such as ridesharing applications (e.g., Lyft) and micromobility services (e.g., scooter and bike share) have and will continue to change the way people travel, including car ownership and circulation patterns. When paired with high quality infrastructure, like the Multimodal Parallel Trail, services like scooter share can allow visitors to park (or transit) to the coast and travel easily without a car to other coastal destinations. Service availability is currently largely available dependent upon private companies (like Lyft[31])

[28] ibid

[29] San Mateo County Local Coastal Program. 2013. P.2.22. https://planning.smcgov.org/documents/local-coastal-program (Accessed 11/8/20)

[30] C/CAG Appendices for Congestion Management Program, 2019 – Appendix I - https://ccag.ca.gov/wp-content/uploads/2020/04/2019-Final-CMP-Appendix-040920-compressed.pdf

[31] Lyft scooter share offerings https://www.lyft.com/scooters

and can require public-private partnerships, typically led by regional transportation agencies (e.g., Metropolitan Transportation Commission, San Mateo County Transportation Authority, and others).

Connect the Coastside recommends that the County continue partnerships with other agencies to explore how using emerging transportation technologies could address existing and projected traffic conditions on the Midcoast.

SHARED PARKING

During the 2020 engagement process, several stakeholders suggested a "shared parking" strategy to increase parking availability to serve recreational areas and transit riders. Shared parking allows different sites to share parking whose peak parking demands occur at different times. Shared public parking can be more efficient than single-use private parking because fewer spaces are needed to meet the total peak parking demand. Parking that is shared among different establishments allows motorists to park once and visit multiple sites on foot.[32] Stakeholders suggested candidate sites for shared parking, including El Granada Elementary School and the Church of Latter Day Saints in Moss Beach. Implementing shared parking at privately owned sites is complex due to liability, rules related to property tax exempt status for non-profit entities, and maintenance. Connect the Coastside recommends exploring shared parking as a strategy with partners given the potential benefits and reduction in environmental impacts, and potential LCP amendments to promote shared parking.

[32] Shoup, D. "Instead of Free Parking." Access Magazine, Number 15, Fall 1999. P.8-13. Available at: http://shoup.bol.ucla.edu/InsteadOfFreeParking.pdf

IMPROVE SAFETY

LOWER SPEED LIMIT ON HIGHWAY 1

Stakeholders were concerned about speeding on Highway 1 in commercial areas and recommended lowering the speed limit. The California Vehicle Code (Division 11, Chapter 7) dictates speed laws in California. The State of California Department of Transportation (Caltrans) can lower the speed limit on highways under certain conditions. Connect the Coastside recommends that Caltrans engage in the appropriate studies to determine whether the speed limit on Highway 1 can be lowered, especially in the Village zones in central Montara, Moss Beach, and El Granada/Princeton.

EDUCATIONAL CAMPAIGNS

Motor vehicle crashes continue to be a leading cause of death in California and the nation. Media campaigns and educational strategies can be effective in addressing specific behaviors such as impaired driving, distracted driving, and pedestrian and bicycling safety. Connect the Coastside recommends collaborating with Safe Routes to School partners, Caltrans, and others to distribute safe driving materials and implement safety campaigns. The California Office of Traffic Safety offers grants and resources that can support the effort: https://www.ots.ca.gov/

Image from California Office of Traffic Safety Distracted Driving campaign and associated site: https://gosafelyca.org/distracted-driving/

RECOMMENDED STANDARDS AND EVALUATION

The effectiveness of recommended projects in Connect the Coastside is measured using current and new performance standards (see discussion beginning on page 44). Connect the Coastside recommends the following amendments to transportation evaluation standards.

SAN MATEO COUNTY TRAFFIC IMPACT ANALYSIS REQUIREMENTS

San Mateo County's Department of Public Works developed the *Traffic Impact Study Requirements (2013)*. These requirements have not yet been revised to reflect changes in State law related to evaluating transportation impacts under the California Environmental Quality Act (CEQA) that require using Vehicle Miles Traveled (VMT). The County may continue to require level of service evaluation, but any changes in level of service are no longer considered significant environmental impacts under CEQA.

Connect the Coastside assumes that the County will further refine the interim guidance on VMT[33] and incorporate subsequent changes into revised Traffic Impact Analysis Requirements. In the interim guidance on VMT, El Granada/Miramar are categorized as urban/suburban areas, and therefore have interim VMT threshold criteria. Other Midcoast communities are categorized as rural areas, where thresholds will be set on a case-by-case basis. The San Mateo County Local Coastal Program (LCP) designates urban lands as those lands in the Midcoast area within the urban-rural boundary on Land Uses (LCP Map 1.4, p.1.34). The LCP designations currently do not align with the urban/suburban areas definition in the VMT guidelines. Connect the Coastside recommends updating the final VMT guidelines and/or LCP to resolve this difference.

If the County continues to use intersection level of service to assess the need for traffic mitigation, Connect the Coastside recommends that the Traffic Impact Study Requirements are revised so that unsignalized intersections with Highway 1 in the Midcoast are considered deficient if they meet a peak-hour signal warrant.

LCP Policy 2.52 has different threshold requirements for when a traffic impact analysis is required than the current San Mateo County Traffic Impact Study Requirements (i.e., any net new increase in trips on Highways 1 or 92 vs. 100 peak hour trips or 500 daily trips). Connect the Coastside recommends that the San Mateo County Traffic Impact Analysis Requirements be amended to address requirements of LCP Policy 2.52. C/CAG is in the process of updating the County's Transportation Demand Management ordinance, and it would be beneficial when the C/CAG policy is adopted to update LCP Policy 2.52 and the Transportation Impact Analysis Requirements so that these documents are consistent.

[33] Inter-departmental Correspondence – Change to Vehicle Miles Traveled as Metric to Determine Transportation Impacts under CEQA analysis. Available at: https://publicworks.smcgov.org/sites/publicworks.smcgov.org/files/documents/files/Interim%20VMT%20Analysis%20Criteria.pdf

San Mateo County Local Coastal Program

The San Mateo County Local Coastal Program (LCP) contains policies to protect coastal resources and govern decisions in the Coastal Zone, including requirements for new development. Several LCP policies collectively aim to reduce traffic congestion, promote alternative modes of travel, and protect coastal resources from the impacts of new and cumulative residential development.

LCP Policy 2.43 Desired Level of Service states: "In assessing the need for road expansion, consider Service Level D acceptable during commuter peak periods and Service Level E acceptable during recreation peak periods." The San Mateo County Congestion Management Agency (C/CAG) is currently required to use level of service when measuring roadway performance for its Congestion Management Program, but this may change in the future.

Connect the Coastside recommends that the County work with the California Coastal Commission and C/CAG to amend the LCP to incorporate the delay index and vehicle miles traveled as performance measures. A revised policy could read:

> *"In assessing the need for road expansion, consider Delay Index 3.0 acceptable for roadway segments with adjacent Class I or Class II Bikeways for at least 80% of the length and Delay Index 2.0 acceptable for other roadway segments during commuter or recreation peak periods. Induced vehicle miles traveled due to proposed road expansion should be assessed per San Mateo County's Guidelines."*

This change would impact how capacity limits are assessed as noted in other policies within the LCP, including Policy 2.42 Capacity Limits, Policy 2.44 Route 1 and Route 92 Phase I Capacity Limits, and Policy 2.46 Monitoring.

Policy 2.52 Traffic Mitigation for all Development in the Urban Midcoast requires applicants for new development that generate any net increase in vehicle trips on Highways 1 and/or 92 (other than up to a two-family dwelling unit) to develop and implement a traffic impact analysis and mitigation plan (TIMP). The LCP does not define a specific methodology to assess impacts and references transportation demand management measures for mitigations. Connect the Coastside recommends that this policy be revised to reference San Mateo County's Traffic Impact Study Requirements (per the section above), and projects within this Plan (the CTMP) for mitigation measures.

Connect the Coastside Implementation Monitoring

Connect the Coastside recommends County Planning and Building staff report every 5 years on the status of implementation of Connect the Coastside projects and development; LCP Policy 2.46 could be amended to incorporate this recommendation.

OTHER EFFORTS TO IMPROVE TRANSPORTATION CONDITIONS

The County and its partners already engage in efforts to improve travel conditions to and within the Midcoast. The following programs are highlighted to address comments received during Connect the Coastside's engagement efforts.

VEGETATION REMOVAL

Midcoast stakeholders are concerned about the impact of vegetation on traffic safety, including blocking pedestrian, motorist and bicyclist sight lines and ability to evacuate during an emergency, such as a wildfire.

Highway 1 shoulder near Devil's Slide, photo courtesy of Cid Young

The California Department of Transportation (Caltrans) is responsible for most of the maintenance of Highways 1 and 92 and is actively addressing tree die-off and fuel reduction. Caltrans' Maintenance Manual Chapter C2 details Vegetation Control. Per Section C2.06, each Caltrans district prepares an annual plan for vegetation control (VegCon Plan), which considers fire risk management, safety, aesthetics, and community concerns, among others. Section C2.11 details vegetation control of specific areas, including the distance of vegetation control recommended from the paved shoulder edge. Section C2.11.(D) states that "all brush and seedling trees should be controlled nine (9) feet from the pavement edge." Caltrans is also engaging in Wildfire Vulnerability Analysis (2020-2030) to prioritize where to focus fuel-reduction projects for fire prevention and forest health along state highways. Midcoast residents can submit maintenance requests at the link in the "Resources" section below.

