

A. Relevant Documents and References

This Appendix summarizes plan, policy, standards and guidelines documents pertinent to Pacific Coast Bike Route (PCBR) or California Coastal Trail (CCT) improvements along State Route 1 in Mendocino County. This includes documents and regulations ranging from federal to local level. It discusses the distinctions between the standards for recreational facilities, such as more rural portions of the CCT, and transportation facilities, such as pedestrian facilities in urbanized areas, and all portions of the PCBR. It then provides a more detailed description of the pertinent proposals, policies, standards, and guidelines from the relevant documents.

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A.1. Summary of Policies, Standards and Guidelines

Table A-1 summarizes the relevant policies or standards addressed in each of the documents reviewed in this appendix.

Table A-1: Summary of Design Guidelines and Regulations

Agency and Document	Topics Addressed
Federal	
American Association of State Highway and Transportation Officials (AASHTO)	
Guide for the Development of Bicycle Facilities (1999)	<ul style="list-style-type: none"> • Shared roadways (lane width, on-street parking, signing) • Bike lanes (widths, intersections, symbol guidelines) • Shared use paths (separation from roadways, width, clearance, design speed, grade, sight distance, intersections, signing, marking, drainage) • Other design considerations (bicycle facilities through interchange areas, traffic signals, bicycle parking, accessibility requirements)
The Architectural and Transportation Barriers Compliance Board (Access Board)	
Proposed Guidelines for Public Rights-of-Way (2011)	<ul style="list-style-type: none"> • Minimum standards for sidewalks, street crossings, and other elements of the public rights-of-way (including walkways and sidewalks, street or highway shoulders where pedestrians are not prohibited, crosswalks, islands and medians, overpasses and underpasses, on-street parking spaces and loading zones, and equipment, signals, signs, street furniture, and other appurtenances provided for pedestrians)
Draft Final Guidelines for Outdoor Developed Areas (2009)	<ul style="list-style-type: none"> • (Recreational) Trails (surface requirements, maximum slope, clear tread width, passing spaces, signs, resting intervals, gates and barriers) • Outdoor recreation access routes (surface requirements, maximum slope, clear width, passing spaces, slopes, resting intervals) • Beach access routes (surface, clear width, slopes, resting intervals) • Picnic and camping facilities
U. S. Department of Justice (DOJ) Amendment to the ADA Regulations Regarding the Use of Wheelchairs and Other Power Driven Mobility Devices 28 CFR part 35 (2011)	<ul style="list-style-type: none"> • Requires managers of public facilities, including trails, to accommodate people with disabilities who wish to use various types of non-wheelchair powered vehicles for access • See California Department of Parks and Recreation Departmental Notice No. 2011-02: Permissible Uses of Other Power Driven Mobility Devices (OPDMD)

Agency and Document	Topics Addressed
Federal Highway Administration (FHWA)	
Manual on Uniform Traffic Control Devices (MUTCD) (2009)	<ul style="list-style-type: none"> • Defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic • Caltrans adopted the updated California MUTCD (CA MUTCD) in January 2012
Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide (2001)	<ul style="list-style-type: none"> • Shared-use paths (access to path, path surfaces, changes in level, grades, rest areas, width, passing spaces, railings, signs) • Recreation trails (path surfaces, changes in level, grades, rest areas, width, passing spaces, trails through steep terrain, steps, edge protection, signs) • Outdoor recreation access routes (surface, clear tread width, openings, tread obstacles, protruding objects, passing space, cross slope)
State	
California Department of Transportation (Caltrans)	
Highway Design Manual (HDM) (2009)	<ul style="list-style-type: none"> • Class I bikeway/shared use path (width, clearances, grade, separation from highways, design speed, sight distance, horizontal and vertical curves) • Class II bike lane (width, placement, at-grade interchange design) • Class III bike route (bike route criteria, at-grade interchange design) • Multipurpose trails • Clear recovery zones
The District 1 Route Concept Report for Route 1 (2003)	<ul style="list-style-type: none"> • Obstacles to complying with Caltrans' minimum width criteria due to rugged terrain • Reconstruction and rehab work on Route 1 are to accommodate the Coastal Trail where feasible
California Highway Barrier Aesthetics (2002)	<ul style="list-style-type: none"> • Barrier design
California MUTCD (2012)	<ul style="list-style-type: none"> • Signs (application, placement) • Pavement markings (word messages, symbols, arrows, reflectorization, patterns and colors on shared-use paths, demarcating obstacles, dimensions) • Traffic signals and crossing beacons (application, placement)
California Coastal Commission (CCC)	
California Coastal Act of 1976	<ul style="list-style-type: none"> • Requires each of the state's coastal cities and counties to adopt a long-term management plan, known as a Local Coastal Program • See County Local Coastal Program
California Coastal Conservancy	
Standards and Recommendations for Accessway Location and Development	<ul style="list-style-type: none"> • Coastal resource protection, access easements, the construction and location of lateral and vertical accessways, overlooks, trails, and coastal bikeways • Trail easements (width, setback, desired connections, alignment in relation to shoreline)
Completing the California Coastal Trail Plan (2003)	<ul style="list-style-type: none"> • Coastal trail wayfinding (sign placement, emblem design)

Agency and Document	Topics Addressed
California Department of Parks and Recreation	
Trail Handbook	<ul style="list-style-type: none"> • Trail design, construction, survey, operations and maintenance standards
Accessibility Guidelines (2009)	<ul style="list-style-type: none"> • Accessibility standards • Recommendations and regulations for compliance with accessibility laws • Signs (placement standards, minimum character sizes, level of information required)
Brand Standards Handbook (2007)	<ul style="list-style-type: none"> • Specification for the State Park Logo and its use • Standard colors and example designs for park entrance and directional signs
Departmental Notice No. 2011-02: Permissible Uses of Other Power Driven Mobility Devices (OPDMD) (2011)	<ul style="list-style-type: none"> • Establishes standards for OPDMD access (size, weight, speed, noise, emissions)
Local	
County of Mendocino	
General Plan Coastal Element	<ul style="list-style-type: none"> • Protection, enhancement and acquisition of coastal access routes • Standards for Highway 1 road bed
Pacific Coast Bike Route Study (2003)	<ul style="list-style-type: none"> • Overview of existing roadway facilities • Bicycle and recreational vehicle counts during peak summer travel periods • Focused areas of concern identified through public outreach • Recommendations and concept designs for scenarios along the PCBR route
Fort Bragg Coastal General Plan (2008)	<ul style="list-style-type: none"> • Recommends that the City of Fort Bragg improve public transportation, expand bicycle routes, provide safe sidewalks throughout the community, and adopt land use designations which reduce the need to drive.
Fort Bragg Bicycle Master Plan (2009)	<ul style="list-style-type: none"> • Outlines the community's goals and policies for increasing the mode share of bicycles • Summarizes all existing and planned bicycle facilities, recommends new bikeways, bicycle parking facilities, and education/safety program
Strategic Plan for the California Coastal Trail in Mendocino County (2010)	<ul style="list-style-type: none"> • Project ranking criteria with which to prioritize California Coastal Trail segments for implementation • Segments of the California Coastal Trail that overlap with the PCBR
Community Plans	
Westport Area Integrated Multi-Use Coastal Trail Plan (2011)	<ul style="list-style-type: none"> • Planning a continuous non-motorized route along the unincorporated northern Mendocino coast • Prioritization of the most densely settled portions of the corridor
The Fort Bragg South Main Street Access and Beautification Plan (2011)	<ul style="list-style-type: none"> • Improvement of linkages between central Fort Bragg and its southern communities • Road shoulders narrow considerably close to downtown, increasing potential conflicts with vehicles • City Council revisions to the design recommendations for enhancing the aesthetic qualities of South Main Street
The Gualala Community Action Plan (2007)	<ul style="list-style-type: none"> • Focus on improving the livability, safety, and vitality of Gualala's downtown area, mainly through streetscape improvements and traffic calming • A detailed improvement program as part of the long-term capital improvement strategy

Agency and Document	Topics Addressed
Gualala Downtown Design Plan (Phase II) (2009)	<ul style="list-style-type: none"> • The community wants to increase walkability and safety via a continuous network of pedestrian paths • Walkways should reflect Gualala’s rural, casual, coastal town character • Parking and circulation issues, including vehicular, pedestrian, and bicycle, in downtown • ADA opportunities and constraints along the Gualala Bluff Trail
Downtown Gualala Refined Streetscape Design Plan (2012)	<ul style="list-style-type: none"> • "Interim Constrained" street section created on west side of SR 1 in front of Surf Market to preserve on-street parking in place of proposed 8-foot wide sidewalk • Caltrans and the Mendocino Council of Governments (MCOG) differ in their preferred construction phasing strategies • Full implementation depends upon acquisition of 5 feet of right-of-way and removal of parking in highly constrained downtown section
The Point Arena Community Action Plan (2010)	<ul style="list-style-type: none"> • Downtown Streetscape Plan; Circulation and Parking Plan • Improved signage and traffic calming elements • Pedestrian and bicycle facility recommendations • Proposed trail and access route improvements
The County of Mendocino’s State Route 1 Corridor Study Update (2008)	<ul style="list-style-type: none"> • Future traffic volumes and impacts on Levels of Service (LOS) generated by potential development in the coastal zone • Existing pedestrian and bicycle facilities and bicycle counts along Route 1 • Focus on shoulder improvements to accommodate pedestrians and bicyclists

A.2. Transportation Facilities versus Recreational Trails

Bicycle and pedestrian facilities may be separated into two general categories: transportation facilities and recreational trails. Distinct design standards and guidelines may apply to each category as described below.

