

Table of Contents

1	Introduction	Page
1.1	Purpose and Background	2
1.2	Environmental Constraints and Design Responses	2
1.3	Task Force and Community Involvement	3
1.4	Project Goals and Objectives	3
1.5	Design Criteria	5
2	Project Description	
2.1	Overview of Proposed Route Alternatives	6
2.2	Coastal plan segment A -Yerba Buena to North Point Natural Area	6
2.3	Coastal plan segments B & C - North Point Natural Area to Toro Creek	7
2.4	Coastal plan segments D, E and F - Toro Creek to Studio Drive	7
2.5	Coastal - Studio Drive to Old Creek Road traffic signal	7
2.6	Coastal - Studio Drive to Ocean Avenue / SR1 intersection	8
2.7	Inland plan segments A and B- Yerba Buena to Toro Creek	8
2.8	Inland plan segments C-F – Toro Creek to South Ocean Ave	8
2.9	Inland- S. Ocean Ave to Old Creek Rd. / Route 1 intersection	9
2.10	Inland - S. Ocean Ave from Old Creek Road to Downtown	9
3	Cost to Construct	
3.1	Cost Projections for Inland and Coastal Route Alignments	10
4	Plan Exhibits	
1.	Project Context, Regional Connections and Access- south	
2.	Project Context, Regional Connections and Access- north	
3.	Path Plan segment A- Yerba Buena to North Point Natural Area	
4.	Path Plan segment B- North Point Natural Area to Rock Barrier	
5.	Path Plan segment C- Rock Barrier to Toro Creek	
6.	Path Plan segment D- Toro Creek to Toro Creek Road	
7.	Path Plan segment E- Toro Creek Road to Bluff Drainage	
8.	Path Plan segment F- Bluff Drainage to Studio Drive	

Appendices

- Appendix A- Property Ownership Exhibits
- Appendix B- Constraint Study Summary Map- Areas of Concern
- Appendix C- Conceptual Alignment Alternatives
- Appendix D- Opinion of Probable Cost
- Appendix E- Bluff Top Geologic Report

1 – Introduction

1.1 Purpose and Background

The purpose of this report is to establish the Preliminary Design alignment and characteristics for the recreational and commuter bicycle route(s) between the north end of Morro Bay and the community of Cayucos.

The proposed is an approximately one mile long bicycle / pedestrian path connecting the communities of Morro Bay and Cayucos. Currently commuter and recreational bicyclists must travel on State Route (SR) 1 since there are no other streets that connect the two communities. The beach area and coastal bluff areas are used for passive recreation. Access to this area is available from the south end of Studio Drive, the City of Morro Bay park at the end of Torro Lane, and along SR 1 at two informal (unauthorized) parking locations.

In order to fund this Preliminary Design Report, the County of San Luis Obispo obtained a Scenic Byways Grant as well as grant funds from the California Coastal Conservancy and San Luis Obispo Council of Governments. The grant funds obtained are for design, environmental review (CEQA and NEPA) and permits.

1.2 Environmental Constraint Study and Design Responses

As part of the creation of this Preliminary Design Report, the County retained the Morro Group inc. to prepare an environmental constraint analysis for the project study area. This study is a prelude to preparation of the CEQA document for the Design Report alignments and is incorporated by reference into this report. In addition, the County retained Earth Systems to prepare a bluff top geologic study (Appendix B contains the Summary Constraint Map and Appendix E contains the bluff top geologic study).

The key findings of the Constraints Analysis as they relate to the path planning and design are summarized as follows:

- Portions of the proposed path alignments occur in areas known to have cultural resource deposits. The path will be designed to be at grade or in fill in these areas and no impact is anticipated.
- The project area contains several plant species that are sensitive. The path is designed to avoid these areas to the extent feasible. The map

exhibits in this report show the impact areas to sensitive plants. Mitigation within the project area by replacement plantings is anticipated.

- A variety of underground utilities exist in the path corridor. Generally the path has been aligned to not be over these utilities.
- The path will cross several erosion features (gullies) that have resulted from stormwater discharge from the highway. The design will fill portions of these where the depth and width is minor and will span two gullies with a bridge where the gully is deeper, wider or may be a jurisdictional Water of the U.S.
- The proposed project is along a designated Scenic Highway. The path construction could result in visual impacts to the scenic highway corridor. To reduce visual impacts, the path has been designed to minimize grading and depress the path below the highway traveler's eye to the extent feasible.
- Wetlands and jurisdictional Waters of the U.S. (Toro creek) have been avoided.