Resources:

- Caltrans Maintenance Manual - https://dot.ca.gov/programs/maintenance/maintenance-manual
- Division of Maintenance Customer Service Request - https://csr.dot.ca.gov/
- Caltrans Roadside Fire Fuels Reduction - https://dot.ca.gov/programs/maintenance/roadside-fire-fuels

LIGHTING

Several commenters during 2020 engagement stated the need for roadway lighting to improve the safety, especially for those walking and bicycling in the evening along Highway 1, Airport Street, and at highway intersections. However, commenters also addressed the need to minimize light pollution to maintain the Coastside character and reduce environmental impacts. Roadway lighting at intersections and pedestrian-scale lighting can increase traffic safety.

The San Mateo County Department of Public Works oversees several lighting districts on the Midcoast. Lighting districts are considered a County-governed special district, governed by the San Mateo County Board of Supervisors and operated by the County; more on these special districts, including when they were established is on the San Mateo County Local Agency Formation Commission (LAFCO) website.

There is currently one light in the State right-of-way on Highway 1 at Virginia Avenue, which is maintained by the Montara Highway Lighting District. It was installed through the streetlight petition process after a crash and with the permission of Caltrans. Airport Street is not currently within any of the service areas of County-maintained lighting districts and there are no County-maintained lights on that street.

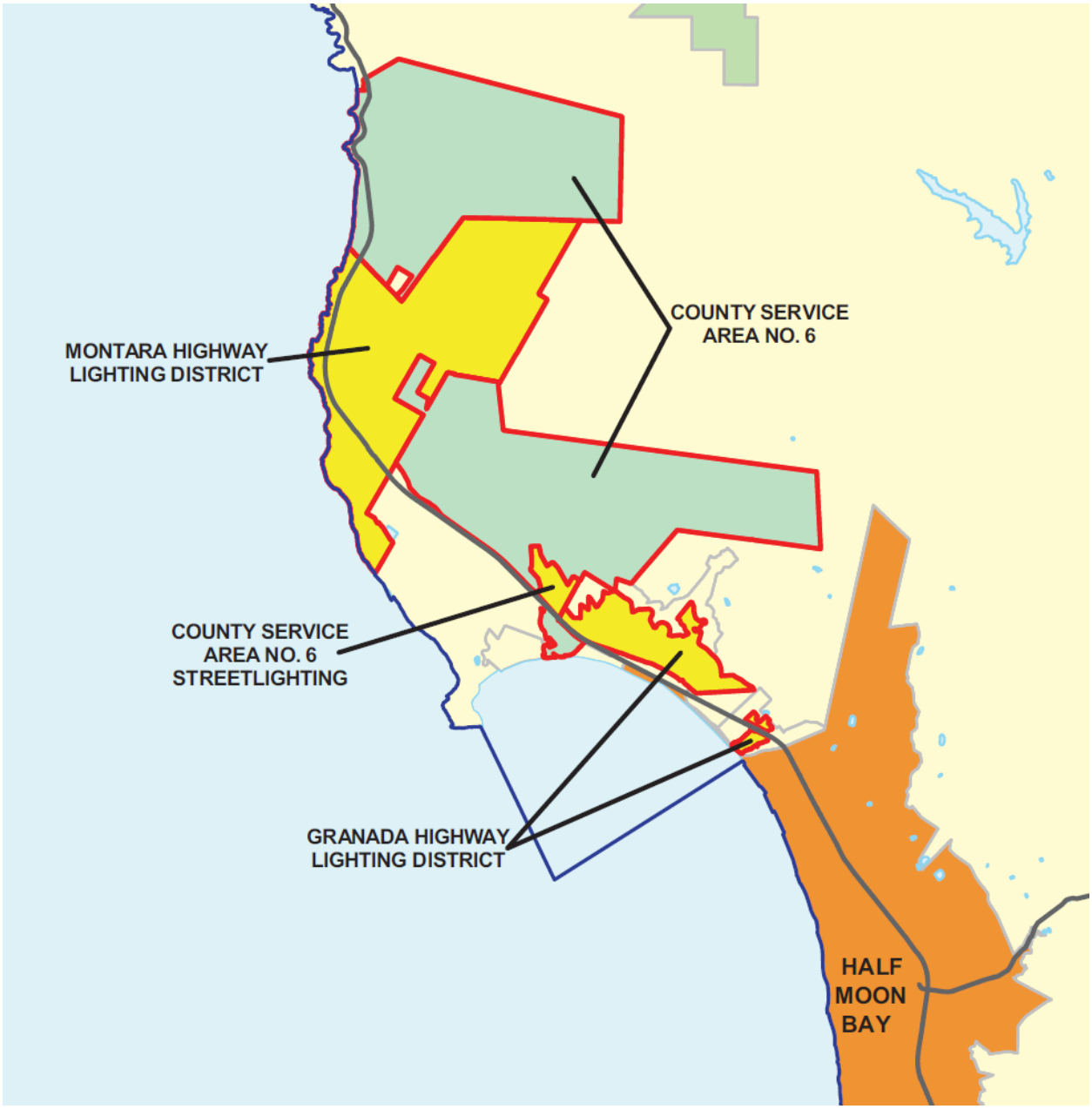
There are two ways to add street lights:

1. Two members of the Board of Supervisors can petition the County Board of Supervisors for installation, or
2. Twenty (20) property owners in the District can petition the Board of Supervisors for the installation of a new light.

The second method is most common and outlined in a Street Light Petition Procedures document. A lighting requestor must send a letter to Lighting District staff requesting the new light at a specific location. District staff verify the location and whether it's feasible to install, and then mail the requestor a letter of instruction and standard petition to be signed by at least 20 property owners. Once received, the District staff will verify the petition and location and prepare a letter to inform property owners within 300 feet of the proposed location and allow 15 days for objections. The Board of Supervisors must then find it just and equitable for additional lights to be installed. In addition, Caltrans must approve any lights in their right of way and could require the removal of County streetlights that are in State right of way at any time. Connect the Coastside recommends that the County work with property owners and agency partners as part of the project implementation process to address lighting needs.

More information about street lighting districts can be found at:
https://publicworks.smcgov.org/street-light-services

Map 20: San Mateo County Lighting Districts



TRAFFIC CALMING

Traffic calming uses physical infrastructure to improve safety and slow vehicle speeds. Common traffic calming measure include speed humps, narrower roadways, traffic circles, and curb extensions. Many stakeholders commented about speeding drivers creating unsafe travel conditions, especially for walking and bicycling.

The San Mateo County Department of Public Works has a residential speed control program, which aims to curb excessive speeding in residential neighborhoods on County-maintained roadways by using speed humps and dips. The purpose of the program is to provide a consistent process to evaluate requests for speed control devices throughout unincorporated areas. Residents can use the petition process to request a roadway evaluation, which requires that at least 51% of the property owners on the given street are interested in participating. More information about this program is available at: https://publicworks.smcgov.org/residential-speed-control

Some of the recommended improvements in Connect the Coastside, such as the addition of curb extensions in Montara, high visibility markings, and edge striping could help slow vehicle speeds. However, Connect the Coastside does not make specific recommendations for each street because all traffic calming measures must be approved and reviewed by Caltrans (if in State right-of-way), California Highway Patrol, Fire Department, and Department of Public Works. Non-infrastructure approaches, such as safe driving campaigns, can also help curb speeding.

Example of a traffic calming demonstration in the City of Redwood City of a mini-traffic circle - https://www.redwoodcity.org/departments/community-development-department/engineering-transportation/transportation-and-parking/traffic-calming-projects

EMERGENCY RESPONSE AND EVACUATION

The projects recommended in Connect the Coastside have been selected to improve safety and mobility for residents, businesses and visitors and ease roadway congestion. In the event of an emergency, keeping traffic moving efficiently will be important for both emergency responders and those leaving during a possible evacuation. Projects in Connect the Coastside that will improve the flow of traffic include intersection controls and turn lanes.

Connect the Coastside also suggests improvements to bicycle, pedestrian, and transit infrastructure that could aid in the evacuation of visitors and residents in certain emergency situations. For example, in the event of a Tsunami Warning, the County of San Mateo Office of Emergency Services (OES) suggests walking to high ground or inland immediately. Improvements to trails and walking paths will make it easier and safer for people to travel by foot.

The following is an overview of different County departments and special projects related to emergency response:

- In the event of a disaster, the Office of Emergency Services coordinates countywide response and protection services. One of the missions of the Office of Emergency Services is to maintain and improve the Countywide Emergency Operations Plan. This plan establishes policies and procedures and assigns responsibilities to keep residents safe during an emergency situation.
- During an emergency or disaster, law enforcement is responsible for evacuation and the movement of the public away from a hazard area. Representatives from law enforcement and public safety agencies were part of the Connect the Coastside Technical Advisory Committee that reviewed and helped refine the plan proposals.
- In the event of an emergency, public safety agencies such as police and fire will be able to provide emergency information directly to people who have registered for the San Mateo County (SMC) Alert service[34]. These alerts may include life safety, fire, weather, accidents involving utilities or roadways or disaster notifications. For example, the SMC Alert service would be used to notify Coastside employees and citizens of available evacuation routes during an emergency.
- In March of 2019, Supervisor Don Horsley allocated $75,000 of discretionary Measure K funds to launch the development of a countywide standardized emergency evacuation zone project (Zonehaven). The goals of the project are to reduce the amount of time it takes to notify the public, create a common operating evacuation platform for all jurisdictions, information sharing, and help people to safely and efficiently evacuate in case of an emergency. Since the project began, the CAL FIRE San Mateo Division has worked with every fire and law enforcement agency in San Mateo County to identify over 300 evacuation zones. The project includes a public webpage that shows a map of each evacuation zone and a software application that helps first responders call for

[34] San Mateo County (SMC) Alert Service - https://hsd.smcsheriff.com/smcalert

evacuations using the standard zones. This will greatly reduce the time from when an evacuation is called to when the public is notified. Additionally, the application integrates with Waze and Google Maps, so as soon as a zone is closed people will be directed accordingly. Zonehaven was used to create an Evacuation Zone Map for the CZU Lightning Complex Fire in August 2020. The platform is available at https://community.zonehaven.com/

- The County of San Mateo will be updating the Local Hazard Mitigation Plan and the Safety Element of the General Plan beginning in the winter of 2021. The County will be working with emergency service providers such as CalFire, the Office of Emergency Services, and the new Flood and Sea Level Rise Resiliency District. These efforts will further evaluate hazard risks and identify safety measures on the Midcoast.

