

**Initial Study &
Draft Mitigated Negative Declaration**

For the

**Arcata Rail with Trail
Connectivity Project**

Prepared for the:

City of Arcata

By:



July 2, 2010

**Updated February 2013 by
City of Arcata**

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Appendices

The following appendices and reports are available under separate cover at the City of Arcata Environmental Services Department, 736 F Street, Arcata, California 95521. Or on the City website <http://www.cityofarcata.org/departments/public-works/parks/rail-with-trail>

- Appendix A Project Information: City of Arcata Rail with Trail Connectivity Project (with detailed alignment maps)
- Appendix B Arcata Rail with Trail Implementation and Operations Plan (including Corridor Management Plan, Trail Maintenance Plan, and Trail Safety Plan)
- Appendix C Natural Features Inventory (including Natural Diversity Database Search)
- Appendix D Wetland Delineation
- Appendix E Cultural Resources Report (available to archaeologists and other authorized personnel only in accordance with federal and state confidentiality requirements)
- Appendix F Phase I Environmental Site Assessment
- Appendix G Arcata Rail with Trails Hydrologic Analysis Technical Memorandum
- Appendix H Geotechnical Report
- Appendix I Arcata Rail with Trail Design Plan Set
- Appendix J Wetland Habitat Mitigation and Monitoring Plan

Prior Report

Arcata Rail with Trail Connectivity Project Environmental Matrix and Impact Analysis Discussion

CITY OF ARCATA

Initial Study

Environmental Services Department, 736 F Street, Arcata, CA 95521 (707) 822-8184

INITIAL STUDY and CHECKLIST

PROJECT: City of Arcata Rail with Trail Connectivity Project

LEAD AGENCY: City of Arcata Environmental Services Department
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PROJECT LOCATION: City of Arcata and Humboldt County, CA (Figure 1)

PROPERTY OWNERS: City of Arcata, North Coast Railroad Authority (NCRA), U.S. Fish & Wildlife Service (FWS) (Humboldt Bay Wildlife Refuge) and private ownership.

GENERAL PLAN DESIGNATION: Multiple City designations - primarily undesignated right-of-way (ROW), Natural Resource (NR) and Public Facility (PF); this is mostly NCRA ROW or City street ROW, also through City parks designated PF, private property designated Industrial Limited (IL) and Residential Low Density (RL), and the Arcata Marsh and Wildlife Sanctuary designated NR. Also through lands with County designations including NR and Industrial General (MG); see Appendix A, Table 1 for further information.

ZONING DESIGNATION: Multiple City zones - primarily undesignated ROW, Natural Resource (NR) and Public Facility (PF); mostly NCRA ROW or City street ROW; also through City parks zoned PF, private property zoned Industrial Limited (IL) and Residential Low Density (RL), and the Arcata Marsh and Wildlife Sanctuary zoned NR. Also through lands with County NR and MG designations; see Appendix A, Table 2 for further information.

PARCEL NUMBERS: Various; mostly NCRA ROW or City Street ROW, some parcels owned by City of Arcata, U.S. Fish and Wildlife Service (Humboldt Bay Wildlife Refuge), and private ownership. See Appendix A, Table 2 for further information.

PROJECT SUMMARY

The proposed Arcata Rail with Trail Connectivity Project (proposed project or proposed trail) involves construction, operation and maintenance of an approximately 4.5 mile long Class I, ADA accessible, non-motorized, multiuse, paved trail. According to the American Association of State Highway Transportation Officials (AASHTO), a Class I Trail is a paved or unpaved non-motorized facility physically separated from motorized vehicular traffic by an open space or barrier. The northern 3.25 miles of the project are located in the City of Arcata (City) and the southern 1.25 miles are located in the County of Humboldt south of the City. The project is west of Highway 101 (Figure 1).

The proposed project would include three potential trail alignments, which would run from northern Arcata at Larson Park (near Sunset Avenue and the Arcata Skate Park), through the City and the Arcata Marsh and Wildlife Sanctuary (Arcata Marsh), and along the eastern edge of Humboldt Bay southward to the Highway 101 and Bracut intersection. The trail, under any of the alignments, would be along or within the NCRA ROW, a portion of the Highway 101 corridor, City-owned ROW, and would also cross private property.

This Initial Study evaluates each of the three trail alignment options, including a Selected Alignment, an Interim Alignment, and a Secondary Alignment for one, relatively short, trail segment. Each of these is summarized below. See Appendix A for a detailed project description including background, existing site conditions, list of permits and agency approvals, trail design standards, and detailed trail alignment maps. For the purpose of the discussions in this Initial Study, the “trail corridor” refers to the trail, trail shoulder, trail prism, and areas to experience direct physical impacts during trail construction (e.g. temporary construction staging areas).

TRAIL ALIGNMENT OPTIONS

Selected Alignment (Alignment A)

This alignment was designed to be compliant with NCRA’s Rail with Trail Guidelines and would preserve the tracks for potential future rail service. For ease of reference, the project is divided into eight distinct segments (Segment 0 through 7) arranged from north to south and described below (see detailed trail alignment maps, Appendix A of this Initial Study, for reference).

Segment 0- Larson Park to Sunset Avenue

The proposed northern trail terminus would begin in the City of Arcata’s Larson Park. The alignment would exit the southeast corner of the park, enter the railroad (RR) ROW, and travel along the north side of the railroad tracks where it would cross Sunset Ave.

Segment 1- Sunset to Alliance Road

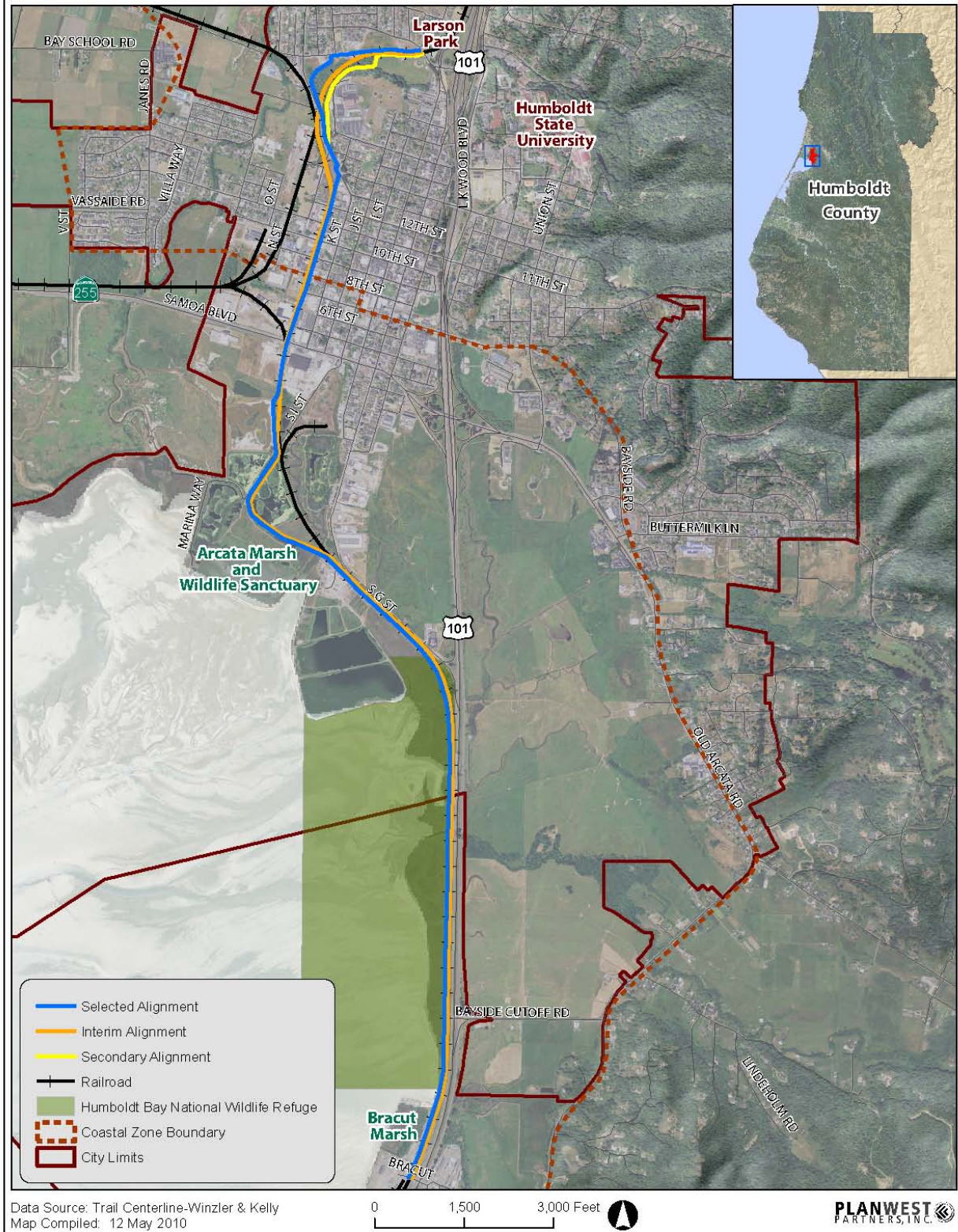
The trail would leave the RR ROW parallel to and on the north side of the railroad tracks, adjoin the City’s proposed Foster Avenue extension project, and travel west along the Foster Street extension to the north side of the entrance to Shay Park.

Segment 2- Alliance Road

Near the end of the existing Foster Avenue, the alignment would head south into Shay Park. Within this treed area, the alignment would follow a raised earthen berm between Jolly Giant Creek and Alliance Road to the railroad crossing at Alliance Road and 17th Street.

Fig. 1: Location Map

Arcata Rail with Trail



Segment 3

Segment 3.1 - Below the High School

The alignment would parallel the east side of Alliance Road, cross the railroad tracks, leaving the RR ROW, and continue along the east side of Alliance Road, across 15th Street.

Segment 3.2 - L Street Connection

From the existing paved trail which intersects Alliance Road from an abandoned portion of L Street, the alignment would cross to the south side of Alliance Road, re-enter the RR ROW, and travel along L Street east of the railroad tracks to 12th Street.

Segment 3.3 – Urban Interface Trail

The trail would share an alignment with L Street to form a proposed Urban Trail Interface. Design would focus on shared use of the existing road with a separate trail on the west side of the RR ROW.

Segments 3.4 & 3.5- L Street (West Side) & Samoa Boulevard Crossing

At 7th Street, the trail would continue along the west side of the RR ROW to Samoa Boulevard. Within the Samoa Boulevard crossing, the alignment would cross to the west side of a branch of the railroad tracks.

Segment 4

From Samoa Boulevard, the alignment would continue within the RR ROW southward along the west side of the railroad tracks.

Segment 5

Segment 5.1 - Arcata Marsh North Entrance

Upon reaching the City of Arcata Marsh and Wildlife Sanctuary, the alignment would leave the RR ROW and cross an emergent wetland on a proposed bridge with pilings to an existing earthen dike.

Segments 5.2, 5.3 & 5.4 - Arcata Marsh

The trail would continue along the dike, parallel to the railroad tracks and separated by the emergent wetland until reaching South I Street. The trail would cross South I Street, deviate to the west of railroad tracks, and follow an existing crushed gravel path parallel to South I Street. The trail would turn southeast, leave South I Street and continue through the Arcata Marsh and Wildlife Sanctuary until reaching the bridge at Butcher's Slough north of the City's Wastewater Treatment Plant (WWTP).

Segment 6

Segments 6.1 & 6.2 – Butcher's Slough Crossing

The trail would cross Butcher's Slough on a proposed bridge. At the WWTP, the alignment would become parallel with the railroad tracks and South G Street, to the west of the RR ROW, and continue along an existing crushed gravel path.

Segment 6.3 - South G Street

Once past the WWTP Corp Yard entrance the alignment would re-enter the RR ROW and continue to travel southeast towards Highway 101.

Segment 7

Segment 7.1

The railroad tracks and the project alignment turn south and parallel Highway 101. The trail would continue within the RR ROW and cross the tracks immediately north of Gannon Slough. Also

immediately north of the Gannon Slough Bridge, there would be an interpretive sign and viewing platform for the Humboldt Bay Wildlife Refuge which would be owned and operated by the FWS.

Segment 7.2 & 7.3 – Gannon Slough Crossing

The alignment would cross over Gannon Slough on a proposed new trail bridge between Highway 101 and the railroad bridge and remain within RR ROW east of the railroad tracks and west of Highway 101.

Segment 7.4 – Jacoby Creek Crossing

Immediately north of Jacoby Creek, if available the alignment would cross the drainage ditch between the tracks and Highway 101 to access the bike lane on the proposed Caltrans Jacoby Creek replacement bridge. Immediately south of the bridge, the alignment would cross back to the eastern portion of the RR ROW.

Segment 7.5 & 7.6 – Old Jacoby Creek Crossing

The alignment would continue within the RR ROW from Jacoby Creek to Old Jacoby Creek and cross Old Jacoby Creek on a proposed bridge to be placed atop structural pilings.

Segment 7.7 & 7.8- Highway 101

The alignment continues southward in the RR ROW between Highway 101 and the tracks.

Segment 7.9- Bracut

The alignment would continue southward in the RR ROW between Highway 101 and the tracks. The far northern portion of this segment would require partial fill of an existing drainage ditch. The alignment would terminate between the tracks and Highway 101 at the Bracut entrance.

Interim Alignment (Alignment B)

This alignment would generally follow the Selected Alignment as described above, except that in certain locations with limited usable space the trail would be constructed directly on the railroad prism (Figure 1). The Interim Alignment would deviate from the Selected Alignment and occupy the railroad prism for all trail segments except: (1) along L Street (Segments 3.3 and 3.4) and (2) through the Arcata Marsh (Segments 5, 6.1 and 6.2). This alignment would deviate from the NCRA's Rail with Trail Guidelines (with respect to setbacks from the tracks, etc.) and would be implemented with Railroad Authority permission to temporarily build on the tracks, allowing the City to defer construction costs and create options for project construction phasing. This alignment would occupy the existing railroad track prism in certain locations and avoid the need at these locations to build additional prism, reducing the amount of fill required for trail development reducing associated costs, and potentially reducing impacts to wetlands, biological habitat, etc. Eventual relocation of the trail off the tracks would follow the Selected Alignment but would require updated CEQA resource review.

Secondary Alignment (Alignment C)

This alignment would be adjacent to Arcata High School and only extend from Sunset Avenue to 15th Street (Segments 1, 2 & 3.1), and then join up with one of the other alignments for the balance of its southward route to Bracut (Figure 1). This alignment would primarily occupy an existing service road on the high school property and therefore potentially avoid impacts to Jolly Giant Creek. The Secondary Alignment would require Northern Humboldt Union High School District Board review and approval before it could be implemented.

PROJECT OBJECTIVES

- Be planned for bicyclists, walkers and hikers, runners, skaters, wildlife viewers, nature educators, and other non-motorized outdoor users.
- Be a key connection in the California Coastal Trail and Humboldt Bay Trail, promoting coastal access regionally and state-wide.
- Highlight the natural, cultural, and historic resources of Humboldt Bay.
- Promote environmentally sensitive access to the Bay for wildlife viewing and a variety of recreational and educational activities.
- Serve local residents and visitors as a community amenity and nature tourism destination, promoting economic vitality.
- Promote healthy lifestyles, active volunteerism, and community stewardship.
- Be planned, promoted, developed, and managed by a collaborative multi agency partnership.
- Be planned and developed with full consideration of existing and future highway and rail uses.
- Be planned and developed, consistent with Coastal Act policies and related local, state, and federal regulations, promoting protection of wetland, wildlife, and other natural resources.
- Be established with full consideration of the needs of private and public land owners/managers.
- Be located and designed to provide safe, enjoyable non-motorized commuter and recreational coastal access for walkers, runners, bicyclists, skaters, and other outdoor recreational users.
- Not compromise or preclude existing recreational uses including hunting and other existing, allowable recreational uses.
- Connect key destinations that will highlight the unique natural, cultural, and historic resources of Humboldt Bay.
- Integrate spur trails and other recreation facilities to connect to regional recreational, educational, and community resources and to enhance access consistent with trail goals.
- Have designated access points, including trailheads and community/neighborhood linkages, that provide safe and direct pedestrian and bicyclist access.
- Offer a variety of wildlife viewing sites and places to stop to enjoy the Bay.
- Integrate interpretation of natural, cultural, and historic resources in trail planning and design.
- Serve as an alternative route for the Pacific Coast Bike Route.

PROJECT ELEMENTS

Under all three potential trail alignments, there would be a trailhead located at both the north and south end of the proposed trail. The trailhead on the northern end would be located at Larson Park, a City owned park. The trailhead would consist of a connection to the proposed trail from existing walkways at Larson Park that would likely have informational signs posted such as a map and information regarding the trail. The southern trailhead would be located immediately north of the Bracut intersection on the west side of Highway 101 and would likely consist of a small paved area that could serve as a turn-around and have an information sign similar to that for the northern trailhead.

The trail cross-section under all alignments would range from 12 feet to approximately 30 feet in width and consist of three elements including the paved tread surface, the trail's shoulders, and (in some cases) a fill prism designed to bring the trail surface to a required grade or elevation. The trail would include yellow centerline striping and additional warning signage and striping approaching intersections with existing roads and railroad crossings. In addition, signage would be added along the trail warning users

of curves, bends, and other hazardous situations. Fencing and/or physical barriers would be installed in some locations in which the trail occurs within the NCRA ROW, where the edge of the trail is less than 5 feet from the edge of the travel way of a road, where less than 30-feet from the edge of the travel way of Highway 101 (i.e. in the Caltrans “Clear Recovery Zone”), and/or along bridge and boardwalk edges.

Immediately north of the Gannon Slough Bridge, there would be an interpretive sign and viewing platform for the Humboldt Bay Wildlife Refuge which would be owned and operated by the FWS. The FWS may include water access abilities at this location since it would be a short walk from the G Street intersection and would allow an alternate water access location for hunters.

PUBLIC AGENCIES WITH JURISDICTIONAL AUTHORITY

The City of Arcata is the CEQA lead agency for the proposed project. Other agencies with jurisdictional authority (e.g. responsible and trustee agencies) are listed below.

Federal

- U.S. Army Corps of Engineers (COE)
- U.S. Fish & Wildlife Service (FWS)
- National Marine Fisheries Service (NMFS)

State

- Regional Water Quality Control Board (RWQCB)
- California Coastal Commission
- California Department of Fish & Wildlife (DFW)
- North Coast Railroad Authority (NCRA)
- California Public Utilities Commission (CPUC)
- California Department of Transportation (Caltrans)
- State Lands Commission

Local

- Humboldt County Public Works Department
- Humboldt Bay Harbor, Recreation & Conservation District
- Northern Humboldt Union High School District (for the Secondary Alignment only)
- City of Arcata

TRAIL MANAGEMENT

Several reports are being prepared to assist the City with management strategies including a Corridor Management Plan, Trail Maintenance Plan, and Trail Safety Plan; these documents will be combined into one *Trail Implementation and Operations Plan* (Appendix B). The Corridor Management Plan addresses management issues throughout proposed trail corridor relating to use and design of the facility. The Trail Maintenance Plan takes into consideration unique aspects of the trail and local setting including that the trail would be considered a joint or “shared use” facility, defined as a paved trail open to the general public for recreation and non-motorized transportation purposes in a corridor that serves other transportation functions. In addition, trails require their own maintenance, emergency access, and security vehicles; the Maintenance Plan outlines the major maintenance-related responsibilities of the trail management agency. A Trail Safety Plan has been prepared to satisfy the 2009 NCRA Policy and Procedures Manual requirements for a public agency proposing a rail-with-trail facility. As specified in the NCRA Policy and Procedures Manual, the Safety Plan includes design, maintenance and operations measures.

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

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 will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will 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 will 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.

Mark André
Signature

3-1-13
Date

Mark S. André, Director

City of Arcata Environmental Services Department

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each questions. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, “Earlier Analyses,” may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The analysis of each issue should identify:
 - a) the significance criteria or threshold used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

NOTE: For the purposes of this analysis, potential impacts are denoted in the checklist as follows:

A = Selected Alignment B = Interim Alignment C = Secondary Alignment

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

Discussion - Selected Alignment (A)

a-c) Visual resources within the proposed trail corridor include both natural and man-made features. Scenic resources surrounding the trail corridor include natural areas adjacent to creeks and riparian vegetation, urban areas along City streets, the Arcata Marsh, and Humboldt Bay and tidelands. The following Arcata General Plan: 2020 Design Element policies are applicable to the proposed project:

- D-3a Designation of coastal scenic highways.
- D-3e Arcata Bay - Open waters, shoreline, and tidal marshes.
- D-3j Streamside riparian areas.
- D-7d Site design criteria.
- D-7f Maintenance of required landscaping.