A.2.1. Transportation Facilities

Transportation facilities typically pass through or connect developed areas and serve as part of the multi-modal transportation system. Pedestrian and bicycle facilities may be required to meet transportation facility design standards in order to receive state or federal funding, comply with owner or regulatory agency access or design standards, or to secure approval of an encroachment permit within state right-of-way.

Section 887 of the Streets and Highways (S&H) Code defines a "nonmotorized transportation facility" as a facility designed primarily for the use of pedestrians, bicyclists, or equestrians; it may be designed primarily for one of these uses or it may be designed as a joint-use facility. The S&H Code further states that a nonmotorized transportation facility may be part of the highway (such as a shoulder) or it may be separated from highway traffic for exclusive nonmotorized use (such as a bike path or sidewalk). Transportation facilities must comply with ADA Accessibility Guidelines for Buildings and Facilities (ADAAG). All standards set forth in Caltrans Highway Design Manual Chapter 1000 shall be met in order for a Class I, II, or III bikeway to serve as a transportation facility.

A.2.2. Recreational Trails

With recreational trails, the trail is the destination. Recreational trails typically connect and traverse open space areas and natural features, rather than developed areas. The Federal Highway Administration (FHWA) describes recreation trails as trails designed to provide a recreational experience. Use of a recreation trail is a choice made by those individuals who desire the experience that the trail provides. Recreation trails should provide users with disabilities with access to the same range of trail experiences offered to other users at the

site. This means that trails should be designed to reach destinations or points of interest and travel through various environments. Providing access to people with disabilities is best achieved by providing trail information in multiple formats and by minimizing grade, cross slope, barriers, and the presence of surfaces that are soft or unstable¹. Recreational trails may be single use (e.g., hiking, biking, or equestrian only) or multi-use facilities.

A.2.3. Selection of Facility Category

Site conditions, such as steep topography, can limit the types of trail facilities appropriate at a given site. For example, Class I bikeways have a maximum grade of five percent (except for short segments). In order to negotiate grades greater than five percent, a pathway meeting Class I bikeway design standards must incorporate one or multiple switchbacks, depending on the grade and length of the slope. Class I bikeways along long, steep slopes that must incorporate multiple switchbacks create undesirable, circuitous routes. A recreational trail, which in the case of the CCT includes multi-use pathways, allows for steeper running grades and design features such as stairs, and may be more appropriate for lengthy, steep slopes.

In general, more grant funding is available for construction of pedestrian and bicycle facilities that serve as transportation facilities than those that serve primarily recreational purposes. Transportation pathways typically serve a wide range of users and connect residential land uses with transit, commercial, institutional, office, and recreational uses. Due to these characteristics, transportation pathways are more likely than recreational pathways to offset vehicular trips, potentially easing roadway congestion and reducing greenhouse gas emissions and urban runoff. Pathways meeting Class I bikeway/ADA-accessible pathway design standards provide greater transportation benefits than pathways that do not meet these standards and are eligible for a larger pot of grant funding for construction. While a recreational trail is less expensive to construct than an ADA-compliant pathway or Class I multi-use path, funding sources for recreational pathways are limited. The CCT in Mendocino County will feature segments designed to transportation standards, and segments designed as recreational trails.

A.3. Federal Standards and Guidelines

A.3.1. American Association of State Highway and Transportation Officials (AASHTO)

The AASHTO Guidelines for the Development of Bicycle Facilities is the leading national document with guidelines for designing on-street bicycle and facilities and shared use paths. The most recent version of this nationally recognized document is the 3rd Edition, dated 1999. An updated version is currently in draft form, dated 2010.

Rural Roads

The 2010 Draft, “AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities,” makes several recommendations to accommodate bicyclists and pedestrians on rural roadways. Adding or improving paved shoulders on rural roadways with higher speeds or



**“Share the Road” sign assembly
(W11-1 + W16-1P)**

¹ FHWA. Designing Sidewalk and Trails for access, Part II of II: Best Practices Design Guide.

traffic volumes has many safety benefits for motorists, bicyclists and pedestrians. Expanded shoulders provide space for maintenance operations, to escape potential crashes, or for temporary storage of disabled vehicles. They extend the service life of the road by reducing edge deterioration and further improve sight distances in areas with curves and cut sections. Paved shoulders can benefit pedestrians as well by providing a place for them to walk in locations where there is no sidewalk and the current roadside condition is unsuitable for walking.

Roadway retrofits for bicycle facilities are best accomplished as part of repaving or reconstruction projects. On uncurbed cross sections with no vertical obstructions immediately adjacent to the roadway, paved shoulders should be at least 4 feet (1.2 m) wide to accommodate bicycle travel. Rugged terrain and other physical features however, may impact the amount of horizontal space available for a roadway section. In retrofit situations where minimal right-of-way is available, a minimum width of 3 feet (0.9 m) of operating space is allowed between the edge line of the vehicle travel lane and the edge of pavement (where there is no curb). Where physical space is limited, additional real estate for shoulders may be gained by restriping roadways to decrease the width of vehicle travel lanes. The AASHTO Draft Guide states the following:

Where the total width of the outside travel lane is 14 feet (4.3 m), it would be preferable to instead provide a 10-11 foot (3.0 - 3.4 m) travel lane and a 3 - 4 foot (0.9 - 1.2 m) shoulder. Re-striping a 14 feet (4.3 m) travel lane as a 12 foot (3.7 m) lane and a 2 foot (0.6 m) shoulder is not recommended. Since the paved shoulder would not accommodate bicycle operating width, and trying to avoid or repeatedly crossing an edge stripe is uncomfortable, bicyclists would need to ride in the travel lane instead. Even if a bicyclist manages to ride (partly or mostly) on such a narrow paved shoulder, this design may convey a misleading impression of adequate width to a motorist overtaking the bicyclist in the adjacent travel lane, when in fact it would be necessary for the motorist to be driven at least part way into the next lane in order to pass the bicyclist with adequate clearance.

Signs should be used on rural roadways where non-motorized users are anticipated, to alert motorists that bicyclists may be encountered and that they should be mindful and respectful of them. Options available include the “Share the Road” sign assembly (W11-1 + W16-1P).

The AASHTO Draft Guide further states that rumble strips create a potential hazard for bicyclists and are not recommended to be used on shoulders where cycling is anticipated. If they are to be used, a minimum clear path of four feet from the rumble strip to the outside edge of the paved shoulder should be provided.

AASHTO Design Guidelines

- Paved shoulders should be at least four feet wide
- In retrofit situations where minimal right-of-way is available, paved shoulder should be a minimum of three feet wide
- Where physical space is limited, additional width for shoulders may be gained by restriping roadways to decrease the width of vehicle travel lanes

Shared Use Paths

A shared use path allows for two-way, off-street bicycle and pedestrian use. These facilities are frequently found in parks, along rivers, beaches, and in greenbelts or utility corridors where right-of-way exists and there are few conflicts with motorized vehicles.

AASHTO Design Guidelines

- Width:
 - Minimum for a two-way shared-use path (only recommended for low traffic situations): 10 feet
 - Recommended for high-use areas with multiple users such as joggers, bicyclists, rollerbladers and pedestrians: 12 feet or greater
 - 8-foot-width may be used for a short distance due to physical constraints
- Lateral clearance: 2 feet or greater shoulder on both sides.
- Overhead clearance: 8 feet minimum, 10 feet recommended.
- Maximum design speed for shared-use paths: 20 mph. Speed bumps or other surface irregularities should not be used to slow bicycles.
- Grade:
 - Recommended maximum: 5%
 - Steeper grades can be tolerated for a maximum of 500 feet
- Railings
 - Protective railings, fences, or barriers should be a minimum of 42 inches
 - 48-inch railing height is recommended where there are hard corners or sharp curves on a given path, particularly on bridge approaches. Vertical balusters are not recommended for railings designed to provide protection for bicycles to prevent snagging bicycle pedals or handlebars.

Sidepaths

A sidepath is a shared use path located immediately adjacent and parallel to a roadway. AASHTO provides guidelines for the appropriate use of sidepaths but states that a “pathway adjacent to the road is generally not a substitute for the provision on on-road accommodation such as paved shoulders or bike lanes.” Sidepaths can be considered under the following conditions:

- The path will generally be separated from all motor vehicle traffic.
- Bicycle and pedestrian use is anticipated to be high.
- To provide continuity with an existing path through a roadway corridor.
- The path can be terminated at each end onto streets with good bicycle and pedestrian facilities, or onto another well-designed path.
- There is adequate access to local cross-streets and other facilities along the route.

AASHTO Design Guidelines

- A sidepath should satisfy the same design criteria as shared use paths in independent corridors.

- A minimum 5-foot separation between the sidepath and a high-speed roadway is recommended. Where the separation is less than 5 feet, a physical barrier or railing should be provided.