Recreational Trails

Creating continuous and easily accessible trail systems along the coast was mentioned in many comments during 2020 outreach. Commenters stated support and excitement for the Parallel Trail and seeing improvements that complete the Coastal Trail in the Midcoast. Open space trails, such as the Bay Area Ridge Trail or more isolated segments of the Coastal Trail are unlikely to contribute to significant traffic reduction or circulation improvements; however, they continue to be important destinations for local and regional traffic. Therefore, improvements to trailheads and trail access could help improve circulation on the Midcoast. Connect the Coastside recommends collaborating with partners on projects that could enhance or impact recreational trails including trail crossings, wayfinding, and parking. Notable opportunities are described below.

Green Valley Trail

The Green Valley Trail is a proposed trail segment of the California Coastal Trail on State of California Lands, south of the Devil's Slide Tunnel that connects to the parking area at Gray Whale Cove. The recreational trail would accommodate pedestrians, bicyclists and equestrians on a natural surface trail. The County began the environmental review and permitting process to begin construction in 2016 and encountered regulatory and financial hurdles. For example, several of the permit conditions of approval set by the United States Fish and Wildlife Service are too costly and infeasible to meet with the Parks Department current budget. Parks continues to engage with State partners and other agencies who may be able to take on the construction and management of the Trail and meet requirements.

Ohlone-Portola Heritage Trail

The Ohlone-Portola Heritage Trail in San Mateo County is a proposed recreation trail route system of Class I, II and III bikeways, multi-use trails, riding and hiking trails and sidewalks. The trail would designate 90-miles, tracing the expedition of Spanish explorer, Gaspar de Portolà, and the impacts on and stories of the native Ohlone people. The Trail would begin at the Año Nuevo State Park Visitor Center, pass over Sweeney Ridge, and extends to the State Historic Landmark in Menlo Park. Once completed, the recreational route will link the bayside of San Mateo County with its coastside. The recommended Trail alignment includes segments of the

California Coastal Trail and would overlap with the recommended alignment in Connect the Coastside. More information is available on the San Mateo County Parks website: https://parks.smcgov.org/ohlone-portol%C3%A1-heritage-trail-project

Bay Area Ridge Trail

The Bay Area Ridge Trail is envisioned to link the ridges encircling the Bay Area into one continuous 550-mile trail. In 1987, the Greenbelt Alliance, the Golden Gate National Recreation Area, the National Park Service as well as citizen advocates came together to help form the Bay Area Ridge Trail Council. The Bay Area Ridge Trail Council works collaboratively with major land management agencies to advance the trail. To date, about 385 miles of the trail have been built. In June 2020, the San Francisco Public Utilities Commission released a Draft Environmental Impact Report for the Southern Skyline Ridge Trail, a part of the Bay Area Ridge Trail through its Peninsula Watershed Lands. As described earlier, the Highway 92 and Highway 35 intersection (West, Upper) is near the start of the trail and could help connect the two sections of trail. Any improvements to this intersection must consider trail-user needs. More information about the Bay Area Ridge Trail is available at: https://ridgetrail.org/

Bay to Sea Trail

The Bay to Sea Trail is envisioned to be a 40-mile continuous trail from the San Francisco Bay, across the Peninsula to the coast. The initiative is led by the Peninsula Open Space Trust (POST) in close partnership with the Midpeninsula Regional Open Space District, California State Coastal Conservancy, and others. The conceptual alignment is south of Highway 92 and ends south of Half Moon Bay. The Bay to Sea Trail, or a separate route closer to Highway 92, could help alleviate some congestion along Highway 92 as noted in project B4. More information about the Bay to Sea Trail is available at: https://www.baytoseatrail.org/

8.Implementation

OVERVIEW

Implementation of Connect the Coastside will require strong partnerships with actors like Caltrans, other agencies, and ongoing support from the community to work together to find common ground on detailed project designs and funding mechanisms. The implementation horizon of Connect the Coastside is 30 years (through 2050) and some projects, like intersection control at Highways 92 / 35 (upper), are not needed until the traffic conditions warrant them. Some projects, like missing stop signs at side streets, are existing safety concerns that could be implemented in a shorter timeframe. Other projects, like a pedestrian overcrossing, will take longer to implement due to complexity and cost. This chapter describes how the County will approach implementation, including considerations in project design, mechanisms to support implementation, and phased implementation.

MOVING A PROJECT TOWARD IMPLEMENTATION

Moving a project from concept – like those in Connect the Coastside – to implementation is an involved and complex process and can take many years to complete, even for projects that may appear to be "easy" to implement. The following section summarizes key phases to move a project from concept to construction.

1. COLLABORATE WITH OTHER ACTORS AND PARTNERS TO ADD PROJECTS TO LOCAL, REGIONAL, AND STATE TRANSPORTATION PLANS.

Connect the Coastside is the first step to position individual projects for implementation because it establishes a coherent mobility vision and priorities for the Midcoast. The projects need to be integrated into local, regional and state transportation plans to ensure they are coordinated with regional projects and become eligible for most sources of funding. Relevant plans include:

- San Mateo County Transportation Authority Strategic Plan
- San Mateo County Congestion Management Plan (C/CAG)
- Plan Bay Area (Sustainable Communities Strategy and Regional Transportation Plan)
- State Transportation Improvement Program
- State Highway Operations and Protection Plan (SHOPP)

Since most of the recommended projects in this Plan are not under the exclusive jurisdiction of the County, the County must collaborate closely with other actors, like Caltrans, and participate in other agencies' planning processes, like Reimagine SamTrans to achieve successful project implementation.

Figure 14: How Caltrans Builds Projects

Graphic from "How Caltrans Builds Projects," Office of Project Development Procedures, August 2011. Available at: https://dot.ca.gov/-/media/dot-media/programs/sustainability/documents/2011-how-caltrans-builds-projects-a11y.pdf

2. Project Initiation and Preliminary Design

Developing project designs that address mobility and safety challenges requires staff, funding, and a Project Development Team. The County of San Mateo will, in most cases, need to be the "Project Sponsor" to move projects forward, and would need to use existing funds or grant funds to support this phase. The Project Development Team brings together experts and key agencies together to identify various options that balance specific challenges, like potential environmental impacts, available right-of-way, and others. In order to engage Caltrans on any highway projects, the County would also need to commit to developing a Project Initiation Document (PID). A PID is required by Caltrans and provides stakeholders, decision-makers, and others an understanding of the issues for the proposed transportation project, including potential costs. The County (or other project sponsor) would need to fund Caltrans oversight of PID preparation.

There are multiple phases to project design, and the design gets refined and more detailed in each successive phase. As each individual project is developed, the Project Development Team must consider:

- Engaging community stakeholders, including community-based organizations in a collaborative scoping and project review process
- Other detailed design recommendations from past plans, such as the Highway 1 Safety and Mobility Study Phases 1 and 2)
- Conducting additional data gathering and analysis (specifically for intersection control evaluations (ICE))
- Characterizing topography, habitat and right-of-way constraints
- Designing for accessibility with minimum design standards (ADA, minimum design for trails, bikeways, bus stops, community desire for wide smooth surfaces)
- Minimizing environmental impacts, e.g., avoiding wetlands, streams, and other sensitive habitats and incorporating environmentally friendly elements such as green infrastructure and referencing the County's Green Infrastructure Plan[35] and compliance with Local Coastal Program policies protecting sensitive habitats and wildlife and scenic resources

[35] https://www.smcsustainability.org/download/energy-water/SMC-GI-PLAN-Final_09-17-19-with-Appendices.pdf

- Overcoming property limitations (right-of-way, property acquisition)
- Evaluating impacts on evacuation and emergency response
- Operations and maintenance (brush, vegetation clearance)
- Climate change impacts (Coastal erosion, sea level rise, impacts of heat/flood)

For projects in Caltrans right of way, the project initiation process will produce a Project Initiation Document, such as a Project Study Report (PSR) and Project Environmental Study (PES). For all projects, this phase will lead to a preliminary project scope and design and a characterization of environmental impacts, all based in a robust community engagement process.

3. Identify and secure funding for implementation.

Once preliminary designs have been completed, the County and its partners can seek additional funding for the project or allocate existing resources for additional design and implementation. Projects can qualify for competitive grant funds from federal, state, regional sources, or in special cases, funding directly from the State Legislature in the Governor's budget (potential sources are described later in this chapter). The County of San Mateo's Five-Year Capital Improvement Plan (CIP) is a planning tool designed to identify short- and long-term capital improvement needs of the County and align those needs with appropriate financing, scheduling, and implementation. The County Department of Public Works administers the County's Road Fund, which includes state and federal tax monies returned to the County. The County may also commit general funds or voter approved sales tax funds to Connect the Coastside projects.

