

EXECUTIVE SUMMARY

DRAFT Marine Park Trail Alternatives Analysis Report

Prepared for

Port of Cascade Locks
Oregon Department of Transportation
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Introduction

The proposed Marine Park Trail would connect Marine Park end to end and run the length of Thunder Island. At the west end of Marine Park, the trail would connect to the future freight rail overcrossing, which is a related project to create a new park entrance for people walking, biking, and rolling to enter from Wa Na Pa Street (Historic US 30).

This report identifies and evaluates multiple alternative alignments for the proposed Marine Park Trail in the Port of Cascade Locks' Marine Park. The proposed trail would extend the length of Marine Park, from the beach at the east end to SW Portage Road at the west end where the trail would connect with a proposed future rail overcrossing project. The trail would also connect to Thunder Island, with a trail segment extending the length of the island.

The trail alternatives will be presented to community members, park users, tribes of the Columbia River, and other stakeholders including the Port Commission for its feedback and input to inform the recommended trail alternative.

This report includes a review of past planning and analysis at Marine Park; an overview of existing conditions at the park; a description of the trail alternatives, including possible new amenities; a review of environmental resources and historic and cultural resources; an analysis of the alternatives; and an initial recommendation for a preferred alignment. **This initial recommendation will be revised to incorporate and reflect public outreach and stakeholder consultation that will take place in December 2021.**

Trail Design

The proposed trail alternatives were designed as two-way multi-modal paths. A 10-foot-wide hard surface path with 2-foot gravel shoulders was assumed for development of the mainland trail alternatives. A 10-foot-wide gravel path with no shoulders was used for development of the Thunder Island trail alignment.

The Oregon Department of Transportation (ODOT) Highway Design Manual Chapter 13 (*Pedestrian and Bicycle*) and Appendix L (*Bicycle and Pedestrian Design Guide*) were referenced to develop cross sectional trail widths, horizontal and vertical curvatures, and grade and cross-slope requirements. ODOT has adopted the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities for path design standards.

Trail Alternatives

The Marine Park Trail is divided into seven segments for this alternatives analysis. Four of the segments have a single alignment, and three segments have two alternatives each under consideration. The initial trail alternatives were developed in a previous planning effort; the project team made several minor changes to the alignments in order to explore additional alternatives near the marina and at the central lawn. Figure ES-1 shows the trail segments and alternatives.