1.3 Planning Team and Community Involvement

The County formed a Planning Team composed of agencies and stakeholders to guide and provide input during the design and planning process. This Task Force met periodically during the development of this report and provided input regarding potential constraints, reviewed plans and documents, helped formulate Project goals and objectives, and assisted in determining the preferred route. The members of the Team included:

- Jan DiLeo, County Department of General Services- Parks
- David Foote, Firma (consultant)
- Mike Nunley, Boyle Engineering (consultant)
- Malcom McEwen, Boyle Engineering (consultant)
- Darren Brown, San Luis Obispo Council of Governments
- Tim Duff, The Coastal Conservancy
- John Smida, Caltrans- Local Assistance
- Cathy Stetler, Caltrans - Environmental
- Gary Ruggerone, Caltrans - Environmental
- Steve Senet, Caltrans- Right of Way
- Vince Cicero, California Department of Parks and Recreation
- Frank Cunningham, City of Morro Bay
- Steve McMasters, County Department of Planning and Building
- Doug Bird, County Public Works Department

- Bill Henry, Morro Group (consultant)
- Keith Miller, Morro Group (consultant)
- Dick Moon, community representative for Cayucos
- Robert Davis, SLO Bike Club
- Adam Fukushima, SLO County Bike Coalition

The conceptual path alignment alternatives were presented to the Cayucos Citizen Advisory Council (twice), the City of Morro Bay Parks & Recreation Commission and Public Works Advisory Board, and the San Luis Obispo County Parks and Recreation Commission. The consensus of all groups was that the coastal route was preferred if feasible.

Design review meetings were also conducted with Caltrans staff in relation to the path segments proposed within the Caltrans right of way. The consensus was that the preliminary alignments appear feasible and that the coastal route is the preferred route, provided the environmental review process determines there are no insurmountable environmental issues related to that route.

1.4 Project Goals and Objectives

The fundamental goal of the Project is to provide an alternative transportation corridor as well as a recreational bicycle /pedestrian path between the north end of Morro Bay and the southern portion of Cayucos.

The Project study area extends from Yerba Buena Street in Morro Bay to the north end of Studio Drive and Old Creek in Cayucos, **refer to Exhibits 1 and 2** (in section 4 following). The proposed project consists of new construction of a class 1 bike path from Yerba Buena Street to the south end of Studio Drive. Two alternate alignments are presented, one on the ocean side of State Route 1 and one on the inland side of the highway.

The path is located and designed to accommodate a variety of users including commuter bicyclists, recreational bicyclists and pedestrians. The new proposed path segments are designed to link up with several existing public streets that currently function to one degree or another as bicycle and pedestrian routes in each community. Because of this anticipated mixed use the proposed project is designated a bicycle / pedestrian path.

The following objectives were identified in the planning and design process:

- To the maximum extent feasible, given environmental and technical constraints, provide a separated (Class 1) path of travel.
- Avoid or minimize impacts to sensitive environmental resources.
- Path design should conform to Caltrans and County bike path standards for width, separation from travel lanes, barriers, surfacing, signage and horizontal and vertical alignment geometry.

- The path should maximize the user's contact with the coast line.
- The path must consider the safety of users at the points the new path links to existing streets or routes, incorporate measures to minimize hazards and risks, and avoid street and highway crossings at uncontrolled intersections.
- To the extent feasible and balancing cost, safety and environmental constraints, locate the path outside of the Route 1 right of way.
- Recognize and accommodate potential pedestrian use of the path segment along the ocean bluff for recreational walking and beach access.
- The path should meet accessibility standards to the maximum degree feasible.

1.5 Path Design Criteria

The path alignments incorporate the following design criteria:

- The path should be a minimum of 8 feet paved with two foot aggregate base shoulders on both sides.
- The bridge segments should be a minimum of 12 feet wide inside railing to inside railing.
- Where the path option is within 5 feet of the edge of pavement on Route 1 a concrete (32") and fence (22") barrier with a combined height of 54 inches high is required unless adequate vertical separation is achievable.
- The at-grade segments of the path will be asphalt-concrete paving over an approximate minimum of 6 inches of compacted aggregate base.
- Where the path runs along the existing unauthorized parking areas on the west side of Route 1, a low chain link fence barrier will be located about 50 feet from the edge of the highway, to minimize parking / bicyclist conflicts.
- No on-street striping on existing streets is proposed.
- Signage consisting of wood posts approximately 42 inches tall with coated aluminum sign plates will be installed periodically to direct users.

