

# Little River Trail Feasibility Study

Final



April, 2014

Prepared for the State Coastal Conservancy

By the Natural Resources Services Division of  
Redwood Community Action Agency



# Table of Contents

<b>Executive Summary</b> .....	<b>1</b>
<b>1. Project Purpose and Goals</b> .....	<b>2</b>
Project Background and Purpose .....	2
Goals of the Little River Trail Feasibility Study.....	4
<b>2. Background and History</b> .....	<b>6</b>
<b>3. Project Approach</b> .....	<b>15</b>
Planning Context Review .....	15
Agency and Public Outreach .....	16
Trail Alignment Analysis .....	18
Bridge Crossing Analysis.....	18
Appraisal Process .....	19
Appraisal Results.....	21
<b>4. Feasibility Analysis of Alignment Alternatives</b> .....	<b>22</b>
Major Considerations for the Little River Trail Alignments .....	22
Evaluation of Alignments .....	26
Alignment North 1 (N1):.....	29
Alignment North 2 (N2):.....	29
Alignment North 3 (N3):.....	29
Alignment South 1 (S1):.....	30
Alignment South 2 (S2):.....	31
Little River State Beach Paved Trail Option .....	31
Bridge Design Recommendations.....	32
Bridge Option 1 – On the Existing Highway 101 Bridge.....	33
Bridge Option 2 – Separated Bridge within Caltrans Right-of-Way .....	35
Bridge Option 3 – Separated Bridge outside Caltrans Right-of-Way .....	35
<b>5. Preferred Trail Alignment</b> .....	<b>37</b>
Preferred Alignment Description .....	39
Preferred Alignment, North Trail Section: N1 .....	41
Preferred Alignment, Bridge Trail Section: B1.....	44
Preferred Alignment, South Trail Section: S2 .....	46
<b>6. Anticipated Environmental and Regulatory Requirements</b> .....	<b>51</b>
Coastal Act Considerations.....	52
Mitigation Considerations.....	53
Zoning Considerations.....	54
Cultural and Archaeological Resource Study.....	54
Caltrans Encroachment Permit and New Access.....	55
<b>7. Trail Support Facilities</b> .....	<b>56</b>
Trailhead Locations .....	57
Additional Trail Support Facility Considerations .....	59
Interpretative Plan.....	61

Potential Interpretive Themes.....	67
<b>8. Trail Management Strategy.....</b>	<b>69</b>
Example Cooperative Trail Management Agreements .....	69
Potential Trail Management Partners.....	70
Community Involvement in Trail Maintenance .....	74
Funding Trail Operations and Maintenance.....	75
<b>9. Final Recommendations and Next Steps .....</b>	<b>77</b>
Engineered Designs, CEQA and Environmental Permitting.....	77
Implementation Fund Seeking.....	79
Acquisition of the Moonstone Parcel.....	81
Cultivating Regional Support.....	82
Closing.....	82
<b>Appreciation .....</b>	<b>83</b>
<b>References and Resources .....</b>	<b>84</b>
<b>Appendices .....</b>	<b>87</b>
Appendix A – California Historical Resources Information System (CHRIS) report	
Appendix B – Little River Trail Task Force Workshop Summary	
Appendix C – Little River Trail Public Comment Summary	
Appendix D – Bridge Feasibility Study	
Appendix E – Green Diamond Resources Company Moonstone Parcel Appraisal	
Appendix F – Trail Alignment Evaluation Matrix	
Appendix G – Caltrans’, Coastal Commission Staff’s and Blue Lake Rancheria’s Comments on the draft LRTFS	

## Executive Summary

The Little River Trail Feasibility Study (LRTFS), funded by the State Coastal Conservancy, analyzed potential non-motorized trail alignments from the southern end of Scenic Drive across the Little River to Clam Beach Drive. Creating a trail connection along this stretch of Humboldt County coastline would close a key gap in the California Coastal Trail (CCT) currently separating the communities of Westhaven and Trinidad from the Hammond Coastal Trail and Humboldt Bay communities. This trail connection to improve mobility options and recreational opportunities has been a priority for local residents, trail advocates and local and state agencies for almost three decades.

The Little River project area is rich in flora, fauna, culture and history. The LRTFS examined trail alignment opportunities and constraints on the ground, researched environmental considerations and cultural histories, and held thorough discussions with cooperating agencies, local Tribal Historic Preservation Officers and the interested public. A preferred alignment and bridge crossing was recommended that offers scenic vistas and a direct trail connection separated from Highway 101 for all non-motorized users while limiting the disturbance of culturally significant and environmentally sensitive areas. A 30% design plan was developed for widening the existing Little River Bridge to include a separated trail crossing.