Arcata GP: 2020 policy D-3a designates coastal scenic highways including Samoa Blvd. (from Crescent Drive to Manila), Highway 101 (from southerly City boundary north to the Mad River), and South I Street (from Samoa Blvd. south). Views of the Arcata Marsh and Humboldt Bay and tidelands are protected by Policy D-3e Arcata Bay - Open waters, shoreline, and tidal marshes, which states:

“Proposed land uses and developments shall not significantly alter the natural appearance or landforms of the waters, shoreline, and tidal marshes of Arcata Bay... Development within the area bounded by Samoa Blvd., Butcher’s Slough and Gannon Slough shall include local native plant landscaping, screenings and other measures to ensure compatibility with the educational, recreational, wildlife and other uses of the Humboldt Bay National Wildlife Refuge and the Arcata Marsh and Wildlife Sanctuary. ”

Trail development would occur on existing Marsh trails and, for the most part, along the east side of the existing railroad tracks, and at the same elevations, along the Bay and therefore would not substantially alter the shoreline or obstruct Bay views. Fencing and/or physical barriers may be installed under the following five conditions and installation is assumed for this analysis:

- (1) in locations in which the trail is within the RR ROW, in which case the fence would be placed between the trail and the RR tracks,
- (2) where the edge of the trail is less than 5 feet from the edge of the travel way of a road, in which case the fence would be placed between the trail and the road,
- (3) where the edge of the trail is less than 30 feet from the edge of the travel way of Highway 101 (i.e. within the Caltrans “Clear Recovery Zone”), in which case the fence would be placed between the trail and Highway 101,
- (4) along the edges of bridges and boardwalks, and/or
- (5) areas in which a vertical clearance equal to or greater than 30 inches separates the surface of the trail and adjacent ground surface.

In areas falling under condition #1, the barrier would consist of a four-foot high wooden split-rail fence, or similar, with posts ten feet on center or black vinyl coated chain link fencing. In areas falling under condition #2, the barrier would consist of a physical barrier separation such as K-rail, fencing, guardrail, or shrubs. In areas falling under condition #3, the barrier would consist of a physical barrier separation such as K-rail, fencing, shrubs, or guardrail, where there is danger of motorist encroachment. In areas falling under condition #4 or #5, the barrier would consist of wooden or metal bridge railings. The above fence designs would not substantially alter the shoreline or obstruct Bay views, therefore impacts would be *less than significant*.

The existing L Street corridor includes a relatively narrow paved street which gets limited use primarily from driveway access to adjacent residences and businesses. The railroad tracks run down the middle of the street corridor and there are overhead power lines along the western side of the street. The proposed Urban Interface Trail along L Street would include features to enhance the existing visual character of this area such as landscaping including native trees, shrubs, onsite drainage retention areas, and trail lighting. These features would create a much more inviting and comfortable environment that is visually appealing and encourages non-motorized transportation. Therefore impacts would be *less than significant*.

Construction of the trail prism would result in the removal of trees, shrubs and riparian vegetation along some trail segments, especially in Shay Park, the Arcata Marsh, and along South G Street. The removal of trees and vegetation could substantially damage scenic resources and/or substantially degrade existing visual character in these areas. This impact would be *less than significant after mitigation* with implementation of Mitigation Measure Aesthetics -1.

- d) The proposed trail passes through both City streets and natural areas. There is existing street lighting near the trail corridor along Sunset Avenue, Alliance Road, L Street, and Samoa Boulevard. Safety lighting (up to 70 new lights) would be installed along the trail and at all trail/road crossings. The proposed project would modify lighting at the intersection of 17th Street and Alliance Road and add additional decorative street lighting along L Street where minimal street

lights currently exist (see Trail Operations Plan, Appendix B). New lighting would not be installed in areas where the trail passes through the Arcata Marsh. The trail segment that routes along the northern and western boundaries of Shay Park will incorporate lighting. To minimize potential impacts, the City has General Plan and Land Use Code policies to control light impacts on- and off-site. The proposed trail lighting would be designed and planned to conform to all applicable City performance standards for light and glare including shielding and directing all lighting downward and away from wetland and habitat areas such as Shay Park. With compliance with these performance standards, outdoor light and glare under the proposed project would be similar to what is currently generated along City streets and would thus be *less than significant*.

To maintain existing natural areas along the trail corridor and prevent potential impacts, lighting would not be installed along the natural areas of the trail in the Arcata Marsh and along the Bay. Therefore, light and glare impacts in these areas would also be *less than significant*.

Mitigation – Selected Alignment (A)

Aesthetics -1) *Soils and slopes exposed due to project-related earthwork shall be re-vegetated with native ground cover, understory species, and trees. Trees shall be replaced with native species on a 1:1 basis along the trail where possible and along Janes Creek riparian areas lacking riparian cover to offset loss of vegetation associated with development of the trail.*

Discussion - Interim Alignment (B)

Same as the Selected Alignment for all aesthetic issues with implementation of Mitigation Measure Aesthetics-1 above. Note that the Interim Alignment would result in the removal of fewer trees/shrubs and a smaller area of vegetation because portions of the trail would be constructed on the existing railroad track prism rather than requiring construction of additional or new prism. However this would not change the significance determinations.

Mitigation – Interim Alignment (B)

Implement Mitigation Measure Aesthetics-1.

Discussion - Secondary Alignment (C)

Same as the Selected Alignment for all aesthetic issues with implementation of Mitigation -1 above. Note that the Secondary Alignment could result in the removal of trees/shrubs and riparian vegetation on the hillside below Arcata High School to allow for construction of a retaining wall or additional structural support required for the trail. However this would not change the significance determinations.

Mitigation – Secondary Alignment (C)

Implement Mitigation Measure Aesthetics-1.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE AND FOREST RESOURCES: 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?				A, B, C
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				A, B, C
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 PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				A, B, C
d) Result in the loss of forest land or conversion of forest land to non-forest use?				A, B, C
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 forestland to non-forest use?			A, B, C	

Discussion - Selected Alignment (A)

- a-d) The proposed trail corridor runs along the same general path as the North West Pacific rail line within NCRA and City ROWs. The project corridor is primarily undesignated ROW, but also travels through City parks designated PF, private property designated IL, and the Arcata Marsh and Wildlife Sanctuary which is designated NR. The parcels that make up the trail corridor are not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (collectively “Farmland”), do not contain existing farming uses, are not zoned for agricultural or timberland uses, are not under Williamson Act contracts, and are not “Forests,” nor is the land directly adjacent to the corridor. Hence the proposed trail would not convert Farmland to non-agricultural use or result in the loss of forest land or conversion of forest land to non forest use. **No impact** would occur.
- e) The project corridor is mostly within NCRA and City ROWs and is not adjacent to agricultural or forest lands. The proposed project would construct 4.5 miles of paved multiuse trail through the City of Arcata, the Arcata Marsh and Wildlife Sanctuary, and along Humboldt Bay. The proposed trail alignment between Samoa Boulevard and South I Street would be near land within the coastal zone historically designated and utilized for agricultural purposes (McDaniel Slough Enhancement Project area). However, this area is now designated NR and the City has worked with multiple agencies to restore and enhance wetland function to reclaimed former tidal salt/brackish marsh in this area. The proposed trail would be similar to, and in some cases overlay, existing levee trail uses currently on the site and would not result in the conversion of Farmland to non-agriculture use. Therefore, a **less than significant impact** would occur.

The proposed trail alignment is not directly adjacent to designated agriculture land or timberland. Thus, the proposed project would not involve changes in the existing environment which, due to its location or nature, could result in conversion of existing adjacent Farmland to non-agricultural use or conversion of forestland to non-forest use. A *less than significant impact* would occur.

Discussion - Interim Alignment (B)

Same as the Selected Alignment for all agriculture and forest issues.

Discussion - Secondary Alignment (C)

Same as the Selected Alignment for all agriculture and forest issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct Implementation of the applicable air quality plan?			A, B, C	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			A, B, C	
c) Result in a cumulatively considerable net increase of 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)?			A, B, C	
d) Expose sensitive receptors to substantial pollutant concentrations?				A, B, C
e) Create objectionable odors affecting a substantial number of people?				A, B, C

Discussion - Selected Alignment (A)

- a, b) The project site is located within the North Coast Air Basin (NCAB) and the jurisdiction of the North Coastal Unified Air Quality Management District (NCUAQMD). The North Coast Air Basin currently meets all federal air quality standards; however, it has been designated as non-attainment (exceeds maximum limits) for California Ambient Air Quality Standards for particulate matter less than ten microns in size (PM₁₀). To address this, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of PM₁₀ standard exceedance, and identifies cost-effective control measures to reduce PM₁₀ emissions, to levels necessary to meet California Ambient Air Quality Standards.

The following Arcata General Plan: 2020 Design Element policies are applicable to the proposed project:

- AQ-2a Implement land use measures to reduce vehicle trips, miles traveled, and air pollutant emissions.

- AQ-2b Implement transportation measures to reduce vehicle trips, miles traveled, and air pollutant emissions.
- AQ-2f Enforce air quality control measures and monitoring at construction sites.

The proposed project would generate construction emissions associated with mechanical clearing, grading, base laying, surface application and re-vegetation activities. While the NCAB is in non-attainment for PM₁₀, the temporary nature of construction activities combined with implementation of standard NCUAQMD dust and CO₂ emission reduction measures during construction (e.g., watering of construction site, covering haul trucks, street sweeping haul routes, landscaping/covering freshly graded areas immediately after grading, etc.) would avoid significant impacts. The proposed project would also provide a multi-use, ADA accessible trail through central Arcata south towards Eureka, thus potentially reducing vehicle miles traveled (VMT) and resulting in a beneficial air quality impact. The proposed project would not obstruct implementation of the NCUAQMD Particulate Matter Attainment Plan, violate air quality standards, or contribute substantially to an existing or projected air quality violation. Additionally, the project is consistent with Arcata's General Plan Air Quality Element. Therefore, a *less than significant impact* would occur.

- c) Some of the project's construction activities would likely temporarily increase PM₁₀ levels (e.g., exposing and moving soil can increase airborne particulate matter). The City of Arcata's standard permit conditions regulate construction practices to avoid and minimize adverse effects on air quality. The proposed project will carry out the City's standards and best management practices during the construction phase, and thereby minimize the project's short-term PM₁₀ impacts to a *less than significant* level.

In the long term, the proposed project would not add any significant level of PM₁₀ emissions that would cause a cumulatively considerable net increase. As stated previously, the project would potentially reduce motorized vehicle trips or miles traveled. The project is designed to encourage less motorized trips. If the project does succeed in reducing current or future motorized vehicle travel, it will help reduce emissions of PM₁₀, ozone precursors, carbon monoxide, and other toxics in the air basin.

- d) The majority of the proposed project is not located adjacent to a sensitive receptor (e.g. hospitals, daycare centers, schools, etc.). However, a portion of the proposed trail would be approximately 0.20 miles from Arcata Elementary School and 0.07 miles from Arcata High School. Still, the proposed project would not result in substantial air pollutant concentrations, and thus would not significantly impact these sensitive receptors. Therefore, *no impact* would occur.
- e) The construction phase would include trail paving, which could include applying hot asphalt. The odor from hot asphalt may be objectionable to some. However, the odor impact would be both short-term and localized segment by segment, and therefore would neither be persistent nor affect a substantial number of people. *No impact* would occur.

Discussion - Interim Alignment (B)

Same as the Selected Alignment for all air quality issues. Note the Interim Alignment would result in slightly less construction emissions than the Selected Alignment because portions of the

trail would be constructed on the existing railroad track prism rather than requiring construction of additional or new prism. This alignment would also be approximately 200 feet closer to Arcata High School than the Selected Alignment. However, this would not change the significance determinations.

Discussion - Secondary Alignment (C)

Same as the Selected Alignment for all air quality issues. Although this alignment would be constructed on Arcata High School property adjacent to existing High School shop buildings (wood shop, Pacific Coast High School and Six Rivers High School) and parking areas, this would not change significance determinations.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		A, B, C		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		A, B, C		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		A, B, C		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			A, B, C	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			A, B, C	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			A, B, C	

Analysis Methodology

The background information and responses below are based on a Natural Features Inventory and Wetlands Delineation prepared for the project (Appendices C and D). The Natural Features Inventory includes: (1) a review of databases listing special-status plant and animal species that have been previously recorded in the region in which the proposed trail corridor is located (e.g., Natural Diversity Database, Inventory of Rare and Endangered Vascular Plants, etc.); (2) an assessment of the likelihood

that the project corridor and its environs contains habitat that may support any of the recorded species; and (3) a reconnaissance-level biological field survey of the trail corridor. The Wetland Delineation includes delineation of jurisdictional wetlands within and adjacent to the trail corridor following Federal and State delineation criteria and procedures. The wetland boundary was evaluated using the Army Corps of Engineers (three-parameter), City of Arcata (two-parameter), and/or Coastal Commission (one-parameter) methodologies, as applicable based on location. The Natural Features Inventory and Wetlands Delineation are included in their entirety as Appendices C and D of this Initial Study.

Existing Conditions

The proposed trail corridor (e.g., trail, trail shoulder, and trail prism) includes developed and undeveloped land located between Larson Park and Bracut. It would run through the City of Arcata, the Arcata Marsh and Wildlife Sanctuary, and along Humboldt Bay. It would cross vacant land, NCRA ROW, City of Arcata street ROW, Arcata Marsh trails, wildlife habitat, and wetlands, and would span Jolly Giant Creek, Butcher's Slough, Gannon Slough, Jacoby Creek, Old Jacoby Creek, Brainard's Slough, an unnamed drainage ditch parallel to Highway 101, and Arcata Bay. Most of the trail corridor consists of human-altered soils from cut and fill for road development, railroad development, berm/dike instillation and manipulation, agricultural uses, urban development, wastewater treatment infrastructure, highway roadbed, and railroad fill. Much of the vegetation has similarly been altered from long-term land uses, and consists of many non-native and disturbance oriented species. Site hydrology has also been historically altered from conversion of land to urban uses (W&K 2010a). The following wetland types were mapped within the trail corridor:

Palustrine Emergent: Freshwater wetlands within vegetated freshwater ditches, springs, and seeps in the City, seasonal high groundwater, compacted areas near Shay Park and other former industrial/ commercial properties within urban limits of the City. Also, some ditches that act as stormwater conveyance, which have extensive wetland vegetation, hydric soils, and hold persistent or seasonal water. This includes the ditch located along Highway 101 between the railroad prism and the highway edge of pavement (W&K 2010a).

Palustrine Emergent Ditch: These areas consist of City stormwater conveyance ditches that in some cases are established with palustrine emergent vegetation and meet the City definition of two-parameter wetlands. These are human-made ditches, absent permanent or seasonal wetland hydrology, that were observed to have ephemeral water directly related to storm events (W&K 2010a).

Estuarine Intertidal Emergent (Saltmarsh): These areas are present at the margins of Humboldt Bay, Butcher's Slough, Gannon Slough, and Jacoby Creek, and are subject to tidal inundation with some fresh water influence when located within tidal parts of creek mouths/estuaries (W&K 2010a).

Estuarine Emergent Ditch: These areas are isolated from direct tidal influence and are connected to the palustrine emergent ditch that runs along the west side of Highway 101 between the railroad prism and the highway edge of pavement. Some portions of this ditch receive subsurface saltwater infiltration, have remnant saline conditions, or receive occasional saltwater during high tide storm events (W&K 2010a).

For purposes of simplicity, this analysis groups the two palustrine emergent wetland categories above into a single “palustrine wetlands” category, and the two estuarine emergent wetland categories above into “estuarine wetlands.” See Appendix D of this Initial Study for analysis of wetland impacts by each of the four wetland categories.

Detailed wetland delineation maps are included in Appendix D. Table 1 identifies the acreage of the existing habitat, wetlands and Waters of the U.S./State located within the study area (trail corridor plus land on either side of the corridor), and the acreages of these resources that would be temporarily and permanently filled and/or otherwise impacted under the proposed project. As indicated in Table 1, the study area currently contains 0.03 acres of shorebird roosting/rocky shoreline habitat, 2.06 acres of riparian habitat, 0.71 acres of Humboldt Bay owl’s clover (*Castilleja ambigua ssp. humboldtensis*) [CNPS List 1B.2], 0.16 acres of Lyngbye's sedge (*Caryx lyngbyei*) [CNPS List 2.2], 4.15 acres of palustrine wetlands, 3.22 acres of estuarine wetlands, and 1.04 acres of Waters of the U.S./State. In addition, although survey results were not available at the time of preparation of this Initial Study, it is assumed that the trail corridor may also contain Point Reyes bird’s beak (*Cordylanthus maritimus ssp. palustris*) [CNPS List 1B.2] and sand spurrey (*Spergularia Canadensis var. occidentalis*) [CNPS List 2.1].

Table 1
Existing and Impacted Habitat, Wetlands, and Waters of the U.S.
Under the Proposed Project

	Habitat (acres)						Wetlands (acres)		Waters of the U.S./ State (acres) ⁴
	Shorebird Roosting/Rocky Shoreline	Riparian (1 Parameter)	Humboldt Bay owl’s clover (<i>Castilleja ambigua ssp. humboldtensis</i>)	Lyngbye's sedge (<i>Caryx lyngbyei</i>)	Point Reyes bird’s beak (<i>Cordylanthus maritimus ssp. palustris</i>) ¹	Sand spurrey (<i>Spergularia Canadensis var. occidentalis</i>) ¹	Palustrine ²	Estuarine ³	
Existing	0.03	2.06	0.71	0.16	0.85	0	4.15	3.22	1.04
Temporarily Impacted	0.00	0.12	<0.01 (186 ft ²)	0	<0.01 (279 ft ²)	0	0.67	0.24	0.03
Permanently Impacted	0.00	0.14	<0.01 (284 ft ²)	0	0.01 (616 ft ²)	0	1.35	0.41	0.01

¹ Data has not been collected at this time, presence is assumed until a survey for the species has been conducted.

² Includes palustrine emergent and palustrine emergent ditch wetlands.

³ Includes estuarine intertidal emergent (saltmarsh) and estuarine emergent ditch wetlands.

⁴ Ordinary high water mark and tidal waters of the U.S. (below high tide line)

Source: Wetlands Delineation, Appendix F, Table 1, May 2010.

The Humboldt Bay area provides habitat for a large diversity of aquatic and terrestrial animal species. The biotic environmental setting within the proposed trail corridor includes wetlands, sloughs, freshwater marsh, coastal salt marsh, creeks, ditches, mudflats, and natural communities, including aquatic, riparian, upland habitat, shorebird roosting habitat and sensitive species. Existing urban development, the railroad tracks, and Highway 101 each limit the diversity and abundance of habitat for

use by wildlife species. The Natural Features Inventory and Wetland Delineation describe each habitat type in detail (Appendices C and D).

Sensitive Species

The riparian habitat through Shay Park has a high potential for migratory bird use in addition to providing potential habitat for nesting birds, including the Black-capped Chickadee, a California Species of Special Concern. Creeks and sloughs in the project area could potentially serve as migration corridors for fish, such as salmon, that move between salt and freshwater to complete their life history. Sloughs could also potentially provide resting and feeding habitat for migratory waterfowl and shorebirds. The brackish waters of the sloughs, drainage ditches, and the lower reaches of the streams provide potential habitat for special status species as listed below.

Fishes

Tidewater Goby (*Eucyclogobius newberryi*): The tidewater goby is listed as endangered by the Federal Government (59 FR 5494; March 7, 1994). The tidewater goby is generally found in fresh or low salinity (brackish) water of shallow (less than one meter) lagoons, coastal wetlands, and lower stream reaches where the water is fairly still but not stagnant. The potential habitat for goby within the project area is limited to the lower portions of Jacoby Creek, within Butcher's Slough, and potentially backwaters associated with estuarine emergent wetlands and ditches that at some point have or had connectivity to inputs from the Bay and maintain water throughout the year (W&K, 2009a).

Coho Salmon (*Oncorhynchus kisutch*): The Southern Oregon/Northern California coho salmon (Southern Oregon/Northern California ESU) was federally listed as a threatened species by NMFS (62 FR 33038; dated June 18, 1997) and is also listed as threatened by the State of California. The coho salmon was listed as threatened in the Southern Oregon/Northern California Coast Evolutionary Significant Unit (ESU), defined as all coho salmon naturally produced in streams between Cape Blanco in southern Oregon and Punta Gorda in northern California, Humboldt County. Coho salmon spawn in coastal streams in fall or winter, and remain in fresh water for about a year.

Chinook Salmon (*Oncorhynchus tshawytscha*): The California Coastal chinook salmon (Southern Oregon/California Coastal ESU) is listed by the Federal Government as a threatened species (64 FR 50393; September 16, 1999). The coastal chinook salmon was listed as threatened in the Southern Oregon/Northern California Coast Evolutionary Significant Unit (ESU). California coastal chinook salmon are a distinct population of chinook salmon that reside from Redwood Creek in Humboldt County, south through the Russian River in Sonoma County.

