

Attachment 2

Initial Study and Proposed Mitigated Negative Declaration



County of Humboldt
Humboldt Bay Trail South

California Environmental Quality Act
Public Review Document

Initial Study & Proposed Mitigated Negative Declaration

February 16, 2018

*California Environmental Quality Act
Public Review Document*

Initial Study & Proposed Mitigated Negative Declaration

County of Humboldt Humboldt Bay Trail South

Prepared for:



County of Humboldt
Department of Public Works
1106 Second Street
Eureka, California 95501

Prepared by:



GHD
718 Third Street
Eureka, California 95501

February 16, 2018

County of Humboldt
Department of Public Works
1106 Second Street
Eureka, California 95501

**CEQA Notice of Intent to Adopt a Mitigated Negative Declaration for the County of Humboldt,
Humboldt Bay Trail South Project**

In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15072 and Public Resources Code Section 21092, the County of Humboldt Department of Public Works is providing notice of intent to adopt a mitigated negative declaration (MND) of environmental impact for the "Humboldt Bay Trail South Project" as described here. The public is invited to comment on the proposed MND pursuant to the provisions of CEQA. The review period is 30 days and commences on February 16, 2018, and ends on March 19, 2018. Written comments must be submitted to the County of Humboldt Department of Public Works no later than 5:00 pm on March 19, 2018. The Initial Study and proposed MND document is available for review during regular business hours at the County of Humboldt Department of Public Works located at 1106 Second Street in Eureka, California. The document is also available on the County's website for download at: <http://www.humbolddbaytrail.info>. Per CEQA Guidelines Section 15072(g)(5), no known hazardous waste facilities or disposal sites exist along the project alignment.

The project generally consists of the construction and operation of a Class I bike path and cable barrier along the North Coast Railroad Authority (NCRA) and Caltrans U.S. Highway 101 corridor between Bracut and Eureka, and construction of a cable barrier between Bracut and Gannon Slough. The project is located along the NCRA and Caltrans U.S. Highway 101 corridor between Eureka and Brainard Slough, with the exception of a proposed levee trail segment around the California Redwood Company mill site. The project is generally located on the west/north side of U.S. Highway 101 and on the south/east side of the NCRA railroad corridor along the northeast shoreline of Humboldt Bay.

The County of Humboldt Department of Public Works will discuss the plan to complete the Humboldt Bay Trail between Eureka and Arcata at the Wharfinger Building, 1 Marina Way in Eureka, between 5:30 and 7:00 pm on February 27, 2018. For further information, please contact Hank Seemann, County of Humboldt Department of Public Works, Deputy Director at (707) 445-7741, or email at HSeemann@co.humboldt.ca.us.

The County of Humboldt plans to consider adoption of the MND at a regularly scheduled Board of Supervisors meeting on or around April 24, 2018, after 9:00 am, in the Supervisors Chambers (first floor), located at 825 5th Street, in Eureka.

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Acronyms and Abbreviations

AB	Assembly Bill
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
APN	Assessor Parcel Number
ARB	Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BA/EFHA	Biological Assessment/Essential Fish Habitat Assessment
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
CalEMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal-OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CDP	Coastal Development Permit
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CH ₄	Methane
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO ₂	Carbon dioxide
CPR	California Public Resources Code
CRC	California Redwood Company
CRHR	California Register of Historic Resources
dB	decibel

dBa	A-Weighted Sound Level
DTSC	Department of Toxic Substances Control
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency
ESHA	Environmentally Sensitive Habitat Area
FEMA	Federal Emergency Management Agency
GHGs	Greenhouse Gases
GIS	Geographic Information System
HCAOG	Humboldt County Association of Governments
HRER	Historical Resources Evaluation Report
HWMA	Humboldt Waste Management Authority
ICLEI	International Council on Local Environmental Initiatives
ISMND	Initial Study and Mitigated Negative Declaration
Ldn	Day-night Average Sound Level
Lmax	Maximum Instantaneous Noise Level
LOC	Letter of Concurrence
LRA	Local Responsibility Area
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MTCO _{2e}	Metric tons carbon dioxide equivalent
N ₂ O	Nitrous oxide
NAHC	Native American Heritage Commission
NCRA	North Coast Railroad Authority
NCRWQCB	North Coast Regional Water Quality Control Board
NCUAQMD	North Coast Unified Air Quality Management District
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NRHP	National Register of Historic Places
NWIC	Northwest Information Center

NWPRR	Northwestern Pacific Railroad
PM ₁₀	Particulate matter less than 10 micrometers in diameter
PM _{2.5}	Particulate matter less than 2.5 micrometers in diameter
PPV	Peak Particle Velocity
PRC	Public Resources Code
PSB	Project Study Boundary
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SDC	Seismic Design Category
SLR	sea level rise
SONCC	Southern Oregon/Northern California Coast
SVOC	Semivolatile Organic Compounds
SWL	Still Water Elevation
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TWL	Total Water Level
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1. Project Information

Project Title	Humboldt Bay Trail South
Lead Agency Name & Address	County of Humboldt, Department of Public Works 1106 Second Street Eureka, California 95501
Contact Person	Hank Seemann, Deputy Director Telephone: (707) 445-7741 hseemann@co.humboldt.ca.us
Project Location	Between Bracut and the City of Eureka, California (see Section 1.3 of this ISMND)
Project Sponsors	Not applicable
Project Assessor's Parcel Numbers (APN)	014-031-002, 014-031-002, 014-041-002, 014-051-003, 014-041-002, 014-061-002, 014-101-002, 014-051-003, 014-111-003, 014-061-002, 014-121-002, 017-081-001, 017-081-002, 017-102-008, 014-101-002, 404-141-002, 404-141-003, 404-141-004, 014-111-003, 404-141-005, 014-121-002, 017-081-001, 501-091-006, 017-081-002, 501-241-005, 404-141-002, 501-241-027, 404-141-003, 501-241-031, 404-141-004, 501-241-033, 404-141-005, 501-091-006, 501-241-005, 501-241-027, 501-241-031, 501-241-033.
General Plan Land Use Designation	Humboldt County: Natural Resources (NR), Industrial General (MG), Public Facility (PF). City of Eureka: Natural Resources (NR).
Zoning	Humboldt County: NR/Coastal Wetlands (NR/W), Industrial General/ARA (MG/A), Natural Resources/Design Review, Wetlands (NR/D, W), Industrial General/Flood Hazard (MG/F), Unclassified (U). City of Eureka: NR, Conservation Water (WC).
Project Description Summary	Construction and operation of a Class I bike path along the North Coast Railroad Authority (NCRA) and Caltrans U.S. Highway 101 transportation corridor generally between Bracut and Eureka, and construction of a cable barrier between Eureka and Gannon Slough. Some project elements are discretionary and/or may be phased.

Surrounding Land Uses and Setting Summary	The project is located along the NCRA and Caltrans U.S. Highway 101 corridor between Eureka and Brainard Slough, with Humboldt Bay to the north. The project is generally located on the west/north side of U.S. Highway 101 and on the south/east side of the NCRA railroad corridor along the northeast shoreline of Humboldt Bay. Project improvements are located within the boundaries of the City of Eureka, and unincorporated Humboldt County.
Comment Period	February 16 – March 19, 2018 Comments can be submitted: <ol style="list-style-type: none"> 1. Via e-mail to hseemann@co.humboldt.ca.us; or 2. In hard-copy form to Humboldt County Department of Public Works, 1106 Second Street, Eureka, CA 95501

1.1 Introduction

The Humboldt Bay Trail is a network of multi-use trails (also known as shared-use paths) providing non-motorized access for transportation and recreational use throughout the Humboldt Bay region. The Humboldt Bay Trail will connect communities with multi-modal transportation facilities and connect people to the bay by enabling people of all ages and abilities to access and experience the bay's resources directly. In addition to serving the region's transportation needs, the Humboldt Bay Trail will achieve a critical link in the California Coastal Trail and enhance recreational use and enjoyment around the bay.

The Humboldt Bay Trail is being developed as a collaborative effort between the Humboldt County Association of Governments (HCAOG), Humboldt County (County), City of Arcata, City of Eureka, California Department of Transportation (Caltrans), California State Coastal Conservancy, North Coast Railroad Authority (NCRA), Redwood Community Action Agency (RCAA), and other partners. The City of Arcata recently completed the Humboldt Bay Trail North segment which extends south along the Highway 101 and railroad corridor to a terminus located near Bayside Cutoff and Bracut Industrial Park. The City of Eureka recently completed Phases B and C of the Eureka Waterfront Trail which extends a segment along the west side of Eureka Slough. The Humboldt Bay Trail is being developed concurrent with the Eureka-Arcata Route 101 Corridor Improvement Project which is being implemented by Caltrans and HCAOG to improve safety and operations at six at-grade crossings on Highway 101. The Corridor Improvement Project will include a new interchange at Indianola Cutoff.

Humboldt County is leading the Humboldt Bay Trail South project (the "project") from the Eureka Slough area to the Bracut Industrial Park to provide the interconnecting link between the two trail projects recently completed by the cities of Arcata and Eureka. The proposed project is an approximately 4.2-mile paved path situated primarily along the Highway 101 and railroad corridor with the exception of a proposed levee trail segment around the California Redwood Company (CRC) mill site. This project will result in a continuous non-motorized trail from central Arcata to the southern end of Eureka, for a total length of nearly 13 miles. Completion of the link between the two largest cities in Humboldt County will provide a major step toward regional trail connectivity around Humboldt Bay. Additional background information is provided in the Project Study Report (Humboldt County, 2014).

In 2013, the County initiated technical studies to evaluate potential alignment options for the project (GHD, 2014). Preliminary engineering and environmental studies began in 2015. Funding for the engineering and environmental phases of the project was provided by the State Transportation Improvement Program. The County plans to complete the CEQA process in spring 2018 and submit

environmental permit applications in late summer 2018. Refinement of the project design and preparation of engineering plans and specifications will continue through 2019.

The County will need to secure right-of-way prior to construction because the proposed project crosses property owned by NCRA, Caltrans, City of Eureka, and three private landowners. The County plans to apply for a license agreement from NCRA similar to the agreements NCRA executed with the cities of Eureka and Arcata for adjoining trail projects. The County plans to develop a cooperative agreement with Caltrans and obtain an encroachment permit. The County plans to obtain an access agreement (or similar authorization) from the City of Eureka. The County will need to obtain right-of-way through easement or acquisition from the three affected private landowners prior to construction. The County has initiated discussions with each of the affected landowners regarding right-of-way and seeks to work cooperatively with each of them to obtain rights needed for the trail.

The County plans to apply for construction funding from the Active Transportation Program in July 2018. Acquisition of funding from other sources will also likely be required due to the cost of the project. The timeline for construction is not firm because it is contingent upon securing right-of-way, environmental permits, funding for construction, and funding for wetland mitigation. The earliest construction could begin is likely 2021.

The project is subject to the environmental review requirements of the California Environmental Quality Act (CEQA). The County is the CEQA Lead Agency and has developed this Initial Study for the following purposes:

- To identify feasible opportunities to avoid, substantially reduce, or mitigate environmental impacts;
- To provide a basis for deciding whether to prepare an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration for compliance with CEQA;
- To disclose the results of the County's analysis of potential environmental impacts from the project and the supporting information for approving the project; and
- To inform the CEQA Lead Agency, responsible agencies, trustee agencies, and the public regarding the potential environmental impacts of the project.