The Little River area has additional opportunities for habitat enhancement and public access surrounding the Little River estuary. The LRT alignment traverses publicly owned properties. However, the LRT is adjacent to a 14-acre private parcel, owned by Green Diamond Resource Company, located just south of Scenic Drive, which would impact the development of the LRT. Green Diamond Resource Company is interested in selling the property to a public or non-profit entity. With the support and participation of Green Diamond Resource Company and as part of this study, the parcel was appraised at market value and its development potential was analyzed. The appraisal estimated the market value of the parcel to be \$120,000. The appraisal determined that the highest and best use of the property would be for recreational use, concluding that the development of a single-family residence would be impractical but not impossible.

The LRTFS also examines potential cooperative trail management opportunities, regulatory requirements, funding opportunities and other next steps in order to realize the vision of a completed Little River Trail. The study also outlines potential trail support facilities, including parking areas, signage and trail interpretative themes to enhance the experience along the future trail corridor. Finally the LRTFS examines how best to build local support and momentum to advance the completion of this significant segment of the California Coastal Trail and Humboldt County's regional trail network.

## 1. Project Purpose and Goals

The Little River Trail Feasibility Study aims to recommend a preferred alignment for a non-motorized trail connection across the Little River to create a contiguous segment of the California Coastal Trail (CCT) from Arcata to Trinidad. Completing this section of the CCT would enhance a unique section of the Humboldt County coastline, improve transportation and recreation opportunities for local communities and enhance existing public access areas by creating connections that encourage a wider variety of users.

### ***Project Background and Purpose***

Humboldt County has some of the most scenic and rugged coastline in the state, from the towering trees and cliffs overlooking the coast in Redwood National Park to the serene lagoon bars and beaches near numerous river mouths. The Humboldt County coastline presents numerous opportunities for outdoor recreation, environmental conservation and linking communities. However, there are many challenges in connecting communities and public lands along the coast including rugged topography, extensive private property, trail management challenges and limited north-south public routes.

The Little River area lies north of Humboldt Bay and south of Trinidad, between the heavily frequented public beaches of Clam Beach and Little River State Beach to the south and Moonstone Beach to the north. Highway 101 serves as the only public road over the Little River and along this stretch of Humboldt County coastline. A non-motorized trail connection over the Little River to connect Humboldt Bay communities to the Hammond Trail has been of great interest to local residents and trail advocates for decades. A trail crossing the Little River would also close a key gap in the California Coastal Trail.

The California Coastal Trail (CCT) aims to be a continuous stretch of publicly accessible trail along the state's coastline from Mexico to Oregon. In 2003 the State Coastal Conservancy, directed by California State Legislature SB 908, produced *What Still Needs to be Done: Completing the California Coastal Trail*. This document noted sections of the proposed Coastal Trail that "Needs Substantial Improvement." One of these was the Little River Bridge crossing, and the connection between Scenic Drive and Clam Beach Drive.

Currently, bicyclists and pedestrians have limited options traveling south from Scenic Drive in Westhaven and must use the Highway 101 bridge to cross Little River, which is an unappealing and challenging endeavor for most. The on-ramp to Highway 101 from the south end of Scenic Drive is not conducive for bicyclists as they are constrained on one side by a guardrail and on the other side by cars entering the freeway with a short on-ramp merging lane and limited sight distance. Private property to the east of Highway 101, rugged hillslopes and the mouth of the Little River have previously presented logistical constraints to developing a separated non-motorized trail along this section of coastline.

Despite these constraints, the opportunities for a multipurpose trail connection at Little River are numerous. State Parks maintains Little River State Beach just south of Little River and includes the parcel just north of Little River. The Hammond Coastal Trail, the premier multipurpose trail on the North Coast that connects south to McKinleyville and Arcata, has its northern terminus at Clam Beach just south of Little River State Beach. Bike lanes and wide shoulders on Clam Beach Drive provide safe connectivity for cyclists to the Crannell Road overpass just south of the Highway 101 bridge over Little River. In addition, State Parks recently completed a key link in the CCT for hikers and equestrians through Little River State Beach from the Hammond Coastal Trail to the south bank of the Little River. State Parks also built two new trailhead parking areas as part of this project, with one designed specifically for equestrian trail users, which may serve as a trail support facility for the Little River Trail. These recent trail improvements leading to the south bank of the Little River present a great opportunity for connections to the proposed Little River Trail.

Green Diamond Resource Company (GDRC) owns a parcel north of Little River between State Parks property and the southern terminus of Scenic Drive that has the potential to add increased estuary access and serve as a potential route for the LRT. GDRC has demonstrated significant interest in selling the property that comprises approximately 14 acres lying between Highway 101 and the Little River. Besides serving as a potential route for the Little River Trail and providing unique coastal access along the Little River estuary the GDRC parcel offers habitat restoration and viewing opportunities. This study also looks to determine the parcel's development potential and the cost to acquire it through an appraisal of the property.