4. Conduct environmental studies and detailed design.

Once a project has secured funding for at least project initiation, detailed environmental review and project studies and design can begin. The Project Development Team would refine the preliminary design, and engage in additional engineering, right-of-way and utilities assessments. In addition, individual projects would be assessed under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) (if using federal funds). Depending on the scope and scale of the project, the environmental assessment will address impacts to special status plants and wildlife, historic sites, wetlands, visual impacts, and other issues. It may also include a discussion of mitigation measures for those impacts and discuss alternatives to the project. After environmental studies are complete, the Project Development Team would develop Project Approval/Environmental Documentation (PAED) for any Caltrans-related projects. The project would then need to be approved with the selected preferred alternative and environmentally cleared. After that, the Team would move forward with a more detailed design phase (Plans, Specifications, and Estimate or PS&E) with Caltrans.

5. Secure approvals, agreements, and permits.

After environmental studies and detailed designs are complete, the project must go through final review and approval with the appropriate agencies, including permits. Each project will require a Coastal Development Permit issued by the County of San Mateo (except for a few projects that are outside the Coastal Zone). Other agencies that may need to issue approvals or permits include the Department of Fish and Wildlife, US Army Corps of Engineers, including consultation with the U.S. Fish and Wildlife Service. For highway projects, the County may need to enter into agreements with Caltrans, including addressing long-term maintenance and operations of the project, and securing any necessary encroachment permits.

6. Construct and close-out project.

Once a project is designed, funded, and permitted, it can be constructed. Many infrastructure projects are built by private contractors hired by local government. In order to have a contractor implement the project, the County must engage in a competitive public bidding process. This allows construction companies to compete for a project by responding to a request for proposals (RFP) issued by the County. Once a contract is awarded, the contractor can begin to build the project. Once the project is constructed, the project must be "closed out," which includes compiling final records including right-of-way improvements completed, as-built plans, updated right-of-way maps, and others.

7. Project Maintenance.

All projects require maintenance, which is a considerable cost to the agency responsible. Properly maintained infrastructure is safer, functions better and is more likely to meet its intended purpose.

NEXT STEPS

Several factors influence next steps and the Connect the Coastside's implementation, including:

- **Local Coastal Program**: There are several LCP Policies (2.6, 2.7, 2.9, 2.42, 2.47) that dictate the timing and development of public works facilities to be phased and limited to meet the needs of projected buildout without inducing new development; in short, infrastructure should not be implemented purely to serve a projected need.
- **Funding Timeliness**: Grants are offered by funders on different cycles and are available for different types of projects. The County will need to be opportunistic and match projects that will compete well with funding opportunities.
- **Staff Resources**: Implementation requires County and partner agency staff resources. Available staff will limit the number of projects and programs that can be pursued and managed.
- **Project Cost and Ease of Implementation**: Low project design, capital and permitting costs, and projects with little or no environmental impacts, generally make it easier for a project to be implemented.
- **Multimodal Connectivity**: Projects that fill a gap in existing bicycle, pedestrian or transit networks are of higher importance.
- **Safety and Circulation**: Projects that improve an identified safety concern and/or circulation issue are of higher importance.
- **Coastal Access**: Projects that enhance access to the California coast for all modes of travel are of higher importance.
- **Operations and Maintenance**: Projects that have lower annual expected Operations and Maintenance (O&M) costs will be easier to implement.

Below is the expected implementation timeline based on the considerations above and the 6 phases of implementation: 1) Collaborate, 2) Project Initiation, 3) Secure Funding, 4) Environmental and Design, 5) Approvals and Permits, and 6) Construction. Connect the Coastside's implementation will be reported on every 5 years by County Planning and Building staff. The timeline is subject to change based on staffing, County resources, and grant availability.

Table 33: Project Implementation Timeline

Project #	Project	Near-term (0 to 7 years)	Medium-term (8 to 16 years)	Long-term (17 to 30 years)
R1	SR-1 Shoulder Treatment (Village and Fringe)		Phases 1 - 4	Phases 5 - 6
R2	SR-1 Side Street Stop Signs	Phases 1 - 4	Phases 5 - 6	
R3	Gray Whale Cove Turn and Acceleration Lanes	Phases 1 – 4	Phases 5 - 6	
R4	Highway 1 Turn and Acceleration Lanes at 8th Street		Phases 1 – 4	Phases 5 - 6
R5	16th St / Highway 1 Intersection Control		Phases 1 – 2	Phases 3 - 6
R6	California Ave / Highway 1 Intersection Control		Phases 1 – 2	Phases 3 - 6
R7	Cypress Ave / Highway 1 Intersection Control	Phases 1 - 2	Phases 3 - 6	
R8	Main Street Traffic Calming and Bike/Ped Connectivity	Phases 1	Phases 2 - 6	
R9	Carlos Street Realignment to 16th Street		Phases 1 – 4	Phases 5 - 6
R10	Carlos Street Traffic Calming	Phases 1	Phases 2 - 6	
R11	Highway 92 / Highway 35 (East, Lower) Intersection Improvements		Phases 1 - 6	
R12	Highway 92 / Highway 35 (West, Upper) Signal			Phases 1 - 6
R13	Highway 92 Truck Signs	Phases 1 - 6		
R14	Highway 92 Left-turn Pockets		Phases 1 - 2	Phases 3 - 6
Pe1	New and Improved Pedestrian Crossings of Highways 1 and 92	Phases 1 – 6 (subset of crossings)	Phases 1 – 6 (subset of crossings)	Phases 1 – 6 (completion)
Pe2	Highway 1 Multimodal Parallel Trail	Phase 1 – 2	Phases 3 - 6	
Pe3	Midcoast Alignment of California Coastal Trail		Phases 1 - 4	Phases 5 - 6
Pe4	Highway 1 Sidewalks in Moss Beach and Montara		Phases 1 - 4	Phases 5 - 6
Pe5	Central Moss Beach Bicycle and Pedestrian Improvements	Phases 1 -2	Phases 3 - 6	
Pe6	Montara Safe Routes to School		Phases 1 - 6	
Pe7	El Granada Safe Routes to School		Phases 1 - 6	
Pe8	Capistrano Road (South) Intersection Improvements		Phases 1 - 6	
B1	Highway 1 Bikeway	Phase 1	Phases 2 - 6	
B2	Airport Street Bikeway and Princeton Connections	Phases 1 – 2	Phases 3 - 6	
B3	Capistrano Road Bikeway	Phases 1 – 2	Phases 3 - 6	
B4	Highway 92 Bikeway			Phases 1 - 6
B5	Bicycle Parking	Phases 1 - 6		
T1	Transit Stop Improvements	Phases 1	Phases 2 - 6	
T2	Recreational Shuttle	Phases 1	Phases 2 - 6	
T3	Increased Midcoast Bus Service	Phases 1	Phases 2 - 6	
Pa1	Upper Gray Whale Cove Parking Lot Improvements	Phases 1 – 3	Phases 4 - 6	
Pa2	Wayfinding	Phase 1	Phases 2 - 6	

County Planning and Building staff anticipates leading the following actions with the support of other actors and partners within five years of Connect the Coastside's approval by the Board of Supervisors:

Table 34: Early Implementation Actions

CTC Recommendation	Action
Lot Merger	Initiate and implement the lot merger program when Connect the Coastside is adopted.
Transportation Impact Mitigation Fee	Seek funding and commit Planning and Building staff resources to engage in a nexus study to establish the Transportation Impact Mitigation Fee.
Highway 1 Multimodal Parallel Trail (Pe2)	Complete project implementation for Phase 1 of the trail. Seek funding to begin the design process for the rest of the Multimodal Parallel Trail, with the intention of completing design from El Granada to Moss Beach.
Highway 1 Pedestrian Crossings (Pe1)	Engage Caltrans and seek funding to begin the design process for at least one Highway 1 pedestrian crossing in each community. Complete the Gray Whale Cove pedestrian crossing.
Highway 1 and Cypress Avenue (R7), Highway 1 and California Avenue (R6)	Complete Project Initiation Documents for the intersections of Highway 1 at Cypress Avenue and at Highway 1 and California Avenue.
Bicycle Parking (B5)	Pursue funding to plan and implement short-term bicycle parking throughout the Midcoast.
Parking Studies	Seek funding for community-engaged planning process to develop specific parking recommendations for El Granada, Princeton, and Miramar.
Transit Amenities (T1), Recreational Shuttle (T2), and Increased Midcoast Bus Service (T3)	Engage with SamTrans as part of the Reimagine SamTrans process to begin planning around future service changes, including identifying potential park and rides, opportunities for improved transit stop amenities, and pursuing funding for additional services.
Carlos Street Realignment to 16th Street (R9)	Identify necessary partners and establish working group for a feasibility analysis.
Gray Whale Cove Parking Lot (Pa1)	Evaluate whether lot is candidate for stormwater funding and pursue funding if so.
Gray Whale Cove Turn and Acceleration Lanes (R3)	Continue engagement with Caltrans to add turn and acceleration lanes for Gray Whale Cove parking lot.
Airport Street Bikeway and Princeton Connections (B2)	Seek funding to engage in a planning-level corridor study for 30% design for Airport Street and connected bike and pedestrian accommodations.
Highway 1 Side Street Stop Signs (R2)	Evaluate feasibility of Highway 1 side street stop signs with Caltrans and County Department of Public Works to add projects to repaving schedule.
Highway 92 Truck Signs (R13)	Work with Caltrans to install the trucks use right lane signs.
Sea Level Rise and Planning Efforts	Continue efforts to maintain the current California Coastal Trail alignment with replacement of Medio Creek Bridge, while pursuing funding in partnership with FSLRRD to support planning studies related to Highway 1 and California Coastal Trail realignment to effectively address impacts of sea level rise.
Connect the Coastside Monitoring	Leverage County's existing web and data infrastructure to make existing and future transportation and development data publicly available, for the purpose of informing status reports on Connect the Coastside every 5 years.