Longfin smelt (*Spirinchus thalychthys*): The longfin smelt (*Spirinchus thalychthys*) was listed as threatened by the California Fish and Game Commission, effective as of March 5, 2009. The decision was finalized on June 25, 2009. All life stages of longfin smelt are known to occur in Humboldt Bay and tributary streams; however, with some seasonal variability in presence. Adult longfin smelt could be present in the Bay at any season, and juvenile outmigration occurs in the spring. Longfin smelt apparently occur in Humboldt Bay at very low density, however some uncertainty remains about distribution because no specific studies to detect their presence

have been conducted in most Humboldt County streams. At present they are considered uncommon in Humboldt Bay (W&K 2009a).

Steelhead (*Oncorhynchus mykiss*): The Northern California steelhead (Northern California ESU) is listed by the Federal Government as a threatened species within the "Northern California ESU" (FR 65:36074; August 7, 2000). This coastal steelhead ESU occupies river basins from Redwood Creek in Humboldt County, California to the Gualala River, inclusive (i.e. in Smith, Klamath, Trinity, Mad, and Eel Rivers and Redwood Creek). Generally, in this ESU, steelhead return to fresh water to spawn from August through June, spawn from December through April, with peak spawning in January in the larger basins, and late February and March in the smaller coastal basins.

A few additional potentially sensitive but non-listed fish species may be present in the general vicinity, as follows:

Coastal Cutthroat Trout (*Oncorhynchus clarki clarki*): The Southern Oregon/California Coast ESU of coastal cutthroat trout was determined to be a Federal Candidate species by NMFS. In Vol.63, No. 55, p. 13832; March 23, 1998 of the Federal Register. This ESU of Coastal Cutthroat Trout includes populations of cutthroat trout from south of Cape Blanco to the southern extent of the subspecies' range near the Mattole River in California.

Green Sturgeon (*Acipenser medirostris*): The green sturgeon Northern Distinct Population Segment (DPS), north of and including the Eel River, is a Federal Species of Concern. The Southern DPS is listed as threatened (71 FR 17757, April 7, 2006). It is found in estuaries, lower reaches of large rivers, and salt or brackish waters off river mouths. Juveniles under 300 mm are not tolerant of salinity, and would not be expected to occur in Humboldt Bay.

Pacific eulachon (*Thalyichthys pacificus*, PT): This small, anadromous smelt has been proposed for federal threatened status (74 FR 10857, March 13, 2009). The species occurs from Alaska south to Humboldt Bay, where it has been found in the Bay and small tributary streams, and in the Mad River. At any given time most of their adult population would be expected to inhabit deeper waters beyond Humboldt Bay, and any fish present would most likely be active in the mid-water column.

Pacific Lamprey (*Lampetra tridentata*, SC): The Pacific lamprey, is a jawless fish that hatches in freshwater and spends its early life in the bottom sediments of rivers. Adults usually stay in the ocean near the shore, and then return to freshwater to spawn.

Plants

All areas of estuarine intertidal emergent wetlands are considered potential habitat for Humboldt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*), and Point Reyes bird's beak (*Cordylanthus maritimus* ssp. *palustris*) [both CNPS List 1B.2]. The brackish ditches on the east side of the tracks are considered low-quality potential habitat and the saltwater marsh associated with Butcher's Slough and vegetated salt flats on the west side of the tracks along the margin of the bay are considered moderate to high value habitat for these species. Of lesser potential to occur within the project site is sand spurrey (*Spergularia Canadensis* var. *occidentalis*) which

prefers prime saltmarsh habitat and is less likely to occur along the railroad bed [CNPS List 2.1]. Sand spurrey has not been reported along the east shore of Humboldt Bay. CNPS listed plant species Lyngbye's sedge (*Caryx lyngbyei*) [CNPS List 2.2] is also associated with estuarine intertidal emergent (saltmarsh) wetland.

No sensitive animal species were observed within the proposed trail corridor during the field survey. The terrestrial habitats surrounding the trail corridor have limited potential to support special status animal species because of the proximity to Highway 101 and the ongoing noise, high level vehicular presence, and ongoing road maintenance activities. None of the special status terrestrial animal species from the region have been documented within the corridor and these species are not likely to occur because of the lack of suitable habitats (W&K 2009a).

Existing Regulatory Setting

The City of Arcata's General Plan 2020 Resource and Conservation Element policies that apply to biological resources include, but are not limited to:

- RC-1a Maintain biological and ecological integrity.
- RC-1b Non-native plant and animal species.
- RC-1c Habitat value protection.
- RC-1d Sensitive habitat definition.
- RC-3a Requirement for wetland delineation and study.
- RC-3b Filling of wetlands.
- RC-3c Designation of Wetland Protection Areas (WPA).
- RC-3d Allowable Uses and activities in Wetland Protection Areas.
- RC-3f Review and approval of projects affecting Wetland Protection Areas.
- RC-3j Minimum mitigation requirements for wetland impacts.
- RC-3k Wetland functional capacity maintenance requirement.

The Resource Conservation & Management Element designates environmentally sensitive habitat areas (ESHAs) including Jacoby Creek, Jolly Giant Creek, Gannon Slough, Butcher's Slough, and the Arcata Marsh and Wildlife Sanctuary (Policy RC-1d). In addition to the policies above, the City's Land Use Code would apply to the proposed project (Municipal Code, Title 9, Article 5) including applicable policies on Wetland Conservation and Management (9.59.060) which protect existing wetlands areas and maintains a standard of 'no net loss' in area, function, and value.

Pursuant to Clean Water Act Section 404, a Section 404 Permit is required for any fill or dredging within jurisdictional wetlands or waters of the U.S. The COE has jurisdiction over wetlands which meet each or any of the three-wetland criteria (hydrology, soils, and vegetation) defined in the COE Wetlands Delineation Manual (Environmental Laboratory, 1987). The COE does not regulate wetland buffers, development adjacent to wetlands, or environmentally sensitive habitat areas (ESHAs). Additionally, such federally-permitted projects are subject to a 401-water quality certification from the RWQCB to minimize impacts to "Waters of the State." The Fish and Wildlife Service has jurisdiction over species listed as threatened or endangered under Section 9 of the Federal Endangered Species Act. CDFW and National Marine Fisheries Service (NMFS) have jurisdiction over species listed as threatened or endangered under California Fish and Game Code Section 2080.

In addition to the above state and federal requirements, biological resources within the coastal zone are subject to the California Coastal Act of 1976. The major components of the Coastal Act that pertain to the proposed project are the protection of wetlands and ESHAs. The California Coastal Commission regulates impacts to wetlands and ESHAs within the Coastal Zone.

Discussion - Selected Alignment (A)

- a) Special status fish species such as tidewater goby, southern Oregon/northern California Coho salmon, California coastal Chinook salmon and coastal cutthroat trout are known to use the tributaries in Arcata and Humboldt Bay. Therefore, the sloughs, streams, and ditches located immediately adjacent to the alignment are potentially utilized by these fish species. The brackish to saltwater areas of Butcher's Slough, Gannon Slough and tidally influenced lower portion of Jacoby Creek are considered potential habitat for several special status fish species, as listed above. Direct impacts to this habitat (i.e. "Waters of the U.S.") would occur due to pile installation and bridge footings below the Ordinary High Water Mark (OHWM) for non-tidal waters and below the High Tide Line (HTL) for tidally influenced waters. Indirect (shading) impacts could occur due to bridge structures placed over Waters of the U.S. The extent of these impacts is summarized in Table 2 below. As indicated, project bridge impacts would directly impact a total of 256 square feet (0.01 acres), and indirectly impact (e.g. shade) a total of 8,249 square feet (0.19 acres), of Waters of the U.S.

Table 2
Bridge Impacts to Waters of U.S. Under the Proposed Project

Water Crossing Name	Bridge Data			Impacts to Waters of U.S.	
	Total # of Piles	Total Piles Below HTL/OHWM	Total # of Bridge Footings ¹	Bridge Footings Ground Disturbance Below HTL/OHWM (ft ²)	Bridge Shading Below HTL/OHWM (ft ²)
Jolly Giant Creek	0	0	2	0	80
Arcata Marsh Berm Bridge	0	0	5	0	0
Butcher's Slough	4	0	2	60	979
Gannon Slough	16	13	7	134	4,432
Jacoby Creek	0	0	0	0	0
Old Jacoby Creek	6	2	4	13	938
Brainard's Slough	6	5	4	49	1,820
TOTAL				256 ft² (0.01 acres)	8,249 ft² (0.19 acres)

HTL = High Tide Line. OHWM = Ordinary High Water Mark.

¹ Bridge footings include pile caps and retaining footings

Source: Appendix A Table 4, May 2010

As indicated in Table 2, the proposed crossings of Jacoby Creek, Jolly Giant Creek and the Arcata Marsh Berm would not directly impact Waters of the U.S. in that bridge piles, footings, or other ground disturbing activities are not proposed within the HTL or OHWM of these waterways. However, as indicated in Table 2, the proposed crossings of Butcher's Slough, Gannon Slough, Old Jacoby Creek and Brainard's Slough would directly impact Waters of the U.S. in that bridges, pile footings, or other ground disturbing activities are proposed within the

channel and/or below the HTL of these waterways: the proposed Butcher's Slough crossing would require bridge footings below the HTL; the proposed Gannon Slough Crossing would require piles within the channel along with temporary dewatering using cofferdams during construction; the Old Jacoby Creek and Brainard's Slough crossings would require piles and footings below the HTL. Because sensitive fish species have the potential to occur in these waterways, the project could impact these fish species – this would be ***less than significant impact after mitigation*** with implementation of Mitigation Measure Biological-1

All areas mapped as estuarine intertidal emergent wetlands are considered potential habitat for Humboldt Bay owl's clover, Point Reyes bird's beak, Lyngbye's sedge, and sand spurrey. A survey for Humboldt Bay owl's clover and Lyngbye's sedge was conducted; as indicated in Table 1, approximately 0.71 acres and 0.16 acres of the plants were found respectively. Less than 0.01 acres of Humboldt Bay owl's clover would be temporarily impacted during trail construction, and no acreage of the plant would be permanently impacted. There would be no temporary or permanent impacts to Lyngbye's sedge. In addition, while survey results for Point Reyes bird's beak and Sand spurrey were not ready in time for inclusion in this Initial Study (although survey results are expected around the beginning of August, 2010), presence of these species within the trail corridor is assumed to provide a conservative analysis. Thus, the proposed project could impact these sensitive plant species – this would be ***less than significant impact after mitigation*** with implementation of Mitigation Measure Biological-2.

The riparian habitat through Shay Park provides potential habitat for California bird Species of Special Concern, including the Willow Flycatcher, Yellow-breasted Chat, Yellow Warbler, Warbling Vireo, and Black-capped Chickadee. Sloughs to be crossed by the proposed trail could also potentially provide resting and feeding habitat for migratory waterfowl and shorebirds. Project construction activities could generate temporary noise, dust, vibration, and light that could have adverse impacts to these and other sensitive avian species, especially during the breeding season. Although no special status avian species were observed during the field survey, and potential construction impacts would be temporary, an additional survey prior to construction activities near Shay Park and along the sloughs to be crossed by the proposed trail would reduce the potential impact even further. Therefore, the project would have a ***less than significant impact after mitigation*** on special status avian species with implementation of Mitigation Measure Biological-3.

- b, c) Much of the proposed trail development through the City is adjacent to existing streets and through disturbed areas and therefore would not impact riparian habitat or other sensitive natural communities. However, trail development along the northern and western boundary of Shay Park, South of Samoa Boulevard, through the Arcata Marsh, and along Humboldt Bay would result in impacts to riparian habitat and to both palustrine and estuarine wetlands.

Riparian Habitat

Construction of the trail prism would result in the removal of trees, shrubs and riparian vegetation along some trail segments, especially in Shay Park, the Arcata Marsh, and along South G Street. Of the 2.06 acres of existing riparian areas within the proposed trail corridor, approximately 0.14 acres would be permanently impacted (i.e. vegetation / tree removal) and

0.12 acres would be temporarily impacted (Table 1). Impacts would be *less than significant after mitigation* with implementation of Mitigation Measure Aesthetics-1.

Shorebird Roosting / Rocky Shoreline

The presence of several shorebird roosting locations along the railroad alignment between Arcata and Bracut has been documented in prior studies (W&K 2009a). The actual railroad alignment is likely used for roosting mostly during high tides when more preferred locations are unavailable along the Bay margin. During the field survey, the biologist did not observe use of the roosting locations on the railroad alignment other than piles that are away from the railroad bed and within the intertidal zone. As shown in Table 1 above, approximately 0.03 acres of shorebird roosting habitat exists within the study area, however the proposed project would not result in permanent or temporary impacts to these areas. Since shorebird use of the railroad alignment within the project footprint does not appear to be frequent based on several high-tide site visits by the project biologist, it is unlikely that human movement effects associated with use of the new trail would significantly alter current shorebird use of the project site. Therefore, a *less than significant impact* would occur.

Waters of the U.S.

Several areas within the proposed project corridor are defined as “Waters of the U.S./State,” including Jolly Giant Creek (at Shay Park), Butcher’s Slough, Gannon Slough, Jacoby Creek, Old Jacoby Creek, and Brainard’s Slough. There are 1.04 acres of Waters within the proposed trail corridor (Table 1). Permanent impacts of 0.01 acres would result from installation of bridge footings and other crossing structures below the HTL, while 0.03 acres of temporary impacts would occur (Table 2). As long as construction activities within these Waters occur in accordance with the required 404, 1603 and other permits from NOAA Fisheries, FWS, COE and DFW, the impact would be *less than significant*.

Wetlands

The proposed project would result in impacts to palustrine emergent wetlands, estuarine intertidal emergent (saltmarsh) wetlands, and estuarine emergent (ditch) wetlands. The study area currently contains 4.15 acres of palustrine wetlands and 3.22 acres of estuarine wetlands. Temporary and permanent impacts to palustrine wetlands would total 0.67 acres and 1.35 acres respectively, while temporary and permanent impacts to estuarine wetlands (including waters of the state) would total 0.27 and 0.42 acres respectively (Table 1).

In the area south of Samoa Boulevard, a boardwalk/bridge is proposed across existing wetlands to join the proposed trail from the railroad bed to the existing Arcata Marsh berm. Equipment staging is also proposed in this wetland area, although the size of the temporary impact area would be minimized by storing supplies and equipment in upland areas. The proposed boardwalk/bridge would be designed to minimize footing requirements and associated impacts to the wetlands, and minimization measures are proposed associated with the proposed equipment staging, including the placement of protective pads (metal/wood/rubber sheets) on top of the wetlands where equipment access/staging would be required to prevent the equipment tracks/wheels from rutting and compressing the soil and uprooting or destroying existing wetland vegetation. Still, the wetland would be temporarily impacted during trail construction and

permanently impacted by the proposed boardwalk/bridge footings and shading from the bridge/boardwalk itself.

Based on the above, the proposed trail would impact a limited amount of palustrine emergent wetland, estuarine intertidal emergent, and estuarine emergent wetlands. To mitigate the wetland impacts the City has developed a mitigation and monitoring plan that creates 1.75 acres of on-site wetlands (see Mitigation Biological-4) adjacent to or in close proximity to the proposed trail corridor. The wetland mitigation sites include areas at or adjacent to the Arcata Marsh and Wildlife Sanctuary which add to and/or enhance existing wetlands rather than creating small isolated wetlands in other areas along the proposed trail corridor. The Plan proposes two mitigation options. One option replaces palustrine wetlands on a 1:1 ratio and estuarine wetlands on a 1:1 ratio or a second option that replaces an overall 1:1 wetlands replacement that creates a greater proportion of high value estuarine wetlands to replace impacted low value palustrine wetlands that were historically estuarine wetlands. The estuarine wetlands are designed to provide habitat for *Humboldt Bay Owl's clover*, *Point Reyes bird's beak* and *Sand spurrey* to offset impacts from trail construction. Therefore a ***less than significant impact after mitigation*** would occur with implementation of Mitigation Measure Biological-4.

- d) The creeks and sloughs in the vicinity of the proposed project serve as migration corridors for listed fish species that move between salt and freshwater habitat to spawn. Small areas adjacent to the proposed trail corridor also serve as habitat for listed migratory waterfowl and shorebird species. Project construction activities could potentially discourage the use of small areas of Jolly Giant Creek, Butcher's Slough, Gannon Slough, Jacoby Creek, Old Jacoby Creek, and Brainard's Slough by these listed migratory fish species, and could potentially discourage use of small areas of habitat along Humboldt Bay and within Arcata Marsh by these migratory waterfowl and shorebird species. However, because project construction activities would be temporary, and because there is substantial additional habitat in the area for these species, project construction activities would not interfere substantially with the movement of native resident or migratory fish or wildlife species, and a ***less than significant impact*** would occur.

The project would include the construction of approximately 0.01 acres of bridge footings below the HTL/OHWM of Jolly Giant Creek, Butcher's Slough, Gannon Slough, Old Jacoby Creek, and Brainard's Slough. While these creeks and sloughs serve as migration corridors for listed fish species, the size and extent of the footings would be minimal and would not represent a barrier to fish passage. Therefore, project structures would not interfere substantially with the movement of native resident or migratory fish or wildlife species, and a ***less than significant impact*** would occur.

- e) Arcata General Plan: 2020 Resource Conservation and Management Element policies define sensitive habitat areas (e.g. streams, creeks and wetlands) and limit activities adjacent to these areas, referred to as environmental buffer areas (EBA) (Policies RC-1, 2 and 3). Generally EBAs range from 50-100 feet. Construction and maintenance of foot trails for public access and outdoor recreation activities such as bird watching, hiking and similar activities are allowable uses within EBAs (Policies RC-2c and 3d).

Resource Conservation & Management Element Policy RC-3a requires a wetland reconnaissance or delineation report for potential wetlands impacts. A wetland delineation was prepared for the proposed project (Appendix F of this Initial Study). The City will follow Policy RC-3b, which stipulates allowances and mitigations for filling a wetland. See discussion b,c) above for a complete discussion of the project's potential wetland impacts and mitigation measures. Mitigation Measure Biological-4 is consistent with applicable General Plan policies, including RC-3j (Minimum mitigation requirements for wetland impacts) and RC-3k (Wetland functional capacity maintenance requirement), and would reduce potential wetland impacts to less than significant. As long as the City complies with these policies for filling wetland, the proposed project alignment would not be in conflict with General Plan policies adopted to protect biological resources. Therefore construction, maintenance, and use of the proposed trail would not conflict with applicable General Plan Policies and a ***less than significant impact*** would occur.

- f) A number of plans aimed at protecting and/or restoring watershed processes in order to preserve and enhance wildlife habitat, in particular salmon and steelhead habitat within the Humboldt Bay Area have been prepared including Humboldt Bay Salmon and Steelhead Conservation Plan (2005) and Humboldt Bay National Wildlife Refuge Complex, Draft Comprehensive Conservation Plan (January 2009). Based on the discussions above (a-e), the proposed project would not significantly impact the Humboldt Bay watershed or impact protected fish and wildlife species, and therefore would not conflict with any conservation plans. Therefore, a ***less than significant impact*** would occur.

Mitigation – Selected Alignment (A)

Biological-1) *Pile, bridge footing, and other ground disturbing construction activities within the channels and/or below the HTLs of Butcher's Slough, Gannon Slough, Old Jacoby Creek and Brainard's Slough shall:*

- (a) *Include the implementation of minimization and avoidance measures, such as isolating pile installations, bridge footing installations, and other ground disturbing activities within the channel or below the HTL from flowing water;*
- (b) *Include the implementation of BMPs to avoid sedimentation and polluted runoff from draining to the creeks and sloughs from the construction sites;*
- (c) *Be limited to the non-spawning seasons for the sensitive fish species that occur within these creeks and sloughs;*
- (d) *Include any other measures required by, or developed in consultation with, NOAA Fisheries, FWS, COE and DFW during the requisite 404, 1603 or other permitting, to avoid impacts to sensitive fish species.*

Biological-2) *All efforts shall be made to avoid Humboldt Bay Owl's clover, Point Reyes bird's beak and Sand spurrey during trail construction. Efforts will be made to schedule construction for times when these plants are dormant or have dropped their seed. Should construction occur during times when these plants will be present the area will be surveyed and any individual Humboldt Bay Owl's clover, Point Reyes bird's beak and Sand spurrey plants*

will be flagged. If construction will impact any Humboldt Bay Owl's clover, Point Reyes bird's-beak and Sand spurrey plants these plants shall be replaced on a 1:1 basis at sites adjacent to the trail corridor or in the proposed mitigation areas determined to be suitable by a qualified botanist.