This Initial Study has been prepared to satisfy the requirements of CEQA (Public Resources Code [PRC], Div. 13, Sec 21000-21177) and the CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387). Based on the findings of the draft Initial Study, the County proposes to adopt a Mitigated Negative Declaration of environmental impact for the project. A Mitigated Negative Declaration is appropriate when significant environmental impacts can be avoided by adopting specified mitigation measures.

The public review period for the draft Initial Study and proposed Mitigated Negative Declaration (ISMND) is February 16 through March 19, 2018. Comments regarding the correctness, completeness, or adequacy of the ISMND are invited. Comments received by the end of the public review period will be considered before adoption. The final ISMND document will be produced in track-changes mode to show the changes made in response to the comments received. Copies of the comments will be provided in Appendix A of the final document. Adoption of the final ISMND by the Humboldt County Board of Supervisors is anticipated in April 2018. Comments on the draft ISMND can be submitted via e-mail to hseemann@co.humboldt.ca.us or mailed in hard-copy form to:

Humboldt County Department of Public Works
1106 Second Street
Eureka, CA 95501

Comments must be received by 5:00 pm on Monday, March 19, 2018.

1.2 Purpose and Need

A dedicated bicycle and pedestrian trail between Eureka and Arcata has been a regional priority for nearly 20 years and is identified as a priority project in the Regional Transportation Plan (HCAOG, 2017). The project described and analyzed in this Initial Study will close the existing 4.2-mile gap in the Humboldt Bay Trail between Eureka and Arcata.

The primary purpose of the project is to improve safety and connectivity for non-motorized and motorized travelers between the communities of Eureka and Arcata. The trail is warranted because Highway 101 between Eureka and Arcata is an incomplete transportation facility that was designed primarily to support motorized vehicles. The project would reduce the potential for conflicts between bicyclists, pedestrians, and vehicles within the Highway 101 Corridor and increase mobility options between the communities of Arcata and Eureka. The project would contribute to a balanced, “complete street” transportation network and enhance public access to Humboldt Bay. A continuous trail would have many benefits, including:

- Improved safety (through separation of motorized and non-motorized travelers)
- Economic development (by supporting transportation mobility and regional tourism)
- Congestion relief
- Coastal access and opportunities for nature study
- Improved bay viewshed
- Enhanced quality of life
- Improved public health (by creating opportunities for increased physical activity)
- Community connectivity
- Reduced vehicle miles traveled, fuel consumption, and emissions
- Partial rehabilitation of selected areas of the railroad prism

1.2.1 Alternative Alignments Considered and Not Selected

This section provides a brief summary of alternative alignments which were initially considered as part of the overall evaluation process but not selected:

West Side of Railroad Corridor

This alternative would develop a trail on the west side (toward the bay) of the railroad prism or within the open water portion of the bay. This alternative was not selected due to expected higher construction costs and expected higher impacts to the more sensitive habitat type (salt marsh and mud flat) within the bay. In addition, there is high uncertainty whether the required permits could be acquired.

East Side of Highway 101

This alternative would develop a trail on the east side of Highway 101. This alternative would require multiple crossings of Highway 101 and other roads and driveways to provide a continuous trail that is connected to the regional trail system. Right-of-way needs would be substantial with this alternative and new crossings of creeks and sloughs would be required. The increased distance and separation from Humboldt Bay are also shortcomings. For these reasons, this alternative was not selected.

Re-align Entire Railroad and Highway Corridors

This alternative would shift the railroad and highway corridors eastward to allow a trail on the existing railroad prism. This alternative is logical from a planning perspective and has the benefit of locating the trail directly adjacent to the bay to enhance the recreational experience. This alternative would

be a major infrastructure project with a cost on the order of \$100 million, and securing funding of this magnitude is unlikely due to competing transportation needs. This alternative was determined to be cost-prohibitive and therefore infeasible.

Full Occupation of Railroad Prism (Rail-to-Trail)

This alternative would place the trail directly on the existing railroad prism for all or most of the project area. This alternative would require the removal of the existing railroad tracks and ties, and widening portions of the prism to accommodate the required trail width. This alternative was not selected because it conflicts with NCRA's Rails With Trails Policy and Procedures Manual (NCRA, 2009). NCRA policy allows trails within their right-of-way if they will not inhibit the current or future ability to operate freight or passenger rail services.

In 2012, NCRA formed an ad hoc committee to evaluate restoration of the Humboldt Bay rail prism, development of trails consistent with the NCRA's 2009 trail guidelines, and restoration of rail service in the Humboldt Bay Area. On December 12, 2012, NCRA passed Resolution 2012-13 which included a provision that "NCRA will consider clearly defined and strictly limited exceptions to its current trail policy to enable development of a trail in the Humboldt Bay corridor without compromising the prospects of rail service restoration."

Alignment around Bracut Marsh and Bracut Industrial Park

This alternative would place a portion of the trail (Segment 9) on the levees surrounding Bracut Marsh and Bracut Industrial Park. This alternative would have the advantage of being further away from the highway and closer to the bay, but would have the disadvantage of being a less direct route through the segment with several sharp turns. This alternative would require substantial improvements to the levees, including widening and revetment repair, and two bridges would be needed to cross the gaps in the levee around Bracut Marsh. This alternative would have more environmental impacts (through the filling of wetlands) and be more expensive than the proposed alignment parallel to the railroad. This alternative is not the least environmentally damaging feasible alternative and would conflict with Coastal Act Section 30233. For these reasons, this alternative was not selected.

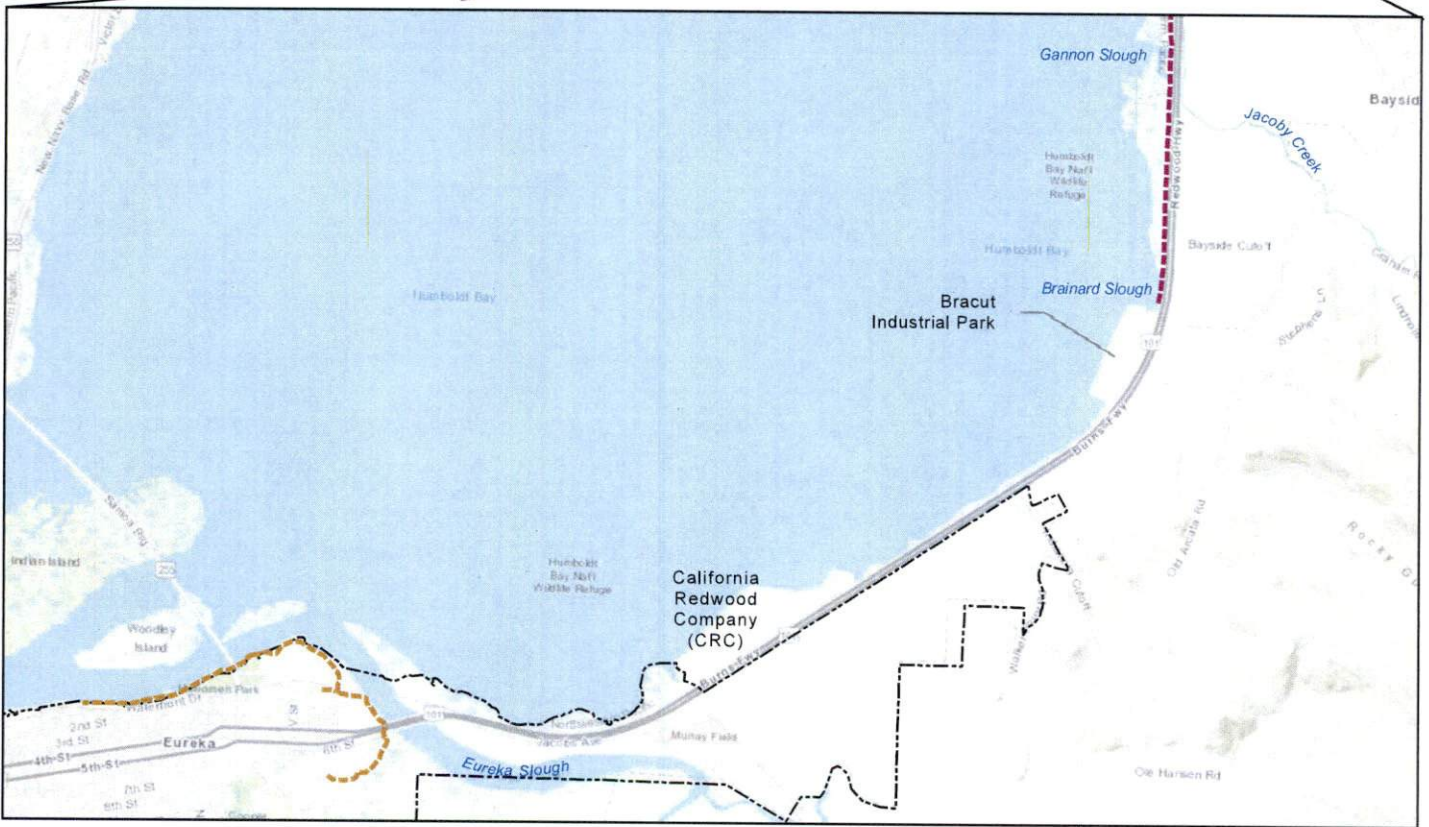
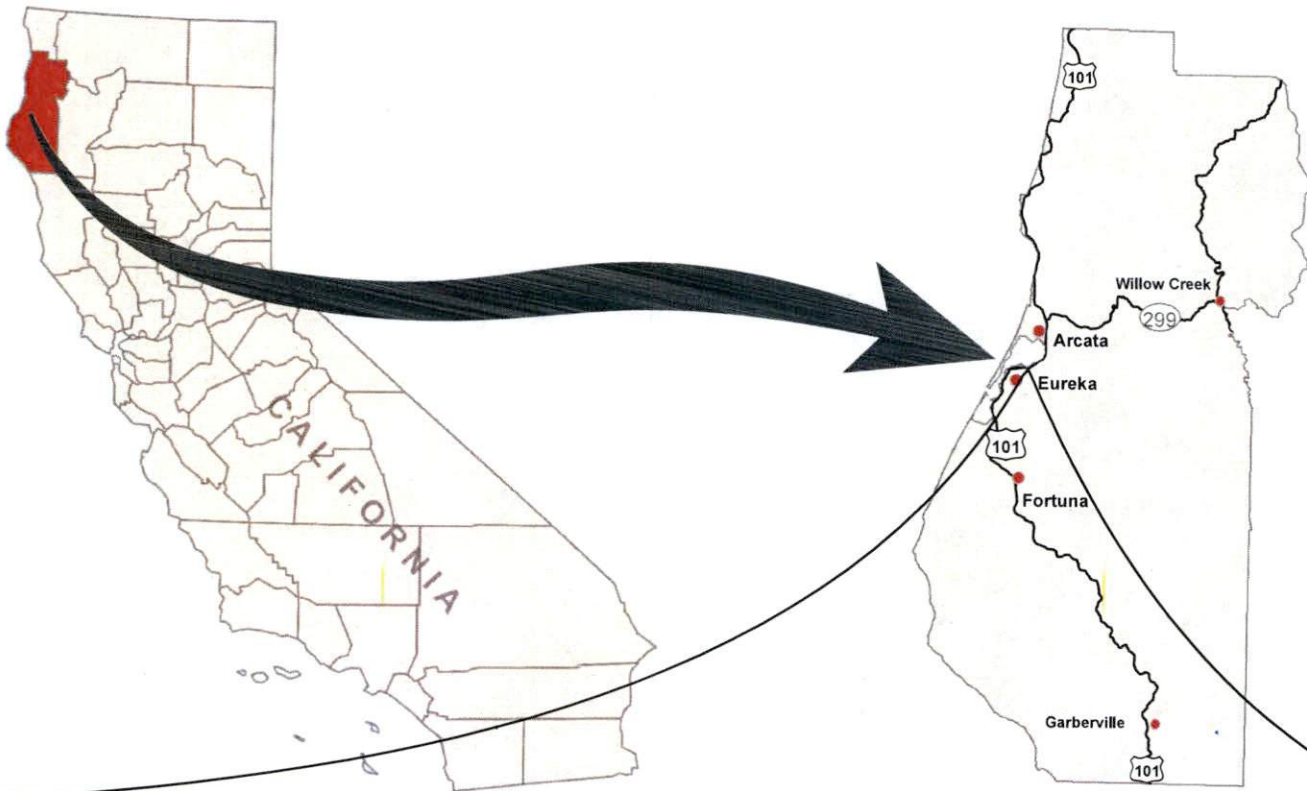
Alignment in Front of CRC mill site