EQUITY AND ENGAGEMENT

Equity is the condition that would be achieved if one's identity no longer predicted, in a statistical sense, how one fares. Equity is one part of justice, and thus includes work to address the root causes of inequities, not just their manifestation. This includes elimination and reversal of policies, practices, attitudes and cultural messages that reinforce differential outcomes by race, sexuality, gender, religion, ability/disability, or socioeconomic status. San Mateo County is committed to advancing equity[36] and is in the process of hiring a Chief Equity Officer to help the County engage in the necessary systems and policies change to do so. Necessarily, equity will be central to how transportation projects countywide – and those in Connect the Coastside - will be prioritized and implemented. An equity-driven approach is also central to stakeholder engagement. The County intends to advance equity through future planning and implementation processes of Connect the Coastside by ensuring engagement methods and outreach materials reach a broad range of stakeholders by using appropriate methods and languages.

[36] Board of Supervisors page on Equity https://bos.smcgov.org/equity

FUNDING AND IMPLEMENTATION MECHANISMS

This section describes potential project funding sources and other opportunities to further implementation.

PLANNING-LEVEL COST ESTIMATES

The following section summarizes the planning-level cost estimates of the recommended infrastructure improvements. The total cost for recommended projects is nearly $77 million. As projects undergo further planning as part of the implementation process, assumptions will be revisited and revised which will affect costs.

*Table 35: Recommended Infrastructure Planning-Level Cost Estimates**

Number	Project Name	Cost (rounded to nearest $1,000)
R1A	Highway 1 Shoulder Treatment – Village	$2,401,000
R1B	Highway 1 Shoulder Treatment – Fringe	$1,603,000
R2	Highway 1 Side Street Stop Signs	$27,000
R3	Gray Whale Cove Turn and Acceleration Lanes	$438,000
R4	Highway 1 Turn and Acceleration Lanes at 8th Street	$387,000
R5	16th St / Highway 1 Intersection Control	$5,442,000
R6	California Ave / Highway 1 Intersection Control	$4,961,000
R7	Cypress Ave / Highway 1 Intersection Control	$13,983,000
R8	Main Street Traffic Calming and Bicycle/Pedestrian Connectivity	$655,000
R9	Carlos Street Realignment to 16th Street	$1,123,000
R10	Carlos Street Traffic Calming	$329,000
R11	Highway 92 / Highway 35 (East, Lower) Intersection Improvements	$254,000
R12	Highway 92 / Highway 35 (West, Upper) Intersection Control	$619,000
R13	Highway 92 Truck Signs	$2,000
R14	Highway 92 Left-turn Pockets	$685,000
Pe1A	Highway 1 Uncontrolled Pedestrian Crossings	$2,262,000
Pe1B	Highway 1 Pedestrian Overcrossing	$4,804,000
Pe1C	Highway 1 and Coronado St. Improved Pedestrian Crossing	$121,000
Pe2	Highway 1 Multimodal Parallel Trail	$9,116,000
Pe3	Midcoast Alignment Completion of California Coastal Trail	$1,951,000
Pe4	Highway 1 Sidewalks in Moss Beach and Montara	$568,000
Pe5	Central Moss Beach Bicycle and Pedestrian Improvements	$65,000
Pe6	Montara Safe Routes to School	$310,000
Pe7	El Granada Safe Routes to School	$1,162,000
Pe8	Capistrano Road (South) Intersection Improvements	$256,000
B1	Highway 1 Bikeway	$5,908,000
B2	Airport Street Bikeway and Princeton Connections	$2,017,000
B3	Capistrano Road Bikeway	$297,000

B4	Highway 92 Bikeway	$4,833,000
B5	Bicycle Parking	$340,000
T1	Transit Stop Improvements	$4,274,000
T2A	Recreational Shuttle (Fixed Costs)	$1,260,000
T2B	Recreational Shuttle (Annual Operating Costs)[1]	$926,000
T3A	Increased Midcoast Bus Service (Fixed Costs)	$3,060,000
T3B	Increased Midcoast Bus Service (Annual Operating Costs)[1]	$3,400,000
Pa1	Upper Gray Whale Cove Parking Lot Improvements	$1,219,000
Pa2	Wayfinding	$185,000
TOTAL[1]*		**$76,917,000**

*Cost estimates are planning-level and preliminary and subject to change
[1]Total excludes annual operating costs for transit service (T2B and T3B)

Opportunities for Implementation

Partnerships with agencies, like Caltrans, SamTrans, and others, along with community stakeholders, such as the MCC, community-based organizations, and private sector partners are critical to compete for grant funding opportunities and successfully implement projects. Many funding sources prioritize allocating resources for disadvantaged communities to work towards rectifying past planning and policy practices that have led to vast inequities. Federal and State goals also prioritize addressing climate change and improving community health by reducing greenhouse gas emissions; therefore, many grant resources also prioritize areas with high population density near high quality transit and locations with demonstrated transportation safety concerns. Projects in Connect the Coastside may not compete as readily for these opportunities given its current conditions. Opportunities to further implementation of Connect the Coastside's recommendations, beginning with the most likely opportunities, are listed below.

Table 36: Priority Funding Sources

Source	Description	Potentially Eligible Projects	Website
1. Coastal Conservancy Grants	Administered by the California Coastal Conservancy, grants are provided to non-profit organizations and public agencies for projects that restore and protect the California coast and increase public access to it. Grants are awarded through a standing pre-proposal solicitation and through scheduled grant rounds. This includes disbursements from Proposition 1, Prop 68, and the Greenhouse Gas Reduction Fund. Funds focus on ecosystem and watershed protection, restoration projects, rivers and wetlands and protection, and climate adaptation.	Coastal trail, Multimodal Parallel Trail	https://scc.ca.gov/grants/ and https://scc.ca.gov/grants/grant-programs/
2. State Highway Operation and Protection Program (SHOPP)	Led by Caltrans, the SHOPP is the State Highway System's "fix it first" program that funds the repair and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State highway system. Caltrans leads the submission of eligible projects.	Highway pedestrian crossings, acceleration/turn lanes	https://dot.ca.gov/programs/financial-programming/state-highway-operation-protection-program-shopp-minor-program-shopp
3. California Office of Traffic Safety Grants (OTS)	Administered annually by the California Office of Traffic Safety, OTS grants are for traffic-safety education, awareness, and enforcement programs aimed at specific issues and behaviors (like distracted or drugged driving) that can lead to serious injuries and fatalities on roads.	Traffic safety campaigns to address speeding	https://www.ots.ca.gov/grants/
4. Recreational Trails Program (RTP)	Administered by the California Department of Parks and Recreation, this program supports trail maintenance, building, restoration, trailhead facilities, and maintenance equipment. The program is being updated and is usually available annually.	Coastal Trail, Multimodal Parallel Trail	https://www.parks.ca.gov/?page_id=24324
5. Transportation Funds for Clean Air (TFCA)	Administered by the Bay Area Air Quality Management District and C/CAG, this program funds projects that improve air quality. Eligible projects are broad and can include shuttle, vanpool, or smart growth projects; alternative vehicles; bikeways; signal timing; and engine replacement.	Bike and pedestrian infrastructure, and recreational shuttles	https://www.baaqmd.gov/funding-and-incentives/funding-sources/regional-fund and https://www.baaqmd.gov/funding-and-incentives/public-agencies/county-program-manager-fund

6. Vehicle Trip Reduction Grant Program	Administered by the Bay Area Air Quality Management District, the Vehicle Trip Reduction Grant Program provides funding to support projects that improve air quality and reduce greenhouse gas emissions by reducing vehicle trips and miles traveled in the Bay Area. Eligible projects include transportation service projects to reduce single-occupancy vehicle use, shuttle service, and bike facilities.	Bike and pedestrian infrastructure, and recreational shuttles	https://www.baaqmd.gov/?sc_itemid=B056735B-74BD-4CD0-A744-936A1CFD05A3
7. Storm Water Grant Program (Prop 1)	Administered by the State Water Resources Control Board, this program distributes approximately $200 million statewide for the development of Storm Water Resource Plans and multi-benefit storm water management programs including green infrastructure, rainwater, and storm water capture projects.	Parking lot improvements, if includes green infrastructure	https://www.waterboards.ca.gov/water_issues/programs/grants_loans/swgp/prop1/
8. Transportation Development Act Article 3 (TDA Article 3)	Administered annually by C/CAG using pass-through funding from MTC, this program funds projects to encourage walking and bicycling. TDA Article 3 funds are derived from Local Transportation Funds (LTF, which is a ¼ cent statewide sales tax) and State Transit Assistance funds (state sales tax on gasoline and diesel fuel). Eligible projects include construction of bike/ped projects, planning, and restriping bike lanes.	Bike and pedestrian infrastructure	https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/transit-21st-century/funding-sales-tax-and-0
9. Measure A	The San Mateo County Transportation Authority (TA) was formed in 1998 with the passage of the voter-approved half-cent sales tax for countywide transportation projects and programs, known as Measure A which is authorized through 2033. The TA administers the Measure A funds through various calls for projects every two years.	Bike and pedestrian infrastructure, and transit projects	https://www.smcta.com/about/Measure_A.html
10. Measure W	Measure W is a voter-approved half-cent sales tax (passed in 2018) that provides additional resources to improve transit and relieve traffic congestion. The funds are administered by the San Mateo County Transportation and SamTrans Board of Directors. The TA Strategic Plan guides project evaluation and can fund highway projects, local street repair, expanded bicycle and pedestrian facilities, and improved transit connections. Call for projects typically happen every two years.	Bike and pedestrian infrastructure, transit projects, acceleration/turn lanes	https://www.smcta.com/about/Measure_W.html
11. San Mateo County Safe Routes to School	Administered by C/CAG and the San Mateo County Office of Education, this program intends to increase the number of students able to walk and bike to school. Funds are available to school districts for education, enforcement and promotion/encouragement activities, evaluation and project coordination; and for small capital projects.	Safe Routes to School	https://www.smcoe.org/for-schools/safe-and-supportive-schools/safe-routes-to-school/ and https://ccag.ca.gov/programs/transportation-programs/safe-routes-to-school/