A.3.2. The Architectural and Transportation Barriers Compliance Board (Access Board)

The Americans with Disabilities Act (ADA) of 1990 had major significance for those who plan and design any type of publicly-used facility, including trails. The Access Board is responsible for developing accessibility guidelines for new construction and alterations of facilities subject to the Americans with Disabilities Act, which applies to state and local government facilities, places of public accommodation, and commercial facilities – virtually every type of facility that is open to the public, including bicycle and pedestrian facilities, paths, and trails.

The Access Board has developed draft accessibility guidelines for public rights-of-way, including walkways and sidewalks, parking areas, and associated features. A draft version of the final guidelines has been published for Outdoor Recreation Areas, including Outdoor Recreation Access Routes between developed facilities, and trails. The Access Board has recently initiated an effort to develop guidelines for shared use paths.

Sidewalks and Pedestrian Routes

The federal guidelines for the accessibility of sidewalks, street crossings, and other elements of the public rights-of-way are contained in the Proposed Guidelines for Public Rights-of-Way, dated July 26, 2011 and available at www.access-board.gov/provac/index.htm.

These guidelines cover facilities for pedestrian circulation and use in the right-of-way, including walkways and sidewalks, street or highway shoulders where pedestrians are not prohibited, crosswalks, islands and medians, overpasses and underpasses, on-street parking spaces and loading zones, and equipment, signals, signs, street furniture, and other appurtenances provided for pedestrians. They contain detailed guidance and links to other technical standards and guidelines, such as the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) ‘Guide for the Planning, Design, and Operation of Pedestrian Facilities’, American Association of State Highway and Transportation Officials, July 2004 and ‘Designing Sidewalks and Trails for Access’, FHWA/US DOT September 2001. The Guidelines are proposed rules that are expected to be adopted as law in the near future. The July 2011 Proposed Guidelines are an update of the 2005 Revised Draft Guidelines.

The Guidelines define two types of pedestrian facilities:

1. **Pedestrian Access Route** - A continuous and unobstructed walkway within a pedestrian circulation path that provides accessibility.
2. **Pedestrian Circulation Path** - A prepared exterior or interior way of passage provided for pedestrian travel.

In California, the Division of the State Architect (DSA) is the agency that develops, adopts and publishes regulations to address the state’s own standards for access to people with disabilities to comply with ADA and in some cases exceed the federal standards. See: California Access Compliance Reference Manual, Division of the State Architect, 2003 or latest version.

Recreational Trails

Recreational trails can and by law must be designed for access by people with disabilities, where feasible. There are separate, more flexible standards for recreational trails from urban bicycle and pedestrian transportation facilities and routes that connect developed facilities. The standards include exceptions and exemptions for trails where meeting standards would detract from the resources that the trail is accessing, or where this is physically infeasible.

The federal guidelines are contained in the Draft Final Guidelines for Outdoor Developed Areas, dated December 18, 2009, available at www.access-board.gov/outdoor/.

These guidelines cover trails, outdoor recreation access routes, beach access routes, and picnic and camping facilities. The Guidelines are a proposed rule that is expected to be adopted as law in the near future. No changes are expected.

The Guidelines define two types of trail facilities:

1. **Outdoor Recreation Access Route-** A continuous unobstructed path designated for pedestrian use that connects accessible elements within a picnic area, camping area, or designated trailhead.
2. **Trail-** A route that is designed, constructed, or designated for recreational pedestrian use or provided as a pedestrian alternative to vehicular routes within a transportation system.

Rules for Shared Use Paths

Shared use paths (also called multi-use paths) often serve recreational purposes while providing off-road transportation routes for pedestrians, cyclists, roller skaters, and others. Currently there are no adopted federal rules or guidelines specific to the design of shared use paths for access to people with disabilities. The Access Board is initiating rulemaking to address shared use paths and held a public information meeting on the subject at the ProWalk/ProBike 2010 Conference in September in Chattanooga, Tennessee.

The primary general design standard for shared use paths is the American Association of State Highway and Transportation Officials (AASHTO) Guidelines for Bicycle Facilities.

Comparison of Federal Standards

Table A-2 summarizes the key federal standard dimensions for the various types of trail, bicycle, and pedestrian facilities.

Table A-2: Key Standards for Trail, Bicycle and Pedestrian Facilities

	Class I Shared Use Path*	Pedestrian Access Route	Ramp	Outdoor Recreation Access Route **	Trail ***
Width	8' min (low use areas) 10' w/ 2' shoulders ideally	48" min with 60" min. passing space every 200' or less	60" min	36" min. with 60" min. passing space every 1,000' or less	36" min. with 60" min. passing space every 1,000' or less
Gradient (Running Slope)	< 5% (< 1:20) any length 5-6% (1:20-16.7) for up to 800' 7% (1:14.3) for up to 400' 8% (1:12.5) for up to 300' 9% (1:11.1) for up to 200' 10% (1:10) for up to 100' 11+% (1:9.1) for up to 50'	1:20 (5%) max – any steeper treated as a ramp Sidewalks that abut a roadway can be as steep as the roadway and still be compliant	8.33% (1:12) max with max 30" rise/ 30' length between landings at top, bottom 60" x 60", max 2% gradient; landing 72" long x 60" at change in direction	1:20 (5%) any length 1:12 (8.33%) for up to 50' 1:10 (10%) for up to 30' with resting intervals 60" long, as wide as trail and max 1:33 (3.33%) gradient	1:20 (5%) any length 1:12 (8.33%) for up to 200' 1:10 (10%) for up to 30' 1:8 (12.5%) for up to 10' with resting intervals 60" long, as wide as trail and max 1:20 (5%) gradient No more than 30% of the total trail length shall exceed 1:12
Cross-slope	5% max	2% max	2% max	1:33 max (3.33%) or up to 1:20 (5%) where required for drainage	5% max
Surface	Smooth, paved	Smooth, paved	Smooth, paved	Firm and stable; there are specific standards	Firm and stable; there are specific standards
Handrails	--	--	Required on both sides of any ramp w/ rise greater than 6"	--	--

* AASHTO Guideline – there are no ADA guidelines yet

** All Outdoor Developed Area facilities may be exempted from the Guidelines under the following conditions (1019):

1. Compliance is not feasible due to terrain.
2. Compliance cannot be accomplished with the prevailing construction practices.
3. Compliance would fundamentally alter the function or purpose of the facility or the setting.
4. Compliance is precluded by the: Endangered Species Act (16 U.S.C. §§ 1531 et seq.); National Environmental Policy Act (42 U.S.C. §§ 4321 et seq.); National Historic Preservation Act (16 U.S.C. §§ 470 et seq.); Wilderness Act (16 U.S.C. §§ 1131 et seq.); or other Federal, State, or local law the purpose of which is to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or other significant natural features

*** Additional exceptions to 1019 apply to an entire trail as identified in 1017.1

U. S. Department of Justice (DOJ) Amendment to the ADA Regulations Regarding the Use of Wheelchairs and Other Power Driven Mobility Devices 28 CFR part 35

As of March 15, 2011, a federal ADA ruling went into effect that requires managers of public facilities, including trails, to accommodate people with disabilities who wish to use various types of non-wheelchair powered vehicles for access. This issue seems to be more a concern than a common problem at this stage. By law, an assessment and policy prepared by the managing agency is the only limiting factor on the types of vehicles or devices that visitors may use. By law, the agency does not have to modify its facilities to accommodate the allowed devices, so the access requirement is different than for other ADA access.

California State Parks has adopted a policy for access by Other Power Driven Mobility Devices (OPDMDs), which are motorized accessibility devices that do not meet the definition of a wheelchair. See Section A.4.4.

A.3.3. Federal Highway Administration (FHWA)

The United States Department of Transportation (USDOT) FHWA has adopted a policy statement that bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist. FHWA references the use of the best currently available standards and guidelines such as AASHTO and the MUTCD. Furthermore, all federally funded transportation enhancement (TE) projects must be in full compliance with ADAAG.

Manual on Uniform Traffic Control Devices (MUTCD)

The MUTCD defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is published by the FHWA under 23 Code of Federal Regulations (CFR), Part 655, Subpart F. The MUTCD is a compilation of national standards for all traffic control devices, including road markings, highway signs, and traffic signals. It is updated periodically to accommodate the nation's changing transportation needs and address new safety technologies, traffic control tools and traffic management techniques.

The MUTCD is the national standard, but state transportation agencies differ in how they comply with MUTCD standards. Some states adopt the MUTCD as their standard. Other states adopt the national MUTCD along with a state supplement that might prescribe which of several allowable options are selected for the state's specific purposes. Still other states, California included, use the national MUTCD as the basis for developing their own State Traffic Control Device manuals, which must be in substantial conformance to the national MUTCD. Caltrans adopted the California MUTCD (CA MUTCD) in January 2012 (see Section A.4.1).

Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide

The FHWA's Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide (2001) is another key resource for ADA-compliant sidewalk and trail design. The Design Guide provides planning, assessment, and design guidance for trails. For the purposes of the guidebook, a trail is defined as a path of travel for recreation and/or transportation within a park, natural environment, or designated corridor that is not classified as a highway, road, street, or sidewalk. In Chapter 12 (planning) and Chapter 13 (assessment),

recreation trails and shared-use paths are discussed as one unified topic. In the design chapters (Chapters 14 and 15), shared-use paths and recreation trails are discussed separately.²

A.4. State Standards and Guidelines

A.4.1. California Department of Transportation

Highway Design Manual (HDM)

The State of California, Department of Transportation (Caltrans) Highway Design Manual is used by Caltrans staff and non-Caltrans project managers and planners proposing designs for projects within the Caltrans right-of-way. The design standards cover a wide array of design focus areas including drainage, pavement, and basic design policies. Chapter 1000 specifically focuses on bikeway planning and design. Any trail designated to encroach into or travel within Caltrans right-of-way shall be designed per Chapter 1000 of the Caltrans Highway Design Manual.

To review information from all chapters of the design manual please see the entire document online at: www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm.

Bikeway Design Standards

Caltrans has defined three types of bikeways in Chapter 1000 of the Highway Design Manual: Class I bikeway/shared use path, Class II bike lane, and Class III bike route.

Class I Bike Path

Class I bikeways are facilities with exclusive right-of-way for bicycles and pedestrians, with cross flows by motorists minimized. Experience has shown that if significant pedestrian use is anticipated, a completely separate facility for pedestrians is necessary to minimize conflicts. The anticipated range of users and forecast level of use by different user groups should dictate the design of each specific facility. At a minimum, Class I bikeways require a minimum 8-foot-wide paved surface and a minimum of 2-foot-wide clear, graded shoulders on both sides. For moderate to high-use segments, a wider paved surface of 10 to 12 feet (minimum) should be considered. In areas where a variety of users are expected, expanded unpaved shoulders should be included where possible. Class I bikeways immediately parallel and adjacent to highways must be separated from automobile traffic by a 5-foot horizontal separation or a 2-foot separation with barrier, per the Caltrans Highway Design Manual. Under certain circumstances, Caltrans may approve exceptions to the Class I bikeway design standards.

Class II Bike Lanes

A bike lane provides a striped lane for one-way bike travel on a street or highway. When bike lanes are adjacent to marked on-street parking, five feet is the minimum width of bike lane. When bike lanes are adjacent to on-street parking that is not marked with a parking stripe or stall marking, 11 feet or 12 feet (depending on the type of curb) is the minimum width of the bike lane where parking is permitted. Where parking is prohibited, the minimum bike lane width is 4 feet, if no gutter exists, and 5 feet if a normal 2-foot gutter is present. Wherever possible, the width of bike lanes should be increased 6 feet to 8 feet to provide for greater safety.

² <http://www.fhwa.dot.gov/environment/sidewalk2/index.htm>

Class III Bike Route

A bike route provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists. Chapter 1000 does not present minimum widths for Class III bikeways, as the acceptable width is dependent on many factors, including the volume and character of vehicular traffic on the road, typical speeds, vertical and horizontal alignment, sight distance, and parking conditions.

Clear Recovery Zone

The Clear Recovery Zone (CRZ) is addressed under topic 309-Clearances in the California HDM. CRZ widths are identified for the specific type of roadway facility. Within the Mendocino PCBR/CCT project study area, Highway 1 is classified as both a conventional highway and a freeway/expressway³ and the CRZ distances are as follows:

- 20 ft (Conventional Highway)
- 30 ft (Freeway and Expressway)

The Caltrans Highway 1 Transportation Concept Report identifies the descriptive characteristics of the roadway.

When the standard CRZ widths are “impractical,” the HDM provides guidance for minimum clearances for all objects that are closer to the edge of traveled way than the clear recovery zone distance⁴ as follows:

- Freeways and Expressways: 8 feet (shoulder width) and 4 feet minimum when shoulder is less than 4 feet wide
- Walls: Minimum 10 feet
- Conventional highways without curbs: standard shoulder width or minimum 4 feet when shoulder is less than 4 feet wide

When a Class I Bike Path is closer than 5 feet from the edge of the shoulder and is within the CRZ, a physical barrier is required. Suitable barriers include a chain link fence or dense shrubs. Low barriers (e.g., dikes, raised traffic bars) next to a highway are not recommended because bicyclists could fall over them and into oncoming automobile traffic. In instances where there is danger of motorists encroaching into the bike path, a positive barrier (e.g., concrete barrier, steel guardrail) should be provided.⁵

The Caltrans District 1 Route Concept Report for Route 1

The objective of the Route Concept Report (RCR) for State Route 1, completed in 2003, is to have local, regional, and state consensus on route or corridor concepts, improvement goals, and strategies. This document provides concept information only and does not determine policy nor establish a course of action. The RCR addresses the segment of SR 1 within Caltrans District 1, which begins at the Sonoma/Mendocino County line and terminates at its junction with Route 101 at the community of Leggett.

³ 309.1 (2) Clear Recovery Zone (CRV)

⁴ 309.1 (3) Minimum Clearances

⁵ 1003.1(5) Separation Between Bike Paths and Highways

The RCR states that less than half of State Route 1 meets Caltrans' minimum width criteria⁶. The remaining segments would need to be widened to the desirable standards in conjunction with rehabilitation work. However, the widening of these segments that do not meet "3-R" standards may not be prudent for the following reasons:

1. Costs to widen narrow sections would be inordinately high because of rugged terrain.
2. Existing vertical and horizontal alignment does not meet current standards. Widening without improving alignment could result in collision concerns. If the pavement is wide, the general expectation is that highway alignment will be good (e.g., no short radius curves and good sight distance).
3. Environmental impacts could be significant. Widening could impact biological, historic or archeological resources. Further, the scenic character of the highway could be damaged.
4. Widening SRW 1 to beyond 32 feet, in rural areas would be inconsistent with the Coastal Act and the Local Coastal Plan.

The RCR states that Caltrans staff will work with transportation planning partners to identify and prioritize non-motorized needs on State Route 1 and develop strategies to implement the improvements identified. Reconstruction and rehabilitation strategies involving State Route 1 are to incorporate provisions for accommodating the coastal trail where feasible.

The following improvements are necessary to achieve the Route Concept for State Route 1 in District 1:

- Widen portions of State Route 1 to 32 feet (24 feet between KP 144.8 and 169.9 (PM 90.0 and 105.6)). This widening can be in conjunction with rehabilitation projects, or part of an effort to widen for non-motorized traffic.
- Capacity or operational improvements in the Fort Bragg area. Additional operational improvements could cost between \$1 and \$5 million and if widening to 4-lanes is required, it could be much more expensive.
- Safety improvements should be made as necessary and operational improvements should be considered on a limited basis.

http://www.dot.ca.gov/dist1/dltransplan/rcr_1.pdf

California Highway Barrier Aesthetics

Caltrans published a report on highway barrier aesthetics in 2002 that provides guidance for barriers.⁷ The report provides an overview of barrier design options which may be beneficial within the scenic easement of Highway 1. The photos below provide two examples.

⁶ Caltrans Design Standards for resurfacing, restoration, and rehabilitation (3-R) are based on minimum existing width and annual average daily traffic (AADT). These standards permit rehabilitation at present width, as long as the traveled way and usable shoulder width meets minimum requirements that range from 24 feet to 32 feet, depending on traffic volumes. Standards dictate that sections having overall widths less than the minimum standards must be widened to the desirable standards, which range from 24 feet to 40 feet, also depending on traffic volumes.

⁷ http://www.dot.ca.gov/hq/LandArch/barrier_aesthetics/barrier-aesthlfinal.pdf



A cable barrier is less costly than metal beam guardrail and is can be easier to maintain.



Type 60 Textured concrete barrier along Highway 1, San Luis Obispo, CA.

(Photo credit: District 5 Landscape Architecture Office)

Draft Marin and Sonoma Highway 1 Repair Guidelines (November 2011)

These guidelines address options and provide recommendations for lane and shoulder widths, bicycle facilities, pull-outs, bridges, railings, fence, slope and wall treatments, drainage, and barriers. It includes a pros and cons chart on barrier options. These guidelines may be useful to inform discussions about the same design options in resolving designs of the Mendocino PCBR/CCT potential improvement segments.

California MUTCD (2012)

The California MUTCD (CA MUTCD) is published by Caltrans and is issued to adopt uniform standards and specifications for official traffic control devices in California. Traffic control devices are defined as all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency or official having jurisdiction. In the case of a private road, the authority is the private owner or private official having jurisdiction. The CA MUTCD is not applicable to privately-owned and maintained roads or commercial establishments in California, unless the particular city or county enacts an ordinance or resolution to this effect.

The CA MUTCD incorporates the FHWA's MUTCD (2009 Edition) and all policies on traffic control devices issued by Caltrans that have been issued since January 21, 2010 and other editorial, errata, and format changes that were necessary to update the previous documents.

On state highways, the CA MUTCD shall not supersede Caltrans' Standard Plans, Standard Specifications or the Special Provisions publications but all Standard statements of the CA MUTCD shall be met. On state highways, whenever there is a discrepancy between the specifications and requirements contained in the CA MUTCD, and those contained in Caltrans' Standard Plans, Standard Specifications or the Special Provisions publications, Caltrans' Standard Plans, Standard Specifications or the Special Provisions publications shall govern.