Biological-3) *The City of Arcata shall have pre-construction surveys conducted by a qualified biologist for Willow Flycatcher, Blacked-capped Chickadee, Warbling Vireo, Yellow Breasted Chat, and Yellow Warblers within the Shay Park area, and for sensitive migratory waterfowl and shorebird species in the sloughs to be crossed by the proposed trail. If the survey finds these species to be nesting within the vicinity of the proposed trail: (1) construction shall be delayed until the end of the nesting season of these species; or (2) a 150-foot wide buffer within which no construction activities may occur shall be established around occupied nest until the young have fledged.*

Biological-4) *The City of Arcata Wetland Mitigation and Monitoring Plan will replace impacted wetlands. The plan is designed to meet applicable regulatory agency (FWS, COE and DFW) requirements. At a minimum, the plan: (1) replaces the acreage of jurisdictional wetlands to be permanently impacted by the proposed trail, as set forth in Table 1, with the creation of comparable on-site wetlands on a 1:1 basis; (2) includes an estuarine wetland enhancement component of 2:1 for impacted acres of wetlands (3) includes a revegetation plan that reflects the native plant species within the wetland types to be mitigated; and (3) includes maintenance of the wetlands for a minimum of 5 years, including the replanting of any dead or dying plants within the new wetlands.*

*The development of the on-site mitigation wetlands will be timed to prevent impacts to any sensitive animal species that may be present in adjacent tidal wetlands by working during low tide. A **less than significant impact after mitigation** would occur with implementation of Mitigation Measure Biological-5.*

Biological-5) *The City of Arcata shall have pre-construction surveys conducted by a qualified biologist for sensitive plant and animal species on and within the vicinity of the proposed on-site wetland mitigation sites. If the surveys find sensitive species, the City shall: (1) implement all the recommendations made by the biologist to avoid significant impacts to these species; and (2) conduct any consultations with, and obtain any permits that may be required from, applicable regulatory agencies (e.g., FWS, DFW, etc.).*

Discussion - Interim Alignment (B)

The Interim Alignment would result in substantially less of an impact to all wetland types because a majority of the trail would be constructed on the existing railroad track prism rather than requiring construction of additional or new prism. This alignment would result in approximately 0.10 acres of permanent impacts to palustrine wetlands (92% less of an impact than Selected Alignment) and approximately 0.02 acres of permanent impacts to estuarine wetlands (95% less of an impact than the Selected Alignment). In addition, the Interim Alignment would only require modification/ construction of bridges over Jolly Giant Creek, the Arcata Marsh Berm Bridge, and Brainard's Slough. These bridges would result in no direct impacts to wetlands or other waters of the U.S. However, this would not change the significance determinations. Note that while the area of wetlands to be impacted is

approximated here, full quantification for each wetland type would occur for required permits if the City elects to approve this alternative instead of the Selected Alignment.

Mitigation - Interim Alignment (B)

Implement Mitigation Measures Biological-1,-2, -3, -4, and -5 (adjusted as appropriate for the reduced impact area).

Discussion - Secondary Alignment (C)

The Secondary Alignment would result in similar impacts as the Selected Alignment for all biological resource issues. However this alignment would result in less of an impact to palustrine wetlands due to its avoidance of the Shay Park area; this would not change significance determinations. Note that while the area of wetlands to be impacted is not quantified here, full quantification would occur for required permits if the City elects to approve this alternative instead of the Selected Alignment.

Mitigation - Secondary Alignment (C)

Implement Mitigation Measures Biological-1,-2, -3, -4, and -5 (adjusted as appropriate for the reduced impact area).

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				A, B, C
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		A, B, C		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		A, B, C		
d) Disturb any human remains, including those interred outside of formal cemeteries?		A, B, C		

Discussion - Selected Alignment (A)

- a) A cultural resources investigation was conducted for the proposed project which included background research, records searches, and a field survey of the trail corridor (Appendix E). This report concluded that the proposed project would not impact any properties or features (such as bridges) listed or eligible for listing in the National Register of Historic Places or the California Register of Historical Resources (Roscoe & Associates, 2010). Therefore, ***no impact*** would occur.
- b-d) The proposed project alignment runs through the City of Arcata, generally paralleling the NCRA ROW, and continues adjacent to the NCRA ROW to the Arcata Marsh. Within the Arcata Marsh, the proposed trail alignment is located predominantly on existing Marsh trails. Once crossing Butcher's Slough at the Arcata Wastewater Treatment Plant (WWTP), the trail alignment leaves the Marsh and continues parallel to the railroad tracks adjacent to South G Street. The trail continues south beyond the Arcata City Limits parallel to the railroad tracks

between Highway 101 and Humboldt Bay. Based on the above, the proposed trail alignment travels through previously disturbed lands.

An archaeological records search at the North Coast Information Center (NCIC) was conducted as part of the cultural resources investigation by Roscoe & Associates (Appendix E). According to the records search, the trail alignment does not intersect known archaeological sites. However, there are six previously recorded archaeological sites within 0.5 miles, including two sites within 0.25 miles, of the project area. Proposed alignments through property that is already disturbed (i.e. railroad prism, substantially developed parcels) have less of a potential of impacting cultural resources than alignments through property that has not been previously disturbed. As indicated above, most of the proposed trail segments are either directly adjacent to the NCRA ROW or transect urban/previously developed areas. No new archaeological sites were found or identified during the cultural resources study (Roscoe & Associates, 2010). However, there would still be a potential to unearth archaeological resources, paleontological resources, and/or human remains during trail construction. The impact would be ***less than significant after mitigation*** with implementation of Mitigation Measures Cultural-1 and -2.

Mitigation – Selected Alignment (A)

- Cultural-1) *Earthmoving and excavation activities will be monitored for presence of archaeological or paleontological artifacts and immediately stopped if such activities uncover suspected cultural resources; any suspected cultural resources sites will be inspected by a qualified archaeologist, and any reporting/curation/ preservation recommendations made by the archaeologist will be implemented. Also, if human remains are uncovered, the City of Arcata and the appropriate Native American representative will be notified immediately, and the remains will be treated in accordance with all applicable federal, state, local and tribal requirements.*
- Cultural-2) *If human remains are uncovered during trail construction activities, construction activities in the immediate vicinity of the remains shall be halted, the City of Arcata Planning Department, Humboldt County Coroner, Native American Heritage Commission (NAHC), and the relevant Native American representative(s) shall be notified, and the remains shall be treated in accordance with NAHC treatment and disposition requirements.*

The provision of on-site replacement wetlands required by Mitigation Biological-4 would impact approximately 1.77 acres adjacent to the proposed trail corridor. Prior to developing the mitigation wetlands a NCIC records search and reconnaissance (e.g., surface) level archaeological/paleontological field survey will be conducted by a qualified archaeologist of the mitigation wetlands to prevent potential impacts to any cultural resources that may be present. A ***less than significant impact after mitigation*** would occur with implementation of Mitigation Measures Cultural-3 and -4 below.

- Cultural-3) *The City of Arcata shall have an NCIC records search and reconnaissance (e.g., surface) level archaeological/paleontological field survey conducted by a qualified archaeologist of the mitigation wetlands sites prior to development of the wetlands. If the records search indicates that archaeological resources have been previously recorded at the mitigation wetland sites, or if archaeological or paleontological resources are found on the mitigation wetland sites during the field survey and determined by the archaeologist to be*

“significant” or “unique” as defined by CEQA, required mitigation shall be identified by the consultant and implemented by the City prior to construction (including, potentially, subsurface investigations).

Cultural-4) *Implement Mitigations Cultural-1 and -2 at the mitigation wetlands sites.*

Discussion - Interim Alignment (B)

Same as the Selected Alignment for all cultural resource issues. However, this alignment would potentially replace and/or improve the existing NCRA Gannon Slough bridge. This bridge was one of four features identified in the cultural resources investigation as objects of interest including the railroad bridges over Butcher’s Slough, Gannon Slough, and Jacoby Creek, and a siding remnant north of Gannon Slough. Original construction dates for the bridges could not be found during the research for the cultural resources investigation, but it is possible they contain elements constructed before 1901 (Roscoe & Associates, 2010). Still, an Archaeological Site Record for the portion of the Northwest Pacific Railroad within the Eureka-Arcata corridor was completed in 2003 by JRP, and the study concluded that this portion of the railroad “does not appear to meet the criteria for listing in the National Register of Historic Places, nor does it appear to be a historical resource for the purposes of CEQA” (Roscoe & Associates, 2010). Therefore, significance determinations would not change.

Mitigation – Interim Alignment (B)

Implement Mitigation Measures Cultural-1, -2, -3, and -4.

Discussion - Secondary Alignment (C)

Same as the Selected Alignment for all cultural resource issues.

Mitigation - Secondary Alignment (C)

Implement Mitigation Measures Cultural-1, -2, -3, and -4.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a know fault? Refer to Division of Mines and Geology Special Publication 42.			A, B, C	
ii) Strong seismic ground shaking?			A, B, C	
iii) Seismic-related ground failure, including liquefaction?			A, B, C	
iv) Landslides?				A, B, C
b) Result in substantial soil erosion or the loss of topsoil?			A, B, C	

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?		C	A, B	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			A, B, C	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				A, B, C

Discussion - Selected Alignment (A)

The following Arcata General Plan: 2020 Public Safety Element policies apply to the proposed project:

- PS-2a Development within fault zone/surface rupture areas.
- PS-2b Mitigation of ground shaking hazards.
- PS-2c Mitigation of surface rupture and ground shaking hazards.
- PS-2d Requirement for and review of "Geotechnical Reports."
- PS-2g Earthquake-resistant building and infrastructure standards.
- PS-3b Grading standards for erosion and sedimentation control.
- PS-3e Geotechnical reports.

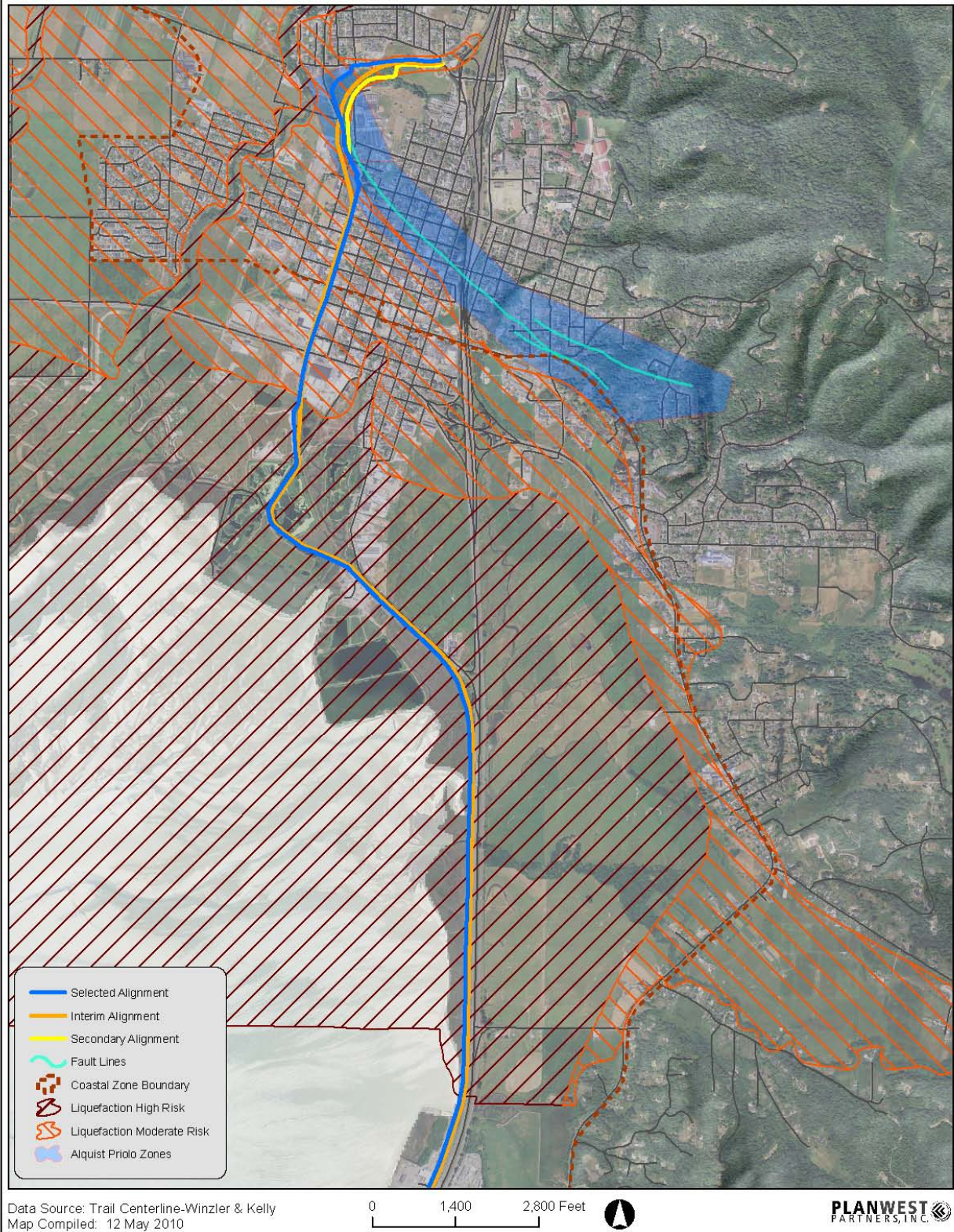
- a.i) The majority of the project alignment is not bisected by any known fault and is not located within an Alquist-Priolo Special Study Zone as shown on Arcata General Plan: 2020, Safety Element Figure PS-a, Hazards Map. However, the segment between Foster Avenue and L and 13th Streets, approximately 2,500 feet (0.47 miles), is within an Alquist-Priolo Zone (Figure 2). The proposed trail also passes through a 50-foot fault zone near Arcata High School at M and 16th Streets. Since trail development would not include habitable structures it would not expose persons or structures to potential substantial fault rupture hazards, a ***less than significant impact*** would occur.
- a.ii) Humboldt County is located within a seismically active region in which very large earthquakes are possible. Strong seismic shaking is a regional hazard, and is not particular to the project site. Because the proposed project would comply with California Building Code and local building codes which have been designed to allow structures to withstand strong seismic ground shaking, and because the project would comply with the site-specific recommendations of the project's Geotechnical Report, the project would not expose persons or structures to potential substantial seismic ground shaking hazards. Hence, a ***less than significant impact*** would occur.
- a.iii) The trail corridor is along the shoreline of the Humboldt Bay, which is underlain by coarse to fine grained alluvium consisting mostly of unconsolidated sand and silt (alluvium). According to the City of Arcata General Plan: 2020 Hazards Map, Figure PS-a, the portion of the proposed trail alignment located between Samoa Boulevard and Bracut is within an area of high liquefaction potential (Figure 2). However, trail development would not include residential

housing or critical facilities, and all bridges would be constructed with appropriate footing foundation design consistent with California Building Code and local building code requirements , and with the recommendations in the project's Geotechnical Report. Therefore, the project would not expose persons or structures to potential substantial seismically-induced ground failure and liquefaction hazards, and *less than significant impact* would occur.

- a.iv) The proposed trail corridor is relatively flat and well away from any significant slopes. There is no evidence of recent active landslides and the potential for slope stability hazard associated with the proposed project is considered negligible. The site is not subject to the City's Hillside Development Standards, and the City does not designate the site as a landslide hazard area (City of Arcata General Plan: 2020, Figure PS-a, Hazards Map). Therefore, *no impact* would occur.

Fig. 2: Earthquake Hazards

Arcata Rail with Trail



- b) The City would implement and maintain erosion control measures during construction and implementation of the project. Construction activities that would potentially disturb soil include: removing vegetation, cutting slopes, digging, moving and filling ground material, and moving heavy equipment on site. During the project's construction phase, the City would practice and/or enforce temporary erosion control measures on all disturbed areas. After construction, the City would implement permanent erosion control measures as necessary. All disturbed areas would be re-vegetated with native, non-invasive species or non-persistent hybrids that would serve to stabilize site conditions. For the duration of the project, the City would follow applicable erosion control measures as defined in the City's Land Use Code and Best Management Practices (BMP) Manual. Implementing these measures would avoid substantial erosion or topsoil loss. Therefore, the impact would be *less than significant*.
- c, d) See responses a.iii and a.iv regarding liquefaction and landslides, respectively. The proposed trail would be constructed on unconsolidated bay sediments and that could potentially involve some lateral spreading, subsidence, expansion, and/or instability. However, because trail construction would adhere to the site-specific recommendations of the project's Geotechnical Report which have been formulated to ensure the provision of adequate foundations and support for the proposed trail, and because the trail would not involve new residences or habitable structures, it would not create substantial risks to life or property. Therefore, the impact would be *less than significant*.
- e) The proposed trail would not involve the construction or use of septic tanks or an onsite wastewater disposal system. Therefore, *no impact* would occur.

Discussion - Interim Alignment (B)

Same as the Selected Alignment for all geology and soils issues.

Discussion - Secondary Alignment (C)

Same as the Selected Alignment for all geology and soils issues except (c). Although this alignment would be located on a slope that is shown on the City of Arcata's General Plan: 2020, Safety Element Figure PS-a, Hazards Map as greater than 15%, it would primarily occupy an existing service road on the high school property. In addition, any trail construction in this area would require a supplemental Geotechnical Report including slope stability and bank stabilization recommendations which would be formulated to avoid substantial slope instability and landslides. This impact would be *less than significant after mitigation* with implementation of Mitigation Measure Geology-1.

Mitigation - Secondary Alignment (C)

Geology-1 *Prior to project activities that would impact the slope on the high school property, the City of Arcata shall have a Supplemental Geotechnical Report prepared for this area and shall implement any slope stability and bank stabilization recommendations made in the report.*

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				A, B, C
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				A, B, C (beneficial)

Discussion - Selected Alignment (A)

This section discusses greenhouse gas emissions and sea level rise resulting from global climate change, and qualitatively assesses the impacts of the proposed project on global climate change.

- a) **i) Greenhouse Gas Emissions** In 2002 the California legislature declared that global climate change was a matter of increasing concern for the state’s public health and environment, and enacted laws requiring the state Air Resources Board (ARB) to control GHG emissions from motor vehicles (Health & Safety Code §32018.5 et seq.). CEQA Guidelines define greenhouse gases to include carbon dioxide (CO₂), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The California Global Warming Solutions Act of 2006 (Assembly Bill 32) definitively established the state’s climate change policy and set GHG reduction targets (Health & Safety Code §38500 et seq.). The State set its target at reducing greenhouse gases to 1990 levels by 2020.

According to *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents* (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable.” (CEQA Guidelines §15064(i)(1) and §15130).

In 2011 the CEQA Guidelines, Section 15064.4 Appendix G were modified to include thresholds of significance for Greenhouse Gases. The project would have potential significant impacts if the project would:

Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;

Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Due to the nature of the proposed project (trail project), the City has determined that it is appropriate to assess potential GHG impacts qualitatively – as allowed by CEQA Guidelines §15064.4(a)2.

There are two ways that the proposed project could produce GHGs: 1) during fuel combustion while the project is being constructed; and 2) operational emissions from lighting associated with the trail and vehicles used by those driving to the site to use the facility. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. The proposed project would be under various stages of construction for one or more years but the construction-related greenhouse gas emissions would be short-term. Therefore, the project construction phase would not significantly increase greenhouse emissions.

Lighting impacts will result from trail lighting that will incorporate up to 70 pedestrian scale lights placed adjacent to the trail. Timers and photo cells will be used to regulate the lights which will be spaced at between a minimum of 50 feet and a maximum 150 feet apart. It is estimated that LED lights will require an average of 35 watts to produce the 0.5 to 1.0 foot candle standard set forth in the Humboldt County Regional Pedestrian Plan. Calculations for annual kilowatt hours of electricity required for the additional lighting resulted in an additional 6769 KWH/Yr. The EPA <http://www.epa.gov/cleanenergy/energy-resources/calculator.html> shows that the new lights will generate 4.8 additional metric tons of CO₂ equivalent annually.