This alternative would place the portion of the trail near the CRC mill site (Segments 5 and 6) parallel with the railroad and highway rather than on the perimeter levee around the mill site. This alternative would have the advantage of providing a more direct route, but would have the disadvantage of being closer to Highway 101 and further from the bay. This alternative would require removal of the 0.6-mile-long southern segment of eucalyptus trees to create space for the trail facility and for safety reasons due to overhanging limbs. The feasibility of this alternative is questionable due to the need to avoid impacting the capacity of the drainage ditch situated between the railroad and highway (GHD, 2017d). This alternative would have more environmental impacts (through the filling of wetlands) and be more expensive than the proposed alignment around the perimeter levee. This alternative is not the least environmentally damaging feasible alternative and would conflict with Coastal Act Section 30233. For these reasons, this alternative was not selected.

1.3 Project Location

The project is located along the NCRA and California Department of Transportation (Caltrans) Highway 101 corridor between the City of Eureka and Brainard Slough, for a total length of approximately 4.2 miles, with a portion located on the perimeter levee between the CRC mill site property and Humboldt Bay (refer to Figure 1).

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- Eureka City Limits
- Trail Connections**
- Eureka Waterfront Trail
- Humboldt Bay Trail North

Paper Size 8.5" x 11" (ANSI A)
 0 0.25 0.5 0.75 1
 Miles
 Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



Humboldt County Public Works Department
 Humboldt Bay Trail - Bay Trail South
 (Eureka to Bracut)
 Vicinity and Existing
 Conditions Map

Job Number	11110166
Revision	B
Date	11 Jan 2018

Figure 1

© 111111110166 Humboldt Bay Trail South PA&E PS&E108-GIS\Maps\Figures\ISMND\11110166_01_Vicinity_RevB.mxd
 718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com
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The proposed trail alignment is generally situated between Highway 101 and the NCRA railroad prism, except where the proposed alignment is located on the CRC levee or where the trail is on the NCRA Eureka Slough Bridge and approaches. Where the project is situated between Highway 101 and the railroad, the proposed alignment is on the west-northwest side of Highway 101 and on the east-southeast side of the NCRA railroad corridor. The project also includes the extension of a cable barrier at various locations along Highway 101 from Eureka Slough to Gannon Slough. Figure 2 shows the trail alignment and various project components, and Figure 3 shows the project study boundary (PSB) incorporating the finished trail and cable barrier.

1.4 Project Description

The Humboldt Bay Trail South Project is intended to provide non-motorized (primarily pedestrian and bike) transportation and recreational access connecting the City of Eureka's Waterfront Trail to the City of Arcata's Humboldt Bay Trail North via a Class I multi-use trail. The project would connect to the existing Eureka Waterfront Trail, starting just south of NCRA's Eureka Slough Bridge in Eureka, and continuing along the NCRA railroad transportation corridor north towards Brainard Slough. In addition to the proposed trail improvements between Eureka and Brainard Slough, the project includes sections of cable barrier that are proposed to be installed at specified locations between the existing Humboldt Bay Trail North Project and U.S. Highway 101. For the purposes of this study, the approximately 4.2-mile-long trail alignment was divided into nine functional study segments (as shown on Figure 2), in addition to the Humboldt Bay Trail North segment, where extension of the safety cable barrier is proposed:

Table 1-1 Trail Segments

Segment	Location	Approximate Length (ft)	Alignment Description
1	Connection to Eureka Waterfront Trail	100	Connection from railroad prism to existing Eureka Waterfront Trail
2	Eureka Slough Crossing	720	Cooperative use of NCRA's existing Eureka Slough Bridge
3	Eureka Slough North	1,500	Trail on or adjacent to railroad prism
4	Eureka Slough to CRC	5,200	Trail between railroad and highway and bridge trail connection over bay
5	CRC	5,400	Trail on CRC perimeter levee
6	CRC North Bay Crossing	200	Bridge trail connection over bay
7	North Eucalyptus Area	2,600	Trail between railroad and highway
8	South of Bracut	4,000	Trail between railroad and highway
9	Bracut to Brainard Slough	2,700	Trail between railroad and highway and bridge over Brainard Slough
Humboldt Bay Trail North	Brainard Slough to Gannon Slough	5,350	Cable barrier between existing trail and highway

The impact analysis included in this document is based the preliminary alignments and concepts shown in Figure 2 and Appendix G. As the design and engineering phase's progress, small changes and variations in design within the project study boundary are anticipated. The impacts

associated with the final design would be comparable or less severe to what is analyzed in this document.

1.4.1 Project Elements

The project is being designed to achieve the standards of a Class I Bikeway in accordance with the Caltrans Highway Design Manual (2017). In addition, the project will be designed to conform to other applicable standards, including the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, Fourth Edition (2012); California Manual of Uniform Traffic Control Devices (CA MUTCD) (2014); the 2010 Americans with Disabilities Act (ADA) Standards for Accessibility Design; Chapter 11B of the 2016 California Building Code; General Order No. 26-D from the California Public Utilities Commission; and the NCRA Trail Guidelines (2009).

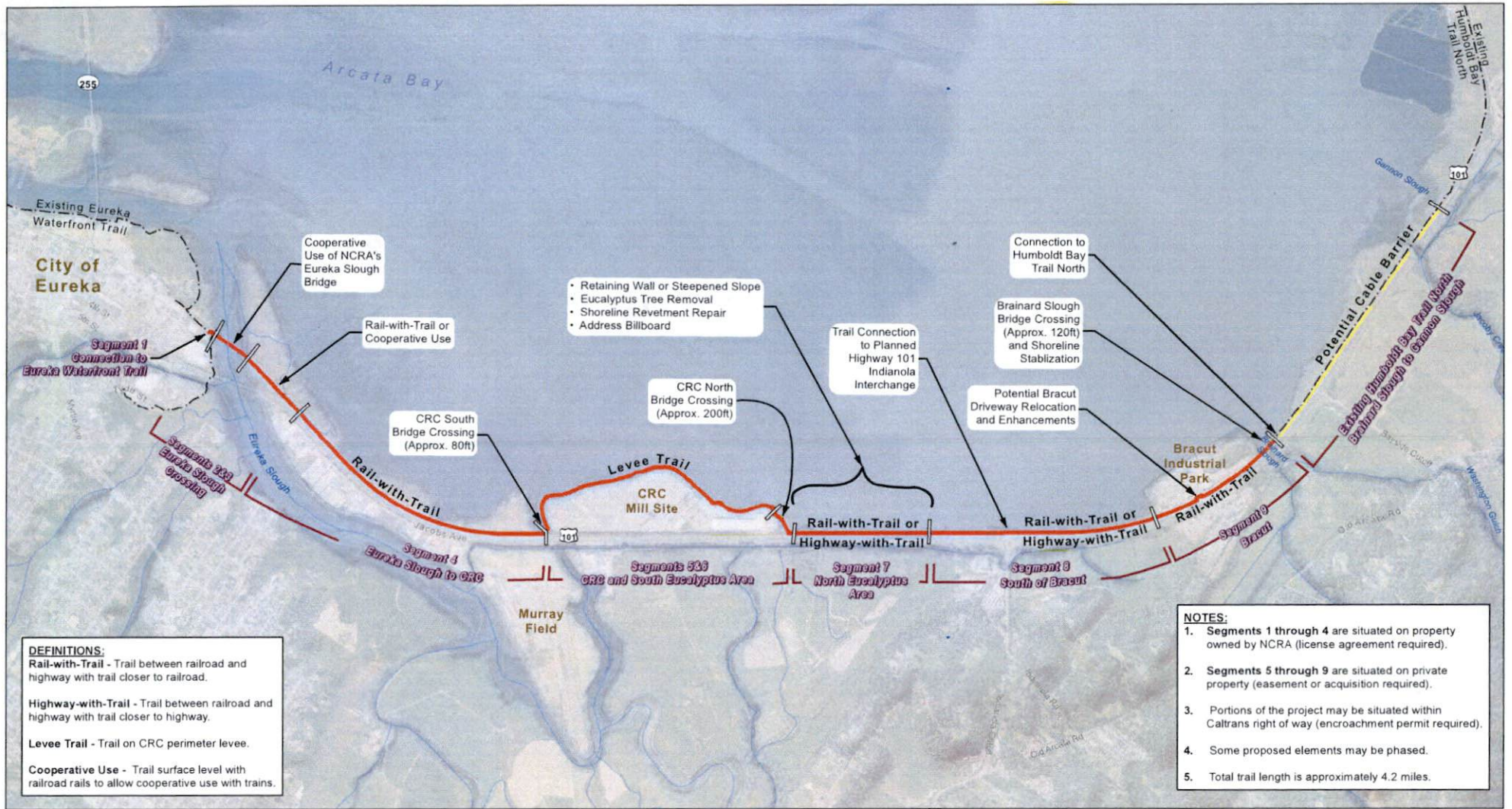
The basis of design for the width of the Humboldt Bay Trail between Eureka and Arcata was evaluated in a technical report (Humboldt County, 2016). Trail width is a key design parameter for use safety and the quality of the user experience. The report documents how design standards were applied for the project area to develop the appropriate trail width using a context-based approach.

The project is being designed to accommodate the expected volume and diversity of users, which includes a range of ages, experience levels, speeds, trip purposes, and mobility modes. As described in more detail below, the project includes a multi-use trail, lighting, signage, shoreline protection improvements, drainage improvements, and cable barrier fencing. Additional features may include viewing platforms, interpretive features, trailheads, and other amenities. Reference Appendix G for detailed graphics and images of project elements.

Class I Multi-Use Trail

The standard trail would consist of a 10 foot wide asphalt traveled way with two 2-foot gravel shoulders on each side. A narrower trail width may be utilized in isolated areas in special situations where it is not practical to maintain the standard width. In accordance to Class I and accessibility standards, the trail would be designed with a two percent or less cross slope and a five percent or less running slope. In areas in which the project crosses tidally influenced waters, the standard trail would include a bridge for crossing as further described below.

The trail is anticipated to have a typical pavement structural section that has approximately 12 inches of aggregate base and approximately 3 inches of asphalt concrete. In areas of poor soils, the structural section may be increased to up to three-feet of aggregate/engineered fill base or other soil stabilization measures such as the use of geotextiles and increased structural section depth.