2 - Project Description

2.1 Overview of Proposed Route Options

The Plan is comprised of two basic route alternatives: the coastal route, located on the ocean side of Route 1, and the inland route located east of Route 1. From Yerba Buena Street in Morro Bay, the east route extends to Ocean Avenue and uses the existing class 3 bike path on Ocean Avenue to link to downtown Cayucos. The west route links to the south end of Studio Drive. From this point, users can travel north to the signal at Old Creek Road to get to Ocean Avenue and downtown. A future project may enable bicyclists and pedestrians to access downtown via a connection to Ocean Avenue under SR 1 near the cemetery or over Old Creek along SR1 between Studio Drive and 24th Street.

Exhibits 1 and 2 show how the proposed Class 1 path between Yerba Buena Street and Studio Drive / Ocean Ave. links to existing streets and class 3 bike routes as well as the locations recreational users can park to access the path.

Each route has variations that are possible depending on the user's origin and destination and riding skill level. For example, as detailed below, once the proposed path connects to the community street system the riders may desire to cross Route 1 at one of several intersections.

In addition, either basic route could include future shoulder or Class 1 path improvements on Route 1 between the south end of Studio Drive and north end of Studio Drive. This option would provide another through-route linking the proposed Class 1 path south of Cayucos to at least Old Creek. This route would primarily appeal to commuter riders. This potential future enhancement of the route is not a part of this report.

The narrative below details the characteristics of each segment of the alternative routes.

2.2 Coastal segment A- Yerba Buena to North Point Natural Area (city park)

The segment beginning at Yerba Buena has two optional routes: up Torro Lane as a Class 3 path and parallel (and above) Torro Lane in the Route 1 right of way as a Class 1 path. Torro Lane is a private street over which the City of Morro Bay has an access easement. The grades are steep at the end of Torro Lane and underground utilities preclude grading, therefore the selected route on this segment is in the Caltrans right of way.

The Northbound users would access this segment from Main Street and Beachcomber Drive, both currently undesignated Class 3 routes, at the signalized Yerba Buena / Route 1 intersection. (refer to **Exhibit 3**)

2.3 Coastal segments B and C – North Point Natural Area to Toro Creek

The alignment within the state right of way would leave the right of way at the City of Morro Bay North Point Natural Area and meet the old roadbed alignment. The path then follows a narrow strip of land between the right of way and rip-rap shore protection over a length of about 500 feet. Over this segment the path would be constructed partially within the SR 1 right of way due to the constraint posed by the rip-rap shore protection and would be up to 2 feet below the grade of the Route 1 pavement. The length of path within the Route 1 right of way would require a concrete barrier (32") and open wire screen (22") totaling 54 inches high.

Where the path runs along the existing unauthorized parking areas on the west side of Route 1, a low chain link fence (36 inches) will be located about 50 feet from the edge of the highway, to separate the path from parking and minimize parking / bicyclist conflicts. This segment would be within the right of way. (Refer to **Exhibits 4 and 5**)

2.4 Coastal segments D, E and F - Toro Creek to Studio Drive

Toro Creek will be crossed with a freestanding (not attached to the Highway bridge) bridge clear spanning the banks of Toro Creek (Exhibit 7). Concrete piers would support the 120 foot span at each end of the bridge outside of the creek banks. The deck would be 6" thick steel, 12 feet wide, constructed on two 4 foot deep concrete girders. The side rails would consist of an open wire fabric fence minimum of 54" high. The bridge deck would be at or slightly below the grade of the highway bridge.

North of Toro Creek, the path would transition out of the right of way and run outside the right of way to the end of Studio Drive. The path generally follows existing footpaths and is located to maximize the distance away from the highway while staying an adequate distance for the bluff top. The path would be essentially at-grade over most of this distance. Generally cut or fill would be less than one foot. Three gullies would be crossed: two by 40 foot free span bridges with 54" railings and one by filling about a two foot depth. (Refer to **Exhibits 6, 7 and 8**)

2.5 Coastal- Studio Drive to Old Creek Road traffic signal

The path would meet the end of Studio Drive at a point where the pavement width is not sufficient for the residents to back out of their driveways when people park on the street. People use this end of the street to park for coastal access. The route through this segment would involve widening pavement on Studio drive to allow an 8 foot wide parking lane, a bay of perpendicular parking and a 24 foot paved street. The route would run on-street within the 24 foot paved section as a striped and signed Class 3 bike path (refer to **Exhibit 8**).