The trail's route through Arcata, together with its non-motorized transportation improvements will contribute positively to State and City efforts to reduce greenhouse gas emissions. Trail operation and the project's bicycle and pedestrian improvements would potentially reduce motorized-vehicle trips. The result would be a reduction in overall motorized vehicle miles traveled (VMT), which would reduce greenhouse gas emissions. Calculations for the trail's associated reduced CO₂ emissions were generated using the Recommended Monetized Values listed in the TIGER BCA Resource Guide. These calculations show an annual potential reduction of 236.76 tons of CO₂ emissions. Based on these findings the overall the project would have *no impact*; and with a reduction in motorized VMT the impact could be considered *beneficial*.

ii) Climate Change and Sea Level Rise - The 2012 California Emergency Management Agency and the California Natural Resources Agency (CNRA) published *California Adaptation Planning Guide – Defining Local and Regional Impacts* –(July 2012) identifying climate change impacts (temperature, precipitation, sea level rise, intensification of coastal storms, ocean acidification, and wind) that will affect a wide range of community structures, functions, and populations. The Guide states “seasonal precipitation patterns, including the timing, intensity, and form of precipitation, are projected to change. Precipitation differs from temperature in that it has greater spatial variability and is more difficult to predict. Climate models demonstrate less consistency in projecting the amount and timing of precipitation and rain vs. snowfall patterns (IPCC, 2007; CNRA, 2009). Potential environmental impacts of these changes include coastal flooding/inundation, loss of coastal ecosystems, coastal erosion, shifts in ocean conditions (pH, salinity, etc.), and salt water intrusion (CNRA, 2009). The combination of sea level rise and possible intensification of coastal storms presents a threat to coastal development and infrastructure. Two primary climate change impacts could affect the immediate shoreline and ocean and this project: sea level rise and changed storm frequency and severity.

According to the International Panel on Climate Change sea level has risen about seven inches over the last century due to global melting of land-based ice and thermal expansion (IPCC, 2007; CNRA, 2009; NAS 2012). Climate change projections estimate a range of sea level rise along the California Coast between 43 and 56 inches by 2100 (COCAT 2010; NAS 2012). This projected sea level rise includes global changes in sea level from thermal expansion and glacial melting, as well as regional changes in land elevation due to uplift and subsidence. As with other climate impacts, there is variation but general agreement among the various models (IPCC, 2007). In addition to SLR, “climate models project two important trends: higher sea level extremes resulting from increasing storm intensity and more frequent extreme events” (CEC, 2009, p. 50). The combination of SLR and potential increased storm frequency and severity is problematic: “Most severe impacts result from the coincidence of sea level rise with storm surge, tides, and other climatic fluctuations (like El Niño)” (CEC, 2009, p. 49).

The State of California Sea level Rise Interim Guidance Document (October 2010) provides projections on future sea level rise as follows:

YEAR	AVERAGE OF MODELS	RANGE OF MODELS
2030	7 in (18 cm)	5-8 in (13-21 cm)
2050	14 in (36 cm)	10-17 in (26-43 cm)
2070	Low 23 in (59 cm) Medium 24 in (62 cm) High 27 in (69 cm)	17-27 in (43-70 cm) 18-29 in (46-74 cm) 20-32 in (51-81 cm)
2100	Low 40 in (101 cm) Medium 47 in (121 cm) High 55 in (140 cm)	31-50 in (78-128 cm) 37-60 in (95-152 cm) 43-69 in (110-176 cm)

Table 3: Sea Level Rise Projections using 2000 as the baseline year

Note: These projections do not account for catastrophic ice melting, so they may underestimate actual SLR. The SLR projections included in this table do not include a safety factor to ensure against underestimating future SLR. For dates after 2050, three different values for SLR are shown – based on low, medium, and high future greenhouse gas emission scenarios. These values are based on the Intergovernmental Panel on Climate Change emission scenarios as follows: b1 for the low projections, A2 for the medium projections and A1FI for the high projections.

The state guidance document on SLR provides considerations that influence exposure, including trends in relative local mean sea level. Relative sea level is the sea level relative to the elevation of the land. In California, the land elevation along the coast is changing due to factors including tectonic activity and subsidence.

The portions of the proposed project located along Humboldt Bay could be subject to coastal flooding when climate change associated sea level rise and storm events is considered. The design life of the trail is projected to be at least 20 years. All but 800 feet of the trail will be built to elevations greater than 9.5 feet (NAVD 88) with many portions of the trail being over 10 feet. MHHW is currently 6.95 feet. Mean monthly maximum tide is 8.1 feet. Even the lowest sections of the trail provide 0.9 feet of additional elevation to account for sea level rise. The lowest 800 feet of trail elevations are a minimum of 0.23 feet higher than the worst case sea level rise 2030 estimate (21cm, 0.67ft) and the majority of the trail is 0.73 feet higher. Estimates for the year 2050 show sea level elevations of 0.83 feet to 1.42 feet above the 2000 base year elevations. The entire trail is at elevations that are above the 2050 best case scenario (8.1+ .83- 8.92) and all but 800 feet is designed to accommodate the mean monthly maximum tide (8.1

+ 1.42= 9.52) worst case scenario of estimated sea level rise for more than 35 years. The lowest 88 feet of trail are adjacent to existing salt marsh habitat on Humboldt Bay. The 2013 *Analysis Of The Costs And Benefits Of Using Tidal Marsh Restoration As A Sea Level Rise Adaptation Strategy In San Francisco Bay* published by the Bay Institute found that “Tidal marsh can reduce storm wave heights by over 50% depending on water depth and marsh width. This finding suggests that flow risk management is improved significantly when areas of tidal marsh exist between the developed shoreline and open waters of the Bay.” The report also stated that “using tidal marsh in combination with a levee constructed at the landward edge of the marsh, the size of the levee could be reduced significantly while still providing the same level of flood protection benefit as would be provided by a larger levee that was not fronted by tidal marsh.” The study found that wave attenuation increased with width of marsh and that a wider marsh will be effective for longer in areas where there is shoreline retreat. The salt marsh width adjacent to the lowest sections of trail is 450 to 70 feet wide. Therefore while there will be times under storm conditions when the trail may be flooded, this study suggests it will occur less frequently due to the adjacent salt marsh habitat. However, the trail is designed to withstand occasional flooding from storm events. Trail signage will also include storm flooding and tsunami warning information. Because the project as designed will accommodate sea level rise for at least 20 years and possibly up to 35 years, the project will have a ***less than significant impact*** associated with projected sea level rise.

- b) The City is actively participating in the Cities for Climate Protection (CCP) Campaign and is a member of the California Climate Action Registry. The City developed a Greenhouse Gas Reduction Plan (August 2006) to reduce locally generated greenhouse gas emissions. In this plan the City committed to decrease its greenhouse gas emissions by 20% below 2000 levels by the year 2010. The plan focuses on six action areas: energy efficiency, renewable energy, sustainable transportation, waste and consumption reduction, carbon sequestration and other methods, and cross-cutting approaches. In addition, implementing the Community Greenhouse Gas Reduction Plan helps fulfill objectives of General Plan Policy RC-8, Energy Resources Management and specifically Policy Rc-8c: – Promote Energy Efficient Transportation. It is City Policy to reduce the need for motor vehicle trips within the city and between the city and other destinations, and to reduce per-trip energy consumption... such as bike and pedestrian paths... shall be used to make these reductions.

The City of Arcata completed its first Greenhouse Gas Inventory in 2004, and most recently updated it in 2006. Calculations were corrected and/or refined in the updated inventory, which will serve as the model for monitoring future emission trends and reduction targets. The table below shows the 2006 Inventory of CO₂ emissions for sectors within City limits, including Humboldt State University, but excluding Highways 101 and 299. The 2006 Inventory shows that greenhouse gas emissions by sector were distributed as follows:

Sector	% of Total Emissions
• Commercial	33%
• Residential	21%
• Transportation	26%
• Industrial	18%
• Waste	2%

Aside from community transportation emissions, the City has calculated its community greenhouse gas emissions based largely on energy usage as reported by PG&E. The numbers include year 2000 methane emissions from cattle within Arcata, but do not account for carbon sequestration from forestland, which offsets some of the community's greenhouse gas emissions. The project would accomplish the following "Sustainable Transportation" measures that are outlined in the Community Greenhouse Gas Reduction Plan:

- **Improve Bicycle Infrastructure** (Create more bike lanes on existing roads.)
- **Improve Pedestrian Infrastructure** (Create and maintain sidewalks, paths & walkways).
- **Educate to Discourage Driving and Create Incentives to Lessen Driving** (Promote walking, bicycling, and taking public transportation, and traffic taming design.)

The proposed project implements the above measures adopted for the purpose of reducing greenhouse gas emissions. Therefore, a *beneficial impact* would occur.

Discussion - Interim Alignment (B)

Same as the Selected Alignment for all greenhouse gas emission issues. Note the Interim Alignment would result in slightly less construction emissions than the Selected Alignment because portions of the trail would be constructed on the existing railroad track prism rather than requiring construction of additional or new prism. However, this would not change the significance determinations.

Discussion - Secondary Alignment (C)

Same as the Selected Alignment for all greenhouse gas emission issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				A, B, C
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		A, B, C		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				A, B, C
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		A, B, C		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				A, B, C
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				A, B, C
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				A, B, C
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				A, B, C

Discussion - Selected Alignment (A)

- a) The proposed project consists of the development of a Class 1, ADA Accessible, non-motorized, 4.5 mile long multi-use trail. Other than the use of oil, diesel, asphalt, paints, and other materials typical of construction activities, the project would not transport, use, or dispose of hazardous materials, and thus would not create a significant hazard to the public associated with these materials. **No impact** would occur.
- b, d) Portions of the trail would occur within the NCRA ROW which may contain contaminants often found along rail lines (e.g., heavy metals, hydrocarbons, chlorinated compounds, pesticides, and PCBs). The proposed trail corridor is characterized by several uses, including the NCRA's North West Pacific rail line, City of Arcata surface streets and shoulders, existing trails within

the Arcata Marsh & Wildlife Sanctuary, and the tops of several levees. The trail would bisect or occur within the vicinity of several areas where industrial or waste uses have historically occurred, including the Shay Park area, the area roughly from 13th Street to Samoa Boulevard in downtown Arcata, “Mount Trashmore” within Arcata Marsh, and the Bracut Industrial Park. The following response is based on a Phase I Environmental Site Assessment (ESA) prepared for the proposed project. The ESA includes a hazardous materials records search conducted by Environmental Data Resources, Inc. (EDR) which lists recorded hazardous materials/waste sites within specified search radii of the trail corridor, file reviews for those listed sights thought to have a potential to be impacted by the proposed trail, a hazardous materials field reconnaissance of the trail corridor conducted by Winzler & Kelly (W&K), and an interpretation of findings prepared by W&K. The ESA is included in its entirety as Appendix F of this Initial Study.

No hazardous materials storage drums or tanks, and no visual evidence of soil contamination, was noted during the field survey of the trail corridor. However, the EDR records search identified 22 recorded hazardous materials/waste sites within 1/8th mile of the trail alignment (Figure 3). Trail construction would have “no impact” with respect to 16 of the 22 hazardous materials/waste sites because the sites are too far away, do not involve hazardous materials contamination, and/or have been remediated. However, seven of the 22 sites involve potential contamination and either occur in or within close proximity to the trail alignment. These sites are listed in Table 3 below.

Table 3
Listed Hazardous Materials/Waste Sites with the Potential to be Impacted by the Project

Phase I Map ID/ EDR Map ID	Site Name	Address	Nature of Potential Hazard ¹	Database Listing ²
2/2	Arcata High School	1720 M St.	Historical leaking USTs containing fuels – although case closed in 1994, potential MTBE groundwater contamination if MTBE not previously investigated	FINDS, HIST CORTESE, LUST, HIST UST, SWEEPS UST, HAZNET
3/4	Beatrice Fisch Trust	1461 M St.	Petroleum spill – potential soil and/or groundwater contamination	HIST CORTESE, LUST, SLIC, HAZNET
7/5	Hitt Family Bypass Trust	1188 13 th St.	Groundwater impacted by diesel - although case closed in 2003.	LUST, HIST CORTESE
4/6	M Street Property	1215 M St.	Brownfield site – potential groundwater contamination	US BROWNFIELDS
1/10	Reliable Equipment Co.	1217/1219 11 th St.	Historical leaking USTs containing fuels – although case closed in 2007, residential MTBE reported in groundwater from adjacent well	HIST CORTESE, LUST, HIST UST
5/14	Arcata Corp, HWMA	1220 Fifth St.	Gasoline leak - potential groundwater contamination	RCRA-SQG, FINDS, NPDES, HIST CORTESE, SLIC, HAZNET
6/16	Little Lake Industries	46 South I St.	Petroleum leak – potential soil and/or groundwater contamination	HIST CORTESE, LUST, SLIC, CHIMIRS, CDL, HAZNET, ENVIROSTOR

¹ W&K, 2009b.

² See EDR Hazardous Materials Records Search for description of database listings.

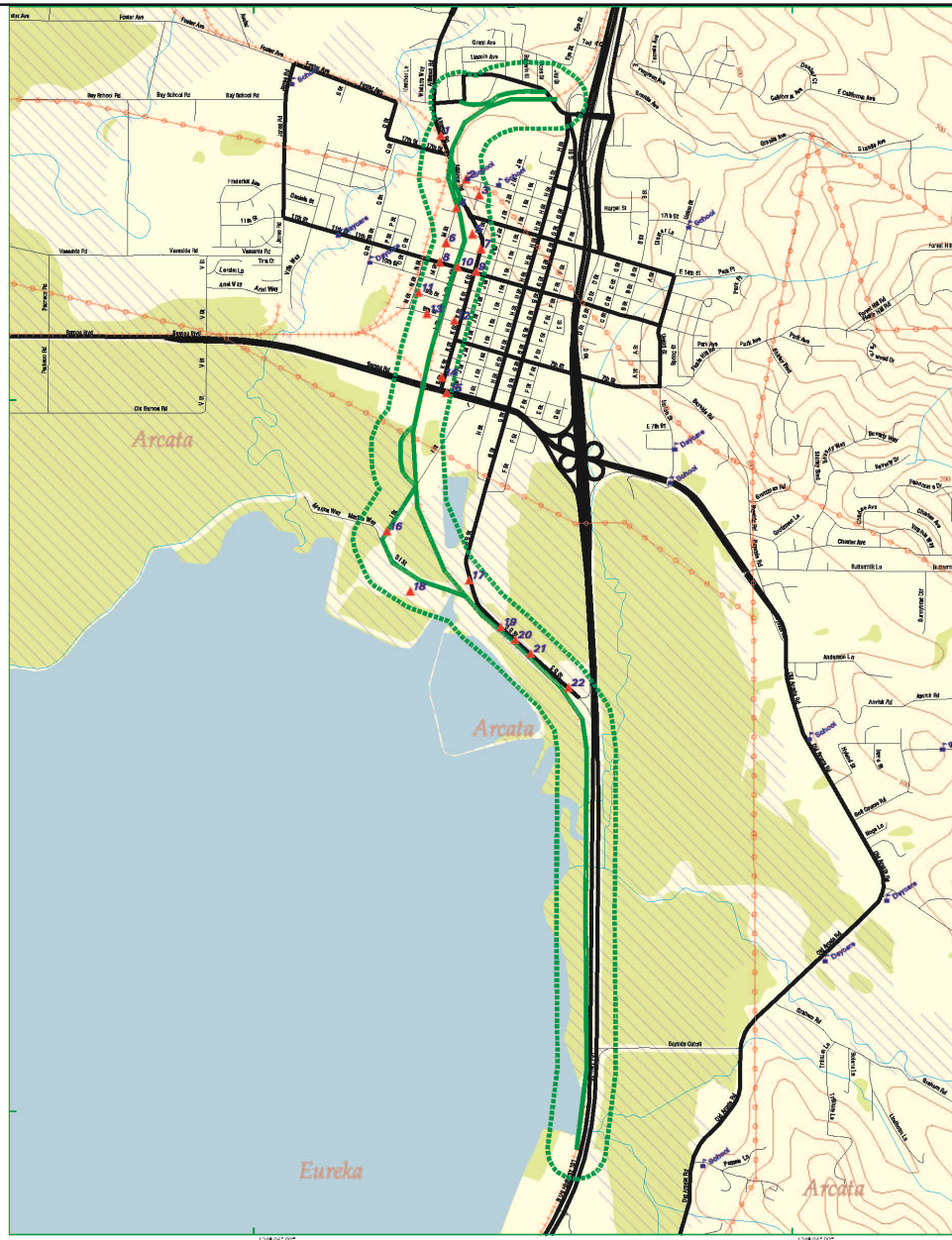
Source: Environmental Data Resources (EDR), Hazardous Materials Records Search, December 4, 2009.

Known impacted soils and groundwater contamination is not anticipated to be encountered within the trail corridor if excavation does not occur immediately adjacent to the sites listed above. If excavation does occur immediately adjacent to these sites, soil and groundwater contamination may be encountered based on the description and history of the listed sites and the shallow depth to groundwater in the area. This is especially true adjacent to the Reliable Equipment Company at the corner of 11th and L Streets where residual groundwater contamination may be present. In addition, while evidence of contamination was not encountered during the field reconnaissance of the trail corridor, W&K's past experience with other railroad properties leads to the conclusion that soil and/or groundwater contamination may exist within those portions of the trail corridor that follow the NCRA ROW. With the implementation of the recommended mitigation measures below, a *less than significant impact after mitigation* would occur.

- c) The proposed project consists of the development of a Class 1, ADA Accessible, non-motorized, 4.5 mile long multi-use trail, and although the trail is proposed within less than ¼-mile of Arcata High School, it would not emit hazardous emissions or acutely hazardous materials, substances, or waste. Therefore, *no impact* would occur.
- e-f) The proposed trail corridor is not located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. In addition, the project would not include new residential development or employee space, and would not include structures which could potentially represent a hazard to aviation. Thus, the project would not have the potential to result in airport-related safety hazards for people residing or working in the project area. *No impact* would occur.
- g) Emergency response and evacuation planning in the project area is the responsibility of the City of Arcata Police Department (APD) and the Arcata Fire Protection District (AFPD). The APD and AFPD provide critical emergency response services and leadership, and serve as the community's primary response agencies under the City's Emergency Response Plan. The Plan outlines response responsibilities during seismic events, tsunamis, slope failure, floods, storms, fires, and hazardous materials spills, and includes evacuation planning. The proposed project would not impair implementation of or physically interfere with implementation of the Plan because the project: (1) would not block existing streets; (2) would not include residential or other development that would significantly increase the number of people exposed to potential emergencies; (3) would not generate traffic congestion during an emergency; and (4) would not include uses that would require amendment of the City's emergency planning (such as a chemical storage facility or large industrial plant). Therefore, *no impact* would occur.
- h) The project site is located in an urban setting and within three miles or less of the AFPD's Downtown Arcata Fire Station located at 631 9th Street. The site does not occur within a State Responsibility Area (SRA) for fire protection, does not occur within an area of steep slopes or forest, and would not result in the intermixing of residences with wildlands. For these reasons, the project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, and *no impact* would occur.

Fig.3: Hazardous Waste Sites

Arcata Rail with Trail



EDR DataMap® - Corridor Study

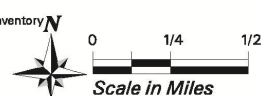


City of Arcata Rail-with-Trail Connectivity Proj



Arcata, CA

- | | | | | |
|--|---------------|-------------|-------------------------|----------------------------|
| Listed Sites | Major Roads | Pipelines | Superfund Sites | National Wetland Inventory |
| Earthquake Epicenters (Richter 5 or greater) | Waterways | Powerlines | Federal DOD Sites | |
| Search Boundary | Railroads | Fault Lines | Indian Reservations BIA | |
| Roads | Contour Lines | Water | 100-Yr Flood Zones | |



Source: Environmental Data Resources Inc.



Mitigation – Selected Alignment (A)

Hazards -1) *Pre-construction soil borings shall be conducted to characterize the soil and groundwater at the following locations:*

- *Adjacent to the NCRA ROW where the alignment follows the RR track; and*
- *Adjacent to Reliable Equipment Co. on the corner of 11th and L Streets.*

Laboratory analytical results of samples collected from these borings shall be utilized to ascertain whether health and safety concerns are present and to determine necessary soil and/or groundwater disposal options.

Hazards -2) *Project construction contractors shall report any evidence of potential soil contamination, or any unearthing of storage drums or other potential sources of hazardous materials/wastes, to the City of Arcata. If determined by the City to be warranted, a Phase II Environmental Site Assessment shall be conducted, including a hazardous materials field survey, borings, and soil testing to determine if hazardous materials contamination is present, and if yes, the spatial extent of the contamination. If contamination is found, the City shall have the site remediated to the satisfaction of the applicable federal, state and county regulatory agencies.*

Hazards-3) *If any dewatering is required during construction within 300 feet of any of the recorded hazardous materials/waste sites listed in Table 1, the City shall have the water proposed for removal tested for contamination prior to dewatering activities. If the water is found to contain regulated contaminants, the City shall have the water remediated to the satisfaction of the applicable federal, state and county regulatory agencies prior to removal.*

The provision of on-site replacement wetlands required by Mitigation Biological-4 would impact approximately 1.77 acres adjacent to the proposed trail corridor. The wetland mitigation sites that have been identified and are not anticipated to have the potential to expose persons to any hazardous materials that may be present. **A less than significant impact after mitigation** would occur with implementation of Mitigation Measure Hazards-4 below.