<p>Paper Size 11" x 17" (ANSI B)</p> <p>0 750 1500 2250 3000</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California 1 FIPS 5401 Feet</p>	<p>LEGEND</p> <p>— Humboldt Bay Trail South</p> <p>— Cable Railing - Humboldt Bay Trail North</p> <p>- - - Existing Trail</p> <p>- - - Project Segment</p> <p>- - - Segment Break</p>	<p>ABBREVIATIONS</p> <p>CRC California Redwood Company</p> <p>NCRA North Coast Railroad Authority</p>	<p>Humboldt County Public Works Department Humboldt Bay Trail - Bay Trail South (Eureka to Bracut)</p> <p>Proposed Trail Alignment and Key Components</p>	<p>Job Number 11110166</p> <p>Revision E</p> <p>Date 30 Jan 2018</p>
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Figure 2



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 Miles
 Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



- Project Study Boundary
- Eureka City Limits
- Existing Eureka Waterfront Trail
- Existing Humboldt Bay Trail North (Bracut to Foster Ave)



Humboldt County Public Works Department
 Humboldt Bay Trail - Bay Trail South
 (Eureka to Bracut)

Job Number	11110166
Revision	C
Date	11 Jan 2018

Project Study Boundary

Figure 3

Lighting

Up to two new lights may be included at the Bracut driveway/trail intersection to enhance visibility at night. Outside night lighting associated with construction, would be designed to protect wildlife and nighttime views, including views of the night sky. This design goal would be satisfied using a variety of means as applicable, including fixture types, cut off angles, shields, lamp arm extensions, and pole heights. Specific design preferences include directing light downward and away from other properties, avoiding brightly illuminated vertical surfaces where feasible, such as walls and lamp poles, and directing lighting away from environmentally sensitive habitat areas (ESHA).

Viewing Platforms and Interpretive Signage

The viewing platforms and interpretive sign areas of the project may consist of either low-profile landscaped areas or raised deck platforms comprised of either steel, asphalt concrete, concrete, wood or crushed rock. Each platform/sign area may include interpretive signs, benches, trash receptacles, railings and/or landscaping. These areas would encourage an appreciation of the environment and the socio-cultural history of the area by providing opportunities for nature and cultural study. The opportunities include providing up-close views of local vegetation/habitats, mid-range views of Eureka Slough/Humboldt Bay, long-range views of the surrounding ridge lines, and interpretive signs that include information regarding local habitats and cultural/historical sites. Specific locations for viewing platforms and interpretive signage will be determined later in the design process.

Directional/Wayfinding Signage

Directional/Wayfinding signage would be installed at regular intervals to inform trail users of nearby connections to surface streets and nearby destinations.

Trailheads

The project is primarily situated within the interior of the Arcata-Eureka transportation corridor and is fundamentally designed to connect existing trail segments located within the two cities. Currently the project does not propose new trailheads, and envisions that users will access the new trail segment from the interconnecting trail segments in Eureka or Arcata. Opportunities for new trailheads will be evaluated as the project design progresses. The trailheads could include new or refurbished parking spaces, interpretive signs, gateway signage, kiosks, benches, trash receptacles, and/or landscaping.

California Redwood Company Area/Levee Trail (Segment 5 and 6)

Approximately 1.1 miles of the proposed trail alignment follows the outer perimeter levee surrounding the CRC. The existing levee varies in width from 12 to more than 30 feet wide and averages approximately 10 feet higher than the adjacent Humboldt Bay mud flats. The standard trail section would be maintained along the levee but may include additional fencing and/or slope/drop-off protection. In general, the trail elevation is proposed to be very similar to that of the existing levee; however, the elevation profile would vary as needed to comply with the standards and other design elements. Portions of the levee which are narrow or low in elevation, may need additional embankment construction to widen and/or raise the elevation of the trail. Sections may also require reinforced steepened slopes or short retaining systems (e.g. gabion walls) to reduce necessary embankment fill. If widening is necessary, it would generally occur on the inboard CRC side of the levee rather than towards Humboldt Bay. The additional embankment would be added along the inside slope at an approximate 1.5:1 slope. In most cases, the added embankment would result in fill into the inboard ditch/wetlands. Where this occurs, the inboard ditch would be reconstructed to provide for the necessary capacity and to also mitigate onsite for wetlands impacts associated with

inboard ditch. The CRC portion of the trail is proposed to be connected to the adjacent trail sections (on both ends) by bridges crossing the mud flats or salt marsh and provide a smooth transition back to the main trail alignment located between the railroad tracks and highway. The bridges are described in more detail below.

Eureka Slough Crossing (Segment 2 and 3)

Currently, Highway 101 crosses the Eureka Slough, but does not include bike or pedestrian facilities. The highway's bridge structures (northbound and southbound bridges) are planned to be replaced and reconstructed in the future; however, no specific dates have been determined. Caltrans staff have indicated a replacement highway bridge across Eureka Slough would include bike and pedestrian facilities, but until that time, an alternate route would be required.

Approximately 700 feet to the northwest of the Highway 101 Eureka Slough Bridge crossing is a railroad bridge owned by the NCRA. The bridge is currently unused as there is no rail service within the area. If rail service were to resume, significant maintenance and/or improvements would be required as the condition of portions of the tracks approaching the bridge are not to current standards for rail traffic.

The proposed trail across Eureka Slough would make use of the existing railroad bridge by modifying the structure to accommodate the trail. One option utilizes the existing deck by installing an asphalt, concrete or a wooden surface over the existing bridge surface and on top of the rails. Another option would be to install an asphalt, concrete, wooden or pre-manufactured surface up to the level of the rails that allows for cooperative use with trains. Some of the existing cross ties may require replacement or an anti-fungal treatment to extend their useful life. Both options would include new safety railing and minor cosmetic improvements to the bridge's appearance, such as painting over graffiti. During construction, protection measures would be implemented to prevent construction debris and other materials from falling from the bridge and entering the waterway below.

In the future, when Caltrans replaces the southbound Highway 101 bridge structure with one that includes accommodations for bikes and pedestrians, the trail (Segments 2 and 3) would be rerouted to utilize the new Highway 101 bridge structure. After crossing the Highway 101 bridge, the future trail would continue along the highway until it connects with the trail (Segment 4) approximately 1,000 linear feet to the north. At that time, access across the railroad bridge would likely discontinue and any un-needed trail improvements could be removed. The future Eureka Slough crossing on Highway 101, connection route to and from the bridge, and the deconstruction of the trail improvements on the railroad bridge are not analyzed in this Initial Study.

Brainard Slough Crossing (Segment 9)

Brainard Slough is formed from the Washington Gulch and Rocky Gulch drainages, the confluence of which is on the east side of the freeway before crossing under Highway 101 via a single reinforced box culvert, then under the tracks via two 48-inch corrugated metal pipe culverts which are significantly damaged and do not currently function. A new trail crossing would require the two existing 48-inch pipe culverts be removed and a bridge structure be added for the trail.

The bridge structure would need to be approximately 120 feet in length. The bridge would consist of a single-span, pre-manufactured structural section comprised of steel, aluminum, fiberglass or concrete. The bridge would be supported on each end with abutments (including wingwalls) supported by up to five 18-inch diameter cast-in-steel-shell (CISS) piles on each end. Up to 10 piles would be installed to a depth of up to approximately 100 feet below ground surface (bgs) and approximately 10 to 15 feet from Humboldt Bay water extents during periods of low tide. The steel

shells would be installed outside the active channel using a vibratory pile driver (American Pile driving Equipment Model 200 or similar), which would utilize a vegetable based non-toxic hydraulic oil in case of a hydraulic leak in or near Humboldt Bay. Each steel shell would be proofed by driving its final 5 feet by a conventional impact hammer pile driver to achieve design tip elevation and verify load capacity. No pile driving would occur in water, as installation would occur during low tides.

The existing failed culverts and debris (including timber ties, supports and rock) would be removed, the remaining rail embankment regraded (as-needed) and rip-rap installed (including on the bay side) to stabilize the embankment/shoreline and reduce the potential for ongoing erosion.

Prior to completing the final design, the County would complete a geotechnical analysis to determine the bearing capacity of the soils and to verify if piles are necessary. The geotechnical analysis would be used to verify the target depths of the piles.

CRC Bridge Structures (Segment 5 and 6)

Two bridge structures are proposed at the north and south extents of the CRC property for trail portions that cross tidally influenced waters. The bridges would be at least 10-feet wide between railings and would be constructed with pre-manufactured wood, fiberglass, steel, aluminum, or concrete materials.

The northern CRC bridge is anticipated to be a three-span pre-manufactured bridge supported with four piers (one on each end and two within the mid-sections located in Humboldt Bay). The bridge would have a total length of approximately 200 feet. Each pier is anticipated to be comprised of up to five 18-inch diameter CISS piles. Like the bridge structure proposed for the Brainard Slough crossing, the steel shells would be installed to a depth of approximately 100 feet bgs and installed using the same vibratory pile driver method followed by impact hammer proofing. In order to provide access for cranes, temporary sheet piles and washed coarse-grained aggregate fill would be used to construct temporary access road and landings. The sheet piles would be installed approximately 30 feet bgs (vibrated in without impact proofing), and the aggregate fill would be encapsulated in geotextile fabric to separate native and fill soils. Water bladders may also be used to construct a coffer dam to isolate the work area from the bay and tidal waters. Isolating the work area with water bladders would allow for work within the bay to be expedited as work would not be restricted to periods of low tides only. The coffer dam would also reduce the likelihood of construction generated sediment from entering the bay, and reduce the possibility of fish entrapment. Following the installation of the bridges, the temporary access road, including the sheet piles, aggregate fill and geotextiles, would be removed, and existing ground surface (bay mud) smoothed out to the extent practical. The northern CRC bridge is necessary to avoid conflicts with an existing building.

The southern CRC bridge would be a single span pre-manufactured bridge approximately 80 feet in length. Like the Brainard Slough bridge, the southern CRC bridge is anticipated to be supported on each end with abutments and up to four 18-inch diameter CISS piles approximately 100 feet deep. The piles would be installed in the same manner and using the same equipment as the northern CRC bridge. The southern CRC bridge is intended to improve the geometry of the trail alignment by reducing the radius of curvature for turns at this location. The southern CRC bridge is optional and could be eliminated during subsequent design refinements.

Prior to completing the final design, the County would complete a geotechnical analysis to determine the bearing capacity of the soils and to verify if piles are necessary. The geotechnical analysis would be used to verify the target depths of the piles.

There have been some opinions expressed regarding the shininess of the new aluminum bridges installed as part of the Eureka Waterfront Trail and Arcata's Humboldt Bay Trail North. A study will be prepared in early 2018 to identify the bridge types that are suitable and that could be considered for the Humboldt Bay Trail South project. During bridge type selection, the County will consider the feedback received on adjacent trail projects as well as the potential benefits of consistency with the existing structures.

Retaining Structures

Retaining structures may be used at each end of the bridges (abutment wing-walls) and also along the segment of the trail beginning at the northwest corner of the CRC property and extending north-westerly for a distance of approximately 2,700 linear feet (Segment 7). The segment of trail north of CRC would be located between the railroad and the Highway 101 corridor, either directly adjacent to the railroad, or directly adjacent to the highway (behind the existing metal beam guardrail). A retaining wall structure may be required in order to maintain minimum setbacks from the NCRA tracks or Highway 101 (depending on the alignment) while limiting encroachment into the existing drainage ditch which is located between the railroad and highway. The structure may consist of cast-in-place concrete or soldier pile retaining wall. If soldier pile retaining wall is used, 30 to 40-foot tall reinforced concrete or steel soldier piles would be driven at six to eight foot intervals and approximately 22 to 34 feet bgs leaving approximately six to eight feet exposed above the ground surface. The soldier piles would be impact driven using the same (or similar) pile driver that would be used for proofing the CISS pilings. Lagging (concrete or treated timber) would be used to retain the backfill. It is anticipated that the soldier piles (approximately 340 total) would require 100 blows per pile. The top of the retaining structures would not exceed the elevation of the railroad and the height to the ground surface is expected to be six feet or less. For safety purposes, the retaining structure would include railings.