The user would have an option at this point to cross Route 1 either coming south to connect to the west side path or coming north to access the existing designated Class 3 bike path on Ocean Avenue. Because this

intersection is un-signalized, signage will direct users to signalized intersections.

Users would be directed by signage to use Studio Drive as an on-street Class 3 route to the signalized intersection at Old Creek Road. The route will be signed at this signalized intersection to direct users to Ocean Ave to continue northbound.

Studio Drive is narrow, with residences on both sides, and has considerable use for coastal access parking, rendering it less safe than Ocean Ave. for bicyclists. However, many people ride on Studio Drive currently.

2.6 Coastal - Studio Drive to Ocean Avenue / SR1 intersection

The route continues as a Class 3 path on Studio Drive to the end of that street. At that point users coming from the east side or users wanting to get to Ocean Ave. could cross Route 1, however, like the other un-signalized intersection to the south, this location will not be signed as a crossing point and will not be encouraged.

Crossing Old Creek over the State Park land or in the Caltrans right of way was determined to be infeasible due to environmental constraints, conflicts with the State Park Master Plan and safety.

Caltrans has commenced initial consideration of a pedestrian / bike underpass at the Studio Drive / Ocean Ave, intersection with SR 1. If constructed in the future this underpass would provide a safe link from Studio Drive to the downtown via Ocean Avenue. (Refer to **Exhibit 1**)

2.7 Inland segments A and B- Yerba Buena to Toro Creek

Like the west side route, travelers would access, or leave, the route at the signalized Yerba Buena intersection. The path would move into the Route 1 right of way and continue as a Class 1 path separated from the edge of the highway by five feet horizontal distance and about 30 inches vertical distance. A 54" tall concrete / fence combination barrier is required over a length of about 1,300 feet separating the path from the highway. Along this segment the path would be benched into the existing highway cut slope (slightly steeper than 3:1). Two terraced retaining walls of about 4 foot height would be constructed on the uphill side of the path. The path would be constructed on cut. (Refer to **Exhibits 3 and 4**)

2.8 Inland segments C-F – Toro Creek to South Ocean Ave.

The path would cross Toro Creek in a similar manner to the bridge concept for the west side, unless the project can be combined with the Caltrans replacement of the northbound Toro Creek bridge planned for 2008-2010, in which case it may be constructed integral with the new highway bridge.

The route would continue outside the SR 1 right of way as a Class 1 path to the south end of Ocean Ave where it would link to the existing designated Class 3 path there. Between Toro Creek and Ocean Avenue, the path would be constructed essentially at-grade with an average of less than 1.5 feet of cut or fill.

The alignment avoids mapped wetlands and minimizes riparian woodland loss at Toro Creek. Areas of sensitive botanical species may be impacted and would require mitigation. (Refer to **Exhibits 5-8**)

2.9 Inland- S. Ocean Ave to Old Creek Rd. / Route 1 intersection

Ocean Avenue is a designated Class 3 path (part of the Pacific Coast Bike Path). The paved width averages at least 30 feet, and the street has residences and businesses on only the inland side, making the route reasonably safe for a variety of rider ages and skill levels. At the intersection of Old Creek Road users can safely cross Route 1 at the signal coming from either direction to get to Studio Drive. As with the west route, only this Route 1 crossing point will be signed and encouraged. This segment would have signs but no other physical improvements. (refer to **Exhibit 1**).

2.10 Inland- S. Ocean Ave from Old Creek Road to Downtown

The route would continue northward to the end of Ocean Ave. where the path meets the existing Class 1 path that continues past the water treatment facility, over Old Creek, under Route 1 and into Cayucos. This segment would have signs but no other physical improvements.

3- Cost to Construct

3.1 Cost Projections for the Inland and Coastal Routes

Boyle Engineering prepared a preliminary opinion of probable cost to construct the coastal and inland alignments. The coastal route is estimated to cost \$2,000,000 to construct. The inland route is estimated to cost \$1,200,000 to construct. A detailed breakdown of costs is presented in Appendix D.

The detailed estimate covers probable construction and engineering costs and include minor amounts for contingencies to cover added costs which may arise due to changed conditions, minor changes in project scope and normal uncertainties that can be expected for a preliminary design. The estimates could vary significantly from the actual cost to construct. At the completion of the permitting phase the cost to construct should be reevaluated and a final opinion of cost shall be prepared after final design is completed.

The following items are not included in the costs shown:

- Permitting, mitigations measures and monitoring
- Cost escalation over time
- Land or easement acquisition
- Unusual construction techniques which may be required by permitting agencies

4 Plan Exhibits