Hazards-4) *The City of Arcata shall have a Phase I Environmental Site Assessment (e.g., EDR records search, interviews, historical research, and reconnaissance-level field survey) conducted by a qualified engineer or hazardous materials consultant of the mitigation wetlands sites prior to development of the wetlands. If the Phase I indicates that un-remediated hazardous materials sites are listed by government records as occurring on the mitigation wetlands sites, or if the field survey finds hazardous materials contains/tanks or evidence of hazardous materials contamination, required mitigation shall be identified by the consultant and implemented by the City prior to construction.*

Discussion - Interim Alignment (B)

Same as Selected Alignment for all hazards and hazardous materials issues

Mitigation – Interim Alignment (B)

Implement Mitigation Measures Hazards-1, -2, -3, and -4.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all hazards and hazardous materials issues. Note that the Secondary Alignment would be closer to Arcata High School than the other alignments.

However, it would not emit hazardous emissions or acutely hazardous materials, substances, or waste, and therefore the significance determinations would not change.

Mitigation - Secondary Alignment (C)

Implement Mitigation Measures Hazards-1, -2, -3, and -4.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?			A, B, C	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			A, B, C	
c) Substantially alter the existing drainage pattern of the site or area, including through stream or river course alteration, in a manner which would result in substantial erosion or siltation onsite or offsite?			A, B, C	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?			A, B, C	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			A, B, C	
f) Otherwise substantially degrade water quality?			A, B, C	
g) Place housing within a 100-year flood hazard Area 1 as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			A, B, C	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			A, B, C	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			A, B, C	
j) Inundation by seiche, tsunami, or mudflow?			A, B, C	

Discussion - Selected Alignment (A)

- a, f) To protect water quality, the City applies a number of programs and practices to all new development and redevelopment projects that would directly or indirectly discharge runoff into storm drains, creeks, streams, rivers, the ocean, or other receiving water bodies in the City. These programs and practices provide a framework of appropriate measures and feasible “best management practices” (BMPs) for protecting water quality. The City implements these policies through the Arcata General Plan, Land Use Code, and the City’s BMP Manual which includes provisions to minimize potential pollutants entering the waterways and gives guidance for City facilities and activities with identified pollutant sources. Because the proposed project would be required to adhere to these requirements, and because the project would not generate or discharge wastewater or industrial flows to wetlands, creeks, waters of the U.S., or Humboldt Bay, the project would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality. A *less than significant impact* would occur.
- c, e) Receiving water bodies within the project area include: Jolly Giant Creek, Butcher’s Slough, Gannon Slough, Jacoby Creek, Old Jacoby Creek, Brainard’s Slough (which Rocky Gulch and Washington Gulch flow into), an unnamed drainage channel parallel and to the east of Highway 101 (herein referred to as the Highway 101 slough), an unnamed drainage ditch parallel and between the NCRA ROW and Highway 101, and Arcata Bay (Figure 4). Due to Highway 101 and associated existing earth dikes and site elevations, the trail would not drain to the slough channel to the east of the highway. Trail construction activities, including bridge and crossing improvements, would occur within and adjacent to water courses as summarized below and in Table 2. Following is a summary of the water crossings that are part of the proposed project.

Jolly Giant Creek is in a culvert for much of the area through the City of Arcata. In the immediate vicinity of the proposed trail alignment, the creek was daylighted/restored (1997) as well as through Shay Park (former lumber deck) along the RR ROW. The creek was also daylighted for a short segment on the west side of Alliance (referred to as Stonehenge). This creek is not tidally influenced and as such the limits of agency jurisdiction is defined at the OHWM.

Arcata Marsh Berm Bridge would be at a location in which the City of Arcata recently created a berm around a restored pond. The proposed bridge would span a large drainage channel, allowing the project to go from the elevated railroad prism to the elevated top of the berm, spanning the drainage channel. This drainage channel is not tidally influenced, and as such the limits of agency jurisdiction is defined at the OHWM. The bridge would consist of four equally-sized bridge decks totally a 93 foot span. This bridge would not require the installation of new piles.

Butcher’s Slough has an existing bridge crossing near the City WWTP which currently carries the City’s primary sanitary sewer conveyance pipeline (welded to the underside of the existing bridge). The water in the slough is tidally influenced (brackish) and receives up-gradient freshwater inputs from Jolly Giant Creek. A new 72 foot span bridge is proposed adjacent to the existing bridge in order to accommodate appropriate width for both bicycle and pedestrian traffic. This bridge would require the installation of four new piles, none of which are proposed within the water (i.e., below HTL). Pile driving near water’s edge would be necessary.

Gannon Slough has tidegates controlling waters that enter the slough from the City of Arcata and surrounding pasturelands, and is free-flowing within the proposed alignment. There is an existing railroad bridge and Caltrans Highway 101 bridge. A new bridge with 180 foot span would be installed between the two existing bridges. This bridge would require the installation of 16 new piles, 13 of which are proposed within the water (i.e., below HTL). Pile driving near water's edge would be necessary for the other three piles.

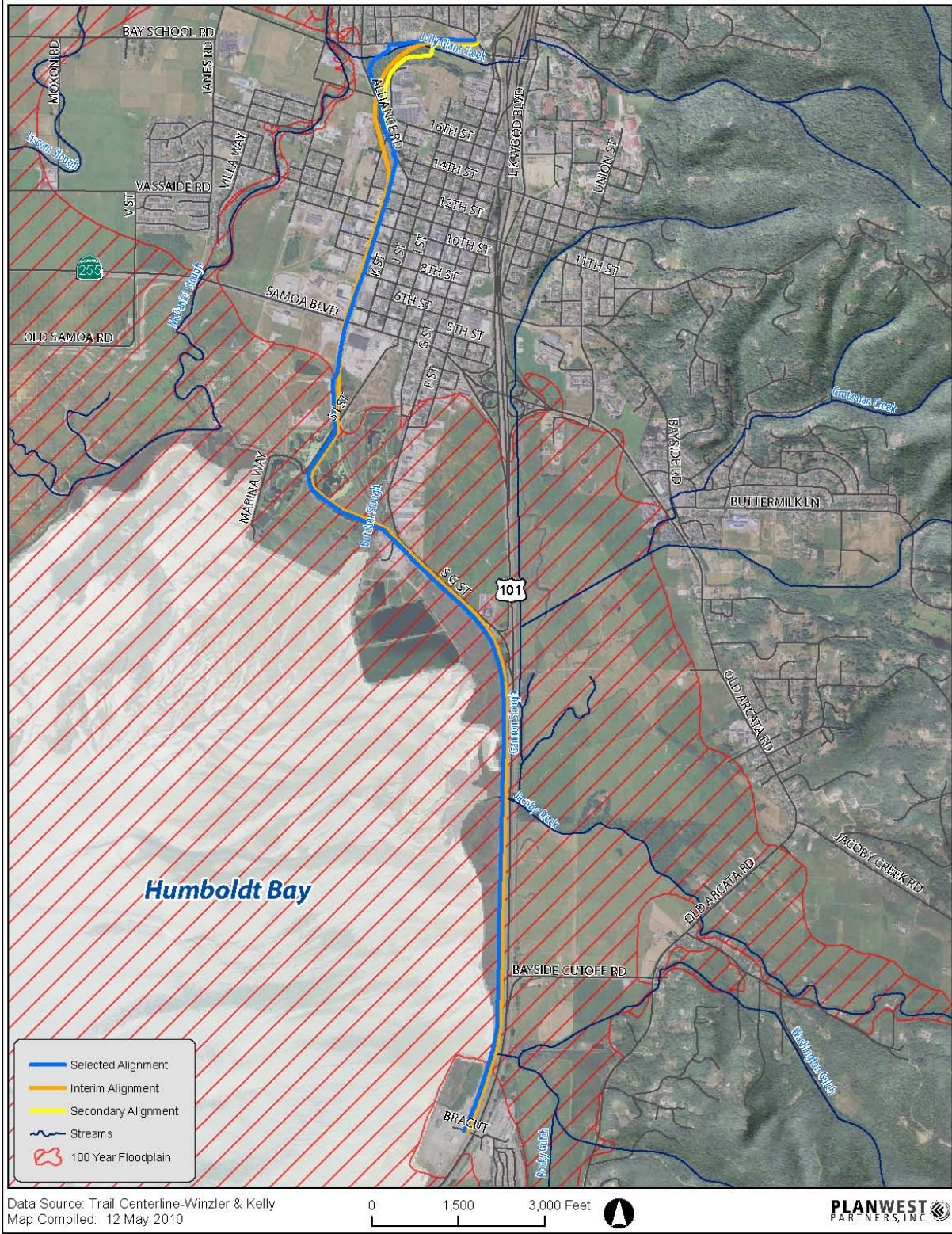
Jacoby Creek flows freely into Arcata Bay. Currently there is a railroad bridge and a Caltrans Highway 101 bridge over the creek/tidal estuary. The Caltrans bridge is being replaced as part of the Highway 101 Improvement Project, and as analyzed in a DEIR for that project (Caltrans, 2007). The Caltrans bridge includes pedestrian/bicycle crossing as part of the highway improvements. Therefore, the proposed project would utilize the upgraded bridge that Caltrans is constructing and would not require additional work within the Jacoby Creek crossing. No additional piles in water are required. Piles may be necessary adjacent/above the HTL in order to tie to the Caltrans bridge.

Old Jacoby Creek flows under the highway and is controlled by a tide gate with a large culvert. The new bridge would span approximately 124 feet. This bridge would require the installation of six new piles, two of which are proposed within the water. Pile driving near water's edge would be necessary for the other four piles.

Brainard's Slough 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. There is one tide gate at the location where the box culvert dumps out on the west side of the freeway between the freeway and the tracks. A new bridge with 148 foot span is planned. This bridge would require the installation of 6 new piles, 5 of which would be within the water. Pile driving near water's edge would be necessary for the other pile.

Fig.4: Flood Zones and Water Courses

Arcata Rail with Trail



As indicated above, proposed crossings at the Arcata Marsh Berm Bridge, and Butcher's Slough, would not require piles directly in the channels or below the OHWM/ HTL, while proposed crossings at Gannon Slough, Old Jacoby Creek and Brainard's Slough would require piles below the HTL. As part of bridge construction, temporary coffer dams and dewatering within those dams would be required below the HTL at Gannon Slough. Any such construction and coffer dam use would be accompanied by minimization and avoidance measures, developed in consultation with NOAA Fisheries, FWS and DFW during permit review, to isolate bridge footing construction from flowing water and avoid sedimentation and erosion. In addition, existing drainage patterns would be maintained, with existing drainage from the trail corridor continuing to drain to the City's existing drainage system and/or to existing drainage ditches.

During trail construction: (1) heavy construction equipment would be used within the vicinity of surface waters, and this equipment could deposit contaminants (fuel, oil, etc.) on the ground which could be carried to surface waters in stormwater runoff; and (2) fuel, oil, paints and other hazardous materials could potentially be stored along the trail alignment during trail construction and represent a potential spill hazard. However, the City of Arcata applies the following regulations and requirements to all new development that would directly or indirectly discharge runoff into storm drains, creeks, streams, rivers, the Bay, and other receiving water bodies in order to protect water quality:

- City of Arcata Storm Water Management Program (SWMP; 2003);
- City of Arcata Stormwater Best Management Practices (BMP Manual, part of the City's adopted SWMP; 2003);
- City of Arcata Storm Water Ordinance (Ord. 1319; this comprehensive ordinance is The City's mechanism to enforce water quality standards; 2001); and
- City of Arcata Grading, Erosion and Sediment Control Code (Ord. 1255)

All construction activities would utilize BMP's such as scheduling excavation and grading work for dry weather and avoiding these activities during wet weather, avoiding runoff while applying water for dust control, covering stockpiled soil with tarps or plastic sheeting if precipitation is expected, utilizing revegetation for erosion control after clearing, grading, and excavating, and planting permanent vegetation immediately after construction. The above regulations and requirements have been formulated to avoid significant stormwater quality impacts. In addition, applicable permits from the COE, RWQCB, DFW, FWS, Coastal Commission (including Clean Water Act Section 404, and 401 Water Quality Certification, etc.), City and County grading permits would be obtained prior commencement of construction activities. With the implementation of these regulations and requirements, project construction activities would not create or contribute runoff water which would provide substantial additional sources of polluted runoff or result in substantial erosion or siltation onsite or offsite during construction. Therefore, a *less than significant impact* would occur.

The proposed trail would include an average asphalt trail surface width of 10 feet (not including an additional 4 to 30 feet of unpaved pervious trail shoulder). During operation, stormwater runoff from the paved trail surface would drain to adjacent lands, existing natural drainages, drainage ditches, sloughs, or the Bay. However, because the asphalt trail would be utilized by non-motorized modes of transportation, urban runoff (e.g., runoff potentially containing

contaminants, including contaminants deposited from motor vehicles such as fuels, oils, antifreeze and rubber) would not be generated. In addition, trail operation would be subject to the City's water quality protection regulations and requirements set forth above. Thus, the project would not create or contribute runoff water which would provide substantial additional sources of polluted runoff or result in substantial erosion or siltation onsite or offsite during operation and would not otherwise substantially degrade water quality. Therefore, a *less than significant impact* would occur.

- b) The proposed trail alignment and greater City of Arcata are underlain by the 718,263 acre Mad-Redwood Groundwater Basin (Humboldt County, 2002). Annual recharge of the Basin exceeds water withdrawals, and thus the basin is not in overdraft (Ibid.). The proposed trail would be developed on several existing surfaces, including:
- (1) Vacant land and NCRA ROW: From approximately Larson Park to 13th Street, 8th Street to the levee approximately 1,050 ft south of Samoa Boulevard, I Street to the beginning of the Arcata Marsh trail, and the Arcata WWTP to Bracut (approximately 19,075 feet);
 - (2) Roadways: From approximately 13th Street to 8th Street (approximately 1,663 feet);
 - (3) Levees: From approximately 1,050 feet south of Samoa Boulevard to I Street (approximately 875 feet); and
 - (4) Trails: From approximately 875 feet west of the I Street/railroad tracks intersection to the Arcata WWTP (approx. 1,750 feet).

Trail development would occur on a mix of pervious and impervious surfaces. Assuming that approximately 4.5 miles of trail would be developed (e.g., the vacant land/ NCRA ROW, levees and existing trails), and assuming an average asphalt trail surface width of 10 feet (not including the unpaved pervious trail shoulder), approximately 5 acres of impervious surfaces would result under the project. This increase in impervious surface would represent less than 0.0002% of the total surface area of the Mad-Redwood Groundwater Basin. In addition, this impervious surface would have little if any impact on groundwater recharge because the minimal amount of runoff generated from the 10 foot wide trail would simply drain to adjacent lands, natural drainages, drainage ditches, sloughs, or the Bay, similar as currently occurs, and would percolate to the groundwater. Furthermore, there are no known water wells within the immediate vicinity of the proposed trail, and much of the trail is proposed adjacent to Humboldt Bay where saltwater intrusion negates the presence of wells. Finally, no large-scale increase in water demand would occur, nor are groundwater wells proposed. For all these reasons, the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the water table. Therefore, a *less than significant impact* would occur.

- d) The proposed project would redefine ditches along Highway 101 following existing drainage patterns. Overland runoff along open areas in Arcata Marsh would drain to the existing city drainage system or follow existing drainage patterns. The proposed trail would be located directly adjacent to the existing railroad prism or be constructed on existing roads or levees (e.g., maintain existing drainage patterns).

The existing drainage system along the western edge of Highway 101 between Jacoby Creek and Brainard's Slough consists of a drainage ditch between the edge of the highway and the existing railroad track prism. The proposed trail would extend from the railroad prism into a portion of the existing drainage ditch, resulting in less available drainage ditch volume for storm discharges. A hydrologic and hydraulic analysis of this drainage was prepared to evaluate the potential impacts of the decrease in drainage capacity (Appendix G). This analysis included calculations of peak runoff and velocity rates and ditch capacity for a 100 year storm event. The results show that ditch capacity would not be exceeded during the analyzed storm event. The project would not substantially alter the existing drainage pattern of the site, alter the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Therefore, a *less than significant impact* would occur.

- g, h, i) The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicate portions of the proposed trail corridor lie within both Zone A and Zone C designated Floodplains. Zone A is defined as “Areas of 100-year flood; Base Flood Elevations and flood hazard factors not determined.” Zone C is defined as “Areas of Minimal Flooding-Outside of the 100-year Base Floodplain Area.” The proposed project would result in some filling in FEMA Flood Zone A within the trail corridor between South I Street and Bracut (Figure 4). However, the fill for the trail would not support a structure that would be subject to flood insurance (i.e. residential/ commercial structure) and the proposed amount of fill in Zone A (approximately 4.5 acres) related to the total floodplain area (1,440 acres) would not result in substantial loss of functional floodplain (0.31%) (Appendix G). When compared to the total area available for inundation of floodwaters, the proposed project would result in placement of negligible amounts of fill in the floodplain. The proposed project would not develop housing or critical facilities, and would not place structures within a 100-year flood hazard area which would impede or redirect flood flows or expose people or structures to a significant risk involving flooding. Therefore, a *less than significant impact* would occur.
- j) The Humboldt County Web GIS database identifies the area along the Bay from Samoa Boulevard to Bracut and beyond as a “tsunami evacuation area” and may be subject to tsunami inundation. However, because the proposed project would not include the development of residential units or other occupiable structures, and because mitigation for the potential tsunami inundation hazard already exists along the Bay in the form of tsunami hazard warning signs and a Countywide tsunami early warning system, the impact would be *less than significant*.

Discussion - Interim Alignment (B)

The Interim Alignment would require less fill than the Selected Alignment because portions of the trail would be constructed on the existing railroad track prism rather than requiring construction of additional or new prism. However, this would not change the significance determinations.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all hydrology and water quality issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?				A, B, C
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			A, B, C	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			A, B, C	

Discussion - Selected Alignment (A)

- a) The proposed project would provide non-motorized connectivity from northern Arcata at Larson Park (near Sunset Avenue and the Arcata Skate Park), through the City of Arcata and the Arcata Marsh, and along the eastern edge of Humboldt Bay south to the Highway 101 and Bracut intersection. The proposed project would not remove existing streets, would not develop impediments to cross-town vehicular, pedestrian or bicycle movement, and would not otherwise physically divide an established community. Therefore, ***no impact*** would occur.
- b) The proposed project would be located mostly within NCRA ROW or City Street ROW, with some parcels owned by City of Arcata, U.S. Fish and Wildlife Service (Humboldt Bay Wildlife Refuge), and private ownership. The proposed trail corridor occurs within multiple land use and zoning designations - primarily undesignated ROW, City parks designated PF, private property designated IL and RL, and the Arcata Marsh and Wildlife Sanctuary designated NR (Figures 5 and 6). All these City land use designations and zones permit trail development. Therefore, the proposed project would not conflict with existing General Plan land use designations or zoning.

Applicable Land Use and Planning policies adopted for the purpose of avoiding or mitigating environmental effects can be found throughout the Arcata General Plan; mostly in the Land Use Element, Transportation Element, and the Resource Conservation & Management Element. The General Plan also identifies policies meant to avoid/ mitigate environmental impacts related to air quality and cultural resources, discussions of which can be found in the applicable sections of this Initial Study. Resource Conservation & Management Element Policy RC-3a requires a wetland reconnaissance or delineation report for potential wetlands impacts. A wetland delineation was prepared for the proposed project (Appendix F of this Initial Study). The City will follow Policy RC-3b, which stipulates allowances and mitigations for filling a wetland (see the Biological Resources section of this Initial Study for a complete discussion of wetland impacts and mitigation measures). These mitigation measures are consistent with applicable General Plan policies, including RC-3j (Minimum mitigation requirements for wetland impacts) and RC-3k (Wetland functional capacity maintenance requirement), and would reduce potential impacts to less than significant. As long as the City complies with these policies for filling wetland, the proposed project alignment would not be in conflict with General Plan policies adopted to avoid or mitigate environmental effects on wetlands.