12. San Mateo County Bicycle Parking Reimbursement Program	Administered by Commute.org with funds from C/CAG, San Mateo County Transportation Authority, and Bay Area Air Quality Management District, this program reimburses applicants up to 50% of the total cost of purchasing and installing bicycle parking facilities up to $500/unit with a $5,000 cap per applicant per fiscal year.	Bicycle parking	https://www.commute.org/employer-services/179-bike-parking-at-half-cost
13. San Mateo County Road Fund	The Road Fund was established by the Boards of Supervisors in 1935, in accordance with Streets and Highways Code section 1622, for all amounts paid to the county out of money derived from the Highway Users Tax Fund. A portion of the Federal Forest Reserve revenue received by the county also is required to be deposited into the Road Fund (Government Code section 29484). In addition, the Board may authorize the deposit of other sources of revenue into the Road Fund. Once money is deposited into the Road Fund, it is restricted to expenditures made in compliance with Article XIX of the California Constitution and Streets and Highways Code sections 2101 and 2150. The fund is largely administered by the Department of Public Works.	Various	https://publicworks.smcgov.org/our-organization https://www.sco.ca.gov/aud_rfa_2016.html

Table 37: Secondary Funding Sources

Source	Description	Website
1. Federal Lands Access Program (FLAP)	The Federal Lands Access Program (Access Program) was established in 23 U.S.C. 204 to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators. Projects are selected by a Programming Decision Committee (PDC) established in each State. The PDCs request project applications through a call for projects. The frequency of the calls is established by the PDCs. This program has funded transportation improvements in relevant areas, including roundabouts and bridges.	https://highways.dot.gov/federal-lands/programs-access
2. Better Utilizing Investments to Leverage Development (BUILD) Grant (Formerly TIGER)	Administered annually by the United States Department of Transportation (USDOT), BUILD (formerly TIGER) is a nationally competitive grant for capital investments on surface transportation projects that achieve a significant impact for a metropolitan area, region, or the nation. Eligible projects include roads, bridges, transit, rail, ports, or intermodal transportation.	https://www.transportation.gov/BUILDgrants

3. Congestion Management & Air Quality (CMAQ)	Administered annually by the Federal Highway Administration (FHWA), CMAQ provides funding for state and local governments for transportation programs and projects that support the Clean Air Act, improving air quality and providing congestion relief. Eligible projects include bikeways, alternative fuel infrastructure, and diesel engine retrofits.	https://www.fhwa.dot.gov/environment/air_quality/cmaq/
4. Surface Transportation Block Grant (STBG) Program	Administered by the Federal Highway Administration, this program funds projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. STBG supports California's local Highway Bridge Program.	https://www.fhwa.dot.gov/specialfunding/stp/ and https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm
5. California Active Transportation Program (ATP)	Administered every two years by the California Transportation Commission (CTC) and Caltrans, the ATP consolidates of former federal and state programs to fund planning, programs, and infrastructure that support safe walking and bicycling. A strong preference is given to projects in disadvantaged communities and with demonstrated safety issues. Eligible projects include bicycle and pedestrian capital infrastructure, non-infrastructure (encouragement, education programs), and jurisdiction-wide active transportation plans.	https://catc.ca.gov/programs/active-transportation-program and https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program
6. Regional Active Transportation Program	Administered by the Metropolitan Transportation Commission (MTC), this is the companion program to the statewide ATP.	https://mtc.ca.gov/our-work/invest-protect/investment-strategies-commitments/protect-our-climate/active-transportation
7. California Sustainable Transportation Equity Project (STEP)	Administered as a pilot project by the California Air Resources Board (CARB), STEP is a transportation equity pilot project for Fiscal Year 2019-20 that aims to increase transportation equity in disadvantaged and low-income communities by addressing community residents' transportation needs, increasing access to key destinations, and reducing greenhouse gas emissions by funding planning, clean transportation, and supporting projects. Eligible projects include subsidizing active transportation with new bicycle and pedestrian infrastructure.	https://ww2.arb.ca.gov/our-work/programs/low-carbon-transportation-investments-and-air-quality-improvement-program-1
8. Clean Mobility Options (CMO)	Administered annually by CARB, the Clean Mobility Options Voucher Pilot Program provides voucher-based funding for zero-emission carsharing, car- and van-pooling, bike- and scooter-sharing, innovative transit services, and ride-on-demand services in California's historically underserved communities. Eligible projects must be in a disadvantaged community, tribal land, or serves a deed-restricted affordable housing facility within an AB 1550 low-income community.	https://www.cleanmobilityoptions.org/

9. Sustainable Transportation Planning Grants	Administered annually by Caltrans, Sustainable Transportation Planning Grants fund planning for studies and preliminary design to identify and evaluate projects that further statewide sustainability goals. Eligible projects include corridor studies, pilot projects, community engagement, and more.	https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants
10. Highways Safety Improvement Program (HSIP)	Administered every few years by the Caltrans Division of Local Assistance, Caltrans manages California's local agency share of federal HSIP funds to reduce fatalities and serious injuries on all public roads. HSIP projects should be identified based on crash experience, crash potential, crash rate, and other data. Eligible projects include safety-related pedestrian, bikeway, or roadway projects.	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program
11. Transit and Intercity Rail Capital Program (TIRCP)	Administered by the California State Transportation Agency (CalSTA), this program funds capital improvements that modernize California's intercity rail, bus, ferry, and rail systems to reduce greenhouse gas emissions, expand transit service to increase ridership, and improve transit safety. Eligible projects include bus transit improvements, including vanpool services operated as public transit and first-/last-mile solutions.	https://calsta.ca.gov/subject-areas/transit-intercity-rail-capital-prog
12. State Transportation Improvement Program (STIP)	Administered every two years by the California Transportation Commission, the State Transportation Improvement Program (STIP) is the biennial five-year plan adopted by the CTC for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements. State law requires the Commission to update the STIP biennially, in even-numbered years, with each new STIP adding two new years to prior programming commitments. Projects need to be nominated in the Regional Transportation Improvement Program (RTIP) to be eligible for the STIP. C/CAG submits projects from San Mateo County to the Metropolitan Transportation Commission for proposed inclusion in the RTIP to the State.	https://catc.ca.gov/programs/state-transportation-improvement-program
13. State-Local Partnership Program (LPP)	Administered by the California Transportation Commission, the LPP provides funding to jurisdictions in which voters have approved fees or taxes dedicated solely to transportation. Funding is distributive through competitive and formulaic programs and must be matched by the local jurisdiction. Eligible projects include state highway system rehabilitation, improvements to transit facilities, local roads, bicycle and pedestrian safety, and more.	https://catc.ca.gov/programs/sb1/local-partnership-program
14. Affordable Housing and Sustainable Communities Program (AHSC)	Administered annually by the California Strategic Growth Council (SGC), this program is available to government agencies, developers, and non-profits to fund affordable housing combined with multi-modal improvements aimed to reduce greenhouse gas emissions and advance sustainability goals. Eligible projects include affordable housing construction, bicycle, pedestrian, and transit improvements near the affordable housing.	https://sgc.ca.gov/programs/ahsc/

15. Transformative Climate Communities Program (TCC)	Administered by the Strategic Growth Council and Department of Conservation every few years, TCC funds community-led development and infrastructure projects with economic, environmental, and health benefits to disadvantaged communities and those disproportionately burdened by pollution. Eligible projects include bicycle and pedestrian improvements, bike share programs, and others.	https://sgc.ca.gov/programs/tcc/
16. Environmental Enhancement and Mitigation Grant Program (EEMP)	Administered annually by the California Natural Resources Agency, this program funds government and non-profit organizations to mitigate the environmental impacts caused by new or modified transportation facilities.	https://resources.ca.gov/grants/environmental-enhancement-and-mitigation-eem/
17. Urban Greening Grant Program	Administered annually by the California Natural Resources Agency, this statewide grant program allocates cap-and-trade dollars to projects that reduce greenhouse gas emissions, particularly in disadvantaged communities. Eligible projects include bike and pedestrian facilities, conversion of built environment into green space, and incorporates green infrastructure.	https://resources.ca.gov/grants/urban-greening/
18. Recreational Trails and Greenways Grant Program	Administered by the California Natural Resources Agency, this program funds projects that expand access to the outdoors and boost recreational opportunities for communities and prioritizes disadvantaged communities. Eligible projects include non-motorized infrastructure that promotes access to parks, waterways, and outdoor recreational areas.	https://resources.ca.gov/grants/trails
19. Local Streets and Roads Program (LSR)	Administered annually by the California Transportation Commission, the LSR program apportions revenue from SB 1 ($1.5 billion statewide) to jurisdictions for basic road maintenance, rehabilitation, and safety projects. Jurisdictions submit proposed project lists to the CTC for review and approval.	https://catc.ca.gov/programs/sb1/local-streets-roads-program
20. Solutions for Congested Corridors (SCCP)	Administered annually by the California Transportation Commission, this program aims to reduce congestion throughout California, focusing on multimodal corridor improvements and prioritizing safety, congestion, accessibility, economic development, and air pollution/GHG reductions.	https://catc.ca.gov/programs/sb1/solutions-for-congested-corridors-program
21. One Bay Area Grant Program (OBAG)	Administered every five years by the Metropolitan Transportation Commission (MTC), this grant program distributes federal funds to Congestion Management Agencies (in San Mateo County, C/CAG) to advance regional goals. Funds can be used for streetscape enhancements, local road maintenance, bicycle and pedestrian improvements, and more.	https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/focused-growth/one-bay-area-grants
22. Measure M San Mateo County Vehicle Registration Fee	Measure M was approved by voters in 2010 and imposes a $10 fee on vehicles registered in San Mateo County. Administered by C/CAG, 50% of funds are allocated to jurisdictions for local streets and roads, and 50% is used for countywide transportation programs such as transit, regional congestion management, and safe routes to school.	https://ccag.ca.gov/funding/measure-m/