Eucalyptus Tree Removal (Segment 7)

A group of existing eucalyptus trees of varying age and size located along the edge of Highway 101 and railroad prism north of the CRC property would need to be removed as part of the project. Removal of the eucalyptus trees is needed to accommodate the trail. The tree removal area extends for approximately 2,500 feet (0.5 miles) and includes approximately 219 eucalyptus trees that are 8 inches in diameter or greater in addition to smaller trees and saplings. Some trees are in direct conflict with the trail alignment and all pose a safety hazard to trail users (falling debris and ground litter). Removal of the trees would also open up views looking west towards the bay. The trees would be limbed and trunks rigged, felled and lowered in sections (sectional felling). Tree stumps would be removed to the extent feasible through excavating, grinding or other means, with remaining stumps and root systems treated with an herbicide (glyphosate, triclopyr or similar) to prevent regrowth. Required equipment and workers would access the trees from both the highway and railroad side. The removal operation would likely require the closure of one or more lanes of Highway 101. The existing metal beam guardrail adjacent to the trees would likely be replaced because removal of the trees is expected to damage the guard rail system. The project would also remove all eucalyptus saplings in the vicinity of the trail (generally between the highway and railroad).

Shoreline Protection (Segments 4, 7, 8 and 9)

As previously discussed, the project includes localized shoreline improvements at the Brainard Slough crossing. In addition to Brainard Slough, there are multiple areas along the project extents where the existing railroad fill prism has deteriorated and shows significant signs of erosion as a result of wave action from Humboldt Bay. The area between CRC and Bracut is generally in the worst

condition, with more isolated areas of deterioration between Eureka Slough and CRC. In order to help protect the trail prism from future erosion and damage, sections of the rail prism would be repaired by placing ballast rock and portions of the revetment would be repaired and/or supplemented with additional rock rip-rap. The shoreline protection along the bay side (the western side of the railroad prism), would be limited (horizontally) to the bay-ward extent of the existing rip-rap. No additional encroachment beyond the toe of existing rock armoring is proposed.

Approximately 500 linear feet of existing shoreline revetment would be repaired with rip-rap and ballast rock. Work would include temporarily removing the railroad ties and rails, placing additional ballast rock, and resetting the ties and rails on the ballast.

Approximately 5,000 linear feet of shoreline would receive supplemental ballast rock infill and surface applied rip-rap placed directly adjacent to the railroad ties on the bay side to improve and protect the shoreline from wind and wave action. Additional surface stabilization rock armoring is anticipated along the highway side of the trail prism to protect against wave over wash and surface erosion. The stabilization rock would be smaller in size as compared to the shoreline rip-rap.

Striping and Vehicle Control

The trail would include a centerline stripe to delineate the two bi-directional lanes. Standard trail-related traffic-control signage would be installed in order to comply with Class I standards and MUTCD requirements. At locations where the trail intersects a vehicular roadway, bollards or similar control features would be installed to prevent motorized vehicles from entering the trail. Authorized personnel (e.g. police, emergency-responders, County/City maintenance crews, etc.) would be able to remove the bollards and temporarily access some portions of the trail with motorized vehicles.

Drainage Improvements

The trail would typically have a two percent or less cross slope to allow surface water to flow off of the trail surface. When the trail is directly adjacent to either the railroad or the highway facilities, the cross slope of the trail would be away from the railroad/highway in order to convey runoff towards existing or new drainage facilities. In locations where the existing drainage ditches are in close proximity to the proposed trail alignment, culverts may need to be extended or added. Similarly, in cases where the trail's fill prism encroaches into the existing drainage ditch to the extent it causes a reduction in capacity, the drainage ditch may need to be reconstructed at approximately the same grade and depth, but at a location (horizontally) offset from the original position.

Barriers and Fencing

Safety railing and fencing is proposed along retaining walls, viewing platforms, the CRC levee, on bridges, at the Bracut driveway, and at the edge of the trail when adjacent to steep embankments. Security fencing and gates may be needed at the CRC mill site and Bracut Industrial Park. The railing and fencing would be constructed from wood or metal material, and may include chain link, cable, or picket style fencing. During railing type selection, the County will consider feedback received on adjacent trail projects as well as potential benefits of consistency with existing structures.

High-tension cable barriers and metal beam guard rail would be utilized between Highway 101 and the trail to protect trail users from errant vehicles. Barriers are required by design standards when the trail is located within the highway's 30 foot clear recovery zone. The proposed project includes cable barriers in certain locations where the trail is outside the clear recovery zone as a discretionary action to enhance trail and highway safety. The cable barrier would be installed along portions of the proposed Humboldt Bay Trail South project as well as the existing Humboldt Bay Trail North project.

The high-tension cable barrier would be set back approximately 10 feet from the edge of trail and approximately 8 to 12 feet from the edge of the highway shoulder. The cable barrier consists of steel wire ropes (typically 4 strands) mounted on steel posts secured in concrete foundations. An approximately two-foot wide concrete weed mat would be constructed along the length of the cable barrier. Image 1-1 shows a typical cable barrier along a highway.



Image 1-1 – Typical Cable Barrier Fencing

Where the trail is less than 10 feet from the edge of the highway shoulder, a metal beam guard rail or other positive barrier would be required. In this situation the trail would be located approximately 3 feet behind the metal beam guard rail wood posts. A weed control mat would be installed along the length of the barrier to control vegetation.

Billboard Removal (Segment 7 and 8)

There are four billboards in the vicinity of the project, all of which are situated on private property. Three of the billboards are located outside the project study area on the bay side of the railroad prism. One of the billboards is located within the project study area between the highway and railroad. Depending on the final trail alignment, the trail may narrowly avoid this billboard, or it could be in conflict and require the billboard be removed or relocated. To prepare for this contingency, this Initial Study analyzes the potential removal of the billboard situated on the railroad prism.

1.4.2 Project Construction

Construction Schedule

Construction of the project is expected to begin in late spring and require approximately six months to complete. Vegetation clearing would occur during the non-bird nesting season, between August 16th and March 14th. Anticipated daytime work hours are 7:00 a.m. to 7:00 p.m., Monday through Friday with occasional work on Saturdays. Construction on Sunday or legal and County holidays is not currently anticipated except for emergencies or with prior approval from the County of Humboldt.

Construction Staging, Activities, and Equipment

Construction staging areas would occur within the mapped portion of the project study boundary, within paved or graveled areas, or with designated, previously disturbed corporation yards. Construction would primarily include removal of trees and vegetation, excavation and grading, bridge foundation construction and pre-manufactured bridge assembly and installation, trail paving, fencing/railing, and signage, along various segments of the project alignment. All construction activities would be accompanied by both temporary and permanent erosion and sediment control best management practices (BMPs).

Trail construction would include the following activities:

- Clearing and Grubbing – To clear trees, vegetation and topsoil from the proposed trail footprint
- Excavation – Primarily at bridge approaches with other shallow excavations to maintain trail grades
- Embankment – Fill to maintain trail grades through low areas
- Retaining Walls – To limit encroachment into drainage ditches
- Aggregate Base – For trail shoulders and to support asphalt paving
- Asphaltic Concrete Paving – For trail surface
- Fencing/Barriers/Bollards
- Trail striping and signage

Pre-manufactured Bridge Assembly and Placement would include the following activities:

- Excavation – For the abutment foundations (maximum depth of six feet below existing grade)
- Aggregate Base – For structure foundations
- Abutments and Footings – Cast-in-place concrete to support pre-manufactured bridges
- Piles – Reinforced concrete in steel shell to support pre-manufactured bridges
- Bridge assembly in staging area
- Placement/Installation – Set pre-manufactured bridge on abutments
- Railing Installation
- Rock Slope Protection – To protect abutments and prisms

Equipment required for trail construction would include: tracked excavators, backhoes, graders, bulldozers, dump trucks, rollers, paving machines, cranes, water trucks, drill rigs, pile drivers and pick-up trucks. Equipment required for pre-manufactured bridge assembly and placement would include excavators and cranes.

Construction access would be to and from the staging areas identified below. Roadways that would be utilized for construction access and the staging areas include Highway 101, the entrance into CRC and the entrance into Bracut Industrial Park.

It is not anticipated that any temporary utility extensions, such as electric power or water, would be required for construction.

Construction Access and Hauling Traffic

The anticipated haul truck routes to the project area include Highway 101 from the north and south. The number of construction-related vehicles traveling to and from project area would vary on a daily basis. It is anticipated that up to 40 haul truck round trips would occur on a peak day. In addition, it is anticipated that construction crew trips would require up to eight round trips per day. Therefore, for the purposes of analysis, on any one day during construction, up to 48 vehicle round trips could occur.

Traffic Control Plan

In accordance with jurisdictional requirements, the construction contractor would be required to obtain an encroachment permit from Caltrans prior to beginning the work along Highway 101. As part of the encroachment permit process, the construction contractor would be required to prepare a traffic control plan for review and acceptance of planned work within the public right-of-way. The development and implementation of a traffic control plan would include, but not necessarily be limited to: temporary traffic control systems, delineators, signs, and flaggers conforming to the current California Manual of Uniform Traffic Control Devices.

Groundwater Dewatering

Excavation into groundwater and dewatering is anticipated. Temporary groundwater dewatering would be conducted to provide a dry work area. Dewatering would involve pumping water out of a trench or excavation. Groundwater would be pumped to settling tanks (Baker tanks or similar) or into dewatering bags. Following the settling process provided by a tank or filter, the water would be used for dust control and compaction. Water from settling tanks or dewatering bags would be applied to upland areas, away from wetlands and other water bodies, or discharged to nearest sanitary or stormwater system.

Site Restoration and Demobilization

Following construction, the contractor would demobilize and remove equipment, supplies, and construction wastes. The disturbed areas along the project alignment would be restored to pre-construction conditions or stabilized with a combination of grass seed (broadcast or hydroseed), straw mulch, rolled erosion control fabric, rock, and other plantings/vegetation.

Air Quality Construction Control Measures

The following air quality emission construction measures would be included in the construction specifications for the project:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered as necessary during dusty conditions.
2. All haul trucks transporting soil, sand, or other loose material on- or off-site shall be covered or should maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
3. Soil stockpiles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers prior any forecasted rain event.
4. Equipment or manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
5. Paved access roads and parking areas shall be swept daily.
6. All visible mud or dirt tracked-out onto adjacent public roads shall be removed.
7. All vehicle speeds on unpaved areas shall be limited to 15 miles per hour.
8. All paving shall be completed as soon as possible.

1.4.3 Maintenance and Operation

The trail would be used for non-motorized transportation and recreation, including but not limited to walking, bicycling, running, skateboarding, roller skating, dog-walking and nature study.

Following construction, general trail operation and maintenance activities associated with the proposed trail would include annual inspections, trash/debris removal, vegetation management, repaving, and painting. In the event of storm damage, more significant repairs to the trail facilities and shoreline may be needed on occasion.

Typical routine operation and maintenance of the project would generate less than one traffic trip per week on average with motorized access limited to light maintenance and emergency service vehicles. Access would be gained at trail/roadway crossings equipped with secured, but removable bollards to prevent unintended vehicular access.