Fig. 5: GPLU Designations

Arcata Rail with Trail

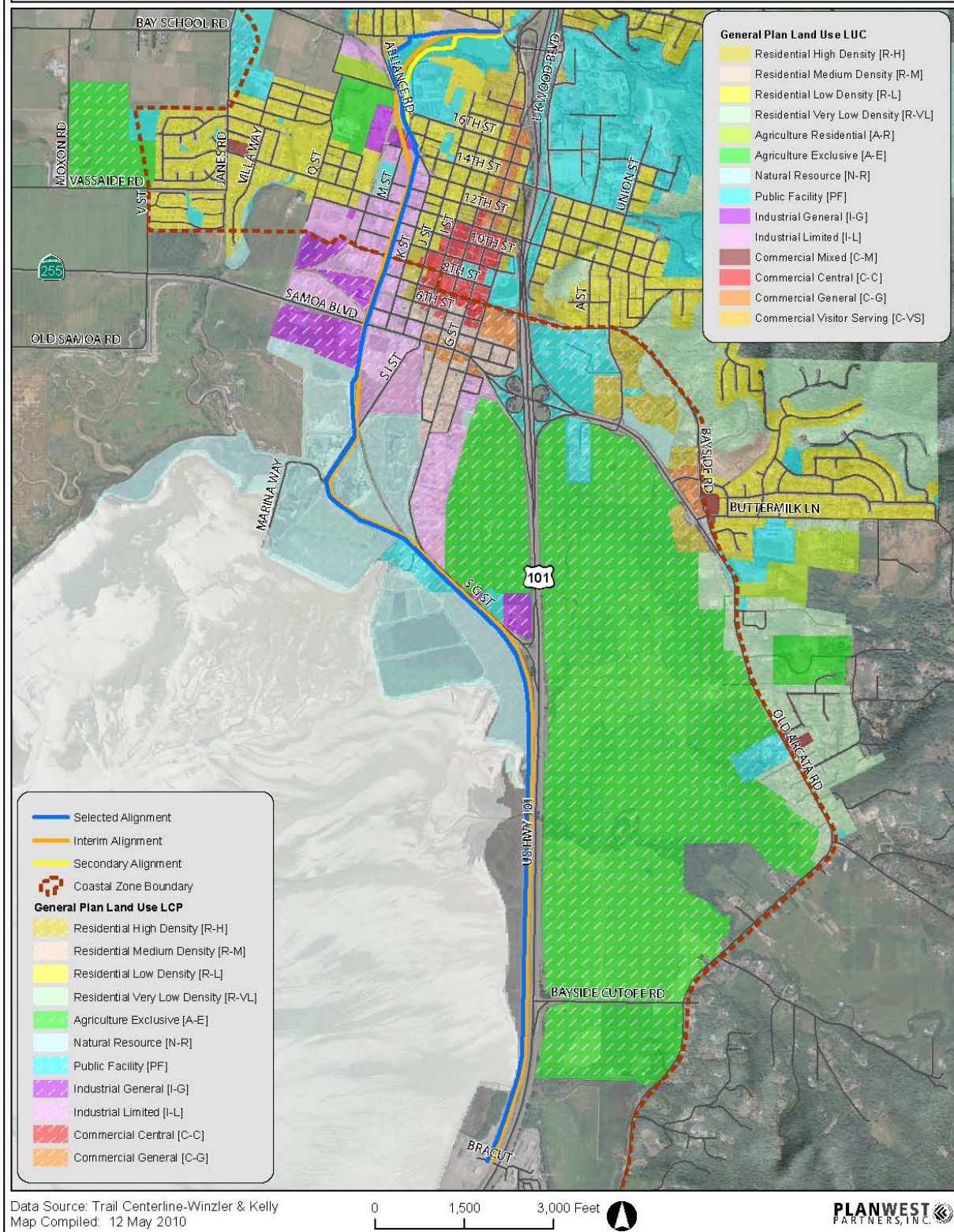
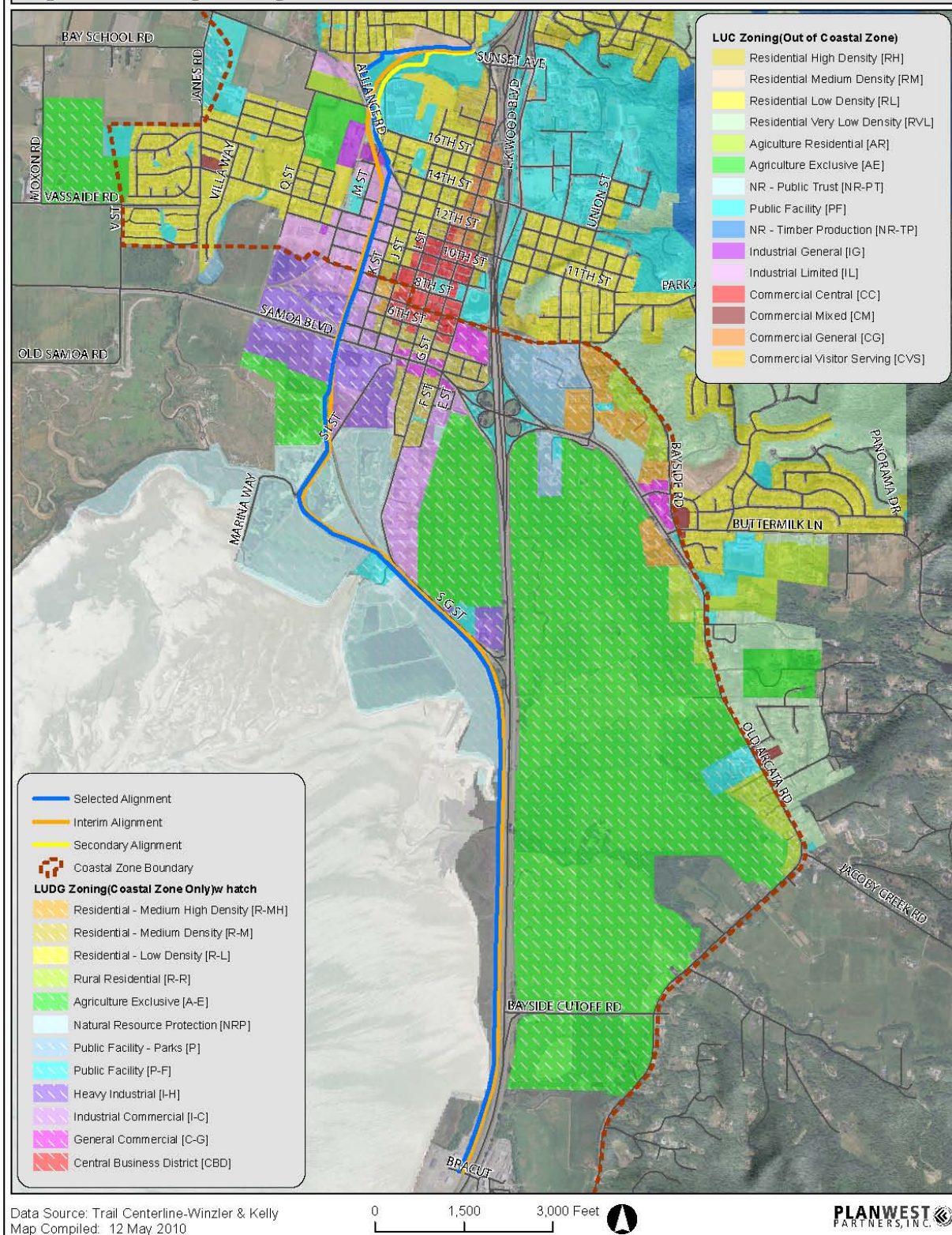


Fig.6: Zoning Designations

Arcata Rail with Trail



Other agencies that regulate the filling of wetlands are the U.S. Army Corps of Engineers (COE) and the State Water Resource Control Board (SWRCB), plus the National Marine Fisheries Service (NMFS) as part of COE permit process, and the California Department of Fish and Wildlife (DFW). Since the proposed project would affect COE and SWRCB “jurisdictional wetlands,” the City must obtain the necessary permit(s) to comply with respective regulations including Clean Water Act Section 404, and 401 Water Quality Certification, and DFG 1600 Permit. By implementing permit requirements and the Biological Resource Mitigation Measures, the City would not conflict with applicable federal and state wetland regulations. Based on the above, a *less than significant impact* would occur.

- c) The City does not have a habitat conservation plan or a natural community conservation plan that would apply to any part of the proposed trail corridor. The City does have the “Arcata Creeks Management Plan” (1991) which guides “management of creeks that flow through Arcata in order to provide the fullest realization of the creeks’ beneficial uses.” The City has designed and planned the proposed project to comply with all City policies, codes, and plans, which includes supporting and complying with the “Arcata Creeks Management Plan.” Therefore, a *less than significant impact* would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all land use and planning issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all land use and planning issues. However, this alignment would bisect a parcel with Residential Low Density land use designation and zoning located on Alliance and 16th Streets. This parcel is owned by the City, is small, located on a slope, and not ideal for residential development. Therefore, the significance determinations would not change.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				A, B, C
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				A, B, C

Discussion - Selected Alignment (A)

- a-b) No mineral resources and no mineral resource extraction currently occurs within any part of the proposed trail corridor. The proposed trail would not affect the availability of a known mineral resource that would be of value to the region, nor would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a specific, general plan or other land use plan. Therefore, *no impact* would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all mineral resource issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all mineral resource issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE: Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			A, B, C	
b) Exposure of persons to or generation of excessive groundborne noise levels?			A, B, C	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			A, B, C	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			A, B, C	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				A, B, C
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				A, B, C

Discussion - Selected Alignment (A)

- a, c) Current conditions within the project area generate no, or low intermittent noise associated with use of the NCRA ROW and existing Arcata Marsh trails as pedestrian pathways. The majority of the area is within existing transportation ROW through both urban and natural resource land uses. The project area is exposed to off-site noise caused primarily by traffic on adjacent City Streets and Highway 101.

For measuring noise levels and setting noise standards, the City uses the Community Noise Equivalent Level (CNEL) and the Day/Night Noise Level (L_{dn}). The L_{dn} measure averages a weighted noise over a 24-hour period, and adds 5 dBA (A-weighted decibel) to noise levels between 7:00 p.m. and 10:00 p.m. The CNEL uses the same methodology, plus adds 10 dBA to noise levels between 10:00 p.m. and 7:00 a.m.

The project would be subject to the following Arcata General Plan Policy N-3b noise standard:

Maximum Allowable Transportation Noise Source Exposure

LAND USE	OUTDOOR ACTIVITY AREAS L _{dn} /CNEL, dB
Playgrounds, Neighborhood Parks	70

Source: Arcata General Plan: 2020, Table N-2 excerpt

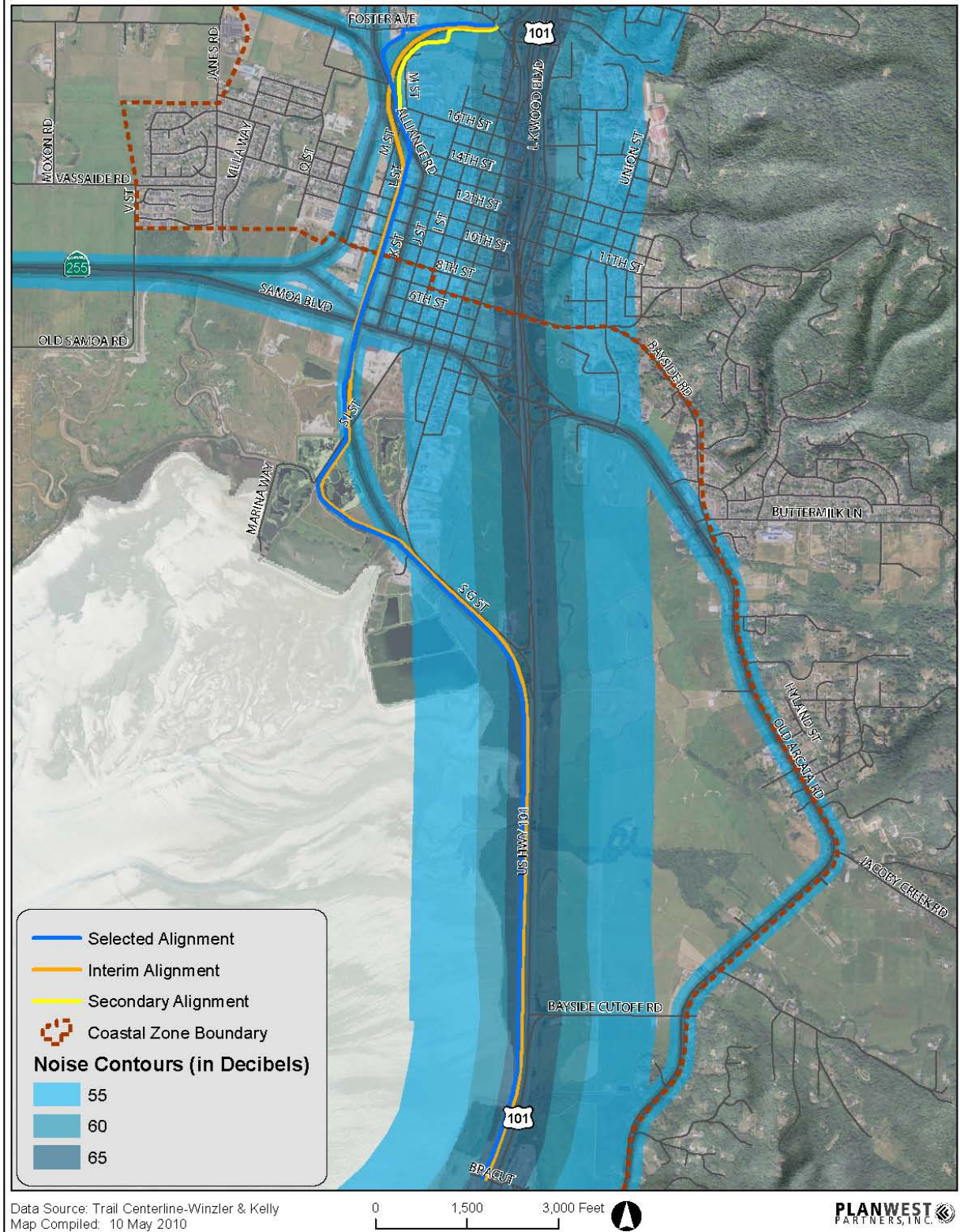
The project site is located adjacent to City streets and Highway 101; General Plan Figure N-b shows projected noise contours for these areas as 65 dB (Figure 7). Therefore, the project site is not expected to be subject to noise levels in excess of General Plan standards, and any potential exposure would be *less than significant*.

Operational noise associated with trail use and maintenance activities would be generated adjacent to limited noise-sensitive uses (residences, Arcata High School). However, the noise would include pedestrian/bicycle activity noise and occasional landscaping and trail repair which are typical of an urban setting. For the overall trail alignment, this incremental increase in noise would not expose persons to noise levels in excess of applicable standards and would not represent a substantial increase in noise. Therefore, a *less than significant impact* would occur.

- b) During the construction phase, earth-moving and compacting activities would generate groundborne vibration or groundborne noise; the level of vibration or noise would typically be moderate. These activities would be temporary, during the initial stage of construction. In addition, pile driving machines would be used for driving piles for proposed bridge replacements over Butcher's Slough, Gannon Slough, Jacoby Creek, and Rocky Gulch. While these pile driving activities could generate high levels of groundborne vibration and noise, they would be temporary, and they would occur along Humboldt Bay between the Arcata WWTP and Bracut which is well away from existing noise-sensitive uses (e.g., residences, schools, etc.). Finally, the proposed project would not include heavy industrial activities, blasting, or other activities that could create excessive groundborne noise levels or vibration. Therefore, a *less than significant impact* would occur.
- d) Construction activities would temporarily increase ambient noise levels, mainly from heavy equipment and construction-related truck traffic. Constructing the trail would include using heavy equipment for earth moving, grading and compaction, paving, and hauling. The construction phase would increase localized truck trips to transport materials and equipment to and from the proposed trail corridor. Construction-related noise would be unavoidable; however, its temporary and intermittent nature would moderate the environmental impact. The proposed project would comply with all applicable City policies to abate construction-related noise impacts. General Plan Policy N-5d which requires limiting construction activity to the hours of 8 a.m. and 7 p.m. Monday through Friday, and between 9 a.m. and 7 p.m. on Saturdays, and Policy N-5e which requires that all construction equipment be maintained in good working order and fitted with factory approved mufflers.

Fig.7: Noise Contours

Arcata Rail with Trail



Construction related noise could be temporarily disruptive to adjacent residences along the proposed trail alignment. However, these residences already experience daily urban traffic noise from adjacent streets. Since construction noise would be temporary and limited to daytime hours per above policies, the project's impact would be *less than significant*.

- e-f) The project site is not located within 2 miles of a public airport or in the vicinity of a private airstrip, and thus would not expose people working or residing in the area due to excessive noise levels. *No impact* would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all noise issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all noise issues. While some construction activities would occur on the Arcata High School property under this alignment, they would not result in significant construction noise because: (1) since the trail would be constructed on an existing service road, the need for heavy construction equipment use would be limited; (2) construction activities would be temporary; (3) construction noise would be required to comply with Arcata General Plan Policies N-5d and -5e and other City requirements; and (4) the High School buildings closest to the proposed trail include the gymnasium, wood shop and metal shop which cannot be considered particularly noise sensitive.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				A, B, C
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				A, B, C
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				A, B, C

Discussion - Selected Alignment (A)

- a-c) No existing housing occurs within the project corridor and the proposed project would not directly or indirectly induce substantial population growth, would not displace existing housing or people, and would not necessitate the construction of replacement housing. Therefore, *no impact* would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all population and housing issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all population and housing issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			A, B, C	
b) Police protection?			A, B, C	
c) Schools?				A, B, C
d) Parks?			A, B, C	
e) Other public facilities?				A, B, C

Discussion - Selected Alignment (A)

- a, b) Emergency response and evacuation in the project area is the responsibility of the APD located at 736 F Street, and the AVFD located at 631 9th Street and 3235 Janes Road. These provide critical emergency response services and serve as the community's primary response agencies under the City's Emergency Response Plan. Both the APD and AVFD are part of the multiagency Standardized Emergency Management System emergency response network. In addition, a California Highway Patrol (CHP) office is located at 255 East Samoa Boulevard and regularly provides back-up services to APD within city limits and serves as the primary emergency responders along the Highway 101 corridor. The Humboldt County Sheriff's Office also serves the Highway 101 Corridor.

The project would not result in significant adverse effects on service ratios for the police or fire departments. This is because: (1) trail users already work or reside in the area and would not represent an increased service population; and (2) the proposed trail corridor is already served by AVFD, APD, CHP and County Sheriff so that the trail would not require extension of fire and police protection services into areas not already served. Although there may be increased use of certain areas, the overall impact to fire and police services would be *less than significant*.

The existing L Street corridor through the City contains the railroad track and a narrow vehicle travel lane that lacks striping, although two-way traffic and some parking is permitted. The proposed improvements allow for bike access on L Street as well as a segregated trail along this corridor. L Street is primarily designed for local access vehicular travel between 8th and 11th Streets. Since L Street is a minor rather than a primary north-south corridor, and there are multiple alternative existing north-south routes both east and west of L Street, the calming of vehicular travel along L Street under the proposed project would not have substantial adverse impacts on fire and police emergency access or response times. Traffic calming measures include traffic humps and yield or stop signs at 8th, 9th and 10th Streets. Between 7th and 11th Streets a new 8 to 10 foot wide segregated multi-use trail will be placed on the west side of the railroad tracks.

- c) The proposed trail corridor would occur in the Arcata Elementary School District and the Northern Humboldt Union High School District. The proposed project would not result in significant adverse effects on school district service ratios or school facilities for the same reasons discussed above for fire and police protection services. Therefore, ***no impact*** to schools would occur.
- d) The proposed trail would represent a new area-serving recreational facility, and would connect a number of existing City parks including Larson Park, Arcata Skate Park, Shay Park, and the Arcata Marsh. Therefore, in terms of the provision of, and access to, park and recreational facilities, the proposed project would have a beneficial impact.

The proposed project would also increase connectivity between existing City parks, and thus could potentially increase park usage. However, the proposed trail would not contribute to any substantial physical deterioration of City parks. This is because the City reviews park funding and park maintenance requirements on an annual basis, and provides the required funding and maintenance needed to maintain its parks consistent with its General Plan and City Parks & Recreation Master Plan. Therefore, a ***less than significant impact*** would occur.

- e) No other public facilities or public services apply to the project. Therefore, ***no impact*** would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all public service issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all public service issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				A, B, C (beneficial)
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				A, B, C

Discussion - Selected Alignment

- a) The proposed trail would increase recreational opportunities within Arcata and is an important piece of developing a regional active transportation network. It is identified in both the City Parks & Recreation Master Plan (2009, adoption pending) and the Pedestrian and Bicycle Master

Plan (2010) as a priority bicycle project. The entire trail would be an overall recreational benefit to the community and would represent a net increase of multi-use trails in the area.

The proposed trail could incrementally increase the use of existing neighborhood and regional parks or other recreational facilities such as Larson Park, Shay Park, and the Arcata Marsh. However, for the same reasons discussed under public services above, the proposed project would not cause substantial physical deterioration of facilities and would have an overall **beneficial impact** to regional recreational facilities.