A.4.2. California Coastal Commission (CCC)

Policies in the California Coastal Act of 1976 guide the conservation and development of California’s 1,100-mile coastline with the goal of protecting California’s coastal resources and providing for their wise use. The Act establishes the California Coastal Commission as a permanent state coastal management and regulatory agency and requires each of the state’s coastal cities and counties to adopt a long-term management plan, known as a Local Coastal Program (LCP). Each LCP consists of a land use plan, zoning ordinances and other implementing actions. In enacting the Coastal Act, the legislature declared that a basic goal of the state for the coastal zone is to:

- Maximize public access to and along the coast and maximize recreational opportunities in the coastal zone consistent with sound resource conservation principles and constitutionally protected rights of private property owners. (Section 30001.5)

The Legislature makes explicit that the Coastal Act policies are applicable to all state agencies (Public Resources Code Section 30402). And, under the federal Coastal Zone Management Act of 1972, specified federal agency activities are reviewed by the California Coastal Commission (CCC) as well. This delegated responsibility is termed the “federal consistency process.” Under this process, the Coastal Commission reviews plans or actions by, for example, the National Marine Sanctuary, National Forests, the Federal Highway Administration, and the Bureau of Land Management (BLM).

All of the potential CCT alignments in Mendocino County are in the Coastal Zone. All new development in the Coastal Zone is subject to first obtaining approval of a coastal development permit (CDP) from either Mendocino County or the CCC—or a federal consistency concurrence from the CCC. No development may proceed without approvals through these review processes. Mendocino County has a certified LCP, meaning that it is responsible for handling the majority of CDP applications. But, for appeals of a locally-approved CDP, or in retained-jurisdiction areas, and for consolidated CDPs, the Coastal Commission itself will continue to review proposed developments.

Many elements of new trail construction cited in the CCT Master Plan will likely meet the definition of “development.” For existing facilities, Coastal Act Section 30610 excludes many ordinary, non-expansive repair and maintenance activities from the CDP requirement. But, Commission Regulations define those classes of repair and maintenance activities that do pose a potential risk of substantial environmental impact and therefore may require a CDP as well.

Chapter 3, Article 2 (Sections 30210 through 30214) of the Coastal Act contains six policy sections addressing public access and development between the first public road and the shoreline. This includes the duty to maximize public access opportunities in new developments, as more completely elaborated in Section 30210. The full text of applicable public access policies from the Coastal Act is included in Chapter 2 of the County’s *Coastal Plan Policies* document.

Generally, the CCC requires new development to be set back from bluff edges so that the development would be safe from bluff retreat for at least 100 years. As defined in the California Coastal Act, the term “development” includes the placement of any solid material or structure; grading or removing of any material; and construction, demolition, or alteration of the size of any structure (PRC 30106). The recommended setbacks are required to factor in anticipated sea level rise. The CCC does make exceptions to the setback

requirements for restoration and recreational/trail projects that do not include habitable structures or significant, permanent infrastructure improvements.

Additional policies contained in Coastal Act Chapter 3 include not only those governing the protection and provision of public access and recreation, but also those that protect agriculture, archaeological features, environmentally sensitive habitat areas, scenic views, and the rural character of two-lane State Highway Route 1. Each of these policies could potentially affect the alignment and implementation of the Coastal Trail in Mendocino County.

A.4.3. California Coastal Conservancy

Completing the California Coastal Trail (2003)

The State Coastal Conservancy, in consultation with the California Coastal Commission and California State Parks, sponsored an overview document for completing the California Coastal Trail (CCT) throughout the state by 2008. This document provides an outline for the vision of the CCT and a study of opportunities and constraints associated with the state's objective to complete a multi-use trail along the entire California coastline. As the California Coastal Trail (CCT) overlaps with portions of the PCBR, it is important to understand the objectives of the CCT. 'Completing the California Coastal Trail' defines the objectives of the California Coastal Trail as the following:

- Provide a continuous trail as close to the ocean as possible, with connections to the shoreline ("vertical access") at appropriate intervals and sufficient transportation access to encourage public use.
- Foster cooperation between State, local, and federal public agencies in the designing, signing, and implementation of the CCT.
- Increase public awareness of the costs and benefits associated with completion of the CCT.
- Assure that the location and design of the CCT is consistent with the policies of the California Coastal Act and local coastal programs, and is respectful of the rights of private landowners.
- Design the CCT to provide a valuable experience for the user by protecting the natural environment and cultural resources while providing public access to beaches, scenic vistas, wildlife viewing areas, recreational or interpretive facilities, and other points of interest.
- Create linkages to other trail systems and to units of the State Park system, and use the Coastal Trail system to increase accessibility to coastal resources from urban population centers.

'Completing the California Coastal Trail' introduces a braided trail concept, envisioning the CCT as several roughly parallel pathways that accommodate different types of users or address particular needs, for instance, avoiding sensitive habitats or providing an off-beach route for bicyclists. The different threads of the trail will also facilitate access to existing destinations along the coastline. While this document reviews the overall objective for a state-wide CCT, it also defines specific improvements needed for each county in California. The maps in the document indicate the many CCT sections that could be improved throughout Mendocino.

Specific recommendations for improving the CCT through Mendocino County are included; however, the more recent and localized study, 'Strategic Plan for the California Coastal Trail in Mendocino County,' also provides site specific priorities for the Mendocino CCT.

- Work with private landowners to acquire public access rights and improve a trail corridor south from Usal Road to Westport-Union Landing State Park.
- Complete a trail system separate from Route 1 connecting existing trail segments within state parks and reserves between Fort Bragg and the town of Mendocino.
- Work with private landowners to acquire public access rights along coastal bluffs from Dark Gulch to Albion Headlands.
- Work with private landowners to acquire public access rights and improve a trail corridor connecting Manchester State Beach and the Point Area pier.

Coastal Accessway Standards

The California Coastal Conservancy's Standards and Recommendations for Accessway Location and Development (Standards) provide guidelines for the location, size, and type of accessways along the California coast. The California Coastal Commission and Conservancy adopted these Standards to ensure a consistent approach is used for access construction. Since sites and circumstances vary along the coast, the application of these Standards is flexible. Specifications for construction of certain parameters will vary depending on the LCP requirements or Commission permit conditions. The Standards apply to all new and existing development.

The Standards provide guidance on thirteen topic areas, including coastal resource protection, access easements, the construction and location of lateral and vertical accessways, overlooks, trails, and coastal bikeways. Concerning trails, the Standards state that specifications for construction will vary according to the LCP. In general, trail easements should be a minimum of twenty-five feet in width and should never be closer than ten feet to an existing residence. Trails should be established on ocean front parcels, depending on the topographic conditions. These trails should connect: a) the shore with inland units of the federal, state, or local park systems; b) access easements; or c) the road with a scenic overlook. Such trails must avoid geologically unstable and erosive soils. Prime agricultural soils should also be avoided except where the trail will not interfere with agricultural production. Trails can feature steps, footbridges, appropriate paving materials, an adequate trail drainage system, trash receptacles, benches, barriers, restrooms, and signs.

California Coastal Trail Siting and Design Standards

The CCT trail is intended to be designed and implemented to achieve the following goals:

- Provide a continuous walking and hiking trail as close to the ocean as possible.
- Provide maximum access for a variety of non-motorized uses by utilizing alternative trail segments where feasible.
- Maximize connections to existing and proposed local trail systems.
- Ensure that the trail has connections to trailheads, parking areas, interpretive kiosks, inland trail segments, etc. at reasonable intervals.
- Maximize ocean views and scenic coastal vistas.
- Provide an educational experience where feasible through interpretive facilities.

The trail should be located along or as close to the shoreline where physically and aesthetically feasible. Where it is not feasible, inland bypass segments should be aligned as close to the shoreline as possible. Shoreline segments that cannot be accessed at all times, due to tide fluctuations, should have alternative inland route options.

Where gaps in the CCT are identified, interim trail options should be identified to guarantee trail continuity. When opportunities become available to relocate the trail to the specification noted above, efforts should be made to do so. The interim trail should meet the design standards for the CCT.

Efforts to minimize impacts to environmentally-sensitive habitat and prime agricultural lands should be made to the utmost feasible extent. Sections of the trail may be closed seasonally to protect sensitive species. Trail access points should be limited to “pass and repass,” with alternative alignments provided if necessary and feasible. Mitigation of any necessary impacts can include providing boardwalk, protective fencing, or adequate drainage, and/or reducing trail width along the edges of agricultural land.

The CCT should include existing oceanfront trails, paths, and support facilities (e.g., public shorelines, parks, and beach facilities) where appropriate and feasible.

Locating the CCT on vehicular roadways should be avoided if possible. Where not possible it is desirable to:

- Position the trail off of the pavement, but within the public right-of-way.
- Separate the trail from traffic by a safe distance or by the use of physical barriers.
- Physical barriers should not obstruct or detract from the scenic views and visual character of the area.
- Roadway crossings should be made with overpasses, underpasses, or other alternative at-grade crossings.
- At-grade crossings should include appropriate directional and traffic warning signage.

Support facilities (parking and trailhead facilities) should be provided to encourage access to the CCT.