For larger repairs to damaged trail facilities or to the shoreline, larger construction equipment would be needed which may include backhoes, excavators, loaders, dump trucks, or pavers. Larger repairs to the trail or shoreline may take several weeks to complete depending on the extent of damage and other circumstances.

1.5 Project Technical Studies

The following technical studies have been completed for the project, are currently under preparation, or will be completed in the near future. The project includes federal funding and several of the studies listed below are associated with the required analysis and documentation under the National Environmental Policy Act (NEPA).

- Project Study Report – Completed March 2014
- Basis of Design Report for Trail Width – Completed March 2016
- Topography and Right of Way Surveys – Completed April 2017
- Preliminary Environmental Study – Completed July 2017
- Mapping of Environmentally Sensitive Habitat Areas – Completed November 2017
- Initial Site Assessment – Completed November 2017
- Rare Plant Survey - Completed November 2017
- Wetland Delineation - Completed December 2017
- Archaeological Survey Report – Draft completed December 2017
- Historic Property Survey Report – Draft completed December 2017
- Historical Resources Evaluation Report – Completed January 2018
- Natural Environment Study – Draft completed February 2018
- Visual Impact Assessment – Draft completed February 2018
- Biological Assessment (federal) – Draft completed February 2018
- Sea Level Rise Vulnerability and Adaptation Report – Under preparation
- Geotechnical Investigation – Under preparation
- Location Hydraulic Study – Under preparation
- Summary Floodplain Encroachment Report – Under preparation
- Drainage Study – Under preparation
- Stormwater Data Report - Under preparation
- Stormwater Pollution Prevention Plan – Under preparation
- Preliminary Design – Under preparation

1.6 Required Permits and/or Approvals

The project would require approval by the County of Humboldt Board of Supervisors, through adoption of this CEQA environmental study and future approval of the construction plans and

specifications. Several additional agencies would also be involved in the consideration of portions of the project. Federal, State and local approvals that may be required for the project are listed below. The anticipated submittal date for each is August 2018 and the goal is to achieve agency approval by August 2019.

- Caltrans: Encroachment Permit
- California Coastal Commission: Coastal Development Permit
- U.S. Army Corps of Engineers and Section 7 Consultation: Individual Permit and 404(b)(1) Alternatives Analysis
- U.S. Fish and Wildlife Service/National Marine Fisheries Service: Biological Opinion and Letter of Concurrence
- North Coast Regional Water Quality Control Board: Section 401 Water Quality Certification
- California Department of Fish and Wildlife: Section 1602 Notification of Lake or Streambed Alteration
- Humboldt Bay Harbor, Recreation and Conservation District: Development Permit.

1.7 Project Phasing

The project includes elements which are discretionary or which could be implemented separately from the core work of constructing the trail. Certain elements may be implemented before or after the trail construction, based on available funding and/or the readiness of the elements. Elements which may be implemented in phases (prior or after the construction of the trail) include, but are not limited to, the following:

- Eucalyptus tree removal
- Cable barrier installation
- Shoreline revetment and embankment repairs and improvements
- Billboard removal
- Painting NCRA's Eureka Slough Bridge
- Trail heads, viewing platforms and trail amenities

1.8 Wetland Mitigation

Due to topographic constraints and the presence of existing facilities within the project area, it is unavoidable that wetlands would be impacted from construction of the proposal trail. Impacts to wetlands are discussed in Section 3.4. The majority of the impacted wetlands are associated with the existing drainage ditch between Highway 101 and the railroad prism. A conservative estimate is approximately 5.65 acres of three-parameter wetlands would be permanently impacted and 1.78 acres temporarily impacted. In addition, approximately 0.13 acres of 1-parameter wetlands would be permanently impacted and 0.30 acres temporarily impacted. The wetland areas impacted include both estuarine and palustrine types. While some wetlands impacts are unavoidable, reduction of wetland impacts to the greatest extent feasible will continue to be a primary design objective as the design and engineering phases progress.

Impacts to wetlands are considered a potentially significant impact; therefore, the County will implement mitigation measures to ensure that the impacts are less than significant. The mitigation approach will be consistent with similar projects and comply with the requirements of the forthcoming environmental permits, including a commitment to no net loss of wetlands.

The proposed wetland mitigation strategy for the project includes a combination of on-site wetland creation and rehabilitation and off-site compensatory mitigation. Where appropriate, the project would

include on-site creation of wetlands associated with reconstruction and/or widening of the adjacent drainage ditch, concurrent with construction of the project. Temporary impacts to wetlands would be restored through disking (or other soil preparation techniques) and re-seeded with native plant species. In addition, the County is collaborating with Caltrans and HCAOG on the funding, planning, design, and permitting of a wetland mitigation project located on a property acquired by Caltrans in 2010 near Lanphere Dunes in the Arcata Bottoms (the "Lanphere Parcel"). Caltrans is leading this project to compensate for impacts from the Eureka-Arcata U.S. Route 101 Corridor Improvement Project and other transportation projects around Humboldt Bay. The goal is to create the wetlands on the Lanphere Parcel prior to, or concurrent with, construction of the Corridor Improvement Project. In 2016, Caltrans committed to create 2.26 acres of wetlands on the Lanphere Parcel to support the City of Arcata's wetland mitigation obligations for the Humboldt Bay Trail North project. Technical studies are currently in progress to identify the total area of wetland creation and to determine whether the Lanphere Parcel has sufficient capacity to fully compensate for all wetland impacts associated with the Humboldt Bay Trail South project. This determination is expected by the end of 2018. This determination will be made in coordination with the permitting agencies (Coastal Commission, U.S. Army Corps of Engineers, North Coast Regional Water Quality Control Board) regarding appropriate mitigation ratios. The mitigation ratio will depend on a variety of factors include wetland type and whether there is temporal loss of wetlands. If the Lanphere Parcel does not have sufficient capacity to fully compensate for the project's wetland impacts, then the County would identify an alternative site and develop a specific plan for that property to create the necessary wetland amount, to ensure no net loss from the project. The County will develop a Wetlands Mitigation and Monitoring Plan when the mitigation site (or sites) is established. Permitting agencies will require this plan prior to permit issuance.

1.9 Climate Change, Sea Level Rise, and Adaptation Strategy

The trail project will not significantly contribute to climate change and sea level rise through greenhouse gas emissions (Section 3.7). However, the project is located along the edge of Humboldt Bay, which is subject to the effects of climate change and sea level rise. A Sea Level Rise Vulnerability and Adaptation Report (ESA, in prep.) is currently being developed to analyze coastal hazards and identify potential adaptation strategies. This report will include the following components:

1. Establish the projected sea level rise range for the proposed project's planning horizon using the best available science.
2. Determine how physical impacts from sea level rise and climate change may constrain the project site, including erosion, structural and geologic stability, flooding, and inundation.
3. Consider the influence of future sea level rise and climate change upon trail infrastructure.
4. Consider initial design features to reduce near term sea level rise and climate change impacts and also consider longer term adaptation strategies that may be used over the lifetime of the project.

Sea level rise is caused by a number of factors including melting ice, increased ocean temperatures and thermal expansion, the compaction of previously diked and drained soils, and land subsidence caused by plate tectonics. Expected sea level rise rates have been forecasted through the development projections for Humboldt Bay published by NHE (2015) and based on State guidance from Ocean Protection Council (OPC) (2013). Based on these reports, the range of sea level rise considered for this project is approximately 1 to 3 feet by the year 2070. This will directly increase the still water elevation and total water level (still water elevation plus the effects of wave setup and

runup), which will be most extreme during King Tides, as well as during storm events which are also expected to occur more frequently.

Potential hazards to the trail itself from increases in sea level include possible wave spray, wave overtopping, trail overflow, and inundation. These forces could also cause deposition of debris on the trail and erosion of the trail prism. Sea level rise and climate change storm related impacts could also cause outboard shoreline erosion, and debris wash-up.

Addressing climate change and sea level rise scenarios are part of the context of developing projects along the coast. Therefore, the trail is being planned based on strategies for initial design, strategies for resiliency of ongoing operations and response to climate/tidal events, and strategies for long-term adaptation as sea level continues to rise in the future.

Strategies for Initial Design

Approximately 500 feet of existing shoreline will be strengthened by reconstructing approximately 500 feet of existing revetment, and installing supplemental ballast and surface applied rip-rap to the railroad prism on another 5,000 feet. In addition, for approximately 4,000 feet where the railroad prism is particularly low (Segment 4) between Eureka Slough and the CRC mill site, the trail finished grade will be raised to the approximate elevation of the adjacent highway.

In addition to shoreline improvements, the trail itself will include a durable asphalt surface, erosion control surface protections for the trail prism, drainage facilities, and other features to both resist damage from overtopping events, and to allow for cleaning and maintenance. Overtopping events will occur when the combination of sea level rise, tides, and weather effects drive the total water level above the shoreline elevation. Drainage features will be included to help quickly clear the trail of water as tides and storms subside.

Strategies for Resiliency of Ongoing Operations and Response to Climate/Tidal Events

During ongoing operations, the shoreline protecting the trail will be periodically inspected for damage. This will be especially important after storm events, when significant wave action and overtopping is most likely to occur and potentially cause erosion. Overtopping events are expected to initially occur relatively infrequently and only due to combinations of King Tides and storm events. However, as sea level rises and storm events become more frequent and severe, overtopping events are likely to become more common. Overtopping events would result in ponding water and potentially sediment on portions of the trail as well as potentially more significant damage in some areas. During such events, the trail may not be readily usable until the tide drops and/or the storm abates. However, during severe storm events that cause overtopping, it is unlikely there would be many users of the trail due to the severity of the weather and so user inconvenience is likely minimal. Post inundation inspections, cleaning, and maintenance should take place to maintain serviceability.

Strategies for Long-Term Adaptation

In the coming decades sea level is expected to continue to rise and the severity and frequency of storm events may continue to increase. Ultimately, this could result in more frequent overtopping, inundation, and erosion. At some point, the still water elevations may regularly inundate the trail at high tides unless adaptation measures are implemented. It is important to note that the trail is not a standalone piece of infrastructure. The corridor between Arcata and Eureka includes the railroad, Highway 101, public utilities, and many acres of protected developed and undeveloped land. There are numerous stakeholders throughout the corridor who could benefit from long-term adaptation based on a collaborative approach.

There are numerous adaptation strategies available to implement in the near- and long-term. One such strategy is the development of a Living Shoreline along the existing levees and the railroad prism. A Living Shoreline is created by augmenting the soils and plant communities within the tidal zone to help manage potential wave effects. Further strategies could include raising the railroad prism, levees, or trail to provide increased protection. In addition, the existing shoreline could be fortified with improved revetment or the implementation of biotechnical approaches such as turf reinforcement or timber crib walls. Since Highway 101 is subject to the effects of climate change and sea level rise, the State of California has a major stake in the resilience of the Eureka-Arcata transportation corridor, and Caltrans is expected to take a lead role in implementing an adaptation strategy for the corridor.

Any major adaptation strategy will take many years to implement and will need to be in place before sea level rise and climate change results in significant adverse effects on the infrastructure. Therefore, sea level rise and climate change should be part of ongoing planning and programming so adaptation projects can be implemented in a timely fashion.