- b) The proposed project is a trail project and would not require the construction or expansion of other recreational facilities which could result in adverse physical effects. However, construction and operation of the proposed trail itself could have adverse physical effects. These potential adverse physical effects are discussed in the other sections of this Initial Study, and **no impact** would occur beyond these adverse physical effects.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all recreation issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all recreation issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation systems, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.			A, B, C	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			A, B, C	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				A, B, C
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			A, B, C	
e) Result in inadequate emergency access?			A, B, C	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			A, B, C	

Discussion - Selected Alignment (A)

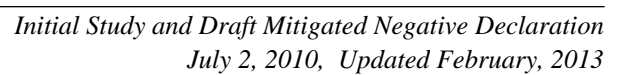
- a, b) The proposed multi-use trail would provide increased opportunities and routes for safe non-motorized travel within the City, as well as for commuters traveling to/from Eureka (Figure 8). The proposed trail would generally be accessed from the following locations: northern trailhead, southern trailhead, street intersections, and adjacent trails in the Arcata Marsh, and at a large turn-out on South G Street.

The project has been designed to meet the operational needs of adjacent and intersecting roadways, the railway system, area businesses, and a variety of potential trail users. Planning, design, and implementation standards were derived from the following sources: City of Arcata General Plan Transportation Element, the current editions of the California Department of Transportation Highway Design Manual, Chapter 1000 “Multi-use Path Planning and Design”, the U.S. Department of Transportation, Federal Highway Administration “Manual on Uniform Traffic Control Devices – California Supplement (CAMUTCD)” and the American Association of State Highway and Transportation Officials’ (AASHTO) “Guide for Development of Bicycle Facilities.” Additional guidance concerning the design of rails-with-trails facilities was considered, including NCRA’s “Trail Projects in the NWP Line Rights-of-Way” and the U.S. Department of Transportation’s “Rails-with-Trails: Lessons Learned.”

The portion of the proposed trail along L Street, the Urban Interface Trail, would be designed to encourage non-motorized transportation both along the roadway and separated pathway. Existing vehicle use of L Street is very low as it is un-striped and relatively narrow and there are multiple alternative north-south routes both east and west of L Street. Therefore, the proposed project would not have substantial adverse impacts to the City’s circulation system.

There are approximately 20 existing 45-degree un-striped parking spaces on L Street between 9th and 10th Streets, and 7 parallel parking spaces between 8th and 9th Streets. These 45 degree spaces are not official parking spaces (e.g., being used by a used car dealer or auto mechanic to store cars). All commercial and residential uses along L Street are required by City Land Use Code policies to provide on-site parking for customers/ residents as applicable. The proposed design would include some parallel parking between 9th and 10th Streets and there is sufficient parking on adjacent streets for any additional parking needs, therefore, any loss of parking on L Street would be less than significant.

Arcata Rail with Trail



The proposed project would include new parking facilities for trail users at the southern trailhead (Bracut) and at the WWTP. The southern trailhead parking would include two - four new parking spaces, including one ADA space. This parking would be accessed from the Highway 101 turn-off for Bracut, with two spaces located on each side of the entrance (east of the existing gate and west of the railroad tracks). The WWTP trailhead parking area would be located in an existing gravel pull-out adjacent to the WWTP. This area would be improved with up to ten parking spaces, benches, interpretive signage, and landscaping. Although this parking area would be accessed via the WWTP turn-off from South G Street, it would be outside the existing fenced WWTP and would not interfere with WWTP access or operations.

The proposed project would not increase vehicle traffic on City streets; in fact, the project could potentially decrease vehicle trips within the City by encouraging non-motorized travel. It would not conflict with effective circulation system performance or intersection level of service standards. Based on the above, the project: (1) would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system; (2) would take into account all modes of transportation, including mass transit and non-motorized travel; and (3) would take into account other components of the transportation system, such as intersections, streets, pedestrian paths, and bicycle paths. Therefore, a *less than significant impact* would occur.

- c) The proposed project would not be located near an airport, would have no impact on air traffic patterns, would not substantially increase air traffic levels, and would not result in substantial safety risks. Therefore, *no impact* would occur.
- d) Trail development could affect transportation/traffic safety: (1) along existing City Streets; (2) at existing City street crossings; (3) at access points along Highway 101; and (4) along existing Arcata Marsh trails. The proposed trail would be separated from all existing City streets by curbs, striping, fences, or other features. Along L Street roadway design focuses on encouraging both motorized and non-motorized transportation. The narrow street width (around 12 feet) would keep vehicle speeds very low and encourage safe driving. Trail safety features in this segment may include, trail lighting, intersection signage, speed humps and tables at intersections, and landscaping. In addition to the existing travel lane, a bike and pedestrian pathway will be constructed west of the railroad tracks to provide a multiuse segregated path. With the provision of these proposed features, substantial hazards due to design features would be avoided along L Street.

The trail would intersect and/or cross the following streets (from north to south): Sunset Avenue, Foster Avenue, Alliance Road, M Street, 12th Street, 11th Street, 10th Street, 9th Street, 8th Street, Samoa Boulevard (Hwy 255), I Street, City of Arcata WWTP Driveway (accessing South G St), and Bracut Industrial Park Driveway (accessing Highway 101). In general, roadway and driveway crossings would be ADA accessible and include warning signage and markings both on the trail and the approaching vehicular way. The trail would include yellow centerline striping and additional warning signage and striping approaching intersections with existing roads and railroad crossings. In addition, signage would be added along the trail warning users of curves, bends, and other hazardous situations. Speed control can only be maintained through signage and striping; speed bumps or other surface irregularities are not permitted to control the speed of bicycles and other non-motorized vehicles. The above design features would be implemented at the intersections as shown in the detailed Design Plans, Appendix I, and would avoid substantial hazards at those trail crossings.

In compliance with FHWA and Caltrans standards for a Class I Bikeway, segments of the trail adjacent to roadways would be separated by at least 5 feet and include a physical barrier (concrete barrier or fence). The proposed trail along Highway 101 would meet all Caltrans safety requirements including physical barriers where necessary between the trail and Highway 101. The proposed trail would also be elevated above the highway travel lanes to approximately the elevation of the existing railroad tracks. This would keep trail users separated from vehicles traveling on Highway 101.

The proposed trail would be directly adjacent to an inactive rail line. There is a perceived hazard associated with trails adjacent to active rail lines; however the project has been designed to meet all applicable NCRA policies and includes the following safety design features: fencing (now or when rail service is restored) between the trail and the RR track along the entire alignment with a minimum setback of 8.5 feet from RR centerline, RR crossing pavement markings and signage at all crossing locations, minimum 45° angle for all trail/RR crossings, and the City would work with NCRA to install additional bar crossing as required if the RR becomes active. These features would avoid any substantial conflicts between the rail line (which is currently inactive) and trail users.

The proposed trail would overlay existing trails within the Arcata Marsh that are used by walkers, runners, bicyclists, and bird watchers. There could be potential conflicts between these users and bicyclists due to the difference in these activities. However, since the proposed trail would have striping, signage, and unpaved shoulders on both sides which could be used by birdwatchers and other uses who want to get out of the main travel lanes, substantial safety related conflicts between trail users and bird watchers would be avoided.

In addition to design safety features, a Trail Safety Plan is included as part of the proposed project to satisfy the 2009 NCRA Policy and Procedures Manual requirements for a public agency proposing a rail-with-trail facility. As specified in the NCRA Policy and Procedures Manual, the public agency shall prepare a Safety Plan including certain design, maintenance and operations measures. Each required topic is discussed in this plan as follows:

- Section 2.2: Trespassing and Crime Prevention. Topics include trespassing reduction and crime prevention strategies, such as regulatory signage, emergency access and identification of a Trail Manager within the City of Arcata.
- Section 2.3: Emergency Response. Topics include emergency response procedures and responsibilities.
- Section 2.4: Security and Patrols. Topics include signage, establishment of a coordinated and responsive patrol service and other security measures.
- Section 2.5: Trail Barrier Design Standards. Topics include recommended barrier systems and RR ROW access.

With incorporation of the design features described above and compliance with the safety standards outline in the Trail Safety Plan, the proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses. Therefore, a ***less than significant impact*** would occur.

- e) The proposed trail would be adjacent to existing street and highway systems. Emergency access to the project area already exists from these streets, and would continue to exist under the proposed project. Bollards would be placed at trail intersections and entrances to prevent all but emergency and maintenance vehicles from entering. See the Public Services discussion in this Initial Study for additional information regarding potential fire and police protection impacts. Since the trail corridor is already served by AVFD, APD, CHP and the County Sheriff, the trail would not slow or hinder emergency response, the trail would not require additional emergency services, and there would be emergency access to all trail segments, a ***less than significant impact*** would occur.
- f) Both the Arcata General Plan: 2020 and the Pedestrian and Bicycle Master Plan (2010) emphasize the City's desire to "create and maintain a balanced transportation system ...to reduce the percentage of trips that are made by automobile and provide the opportunity and facilities to divert trips from automobiles to other modes (General Plan Transportation Element Policy T-1)." The following Arcata General Plan: 2020 policies are also applicable to the proposed project:
 - T-5a Overall bicycle route system and connectivity.
 - T-5b Class I bikeways.
 - T-5g Pedestrian pathways and multi-use trails.

The proposed project would construct a Class I bikeway that would encourage the City's Bicycle & Pedestrian Master Plan goal to "work towards achieving 50% of all trips that begin and end in Arcata being made by non-motorized modes by year 2020." In addition this Plan identifies the proposed project as a priority bicycle project (Humboldt Bay Trail - Arcata Segment, Table 5.5). Furthermore, the entire trail would be constructed to Americans with Disabilities Act (ADA) standards. The proposed project would thus help implement rather than conflict with adopted policies, plans and programs regarding public transit, bicycle, and pedestrian facilities and would not decrease the performance or safety of such facilities. Therefore, a ***less than significant impact*** would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all transportation/ traffic issues except the Interim Alignment would cross Alliance Street slightly further north (at 17th Street) than the Selected Alignment. However, the significance determinations would not change.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all transportation/ traffic issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				A, B, C
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				A, B, C
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			A, B, C	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			A, B, C	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			A, B, C	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			A, B, C	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			A, B, C	

Discussion - Selected Alignment (A)

- a, b) The proposed trail would not involve construction or use of facilities that contribute wastewater to the City's WWTP, and would not require or result in new, or expansion of existing, water or wastewater treatment facilities. Therefore, ***no impact*** would occur.
- c) Where existing storm drainage facilities exist adjacent to the trail, short extensions or modifications to the inlets would allow runoff from the trail to enter the existing storm drain system. Where possible drainage from the trail will be retained and infiltrated adjacent to the trail prior to directing drainage to existing facilities. Where new paving or new surface work would occur over existing utilities, all necessary elements (such as existing valve boxes, manhole lids, electrical vaults, etc.) would be raised to the new elevation of the trail surface. Because drainage facilities are proposed to accommodate stormwater runoff from the proposed trail, because these drainage facilities would consist mainly of maximizing infiltration of stormwater

and connection to existing drainage facilities, and because large-scale expansion of existing drainage facilities would not be required, the proposed project would not require the construction of drainage facilities that would cause significant environmental effects. Therefore, a *less than significant impact* would occur.

- d, e) See responses a) and b) regarding water and wastewater facilities. The proposed trail would not create an increased demand for domestic water service or wastewater treatment capacity. The project would require relatively small quantities of water during the construction phase (e.g. for dust control and concrete/asphalt applications) and water for landscaping, until the new vegetation is established. The project's water demands would not be significant and could be met by existing entitlements and resources. Therefore, the project would not result in the need for the construction of new water or wastewater treatment facilities, or the expansion of existing facilities. A *less than significant impact* would occur.
- f, g) The proposed trail would generate limited solid waste during both construction and operation. Construction solid waste would include the one-time temporary generation of construction waste associated with the proposed development of an approximately 4.5 mile trail. Recyclable construction materials (e.g. scrap metal, wood, concrete, glass) could be shipped to local businesses for reuse, with non-recyclable materials sent to the Humboldt Waste Management Authority (HWMA) transfer station in Eureka.

Operational solid waste would be generated by trail users. Trash and recycling receptacles are currently provided by the City of Arcata at Larson Park and in the Arcata Marsh and Wildlife Sanctuary. These receptacles are periodically emptied by City of Arcata and would be sufficient to accommodate any trash generated by trail users. All of the project's solid waste disposal needs would comply with federal, state, and local statutes and regulations related to solid waste. Existing services and contracts for the City/HWMA are adequate to handle the project's short-term and long-term waste disposal needs. Therefore, a *less than significant impact* would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all utility and service systems issues.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all utility and service systems issues.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal		A, B, C		

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			A, B, C	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			A, B, C	

Discussion - Selected Alignment (A)

Certain mandatory findings of significance must be made to comply with CEQA Guidelines §15065. The proposed project has been analyzed, and it has been determined that with implementation of the mitigation measures recommended in this Initial Study, it would not:

- Substantially degrade environmental quality;
 - Substantially reduce fish or wildlife habitat;
 - Cause a fish or wildlife population to fall below self-sustaining levels;
 - Threaten to eliminate a plant or animal community;
 - Reduce the numbers or range of a rare, threatened, or endangered species;
 - Eliminate important examples of the major periods of California history or pre-history;
 - Achieve short term goals to the disadvantage of long term goals; or
 - Have environmental effects that will directly or indirectly cause substantial adverse effects on human beings.
 - Have possible environmental effects that are individually limited but cumulatively considerable when viewed in connection with past, current, and reasonably anticipated future projects;
- a) Construction of the proposed trail has the potential to adversely affect waters of the U.S., wetlands and potential habitat for several endangered fish species, though it would not threaten self-sustaining levels of these fish species or endangered plant or animal species. The potential impacts to biological species would be *less than significant with incorporation of mitigation measures* (see the Biological Resources Section of this Initial Study for a complete discussion of potential biological impacts and mitigation measures).

The proposed trail would not eliminate important examples of California's history or prehistory. See the Cultural Resources Section of this Initial Study for a complete discussion of potential cultural impacts and mitigation. The project's potential impacts on historic and prehistoric resources would be reduced *to less than significant with the incorporation of mitigation measures* (see the Cultural Resources section of this Initial Study for mitigation measures).

- b) Many of the items reviewed as part of this Initial Study would result in no impact or were considered to have less than significant impacts, and where appropriate, findings were made with reference made to the Arcata General Plan: 2020 and specific studies prepared for the project. The potentially significant effects of the project would be avoided or reduced to less than significant due to the project design and the incorporation of mitigation measures identified in this Initial Study. Because the proposed project would not result in significant impacts after mitigation, and because the proposed project is a trail project rather than a development project that could add to existing and future population growth and development in the area, the proposed project would not contribute to any significant cumulative impacts which may occur in the area in the future. Therefore, the impact would be *less than significant*.
- c) The proposed project has been designed to be consistent with General Plan policies and zoning requirements, and measures to reduce project impacts to the environment have been identified in this Initial Study to avoid significant project-related environmental effects. In addition, the proposed project would not displace existing residents or employees, generate substantial pollution, or generate a substantial demand for public services or utilities. Therefore, the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly and a *less than significant impact* would occur.

Discussion - Interim Alignment (B)

Same as Selected Alignment for all mandatory findings of significance.

Discussion - Secondary Alignment (C)

Same as Selected Alignment for all mandatory findings of significance.

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ATTACHMENTS

- Rails Trails Lighting On Time Calculations for Conversion to Tons CO₂

Rails Trails Lighting On time calculation for conversion to tons CO ₂													
	LIGHTS CIVIL		LIGHTS AM		CIVIL		LIGHTS PM		TOTAL	UNIT	DAYS	HOURS /	
	ON	SUN-RISE	OFF	HRS ON	SUNSET	ON	OUT	HRS ON	HRS ON	CONV.	/MO.	MONTH	
	AM	AM	AM		PM	PM	1:00 AM						
JAN	5:30	7:41	7:30	2:00	4:59	17:00	1:00	8:00	10:00	10	31	310	
FEB	5:30	7:27	7:30	2:00	5:33	17:00	1:00	8:00	10:00	10	28	280	
MAR	5:30	6:51	6:30	1:00	6:07	18:00	1:00	7:00	8:00	8	31	248	
APRIL	5:30	7:00	6:30	1:00	7:40	19:30	1:00	5:30	6:30	6.5	30	195	
MAY	5:30	6:15	6:30	1:00	8:12	20:00	1:00	5:00	6:00	6	31	186	
JUN	5:30	5:47	6:30	1:00	8:41	20:30	1:00	4:30	5:30	5.5	30	165	
JULY	5:30	5:48	6:30	1:00	8:52	20:30	1:00	4:30	5:30	5.5	31	170.5	
AUG	5:30	6:12	6:30	1:00	8:33	20:30	1:00	4:30	5:30	5.5	31	170.5	
SEPT	5:30	6:43	6:30	1:00	7:50	20:00	1:00	5:00	6:00	6	30	180	
OCT	5:30	7:13	7:30	2:00	7:00	19:00	1:00	6:00	8:00	8	31	248	
NOV	5:30	6:49	7:30	2:00	5:11	17:00	1:00	8:00	10:00	10	30	300	
DEC	5:30	7:21	7:30	2:00	4:49	17:00	1:00	8:00	10:00	10	31	310	
													2763 HRS / YR
<div> <div>70</div> <div>X</div> <div>35</div> <div>=</div> <div>2450</div> <div>X</div> <div>2763</div> <div>=</div> <div>6,769,350</div> <div>/</div> <div>1000</div> <div>=</div> <div>6,769</div> </div> <div> <div>LIGHTS</div> <div>WATTS / LIGHT</div> <div>WATTS</div> <div>HOURS / YR</div> <div>WATT-HR/YR</div> <div>KWH/YR</div> </div>													
<p>* times obtained for sunrise and sunset from www.sunrisesunset.com/calendar for 2013 Assumes programable controller timer to adjust monthly This number could be reduced by banking lights and not keeping all of them on until 1:00 am</p>													

- Tiger Grant CO₂ Savings

TIGER 3 Calculations Derived from Recommended Monetized Values listed in the TIGER BCA Resource Guide
Vehicle Trips Saved Calculation
Total Vehicle Trips per year reduced for commuting to work only: 60,122

	1	2	3	4	5	6	7	8	9	10	11
Round Trip Length in miles	Number of Trips	Total Miles	Total Gas in gallons	Total Cost saved through gas reduction	Total CO ₂ Tonn Emissions	Value of CO ₂ Emissions Reductions- 2012	Reduced NOx tons	Reduced SOx tons	Reduced VOC tons	Reduced PM10 tons	Value of Reduced Nox, Sox, VOC, PM10
1	1,202	1202.44	59.23	\$231	0.55	12.29	0.01	0.00	0.02	0.00	199.73
2	3,006	6012.2	296.17	\$1,155	2.74	61.45	0.06	0.00	0.08	0.00	998.66
3	6,012	18036.6	888.50	\$3,465	8.23	184.36	0.19	0.01	0.23	0.00	2995.98
4	6,012	24048.8	1184.67	\$4,620	10.97	245.81	0.25	0.02	0.31	0.01	3994.64
5	6,012	30061	1480.84	\$5,775	13.72	307.27	0.31	0.02	0.38	0.01	4993.30
6	7,215	43287.84	2132.41	\$8,316	19.75	442.46	0.45	0.03	0.55	0.01	7190.35
7	3,607	25251.24	1243.90	\$4,851	11.52	258.10	0.26	0.02	0.32	0.01	4194.37
8	3,006	24048.8	1184.67	\$4,620	10.97	245.81	0.25	0.02	0.31	0.01	3994.64
9	4,209	37876.86	1865.86	\$7,277	17.28	387.16	0.39	0.03	0.48	0.01	6291.56
10	3,607	36073.2	1777.00	\$6,930	16.46	368.72	0.37	0.02	0.46	0.01	5991.96
14	5,411	75753.72	3731.71	\$14,554	34.57	774.31	0.78	0.05	0.96	0.02	12583.12
16	4,810	76956.16	3790.94	\$14,785	35.12	786.60	0.79	0.05	0.98	0.02	12782.85
20	6,012	120244	5923.35	\$23,101	54.87	1229.06	1.24	0.08	1.53	0.03	19973.20
Total	60,122	518,853	25,559	\$99,681	236.76	5303.41	5.36	0.35	6.60	0.14	86184.37

1. Total Number of Trips is based on 289 new commuters x 4 days per week x 52 weeks per year
3. Gallons of gas is averaged at 20.3mpg using EPA MOBILE6.2 Fuel economy calculation
4. Cost savings through reduced gas is calculated at \$3.90/gallon - current Humboldt County Price is \$4.03/gallon
5. See below calculation for total CO₂ emissions
6. Value for reduced CO₂ emissions are generated using the Recommended Monetized Values listed in the TIGER BCA Resource Guide Page 6 Social Cost of Carbon
- 7-10. NOx, SOx, VOC and PM10 are calculated using ICLEI's emissions calculator so ftware
11. Values provided for reduced emissions are generated using the Recommended Monetized Values listed in the TIGER BCA Resource Guide Page 5