Coastal Trail Wayfinding

General Coastal Trail signing standards are identified in the 2003, “Completing the California Coastal Trail Plan.” The plan acknowledges the importance of coordinating with the local public land managers for sign implementation but identifies the following general standards:

- Identification signs for the Coastal Trail should be placed at all staging areas, trailheads, junctions, and special features.
- Signage along major inland connecting trails should direct users to the Coastal Trail.
- The location of CCT staging areas should be indicated from highways and major roadways.
- Signs should use international symbols as much as possible.
- ADA-compliant portions of the trail should be clearly indicated.

In 2006, the Coastal Conservancy adopted a trail emblem to provide a brand identity to the trail. The California Coastal Trail Emblem and Signage Applications Plan provides specifications for the application trail emblem. There are many uses of the trail emblem. It can be incorporated into trailhead signs, map kiosks,

and directional signs, trail markers, coastal access road markers, or in brochures, websites, guides, and public awareness materials.



Figure A-1: CCT emblem can be displayed on a brushed aluminum or on a reflective white or grey background.

A.4.4. California Department of Parks and Recreation (DPR)

Trail Handbook

DPR's Trail Handbook serves as the guideline for trail design, construction, survey, operations, and maintenance standards. This handbook is widely used as a reference guide for recreational trail construction. Reaching the decision to build a new trail, implementing significant modifications to an existing trail, or revising the allowed uses on an existing trail requires both staff specialist review and public input. While a new trail, a major trail modification, or a change in designated trail use can be implemented on a single trail basis, park-wide and regional trail system planning remains the preferred and the most effective avenue for identifying and establishing interrelated recreational trail corridors, thus mitigating resource impacts and reducing construction and maintenance costs.

Currently there is no edition of this handbook published online. To request information on obtaining a copy of the handbook, contact the California State Parks Archives at (916) 653-6519.

Accessibility Guidelines (2009)

DPR Accessibility Guidelines (Guidelines) present principles for providing accessibility within state parks. The Guidelines are the primary tool provided by the California State Parks Accessibility Program to accomplish its mission of guiding the creation of universal access to California State Parks. The Guidelines embody a compilation of accessibility standards, recommendations and regulations for compliance with accessibility laws, particularly those established by the Federal Access Board, and are intended for use throughout California State Parks. According to the Guidelines, all persons and entities should independently confirm standards, recommendations, laws and regulations related to accessibility.

The Guidelines include standards and recommendations for numerous facilities common to parks, including trails. As stated in the Guidelines, every effort should be made to install and maintain accessible trails. To this end, the Guidelines contain standards for accessible trails such as maximum running slopes, minimum width and frequency of resting spaces, maximum acceptable gaps in the trail surface, optimal clearances and signage requirements. The Guidelines further state that accessible trails should represent the most significant features and environmental experiences unique to the area.

The Guidelines provide guidance on the level of information required on trailhead, direction, and regulatory and safety signs. It also provides guidance on placement standards and minimum character sizes based on viewing distance from which they will be read. Trailhead signs, map kiosks, and direction signs should describe trail conditions in order to provide information so that persons with disabilities can determine if they can traverse the trail. Trail conditions could include average grade, cross slope, width of trail, trail surface, and average size of obstacles. Identification and description signs (such as a restroom sign) must meet Title 24 and ADA standards for permanent signs. Finally, the Accessibility Guidelines also provide standards for accessible exhibits which would include the trail map kiosks and interpretive signs and media.

Brand Standards Handbook

California State Parks Brand Standards Handbook, January 2007 provides branding standards in order to create a strong, unified style and tone for the State Parks Department. The handbook provides specification for the State Park Logo (Figure A-2) and its use as well as standard colors and example designs for park entrance and directional signs (Figure A-3).



Figure A-2: CA State Park logo



Figure A-3: The Trailhead sign at Harbony Headlands State Park follows the design guidelines in the Branding Handbook (left). Concept designs for direction signs (right).

Departmental Notice No. 2011-02: Permissible Uses of Other Power Driven Mobility Devices (OPDMD)

California State Parks has adopted a policy for access by Other Power Driven Mobility Devices (OPDMDs), which are motorized accessibility devices that do not meet the definition of a wheelchair. OPDMDs include Segways, ATV's, golf carts, and any other vehicle with a motor. In California State Parks (excluding those designated as California Off-Highway Vehicle Recreation Areas), standards for OPDMD access are as follows:

- Size: OPDMDs shall not be wider than 36 inches or longer than 48 inches.
- Weight: The overall weight of the device and user(s) shall not exceed 550 pounds.
- Speed: OPDMDs shall not be operated at speeds in excess of five miles per hour. Devices capable of exceeding speeds of five miles per hour will not be prohibited from use but individuals observed exceeding the speed limit will be subject to citation and penalties.
- Noise: OPDMDs shall not produce noise levels in excess of 70 decibels.
- Emissions: OPDMDs shall not exceed zero emissions during use.

Vehicles that follow these standards are allowed on signed and designated Class I accessible or multiple use trails and on controlled access roads that are open to multiple recreational uses such as fire roads.

A.5. Local Policies, Standards and Guidelines

A.5.1. County of Mendocino

Mendocino County Local Coastal Program (Revised 1991)

The Coastal Element of the Mendocino County General Plan serves as the certified Local Coastal Program (LCP) for the County of Mendocino. Chapter 3 of the Coastal Element reviews resources and development issues and prescribes policies that apply throughout coastal zone of Mendocino County. Chapter 3 considers public access and transportation issues most relevant to the PCBR. Chapter 4 describes the Land Use Plan for each of the 13 planning areas and lists the policies applicable to that planning area. Chapter 4 also outlines designated coastal access points, trails and recreation areas in these 13 planning areas.

Policies most relevant to PCBR:

- 3.6: Shoreline Access and Trail/Bikeway System
 - Policies in this section guide the protection, enhancement and acquisition of coastal access routes. Policies in this section guide the creation of easements for lateral shoreline accessways and vertical accessways and the requirement of offers to dedicate (OTDs) on the accompanying land use maps.
 - 3.6-17: Caltrans shall be required to improve or construct view turnouts designated on the Land Use Maps as a part of adjoining highway improvement projects when such improvements involve widening or improvements of the highway. (This would exclude rehabilitation type projects).
 - 3.6-18: Along sections of the highway where development intensity will result in pedestrian use, or where this is the siting of the County designated coastal trail, a 15-foot accessway measured from the right-of-way of Highway 1 shall be offered for dedication as a condition of

permit approval if the topography is deemed suitable for pathway development. Coastal trail includes trails identified in Table 3.6-1 and portions of Highway 1 and Usal Road that are necessary to connect these trail segments. All such access offers that have been recorded shall be offered to Caltrans for acceptance. Prevailing acquisition methods for acquiring public right of way by Caltrans shall apply to this section.

- 3.6-19: Along intensively developed sections of Highway 1, (such as between Cleone and Albion or in Gualala) Caltrans shall be requested to build a separate pedestrian, equestrian path parallel to the highway where pedestrian traffic warrants and physical conditions permit.
- 3.6-20: Paved 4 foot shoulders should be provided by Caltrans along the entire length of Highway 1 wherever construction is feasible without unacceptable environmental effects.
- 3.8: Coastal Element Policies: Transportation Utilities and Public Services
 - 3.8-2: Current studies indicate a need for future improvement to certain stretches of Highway 1 and to major intersections. These improvements shall be encouraged so as to accommodate essential industries vital to the economic health of the County and other priority uses under the Coastal Act. The Department of Transportation shall be requested and urged as a high priority of public interest and Coastal Act purpose to:
 - Accelerate highway improvement projects along Highway 1 and those state maintained highway intersections within the Coastal Zone of Mendocino County.
 - Develop a long range comprehensive circulation plan for Mendocino County coastal state highways and tributaries consistent with Coastal Act mandates.
 - 3.8-4: Caltrans and/or the Coastal Commission shall be requested to monitor Highway 1 usage at two-year intervals. The Coastal Act's requirement that the highway remain a two-lane scenic road in rural areas creates an obligation to maintain accurate data on highway capacity for planning purposes.
 - 3.8-5: Caltrans shall, in cooperation with the County, set priorities based on safety requirements and existing highway congestion for improving the capacity of impacted segments of Highway 1. Measures to be studied should include minor realignments, width and shoulder improvements, passing lanes, view turnouts and parking areas, and intersection improvements.
- 3.8-6: It shall be a goal of the Transportation Section to achieve, where possible and consistent with other objectives of The Coastal Act and plan policies for Highway 1, a road bed with a vehicle lane width of 16 feet including the shoulder to achieve a 32 foot paved roadway (12-foot vehicle lane and 4-foot paved shoulder). The minimum objective shall be a 14-foot vehicle lane width (10-foot vehicle lane and 4-foot paved shoulder). New widening projects shall be allocated, first to safety and improved capacity needs and secondly to paved shoulders.

A.6. Review of Relevant Studies and Local Community Plans

A.6.1. Pacific Coast Bike Route Study (2003)

The Pacific Coast Bike Route Study, prepared for HCAOG and funded by Caltrans through a State Planning and Research Grant, provides recommendations regarding facility improvements and route alternatives for the Pacific Coast Bike Route (PCBR) through Caltrans District 1 and the counties of Del Norte, Humboldt, and Mendocino. The study includes an overview of the existing roadway facilities for the PCBR route, bicycle and recreational vehicle counts during peak summer travel periods, focused areas of concern identified through public outreach, and recommendations and concept designs for different scenarios along the PCBR route. This study conducted a cursory review of existing facilities within Mendocino County and did not robustly assess opportunities or constraints for facility improvements.