Sea Level Rise Adaptation Plan for Humboldt Bay Transportation Infrastructure – Phase 1

Humboldt County and the City of Eureka are applying to the Fiscal Year 2018-19 Caltrans Adaptation Planning Grant Program for funding to develop a transportation infrastructure adaptation plan for an area that encompasses the Humboldt Bay Trail South Project, along with portions of Highway 101, county roads, city streets, NCRA railroad, and Murray Field Airport. Funding announcements are expected in the summer of 2018. If awarded, work could begin by the end of 2018. The plan would build a foundation for implementing multi-purpose adaptation projects to reduce the impacts and consequences of flooding hazards associated with sea level rise.

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2. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Agricultural & Forestry Resources | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities/Service Systems |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Noise | <input checked="" type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Population/Housing | |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services | |

DETERMINATION

(To be completed by the Lead Agency) On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.
- I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Hank Selman

County of Humboldt Signature

2-14-2018

Date

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3. Environmental Analysis

CEQA Guidelines Appendix G have been used to analyze potential project impacts throughout this ISMND. Significance thresholds have also been included where applicable to fine-tune the analysis to specific local regulations. Significance thresholds are not included for resource categories found to have no impact.

3.1 Aesthetics

	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?			✓	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

Evaluation Criteria	Significance Thresholds	Sources
Would the project have a substantial adverse effect on a scenic vista?	Major alteration of a view from a scenic vista or major obstruction in viewed area towards a scenic vista	CEQA Guidelines Appendix G, Checklist Item I (a) Table A in Visual Resources Impact Assessment (Appendix B)
Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Affect a scenic resource within 200 feet of a roadway designated as scenic by Caltrans	CEQA Guidelines Appendix G, Checklist Item I (b)
Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	High visual contrast or change	CEQA Guidelines Appendix G, Checklist Item I (c) Table A in Visual Resources Impact Assessment (Appendix B)

Evaluation Criteria	Significance Thresholds	Sources
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Non-compliance with County General Plan Policy SR-S4	CEQA Guidelines Appendix G, Checklist Item I (d) General Plan Policy SR-S4

a) Have a substantial adverse effect on a scenic vista? (Less than Significant)

A draft Visual Resources Impact Assessment (VIA) was prepared for the project and is included as Appendix B (Stantec 2018). The Humboldt County General Plan identifies scenic resources as forested hillsides, working agricultural land, river corridors, and some coastal areas.

All proposed project components would be located on relatively flat land and would typically be at ground level (e.g., the Class I trail itself) or at a relatively low height (e.g., fencing and signage). Refer to Appendix B for images of existing conditions and visual simulations for the various project components (Images 1A through 12B). The three proposed new bridge structures including the Brainard Slough crossing and two crossings to the CRC levee (one at either end of the parcel) would affect the pattern elements (form, line, structure, texture, etc.) of the existing views, but the effect on visual resources and aesthetics would be less than significant. Neighbors (i.e., those persons working in offices and buildings near the north end of CRC) would be exposed to visual changes as a result of the bridge crossing extending from the trail corridor to the levee, and the addition of safety railings. Consideration for construction materials, color palettes, plantings, and use of open safety barrier design would buffer the appearance of project features on the landscape and the effect on viewers, in particular, commuters on Highway 101 who would have the greatest familiarity with the pre-project conditions. In addition, the use of cable safety barriers or rails as needed along the extent of the trail would be consistent with the existing safety features along Highway 101.

Visual impacts were determined in the VIA by assessing changes to the visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental to the visual environment. The assessment of visual impacts also considers cumulative and temporary impacts associated with construction activities. Tables were used to assign numerical values to the existing visual resource and project-related changes, and the viewer's sensitivity to these changes. Numerical ratings range from -7.0 to +7.0 where -7.0 is high negative change and +7.0 is high positive change. Table A (Appendix B) provides a reference for comparing numerical ratings associated with changes to visual resources to a qualitative narrative rating, and significance level. Section 8.2 in the VIA (Appendix B) provides an analysis of visual resources impacts for each landscape unit along the project alignment. All impacts were determined to be either less than significant or result in a positive effect.

One billboard is located within the project area between the highway and railroad, and depending on the final trail alignment, the trail may narrowly avoid this billboard, or the potential exists for the trail to conflict with the billboard, which may result in its removal or relocation. The visual simulation (Image 8B in Appendix B) assumes the billboard would not be in conflict with the trail alignment and, therefore would remain. If the billboard is removed and eucalyptus trees removed, views of Humboldt Bay from Highway 101 would be broadened and scenic resources would be enhanced. There would be no impact to scenic vistas from removal of the billboard.

Two clusters of eucalyptus trees are situated along Highway 101 near the CRC mill site, separated by the entrance into the site. The southerly cluster extends for approximately 3,400 feet in front of the mill site; this cluster would not be affected by the project. The northerly cluster extends for

approximately 2,500 feet north of the mill site and would need to be removed as part of the project. This cluster includes approximately 219 eucalyptus trees that are eight inches in diameter or greater in addition to smaller trees and saplings. The trees would be limbed and trunks rigged, felled, and lowered in sections (i.e., sectional felling). Tree stumps would be removed to the extent feasible through excavating, grinding or other means, with remaining stumps and root systems treated with an herbicide to prevent regrowth. Required equipment and workers would access the trees from both the highway and railroad sides. The existing metal beam guardrail adjacent to the trees may be replaced following removal of the trees. The project would also remove all eucalyptus saplings in the vicinity of the trail (generally between the highway and railroad).

According to JRP Historical Consulting Services (2004), the eucalyptus trees were planted around 1920 at the time of Highway 101 construction as a beautification effort. These trees provide a vertical element and rich texture to the existing view. Other non-native vegetation has established itself along the proposed trail corridor, adding to the visual obstructions for the view from Highway 101. Neighbors and commuters are the viewer group having the most familiarity of this view, so they would be the most affected by the proposed removal of these trees. Per the VIA (Appendix B), removal of the trees would change the visual character of the view by allowing for unobstructed views of the coastal plain and Humboldt Bay previously obstructed by the presence of the trees. The pattern elements of form, line, color, and texture associated with the towering stand of eucalyptus would be replaced by the new trail prism that would be supported by a conspicuous retaining wall that would be exposed to the Highway 101 corridor. Removal of the stand of eucalyptus trees would also partially expose the CRC buildings, making them a dominant, unnatural feature, potentially distracting from the adjacent bay. Recreationists using the trail would be fully exposed to the visual quality of the Highway 101 corridor to the east, which would be in sharp contrast to the presence of Humboldt Bay immediately to the west.

Although the eucalyptus were purposely planted and are not native to the area, their presence along the coastline provides a higher level of unity and intactness than would exist as a result of their removal. Replacement of trees by a human-made feature (trail) would change the pattern elements associated with this view. Vertical lines would be replaced by the horizontal trail alignment, and the dynamic color and texture of the trees would be replaced by the monochromatic trail features; however, railing materials, color, and scale would affect the visual impact. Railings, fencing, and other barriers used throughout the trail alignment for safety may partially obstruct views of areas outside of the trail and conversely, views of the trail afforded motorists on Highway 101. The overall aesthetic quality would be lessened along this trail segment. However, views of Humboldt Bay would be increased for travelers on Highway 101 as well as landward views from the bay and curving coastline to the north and south. Overall, project-related impacts on the visual environment per the VIA (Appendix B) would be negative at a moderately low significance level.

Removal of approximately 40% of the total eucalyptus stand that currently line Highway 101 would be arguably the most noticeable change to the visual character of the Humboldt Bay Trail. Not only would their removal change the existing views along the Highway 101 corridor, but it would also change the visual character of the skyline as viewed from distant neighbors and as reference by pilots using the nearby Murray Field Airport. These trees are considered by some in the community to be an important local landmark, with a history reaching back approximately 80 years, although they are not eligible for listing on the National Register of Historic Places or the California Register of Historic Resources (JRP, 2004; JRP, 2018). The majority of the eucalyptus trees near the CRC mill site will not be affected by the project. This remaining cluster of trees is situated closer to the airport than the cluster to be removed, and will continue to provide visual screening for the mill site. The remaining eucalyptus trees will continue to serve as a landmark and dominant skyline feature.

Neighbors and commuters using Highway 101 (i.e., those most familiar with the existing view) would be the most affected viewer groups. There is currently not a trail in the affected area, thus the effect of changes in the visual character of this proposed trail segment on future trail users cannot be qualified since there is not an established existing view for this viewer group. Removal of the eucalyptus trees would open up views of Arcata Bay from Highway 101 as well as to neighbors; however, the use of railings, fencing, and barriers that may be used to ensure public safety along the affected segment may be considered by some to be an unnatural obstruction on the landscape, reducing the intactness of the view. Unity would be reduced because the eucalyptus trees were a compatible visual intrusion and were harmonious with other visual components. However, harmonious elements like native landscaping treatments would also be included. The impact is less than significant.

The project would result in minor changes to the appearance of the existing ROW between Highway 101 and Humboldt Bay, but would not diminish views of Humboldt Bay on the landward side or of the coastal mountain from the bay. Therefore, the project would not impact views of Humboldt Bay or scenic vistas after construction, and construction activities would be temporary and only visual in the immediate vicinity. The impact on scenic vistas would be less than significant.

b) Substantially damage scenic resources within a state scenic highway? (Less than Significant)

Based on California Scenic Highway Mapping System information no designated state scenic highways are found adjacent to or within view of the project alignment (Caltrans 2011). There are no officially designated State Scenic Highways within Humboldt County, although Highway 101 for its entire length in Humboldt County has been identified by the State Scenic Highway Mapping System as eligible for state listing. The project alignment is visible from Highway 101; however, due to the fact that Highway 101 is not a designated state scenic highway, there would be no impact to a state scenic highway. There would be no impact to a scenic resource within a state scenic highway.

c) Have an adverse effect on visual character or quality? (Less than Significant)

The project is expected to improve the scenic quality/character of the area by installation of a Class I multi-purpose trail which would attract multiple trail user groups to the area, deterring littering and other potential nuisance activities along the Highway 101 corridor.

Temporary adverse visual impacts may occur from construction activities associated with the project. This impact would be short-term (approximately six months of construction) and less than significant. In the long-term the existing visual character along the project alignment would improve for the reasons mentioned above.

The project would be compatible with the existing visual character of the proposed project alignment and its surroundings, and would not introduce any elements that would degrade existing visual character or quality. The addition of project components such as a multi-use trail, fencing, retaining walls, and rock slope protection would have a low profile and occur in a manner consistent with the existing aesthetic of the surrounding area. The impact is less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Less than Significant)

The completed project includes use of nighttime safety lighting at locations where the trail would intersect roadways, such as at the Bracut driveway/intersection. While this would be a new source of nighttime lighting, low-level, low-glare lighting will be used. The potential for glare from headlights

(including bicycle lights), the expanded trail surface, directional and informational signs, would be consistent with existing conditions along the Highway 101 corridor and surrounding areas and would not be significant. Nighttime views of the project area would be limited to artificial light from outside sources such as bicycle lights and road crossings. Adherence to the lighting design features described in the project description would ensure that impacts resulting from project-related light sources remain less than significant.

3.2 Agriculture and Forest Resources

	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

a, b, c, d, e) Convert farmland or forest land or conflict with existing zoning for agricultural use or a Williamson Act contract? (No Impact)

The project study area has no Important Farmlands as mapped by the Farmland Mapping and Monitoring Program of the California Department of Conservation (CDOC 2016). There is no land in agricultural production, land zoned for agricultural use, land designated (General Plan Land Use) for agriculture use, or land under Williamson Act contract within the project alignment (Humboldt County 2017).