23. Lifeline Transportation Program (LTP)	Administered by C/CAG through funds from the Metropolitan Transportation Commission, this program funds community-based transportation projects that are developed through a collaborative process. Projects must address transportation gaps or barriers identified in plans, and specifically, address low-income and disadvantaged neighborhood needs.	https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/transit-21st-century/lifeline-transportation
24. Measure K	Measure K is a countywide half-cent sales tax extension passed by local voters in November 2016 to support essential County services and to maintain or replace critical facilities. Measure K funds are allocated in three ways: 1) through the County's two-year budget cycle, 2) through mid-year adjustments to address emerging needs not anticipated at the time the budget was adopted, and 3) for one-time loans or grants to fill specific needs as recommended by a member of the Board of Supervisors. Funds can be used for addressing the effects of sea level rise, keeping County parks open, maintaining health care for low-income children, seniors, and people with disabilities, and maintaining paratransit services.	https://cmo.smcgov.org/measure-k-frequently-asked-questions
25. Regional Measures 1, 2 and 3	Approved by voters in 1988, 2004, and 2016, Regional Measures 1, 2, and 3 allocate tolls on state-owned toll bridges and are used to finance state highway and transit improvements. Projects in the approved expenditure plan for RM 3 include more frequent transbay bus service, interchange improvements, expanded express lane network, and others.	https://mtc.ca.gov/our-work/invest-protect/toll-funded-investments and https://mtc.ca.gov/our-work/fund-invest/toll-funded-investments/regional-measure-3

Other opportunities include:

- **Road Maintenance and Repaving**: Road maintenance and repaving creates an opportunity to change the way a street looks and functions; for example bike lanes or marked crosswalks can be more easily added when a street is undergoing maintenance. Senate Bill 1 Road Repair and Accountability Act of 2017 (which funds in part the San Mateo County Road Fund) increases the amount of revenue local jurisdictions will receive for local street maintenance and rehabilitation. Funds are generated through an increase in the gas and diesel excise tax, among others. Most revenues will be allocated on a per capita basis and come out of a Road Maintenance and Rehabilitation Account (RMRA), where jurisdictions will have to prioritize fixing existing infrastructure first and provide an adopted list of projects by the California Transportation Commission. To learn more about SB 1, see https://cmo.smcgov.org/faqs-road-repair-and-accountability-act-senate-bill-1, https://www.cacities.org/Policy-Advocacy/Hot-Issues/Transportation-Funding and https://sco.ca.gov/Files-AUD/gas_tax_guidelines31219.pdf.
- **Other Agency Partnerships**: As described in the Actors, Partners, and Stakeholders chapter, there are other decision-making bodies, agencies, and partners that can further implementation of Connect the Coastside, such as the Granada Community Services District, Montara Water and Sanitary District, Caltrans, Midpeninsula Regional Open Space District, and others. These entities build and maintain infrastructure in the Midcoast and may incorporate Connect the Coastside's recommendations into their future planning and implementation efforts.
- **Foundations, Private Sector, and Non-profit Partners**: Aside from public sector partners, foundations and private and non-profit partners are often interested in funding projects and programs that align with their interests and goals. Potential foundations can be found here: https://ncg.org/directory
- **Development**: In some cases, the County can impose conditions on new development that can help incrementally implement Connect the Coastside and keep with its goals. Examples include: providing or complete sidewalks, public bicycle parking, public vehicle parking, and others.
- **Transportation Impact Mitigation Fee**: The proposed Transportation Impact Mitigation Fee is a key opportunity to raise funds to implement projects in Connect the Coastside and is detailed further below.

TRANSPORTATION IMPACT MITIGATION FEE (TIMF)

What is a TIMF?

A transportation impact mitigation fee is a type of development impact fee and is a way to collect a proportional share of funds from new development to offset transportation impacts of that new development. The TIMF program would collect fees for new residential and non-residential development on a per-housing-unit basis for residential and per-square-foot basis for non-residential development.

How is a TIMF established?

In order to establish a Transportation Impact Mitigation Fee, the County will need to document the "nexus" or linkage between the fees being charged to new development, the benefits to mitigate impacts, and cost allocation. These legal requirements are in California Government Code section 66000-66025 and commonly called the "Mitigation Fee Act" or "AB 1600 requirements." Only a portion of Connect the Coastside's recommended projects' costs can be allocated to new development because some of the locations in the study area are already deficient without the addition of new development. The nexus study would show the specific connection between the transportation project need and the new development. The TIMF does not go into effect automatically if Connect the Coastside is adopted.

How much money would a TIMF generate for transportation?

The total amount of money generated by the TIMF is dependent upon how much development ultimately gets built. The calculation for the TIMF is based on the amount of forecasted development, the cost of projects needed to address the impacts of the forecasted development, and the allocation of a fee per housing unit (or per square foot for commercial). All of the forecasted development, in the amount that it is estimated by each land use type, would have to occur in order to generate the full need.

What happens if the TIMF does not move forward?

Without the adoption of a TIMF, proposed developments of a certain size would cause transportation impacts where they could be required to fund transportation improvements; these projects are evaluated on a case by case basis. Smaller projects may not be required to fund transportation improvements. The County, other actors, and partners would still pursue implementation of projects using other sources of revenue and grants.

What can a TIMF be spent on?

Transportation impact fees can be used to fund a variety of transportation improvements, which help to mitigate or "offset" transportation impacts. By law, these fees cannot go to a general fund. The final nexus study would include the final project list. Cities in California have used fees to fund transit services, bicycle and pedestrian infrastructure, transportation demand management programs, roadway improvements, and other fee-eligible projects.

How is a TIMF calculated?

The level of funding that might be available from a transportation impact mitigation fee program can be estimated using:

(1) **Transportation Project List** – Projects to be included in the fee program and their cost estimates

(2) **Forecast of Future Land Use** - The potential for new residential units and new nonresidential uses within the study area

(3) **Allocation of Costs to New Development** – The percentage of project costs that can be associated with new development

(4) **Traffic Forecast** – The volume of traffic over specific roadway segments during the peak period as well as vehicle trip origins and destinations

These are then used to determine the fee amounts per dwelling unit or per square foot.

Connect the Coastside Preliminary TIMF Calculation

(1) Transportation Project List

The list of projects that would be included in the mitigation fee program is consistent with those described Table 29: Recommended Infrastructure Projects on page 93. Of the total project costs, only a portion can be allocated to the fee program by demonstrating a nexus between the project need and new development.

(2) Forecast of Future Land Use and Growth Potential

Transportation impacts first must be scaled to the impacts of one single-family residential household or Dwelling Unit Equivalent (DUE). Standard trip generation rates, average trip lengths, and pass-by trip percentages were used in this process (see Table 38: Dwelling Unit Equivalent (DUE) Rates). These Dwelling Unit Equivalent rates are then applied to divide improvement costs on an equivalent unit basis for the transportation impact fee calculation. The quantity of new development expected in the study area is from the land use buildout analysis based on the Constrained Development Forecast (Table 11 and Table 12 on page 40). The Constrained Development Forecast provides a more realistic estimate of the number of dwelling unit equivalents that the fee will collect over the planning horizon, which is a key input into the calculation. Using the Maximum Buildout Forecast would be an overstatement of growth, resulting in a lower than needed fee. The projected new development was then allocated to land uses based on zoning.