This Study acknowledges there are few alternative route options to Route 1 for the PCBR through Mendocino County. At the time of the study, renovating the Pudding Creek Trestle for bicycle and pedestrian use was a top priority to improve non-motorized connections north from Fort Bragg to MacKerricher State Park.

Public outreach indicated that the top reason many local residents chose to not bike the PCBR was because of perceived lack of safety. Surveys also indicated the priority facility improvement to be building shoulders on Route 1 where none currently exist. The study outlines site-specific recommendations from public outreach for improving the PCBR functionality and safety within Mendocino County:

- Metal plates (slippery when wet) and grates (not designed for bicycle tires) on numerous bridges along State Route 1 pose safety risks to bicyclists.
- Signs should be installed clearly marking routes at which the PCBR diverts from State Route 1.
- Improve connections to access the entire Haul Road through MacKerricher State Park.
- Improve shoulders for non-motorized users on State Route 1 between Albion and the Navarro River. State Route 1 is narrow, winding and steep near the Navarro River.
- Improve State Route 1 between Navarro and Anchor Bay for non-motorized users.

General recommendations for priority facility improvements included 4-foot shoulder width along the entire PCBR route and bridge replacements with safe accommodations for non-motorized users. Concerns about retaining a 'rural uniqueness' along State Route 1 was identified as a potential constraint to shoulder widening in some areas. Unique shoulder treatments such as colorized shoulders were suggested for areas in which widening is infeasible but improved non-motorized safety through traffic calming is needed.

The study recommended improvements along the narrow and winding State Route 1 stretch between Leggett and Westport which could include uphill shoulder widening in particular on southbound uphill as most touring cyclists travel north to south, bicycle pull-outs, and improved signage. Russian Gulch Bridge was also identified as a priority for improvement.

The study also addresses signing, 'Share the Road' educational programs, agency coordination, and cooperative management of the PCBR. Pedestrian activated signals were also recommended for narrow bridges and could also be used for narrow, winding sections of roadway.

A.6.2. Strategic Plan for the California Coastal Trail in Mendocino Co. (2010)

The Strategic Plan for the California Coastal Trail in Mendocino County was completed by the Mendocino Land Trust with funding and support from the California State Coastal Conservancy. The purpose of the document is to serve as planning tool to guide future alignment and development of the California Coastal Trail (CCT) through Mendocino County. The CCT planning process covered the entire 130 miles of coastline and outlines the existing 40 miles of off-highway Coastal Trail.

The Mendocino Land Trust engaged community groups and agency partners to discuss local CCT opportunities and constraints. The Land Trust also engaged private landowners along the coastline whose property was identified as high priority areas along the proposed CCT corridor; four landowners agreed to dedicate a trail easement. The Strategic Plan outlines project ranking criteria with which to prioritize CCT segments for implementation, including feasibility, linkages, cost, long-term maintenance, no alternative, user demand, and support.

Especially along highly constrained portions of coastline, the CCT route often overlaps with Route 1 and the PCBR. The Strategic Plan either identifies these areas as places to prioritize improvements along Route 1 or negotiate public access easements with adjacent private landowners. Segments of the CCT that overlap with the PCBR include the following:

- Usal Road to Westport-Union Landing Beach
- DeHaven Creek to MacKerricher Park
- Noyo River Bridge
- At Jack Peters Creek between Russian Gulch State Park and Lansing Street north of Mendocino
- Big River Bridge
- Brewery Gulch Road to Chapman Road south of Big River
- Little River to Navarro River State Park
- Albion Bridge
- Navarro River to Irish Beach Drive and Manchester State Park
- Point Arena to Gualala

Sections of the PCBR that overlap with the CCT may have additional design recommendations to fully accommodate pedestrians utilizing the CCT. However, the document does not provide facility design recommendations. Close cooperation with partners leading the implementation of the Coastal Trail may provide additional opportunities for PCBR enhancements.

A.6.3. Westport Area Integrated Multi-Use Coastal Trail Plan (2011)

The goal of the Westport Area Integrated Multi-Use Coastal Trail Plan (Westport Area Plan) is to plan a continuous, non-motorized, context-sensitive transportation route along the unincorporated northern Mendocino coast between Usal Road and the Ten Mile bridge on the west side of State Route 1. The Westport Area Plan describes and illustrates existing conditions along the study area corridor (see Westport Area Plan Figures 2 through 6), including locations with narrow existing right-of-way or easements (see Figure 7) and

the SR 1 elevation profile (see Figure 8). Figure 13 of that plan presents Westport Village walking destinations.

The plan defines a preferred alignment and typical design cross sections for the 21-mile coastal trail section. The plan recommends a trail that will follow State Route 1 for much of its length, separating from the roadway only where adjacent public or nonprofit lands or easements already exist, or where landowners have expressed a willingness to negotiate an easement. A total of 15.53 miles of shoulder non-motorized shared use path and 5.59 miles of separated shared use path are recommended. The locations of those proposed trail segments are summarized in Table 12 of the plan. Recommended facility improvements are presented in Figures 14 through 28. Figures 15 through 17 of the plan illustrate cross sections of different shared use path configurations. Other improvements (e.g., parking and access improvements, bike racks, picnic tables, restrooms, water fountains, and signage) are recommended in this Study to support increased non-motorized use of the study corridor.

The study corridor was divided into 17 segments. The three highest priorities identified in this plan are Sections 2c, 3, and 4a surrounding the most densely settled portion of the study corridor in and around the village of Westport. Those sections were stressed by the local community because they will serve the greatest number of people, provide critical transportation connections between the village and outlying resident and visiting populations, and address safety concerns.

<http://www.westportmac.org/trail.jsp>

A.6.4. The Fort Bragg South Main St. Access and Beautification Plan (2011)

The Fort Bragg South Main Street Access and Beautification Plan (South Main Street Plan) seeks to improve safety, mobility, and access between central Fort Bragg and its southern business, recreational, and residential areas and to improve the aesthetic qualities of the South Main corridor through design recommendations that promote a high-quality environment. The project area includes an approximately 1.8 mile stretch of South Main Street/State Route 1 between Oak Street and downtown Fort Bragg to the north and the Hare Creek Bridge at the City's southern limit. Despite a lack of pedestrian facilities, residents and tourists can be found walking along the roadway shoulder, in travel lanes, and along well-worn, informal pedestrian pathways that exist along some sections of the highway. While bicyclists in the southern portion of the project area utilize the shoulder for travel, the bicycle lanes narrow considerably closer to downtown, providing potential conflicts with parked cars and vehicles entering and exiting driveways.

Chapter 2 of the South Main Street Plan describes a series of Guiding Design Principles, including:

- Maintain and strengthen north-south connections for pedestrians and bicyclists.
- Maintain, improve, and increase east-west connections for pedestrians and bicyclists.
- Foster and encourage areas of local walkability.
- Extend Fort Bragg's street grid to maximize walkability and connectivity.
- Foster excellent design at the gateway locations to the city.
- Promote pedestrian-friendly, walkable frontage.

A Class I path along the west side of the highway connecting to the future Coastal Trail and the Pomo Bluffs trails was strongly supported during the workshop activities as well as by Council. The design team explored an alignment that would extend from near Maple Street south to Highway 20. With a road diet, a Class I path can be accommodated within the available right-of-way. In the event that a road diet is not pursued, the Class I path could still be accommodated on Mill Site property. South of Ocean View Drive, existing right-of-way maps suggest that the roadway widens from approximately 100 to 110 feet. Although unconfirmed at the time of writing the South Main Street Plan, this would allow the Class I path to extend all the way to Highway 20 and connect with the Hare Creek beach trail.

Chapter 9 describes the final direction received from City Council for fine tuning the initial design alternatives to represent a final set of designs for the South Main Street Corridor. The Final Plan Alternative includes narrowing travel lanes to 11-feet, installation of wider sidewalks where feasible, curb extensions, high visibility crosswalks, pedestrian islands, Class II bike lanes, signage, and lighting. Specific elements include a 10- to 12-foot pedestrian promenade on the west side of Main Street and elimination of parking, where feasible, on the east side of the highway between Highway 20 and Oak Street in favor of improved landscaping and pedestrian and bicycle facilities. The plan retains the Highway 20/Main Street “free merge” intersection in its current form, prioritizing actions to improve pedestrian and bicycle safety through the intersection.

http://city.fortbragg.com/pdf/SouthMainStreetFinal_04-25-2011-cover&TOCwith-links.pdf

A.6.5. The Gualala Community Action Plan (2007)

The purpose of the Gualala Community Action Plan (Gualala CAP) is to create a community-based plan that addresses a need for traffic calming, increased pedestrian and bicycle safety, parking supply and delineation, economic development, land use refinement, and provision of access to community organizations, recreation and health care. The most important outcome for the community is improving the livability, viability, attractiveness, and safety of its downtown area, predominately through streetscape improvements.