There is land designated Agriculture Exclusive on the east and south side of Highway 101; however, the proposed project would have no impact on these lands. There is no forest land or timber harvesting in the project vicinity, nor are there lands suitable for timber harvesting; therefore, the project would not encroach upon or affect timber harvesting, or cause the rezoning of forest land. No impact would occur.

3.3 Air Quality

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				✓
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			✓	
c) Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✓	
d) Expose sensitive receptors to substantial pollutant concentrations?			✓	
e) Create objectionable odors affecting a substantial number of people?			✓	

Evaluation Criteria	Significance Thresholds	Sources
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Compliance with NCUAQMD Rule 104 – Prohibitions, Subsection D (Fugitive Dust Emissions)	CEQA Guidelines Appendix G, Checklist Item III (a) NCUAQMD Rules and Regulations
Would the project violate any air quality standard or contribute substantially to any existing or projected air quality violation?	Compliance with BAAQMD-recommends "Basic Construction Measures" to reduce emissions of construction-generated PM10	CEQA Guidelines Appendix G, Checklist Items III (b) BAAQMD 2017 CEQA Air Quality Guidelines

Evaluation Criteria	Significance Thresholds	Sources
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Exceed NCUAQMD Rule 110 – New Source Review & Prevention of Significant Deterioration Section E, Best Available Control Technology, Table 1.0 Significance Thresholds	<p>CEQA Guidelines Appendix G, Checklist Items III (c)</p> <p>NCUAQMD Rule and Regulations, Rule 110 - New Source Review (NSR) & Prevention of Significant Deterioration (PSD), Section E.1 – BACT</p> <p>NCUAQMD Air Quality Planning & CEQA: Environmental Review Guidelines (NCUAQMD 2018a)</p>
Would the project expose sensitive receptors to substantial pollutant concentrations?	Exceed NCUAQMD NCUAQMD Rule 110 –NSR & PSD Section E, Best Available Control Technology , Table 1.0 Significance Thresholds	<p>CEQA Guidelines Appendix G, Checklist Item III (d)</p> <p>NCUAQMD Rule and Regulations, Rule 110 - NSR & PSD, Section E.1 - BACT</p>
Would the project create objectionable odors affecting a substantial number of people?	Creation of a new substantial odor source near existing sensitive receptors	CEQA Guidelines Appendix G, Checklist Item III (e)

a) Conflict with or obstruct implementation of the applicable air quality plan? (No Impact)

This impact relates to consistency with an adopted attainment plan. The North Coast Unified Air Quality Management District (NCUAQMD) is responsible for monitoring and enforcing local, state, and federal air quality standards. The U.S. Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards for the following six 'criteria' air pollutants: ozone, particulate matter (PM₁₀ and PM_{2.5}), nitrogen dioxide, carbon monoxide, lead, and sulfur dioxide. The California Air Resources Board (ARB) administers the California Ambient Air Quality Standards, which include the six criteria pollutants listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

Humboldt County is designated 'attainment' for all National Ambient Air Quality Standards. With regard to the California Ambient Air Quality Standards, Humboldt County is designated attainment for all pollutants except PM₁₀. Humboldt County is designated as "non-attainment" for the state's PM₁₀ standard.

PM₁₀ refers to inhalable particulate matter with an aerodynamic diameter of less than 10 microns. PM₁₀ includes emission of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM₁₀ emissions include unpaved road dust, smoke from wood stoves, construction dust, open burning of vegetation,

and airborne salts and other particulate matter naturally generated by ocean surf. Therefore, any use or activity that generates airborne particulate matter may be of concern to the NCUAQMD. The proposed project would create PM₁₀ emissions in part through vehicles coming and going to the project site and the construction activity associated with the project.

To address non-attainment for PM₁₀, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of PM₁₀ standard exceedances and identifies cost-effective control measures to reduce PM₁₀ emissions to levels necessary to meet California Ambient Air Quality Standards. However, the NCUAQMD states that the plan, "should be used cautiously as it is not a document that is required in order for the District to come into attainment for the state standard." (NCUAQMD 2018b) Therefore, compliance with applicable NCUAQMD PM₁₀ rules is applied as the threshold of significance for the purposes of analysis. NCUAQMD Rule 104 Section D, Fugitive Dust Emissions, is applicable to the project.

Pursuant to Rule 104 Section D, the handling, transporting, or open storage of materials in such a manner, which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to: (1) covering open bodied trucks when used for transporting materials likely to give rise to airborne dust; and (2) the use of water during the grading of roads or the clearing of land. The project enhances project compliance with Rule 104 as noted in Section 1.4.3 under air quality construction control measures. Further, the project incorporates additional fugitive dust emission and construction equipment emission controls recommended by the Bay Area Air Quality Management District (BAAQMD). Therefore, the project complies with applicable rules, and would not conflict with or obstruct implementation of the applicable air quality plan with regard to construction and operation.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Less than Significant)

This impact is related to localized criteria pollutant impacts. Potential localized impacts would be exceedances of State or federal standards for PM₁₀. Localized PM₁₀ is of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities.

The project would include clearing and grubbing, excavation, embankment work, asphalt paving, pre-manufactured bridge installation, fencing, and sidewalk construction along various segments of the project alignment. Generally, the most substantial air pollutant emissions would be dust generated from site clearing and grubbing, grading, and excavation. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants. The project's potential impacts from equipment exhaust are assessed separately in Section 3.3 c), below.

The NCUAQMD does not have formally adopted thresholds of significance for fugitive, dust-related particulate matter emissions. For the purposes of analysis, this document uses the BAAQMD approach to determining significance for fugitive dust emissions from project construction. The BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant. BAAQMD recommends a specific set of "Basic Construction Measures" to reduce emissions of construction-generated PM₁₀ to less than significant. Without incorporation of these Basic Construction Measures, the project's construction-generated fugitive PM₁₀ (dust) would result in a potentially significant impact. The Basic Construction Measure controls recommended by

the BAAQMD are incorporated into the project. These controls are consistent with NCUAQMD Rule 104 (D), Fugitive Dust Emission and provide supplemental, additional control of fugitive dust emissions beyond that which would occur with Rule 104 (D) compliance alone. Therefore, the project would result in a less than significant impact for construction-period PM_{10} generation, and would not violate or substantially contribute to an existing or projected air quality violation.

Following construction, the project would not include any stationary sources of air emissions. Vehicle trips associated with operation and maintenance of the trail would include annual inspections, repaving, painting, and repairs as needed. Operation and maintenance of the project would generate less than one traffic trip per week on average. However, larger repairs to the trail or shoreline may take several weeks to complete depending on the extent of damage and other circumstances. The project would not result in substantial long-term operational emissions of criteria air pollutants. Therefore, project-generated operational emissions would not violate or contribute substantially to an existing or projected air quality violation. The project's impact would be less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment? (Less than Significant)

This impact is related to regional criteria pollutant impacts. As identified in Section 3.3 a), Humboldt County is designated nonattainment of the State's PM_{10} standard. The County is designated attainment for all other state and federal standards.

For construction emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be of relatively short duration, lasting less than one year. For project construction lasting more than one year or that involves above average construction intensity in volume of equipment or area disturbed, construction emissions may be compared to the stationary source thresholds. The project's construction is anticipated to require approximately six months to complete. Therefore, the project's construction duration does not exceed the NCUAQMD's unofficial screening guidance of one year. However, emissions modelling was conducted for project construction, as detailed below.

The NCUAQMD does not have established CEQA significance criteria to determine the significance of impacts that would result from projects such as the proposed project; however, the NCUAQMD does have criteria pollutant significance thresholds for new or modified stationary source projects proposed within the NCUAQMD's jurisdiction. NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed construction emissions that last more than one year to its stationary source significance thresholds, which are:

- Nitrogen oxides – 40 tons per year
- Reactive organic gases – 40 tons per year
- PM_{10} – 15 tons per year
- Carbon monoxide – 100 tons per year.

If an individual project's emission of a particular criteria pollutant is within the thresholds outlined above, the project's effects concerning that pollutant are considered to be less than significant.

The California Emissions Estimator Model (CalEEMod) version 2016.3.1 was used to estimate air pollutant emissions from project construction (Appendix C). Construction of the project is expected to begin in late spring and require approximately six months to complete. Detailed construction equipment activity was estimated based on project construction components and prior trail projects.

NCUAQMD Rule 104 (D) requires reasonable precautions to prevent particulate matter from becoming airborne. The air quality construction control measures included in the project description

include enhanced compliance with the Rule 104 (D) requirement, as well as incorporation of BAAQMD's Basic Construction Measures. The emissions modeling included watering the construction site daily, promptly replacing ground cover on disturbed areas, and cleaning trackout off of paved roadways.

Table 3.3-1 summarizes construction-related emissions. As shown in Table 3.3-1, the project's construction emissions would not exceed the NCUAQMD's stationary sources emission thresholds. Therefore, the project's construction emissions are considered to have a less than significant impact.

Table 3.3-1 Construction Regional Pollutant Emissions

Parameter	Emissions (tons per year)			
	ROG	NO _x	CO	PM ₁₀
Project Construction	0.22	2.12	1.43	0.17
NCUAQMD Stationary Source Thresholds	40	40	100	15
Significant Impact?	No	No	No	No

Following construction, the project would not include any stationary sources of air emissions. Vehicle trips associated with operation and maintenance of the proposed trail would include annual inspections, repaving, painting, and repairs as needed. Operation and maintenance of the project would generate less than one traffic trip per week on average. However, larger repairs to the trail or shoreline may take several weeks to complete depending on the extent of damage and other circumstances. The project would not result in substantial long-term operational emissions of criteria air pollutants. Therefore, project-generated operational emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. The project's contribution to a cumulative impact would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations? (Less than Significant)

Activities occurring near sensitive receptors should receive a higher level of preventative planning. Sensitive receptors include school-aged children (schools, daycare, playgrounds), the elderly (retirement community, nursing homes), the infirm (medical facilities/offices), and those who exercise outdoors regularly (public and private exercise facilities, parks). There are no schools in close proximity to the project alignment. The closest residences are approximately 250 feet (the closest residence) or more from the project alignments western end within the City of Eureka. The closest residences along the project alignment within the County are more than 600 feet away.

BAAQMD's Basic Construction Measures included in the project description minimize idling times for trucks and equipment to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]), and ensures construction equipment is maintained in accordance with manufacturer's specifications.

Staging areas where the majority of construction equipment would be stationed, would be located 600 feet or greater from sensitive receptors. Project construction activities would largely be linear in nature, and not include intensive or prolonged construction equipment use in any one location.

Therefore, project construction activities are not expected to occur for a substantial amount of time. Due to the relatively short length of the construction period, the distance from the majority of construction activities, and the implementation of fugitive dust control measures, the project would

not result in the exposure of sensitive receptors to substantial pollutant concentrations. Therefore, the construction-related impact would be less than significant.

Following construction, the project would not include any stationary sources of air emissions or new mobile source emissions that would result in substantial long-term operational emissions of criteria air pollutants. In fact, project operation could potentially reduce vehicle-miles-traveled and therefore emissions. Therefore, project operation would not expose nearby sensitive receptors to substantial levels of pollutants. The operation-related impact would be less than significant.

e) Create objectionable odors affecting a substantial number of people? (Less than Significant)

The project would not create odors that could reasonably be considered objectionable by the general public because no aspect of project construction is anticipated to create objectionable odors except for limited exhaust fumes from gas powered equipment. Following construction, implementation of the project would not result in any major sources of odor. The impact would be less than significant.