Table 38: Dwelling Unit Equivalent (DUE) Rates

Land Use Category	Unit	PM Peak Hour Trip Rate per Unit[1]	Trip Length (miles)[2]	Percent New Trips	VMT per Unit	DUE per Unit
Formula		**[A]**	**[B]**	**[C]**	**[D] = ([A] x [B] x [C])/100**	**[E] = [D] / [D for single-family]**
Single-family	Dwelling Unit	0.99	5.0	100%	4.95	1.00
Multi-family	Dwelling Unit	0.56	5.0	100%	2.80	0.57
Retail[2]	Square Feet x 1000	3.81	2.3	76%	6.66	1.35
Office	Square Feet x 1000	1.40	4.5	92%	5.80	1.17
Industrial	Square Feet x 1000	1.15	5.1	92%	5.40	1.09

Source: DKS Associates, 2017
Notes:
[1]ITE Trip Generation Web-based App (https://itetripgen.org)
[2]ITE Journal, May 1992

Table 39: Constrained Development Forecast (Year 2040) by Land Use and Growth in DUEs

Land Use Category	Unit	DUE per Unit[1]	(A) Existing Uses	(B) Existing DUEs	(C) Future (2040) Uses[2]	(D) Future DUEs	(E) Expected Growth[3]	(F) Expected Growth DUEs
Single-Family	Dwelling Unit	1.00	7,498	7,498	8,835	8,835	1,213	1,213
Multi-Family		0.57	1,283	726	1,916	1,084	575	325
Retail	Square Feet x 1000	1.35	234	315	400	538	165	221
Office		1.17	708	828	1,280	1,499	494	578
Industrial		1.09	298	325	711	775	191	208
Total:				9,691		12,731		2,546
Percent growth DUEs:				**=(F)/(D)**	**0.20**			

Notes:
[1]Dwelling Unit Equivalent (DUE) per thousand square feet for non-residential uses
[2]Includes existing uses, projects already in development pipeline, and remaining capacity
[3]Does not include projects in development pipeline

(3) Traffic Forecast for 2040

Traffic forecasts were generated with the City/County Association of Governments (CCAG) travel demand model. The C/CAG travel model was used to perform select link assignments of future (2040) PM peak period traffic passing through roadway project locations. These select link assignments are used to produce an origin-destination matrix of the vehicle trips passing through model network links or nodes representative of the roadway project locations. The vehicle trip origins and destinations were then categorized as internal or external to the Connect the Coastside study area to separate through traffic from trips starting or ending in the study area (local traffic). The percentage of local traffic attributable to growth was estimated by multiplying the local trips by the percentage of growth DUEs within the study area (Table 40).

Table 40: Percentage of Local Growth Traffic at Select Locations, 2040 PM Peak Period

	Total Trips			Local Trips		
	Local[1]	Through[2]	Total	Existing[3]	Growth[4]	Local Growth %
Highway 1 near California Ave and Cypress Ave	4,767	17	4,785	3,799	969	0.20
Highway 92, east of Half Moon Bay	11,734	536	12,271	9,350	2,385	0.19
Highway 92 and Highway 35 (Upper)	11,706	1,196	12,902	9,327	2,379	0.18

Notes:
[1] Trips with an origin and/or destination in the study area.
[2] Trips beginning and ending outside the study area
[3] "Local" trips associated with existing development (calculated with percent existing DUEs)
[4] "Local" trips associated with new development (calculated with percent growth DUEs)

(4) Allocation of Costs to New Development

Some improvements included in Connect the Coastside address existing deficiencies. In this case, the fair share allocation of the improvement project costs is the portion of total traffic at each project location accounted for by new trips due to growth in the study area, excluding any new through (not beginning or ending in the Midcoast) trips (Local Growth percentage in Table 40: Percentage of Local Growth Traffic at Select Locations, 2040 PM Peak Period).

Bicycle and pedestrian improvements serve local trips, those that have their origin or destination within the study area. The lack of bicycle and pedestrian facilities is an existing deficiency. Since improvements will benefit both existing and future residents, the cost of projects allocated to new development will equal the new development's proportional share of the total future development (existing plus new development) in the study area measured in DUEs.

$$New\ Development\ Share = \frac{New\ Development\ DUEs}{Study\ Area\ DUEs\ (Existing + New\ Development)}\ x\ 100\%$$

Similarly, there are projects which address safety concerns, design standard deficiencies, or benefit multiple modes of transportation. Examples of these include installation of stop signs, parking lot improvements, and roadway shoulder and curb improvements. Since these types of projects also benefit both existing and new development, the cost of those projects allocated to new development is the new development's proportional share of the total future development (existing plus new development) in study area, measured in DUEs. This is the total percent growth DUEs (Table 39: Constrained Development Forecast (Year 2040) by Land Use and Growth in DUEs). The table below summarizes the amount per project allocated to the fee program.

Table 41: Project Costs Allocated as Percentage of Growth Dwelling Unit Equivalents or Local Growth Traffic Percentage

Number	Project Name	Total Cost (rounded to nearest $1,000)	Cost Allocated to Fee Program (rounded to nearest $100)
R1A	Highway 1 Shoulder Treatment – Village	$2,401,000	$480,200
R1B	Highway 1 Shoulder Treatment – Fringe	$1,603,000	$320,600
R2	Highway 1 Side Street Stop Signs	$27,000	$5,400
R3	Gray Whale Cove Turn and Acceleration Lanes	$438,000	$87,600
R4	Highway 1 Turn and Acceleration Lanes at 8th Street	$387,000	$77,400
R5	16th St / Highway 1 Intersection Control	$5,442,000	$1,088,400
R6	California Ave / Highway 1 Intersection Control	$4,961,000	$992,200
R7	Cypress Ave / Highway 1 Intersection Control	$13,983,000	$2,796,600
R8	Main Street Traffic Calming and Bicycle/Pedestrian Connectivity	$655,000	$131,000
R9	Carlos Street Realignment to 16th Street	$1,123,000	$224,600
R10	Carlos Street Traffic Calming	$329,000	$65,800
R11	Highway 92 / Highway 35 (East, Lower) Intersection Improvements	$254,000	$50,800
R12	Highway 92 / Highway 35 (West, Upper) Intersection Control	$619,000	$111,400
R13	Highway 92 Truck Signs	$2,000	$400
R14	Highway 92 Left-turn Pockets	$685,000	$137,000
Pe1A	Highway 1 Uncontrolled Pedestrian Crossings	$2,262,000	$452,400
Pe1B	Highway 1 Pedestrian Overcrossing	$4,804,000	$960,700
Pe1C	Highway 1 and Coronado St. Improved Pedestrian Crossing	$121,000	$24,200
Pe2	Highway 1 Multimodal Parallel Trail	$9,116,000	$1,823,100
Pe3	Midcoast Alignment Completion of California Coastal Trail	$1,951,000	$390,200
Pe4	Highway 1 Sidewalks in Moss Beach and Montara	$568,000	$113,600

Pe5	Central Moss Beach Bicycle and Pedestrian Improvements	$65,000	$13,000
Pe6	Montara Safe Routes to School	$310,000	$62,000
Pe7	El Granada Safe Routes to School	$1,162,000	$232,400
Pe8	Capistrano Road (South) Intersection Improvements	$256,000	$51,200
B1	Highway 1 Bikeway	$5,908,000	$1,181,500
B2	Airport Street Bikeway and Princeton Connections	$2,017,000	$403,400
B3	Capistrano Road Bikeway	$297,000	$59,400
B4	Highway 92 Bikeway	$4,833,000	$966,500
B5	Bicycle Parking	$340,000	$68,000
T1	Transit Stop Improvements	$4,274,000	$854,700
T2A	Recreational Shuttle (Fixed Costs)	$1,260,000	n/a
T2B	Recreational Shuttle (Annual Operating Costs)[1]	$926,000	n/a
T3A	Increased Midcoast Bus Service (Fixed Costs)	$3,060,000	n/a
T3B	Increased Midcoast Bus Service (Annual Operating Costs)[1]	$3,400,000	n/a
Pa1	Upper Gray Whale Cove Parking Lot Improvements	$1,219,000	$243,800
Pa2	Wayfinding	$185,000	$37,000
TOTAL[1]*		**$76,917,000**	**$14,506,500**

Notes:
Percentage allocation for all is based on overall growth percent DUEs, which is 0.2 (20%), except for:
[1]Local growth percentage increase is 0.2 (20%)
[2]Local growth percentage increase is 0.18 (18%)
*Costs for recreational shuttle and increased bus service are excluded from the mitigation fee

(5) Estimated Fees

Table 42 summarizes the transportation impact fee calculation. A total of approximately $14.5 million has been allocated to the fee program. The total allocated costs are distributed across an expected 2,546 DUEs, resulting in a fee of $5,698 for each single-family dwelling unit, $3,223 for each multifamily dwelling unit, and costs of $7.67, $6.67, and $6.21 per square foot for retail, office and industrial development, respectively.

Table 42: Transportation Impact Mitigation Fee Rates

Cost of Improvements Allocated to Coastside Area Growth			$14,506,500
Growth in Dwelling Unit Equivalents (DUEs)			2,546
Cost per DUE			$5,698
Land Use	**Units**	**DUE**	**Fee per Unit or Square Foot[1]**
Single-Family	Dwelling Unit	1.00	$5,698
Multi-Family	Dwelling Unit	0.57	$3,223
Retail	Square Foot	1.35	$7.67
Office	Square Foot	1.17	$6.67
Industrial	Square Foot	1.09	$6.21

9.Appendices

APPENDIX A – ENGAGEMENT

2020 ENGAGEMENT REPORT

MOSS BEACH CHARETTE MEETING NOTES

APPENDIX B – PROJECT REPORTS

APPENDIX C – PLANNING AND POLICY CONTEXT

APPENDIX D – VEHICLE COUNTS COMPARISON

APPENDIX E – ANALYSIS WORKSHEETS

EXISTING CONDITIONS – HIGHWAYS 1 AND 92 – SYNCHRO AND SIMTRAFFIC OUTPUT

BUILDOUT CONDITIONS – HIGHWAYS 1 AND 92 – SYNCHRO AND SIMTRAFFIC OUTPUT

MITIGATED BUILDOUT CONDITIONS – HIGHWAYS 1 AND 92 – SIDRA, SIMTRAFFIC, AND SYNCHRO OUTPUT

Appendices are available for download on the Connect the Coastside webpage at https://planning.smcgov.org/connect-coastside