Chapter 2 provides a detailed improvement program wherein improvements are described, located, illustrated, and evaluated as part of a long-term capital improvement strategy. The appendices include the existing conditions report and base traffic conditions report.

The project area consists of three sub areas that are identified as the Southern Gateway, the Downtown Core, and Uptown Gualala. Recommendations for each subarea are summarized below.

1. Southern Gateway. This subarea extends from the Gualala River Bridge approximately 0.6 miles north to Old Stage Road/Old State Highway. The primary improvements proposed for this area is gateway signage located within a traffic calming median located just south of Old Stage Road/Old State Highway.
2. Downtown Gualala. This subarea extends from the south side of the Highway One/Center Street intersection north to Ocean Drive, a length of approximately 1,500 feet. The Gualala CAP recommends 5-foot wide bike lanes, 5.5-foot wide sidewalks, a landscape buffer between the sidewalk and curb, and elimination of on-street parking.
3. Uptown Gualala. This subarea extends from the north side of the Ocean Drive/SR 1 intersection to the north side of the SR 1/Pacific Woods Road intersection. Given the steep slopes abutting SR 1 in a number of locations, widening the existing road section to accommodate bike lanes may be

problematic. The Gualala CAP calls for a 3- to 5-foot wide pedestrian pathway of compacted gravel on the west side of State Route 1 where feasible. Where off-street walkways are not possible, the Gualala CAP recommends widening the asphalt shoulders of the road to allow more space between pedestrians and vehicles. These areas of widened shoulders should be a clear continuation of the off-street walkways.

<http://www.mendocinocog.org/pdf/Gualala/Gualala%20Final%20Plan-Ph1/Final%20Gualala%20Community%20Action%20Plan%203-28-2007.pdf>

A.6.6. Gualala Downtown Design Plan (Phase II) (2009)

The purpose of the Gualala Community Action Plan Phase II (Gualala CAP II) is to create a Downtown Design Plan that addresses circulation, parking, streetscape design, phasing, and funding. The approximately one-mile long project area extends along SR 1 from Old State Highway to the Gualala Mobile Court, just north of Ocean Drive. The priority for improving livability in Gualala is to increase walkability and safety via a continuous network of pedestrian paths throughout the project area. The community has expressed a preference for a continuous separated walkway system along the highway, and that walkway should reflect the rural, casual, coastal town character. There is strong support for walkways on both sides of the highway from Center Street, on the south end of town, north to Ocean Drive at Cypress Village intersection. From Ocean Drive north the walkway should only be provided on the west side of the highway. More detailed path locations and widths are presented on pages 23 and 24. The preferred path surfacing is a compacted stabilized soil mixture such as “Granitecrete”, in keeping with the casual coastal character.

Chapter 2 of the Gualala CAP II discusses circulation issues including vehicular, pedestrian, and bicycle in downtown and along possible roadway extensions. Chapter 3 provides a detailed improvement program that includes walkways, crosswalks, garden strips, planted medians, lighting, and street furniture. Chapter 4 includes recommendations to improve parking in Downtown through shared parking strategies that would create additional off-street parking. Appendix A contains illustrations of the recommended improvements.

The existing Gualala Bluff Trail (part of the California Coastal Trail system) and future Bluff Trail connections are discussed on pages 29 and 30. The first section of the Gualala Bluff Trail extends from behind Sea Cliff Center to the Surf Motel. Alignments for additional segments are currently being evaluated by the Coastal Commission. The Gualala CAP II notes that some portions of the trail and its vertical accesses should be improved to meet ADA accessibility standards, such as a viewing area. The Gualala CAP II states it is not feasible to make the majority of the trail ADA accessible because of the natural topography constraints. A flat area behind the Surf Center offers one of the few areas suitable for ADA access and an ADA parking spot.

<http://www.mendocinocog.org/pdf/Gualala/Gualala%20Ph2%20Plan-accepted/GDDTP%20Final%20Report%20309-withAppendices.pdf>

A.6.7. Downtown Gualala Refined Streetscape Design Plan (2012)

The Downtown Gualala Refined Streetscape Design Plan 2012 is the third and final part of a larger community planning effort that began with Gualala’s Community Action Plan in 2007. The Design Plan (2009) relied on the establishment of a shared off-street parking plan, which wasn’t implemented in the three years following the plan’s completion. Consequently, the objective of the Design Plan 2012 was to develop a plan that could be

implemented in the absence of a shared parking plan. The goal was to develop a project sooner, rather than later, that could improve conditions for the majority of downtown in the near term.

A.6.8. The Point Arena Community Action Plan (2010)

The Point Arena Community Action Plan (Point Arena CAP) consists of a Downtown Streetscape Plan, a Circulation and Parking Plan, recommendations for gateway, signage and traffic calming elements, a conceptual framework for future growth, and funding and implementation strategies. Downtown Point Arena is oriented along Main Street/ State Route 1.

Existing sidewalks and crosswalks are shown in Figure 2-7 of that plan. Sidewalks generally exist along both sides of State Route 1/Main Street from Iverson Avenue to the State Route 1/School Street intersection. A sidewalk exists on the north side of State Route 1/School Street from the State Route 1/Main Street intersection and to Lake Street. Within Point Arena, State Route 1 is designated as a Class III bike route. The bicycle facilities in the City are shown in Figure 2-8. Between 2003 and 2009, Point Arena had six reported collisions. Their locations are shown in Figure 2-10. In general, the collision records for the City do not indicate any substantial collision patterns, except at School Street/Main Street (State Route 1).

Pedestrian and bicycle facility recommendations along Main Street are presented on pages 40 to 45. The proposed SR 1/Main Street configuration will allow for the sidewalks to be widened 2 to 3 feet on the west side of the street, between the West America Bank Building and the new Centennial Park Plaza, and 2 to 3 feet on the east side of the street, between Mill Street and Fogeaters Market. The Point Arena CAP states that new sidewalks should be provided along streets where sidewalks are missing and/or desired and feasible. Segments identified to have inconsistent or missing sidewalks include School Street between Lake Street and Main Street (west side) and Main Street south of Iversen Avenue. The Point Arena CAP also calls for ADA-compliant curb ramps and devices, pedestrian warning signage, pedestrian-scaled lighting, street trees and landscaping, and street furniture. The Point Arena CAP recommends striping a 5-foot northbound Class II Bike Lane and a southbound Class III shared lane (with sharrows) along Main Street between Riverside Drive/Eureka Hill Road and Iversen Avenue. The proposed uphill bike lane will transition to a Class III shared lane at Riverside/Eureka Hill Road at the northern end and at Iversen Avenue at the southern end, where the roadway cross section width narrows.

Figure 4-26 shows existing trails and proposed trail and access route improvements. Coastal access trails are discussed on page 57. The Point Arena CAP references the Moat Creek to Arena Cove Trail Feasibility Study that is working to develop three potential trail alignments; a northern Bluff Top Trail Loop in the Bluff Top Road area, a coastal trail potentially between southern Bluff Top Road parcels and parcels north of Moat Creek Road, and a southern Coastal Trail Loop just north of Moat Creek Beach.

http://www.mendocinocog.org/pdf/PointArena_CommunityActionPlan.pdf

A.6.9. The County of Mendocino's State Route 1 Corridor Study Update (2008)

The County of Mendocino's State Route 1 Corridor Study Update identifies future traffic volumes which would be generated by potential development in the coastal zone allowed by the Coastal Element and by potential development from growth areas outside the coastal zone that affect traffic conditions on State Route 1. The State Route 1 Corridor Study Update assesses the impact on the Level of Service (LOS) of study intersections on State Route 1 based on incremental buildout scenarios and evaluates alternative

transportation modes. The study area focuses on the coastal portion of SR 1, which extends from the Sonoma County – Mendocino County line at Milepost 0.0 north to approximately Milepost 87.8 near the community of Rockport.

The State Route 1 Corridor Study Update generally characterizes the pedestrian and bicycle accommodations along State Route 1 within the study area. The document references bicycle counts conducted along State Route 1 in 2003 as a component of the Pacific Coast Bicycle Route Survey; these counts serve as a baseline for bicycle use in the corridor.

Recommendations related to pedestrian and bicycle facilities are presented on pages 27 through 29 and in Appendix I. The State Route 1 Corridor Study Update recommends minimum four-foot wide shoulders be required for all roadway improvement and 3R (resurfacing, restoration, and rehabilitation) projects. Projects with overriding geologic, environmental, cost, or other issue should be required to document a finding of such prior to waiving the requirement for four-foot shoulders. The State Route 1 Corridor Study Update also recommends consideration to maximize available shoulder space on the west side of State Route 1, especially on uphill grades (such as south of the Navarro River Bridge leading to Cameron Road). Bicycle pull-outs and provision of 4 to 10-foot wide shoulder areas with all planned bridge replacement projects are also recommended. Appendix I presents site-specific recommendations for pedestrian and bicycle facilities for the segments between study intersections. For each segment, Appendix I identifies the community, bridges, road features, shoulders (including width), pedestrian and bicycle accommodations, other features along the segment (e.g., parks), and recommendations for facility improvements.

<http://www.mendocinocog.org/pdf/SR%201%20Corridor%20Study%20Update.9-18-08.pdf>

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