To the north of the proposed Little River Trail, Scenic Drive is a well-used route for bicyclists and pedestrians heading north to Trinidad and provides a low-auto traffic route for the CCT with stunning views of the coastline and California Coastal National Monument (CCNM) sea stacks. Scenic Drive also provides access to many designated coastal access points and beaches, several of which are operated and managed by the Trinidad Coastal Land Trust (TCLT).

The Little River Trail (LRT) will serve as a vital link between isolated communities, enhance access to and appreciation of numerous scenic and natural areas and complete an important connection in the statewide California Coastal Trail (CCT). The LRT will enable a non-highway non-motorized transportation option for residents in Westhaven, Trinidad and the Humboldt Bay communities. The LRT will provide a link between the Hammond Coastal Trail and Scenic Drive and Patrick's Point Drive, creating a continuous non-highway route for touring cyclists from Arcata to Patrick's Point State Park. With the rugged nature of the Humboldt County coastline, non-motorized mobility options between coastal communities are very limited. Currently, confident cyclists can use the shoulder on Highway 101 but this is not safe or inviting for families. Seeking completion of key Coastal Trail segments through Humboldt County will ensure progress towards a statewide vision and provide greater mobility options for local residents.

In addition to adding mobility options to the Humboldt Bay communities, a completed Little River Trail would further the quality of life for residents and add to the opportunities for visitors to the area. Increasing access to the Little River estuary and connecting Little River State Beach to Moonstone Beach provides a more enticing coastal experience. By increasing connectivity and adding non-motorized trail options that span from Arcata to Trinidad, the Little River Trail can create the incentive necessary for tourists to stay that 'extra day'. The *Humboldt County Coastal Trail Implementation Strategy (2011)* estimated tourism demand for the California Coastal Trail through Humboldt County at 661,000 local trips and 178,000 visitors annually. The completion of more segments of the CCT, such as the Little River Trail, can only be expected to increase tourism potential. Many studies conducted in small towns and rural communities have concluded that connected trail systems have significant economic benefits to nearby communities, generating increased spending in hospitality, service and retail sectors (*Rails-to-Trails Conservancy (2004, 2007)*). The Little River Trail could benefit both the local economy and increase trail options around two locally loved coastal access areas.

In addition to the natural beauty of the coastline and the Little River estuary, there are also many historical, cultural and biological features to be discovered along the trail route. The area from Moonstone Beach to Trinidad is part of the California Coastal National Monument (CCNM) managed by the Bureau of Land Management, and Trinidad has been chosen as the gateway to the CCNM. The Little River Trail crossing and the California Coastal Trail along Scenic Drive and Patrick's Point Drive will be a valuable amenity to offer to visitors interested in exploring the CCNM and the interpretive signs that describe the natural and cultural history of the area. One of the amenities along this trail route is Saunders Park, owned by TCLT and the home of the Trinidad Museum and recently built Trinidad Library, both of which will offer cultural attractions to add to the appeal of the coastal trail.

### ***Goals of the Little River Trail Feasibility Study***

The Little River Trail Feasibility Study will emphasize improving access for non-motorized users along this stretch of coastline. The study will result in 1) plans, alternative alignments and concept designs for a priority section of the California Coastal Trail including a 30% design of a Little River crossing and a preferred Little River Trail, 2) develop preliminary cost estimates for engineering, construction and environmental permitting, 3) identification of necessary permits and potential funding sources; and 4) analysis of property or right-of-way acquisition opportunities along the trail alignment and adjacent coastline. The Feasibility Study will:

- Advance the completion of the next significant phase of the California Coastal Trail through Humboldt County
- Improve mobility options for residents of Westhaven and Trinidad to connect with Humboldt Bay area communities and services and for residents from the south to access the Westhaven-Trinidad area beaches

## 5. Preferred Trail Alignment

The preferred trail alignment for the Little River Trail includes north section N1, Bridge Option 1 and south section S2. This alignment represents the most feasible option for completing this section of the California Coastal Trail, connecting the communities of the Humboldt Bay and providing residents and visitors with the most rewarding trail experience. This alignment considered future connections that would enhance the experience of the LRT and further the County's goal of providing non-motorized transportation options and accessible recreation.

The preferred alignment minimizes environmental impacts while providing an excellent user experience. These alignments create a constructible trail connection that will link Clam Beach and communities to the south, via the Hammond Trail, to Scenic Drive and Trinidad. Scenic Drive has minimal motorized traffic and with fantastic scenic views receives high pedestrian and bicycle use. The preferred Little River Trail alignment helps to fill in an important link in the California Coastal Trail.

The alignments chosen are buildable, cost effective, scenic, and logically sited to connect the areas south of Little River to the areas north of Little River. There are no significant environmental impediments and the necessary lands are publically owned. The privately held GDRC parcel, discussed in Chapter 3, would provide additional opportunities for coastal and river estuary access.

The Little River Trail will be a banner project connecting coastal communities, serving coastal visitors. By removing a major non-motorized transportation barrier it will become a vital transportation corridor for hikers, bicyclists, and others.

# Little River Trail Preferred Alignment



Figure 7 Map of Preferred Alignment

### ***Preferred Alignment Description***

**Alignment N1** stretches from the south end of Scenic Drive to the existing Highway 101 bridge over the Little River. From the north, N1 starts at the end of Scenic Drive and veers east-southeast, just east of the GDRC parcel, into Caltrans right-of-way below the Highway 101 roadbed but along the highway fill slope. Due to the elevation difference and vegetation between the trail alignment and Highway 101, there is an enhanced scenic experience despite the relative proximity to the highway. The N1 alignment allows for coastal views, through coastal scrub and alder forest, encompassing Little River State Beach to the south, and the sea stacks beyond Moonstone Beach to the north. Poised higher on the fill slope, the N1 alignment avoids the more environmentally and culturally sensitive areas of the estuary allowing for viewing opportunities and the future possibility of unpaved spur trails leading to estuary overlook and bench access.

The N1 alignment reaches the Little River and Bridge Option 1 where the possibility exists for an overlook along the trail. Opportunities exist along the N1 alignment to install resting terraces for ADA compliance.

**Bridge Option 1** entails a modification of the existing bridge by widening the southbound side for a barrier-separated trail. This option would likely have the least environmental impacts of the three viable bridge crossing options. It will not disturb the viewshed of those experiencing the LRSB trails, nor, with approved railings, interfere with the coastal view from the highway. In addition, because Bridge Option 1 is to be attached to the existing structure Caltrans has agreed to maintain it. The cost for operating and maintaining the crossing has been a considerable factor for agencies considering LRT management options.

The Little River Trail bridge crossing will be a Caltrans Class I Bike Facility, allowing for comfortable 2-way pedestrian and cyclist traffic. The California Type ST-10 railings are recommended along the traffic side of the widening. A curb mounted metal pedestrian railing, using posts and pickets, is recommended along the outside of the widening. These railings could be painted green like the railings on the Mad River Bridge further south on Highway 101.

This widening will allow for a 10' clear width, which meets Caltrans' Highway Design Manual Section 1003.1 (2) design standard. The bridge widening will be designed to carry live loads meeting current American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Design Specifications and Caltrans Amendments. The design will also meet current Caltrans seismic design criteria.

The bridge widening will likely require driven concrete piles at the abutments and piers similar to the existing bridge. During the study, other structure types were considered. Precast concrete girder type superstructure is an option but less economical than reinforced concrete

T-girder. A steel girder superstructure is also an option, however, steel girders are less economical than concrete T-girder and more costly to maintain.

**Alignment S2** extends from Bridge Option 1 to the Crannell Road overpass and remains within Caltrans right-of-way for most of its length. The alignment traverses the dune area parallel to the existing Caltrans fence which serves as a boundary between Caltrans and Little River State Beach. It is recommended that this fence be removed, as it contains many access breaches and has extensive salt corrosion, and new chain link fencing would be installed east of the trail. The project team does not recommend constructing the trail with fences on both sides due to perceived safety concerns regarding fenced in corridors and greatly decreasing the scenic value of the trail. It will also be necessary to be mindful of the LRSB trails viewshed, the viewshed from Highway 101 in addition to that of the future Little River Trail users. This alignment provides ample opportunity for wildlife viewing of whales, snowy plover, other coastal birds visiting the estuary and LRSB as well as views of the sea stacks off of Moonstone Beach.

Where Alignment S2 intersects with Crannell Road there are options for connecting with the existing LRSB parking area. A cross walk could extend from the southern terminus of the trail across Crannell Road to the parking area, or a trail connection could skirt around the bend in Clam Beach Drive/ Crannell Road to the existing crosswalk across Clam Beach Drive. Because of the curve in the road, and the potential for limited sight lines, routing the path around the bend in the road to connect with the existing cross walk may be the best option. Some geo-cell or similar retaining walls could be built to maintain a bed and keep grade, or the trail can slope downhill to the LRSB trail that then comes up to Clam Beach Drive at the staircase. Maintaining grade and having both options may be preferred.

# Vicinity Map