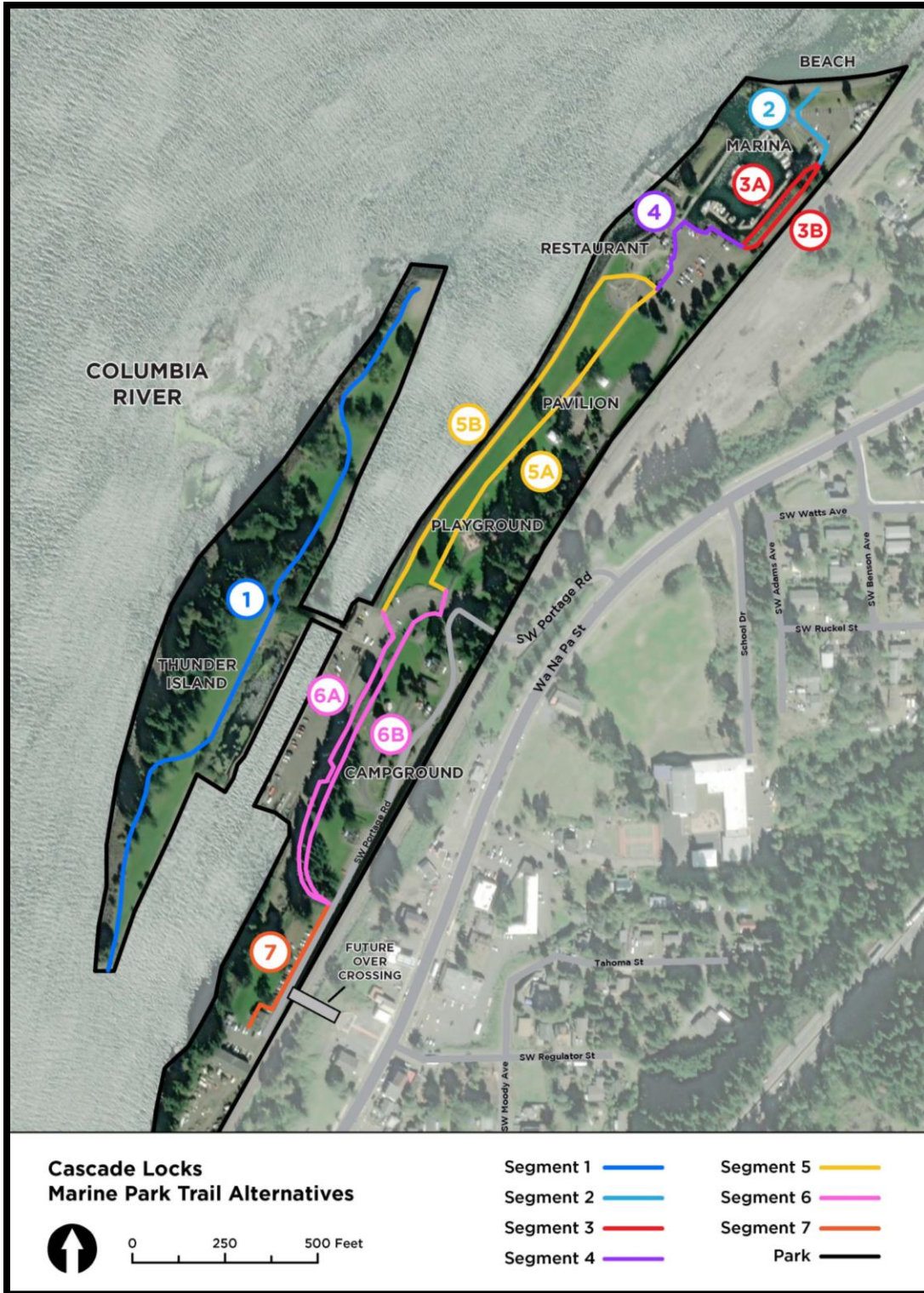


Figure ES-1. Marine Park Trail Alternatives

Table ES-1. Trail Alternatives – Opportunities and Constraints

Trail Alignment Alternatives	Description	Cost Estimate	Opportunities and Constraints
Segment 1 Thunder Island	<i>There is a single alternative for this segment.</i>		
	<p>Thunder Island Trail. This trail segment covers the length of Thunder Island from end to end. The trail connects to the mainland portion of Marine Park across a small bridge over the locks. A gravel trail surface is proposed. The choice of material was influenced by the island’s natural setting and construction access.</p>	\$88,000	<p>Opportunity for a natural trail to complement the scenic beauty of Thunder Island</p> <p>Narrow bridge to the island creates an access constraint for trail construction equipment</p>
Segment 2 Marina Parking Lot	<i>There is a single alternative for this segment.</i>		
	<p>Marina Parking Lot. The trail would begin at the beach, continue up the paved route connecting to the parking lot, passing behind the western row of parking spaces to connect to the fire lane at the south end of the parking lot.</p>	\$16,000	<p>Busy parking lot – trail alignment at the perimeter of the lot reduces potential conflicts between trail users and drivers backing up out of parking spaces</p> <p>May require reconfiguration of the parking spaces</p>
Segment 3 Marina Fire Lane	<i>There are two proposed alternatives for this segment.</i>		
Alternative 3A	<p>Road Expansion. The trail would run adjacent to the existing roadway. The roadway surface would be extended towards the water with a retaining wall or structure.</p> <p>This alternative would likely involve tree removal along the banks of the marina.</p>	\$744,000	<p>Union Pacific Railroad (UPRR) owns much of the road right of way in this segment – need to minimize impact to its property</p> <p>Extension would provide dedicated space for trail users at grade</p>
Alternative 3B	<p>Boardwalk. The trail would run along a boardwalk extended out over the water at the marina’s southeastern edge. This would maintain the existing fire lane width and avoid impacts to the railroad corridor, which is located on the far side of the fire lane, up an embankment.</p> <p>This alternative would involve tree removal along the banks of the marina. The trail could be located farther down towards the water’s surface if tree preservation is a priority; that design would likely require two piles instead of one.</p>	\$1,237,000	<p>UPRR owns much of the road right of way in this segment – need to minimize impact to its property</p> <p>Boardwalk would provide dedicated space for trail users, grade separated</p> <p>Grade separation could limit visibility for trail users</p>

Trail Alignment Alternatives	Description	Cost Estimate	Opportunities and Constraints
Segment 4 Restaurant and Visitor Center Parking Lot	<i>There is a single alternative for this segment.</i>		
	<p>Restaurant and Visitor Center Parking Lot. The trail would follow the edge of the parking lot, along the western edge of the marina and across the front of the building before reaching Portage Road at the roundabout.</p> <p>With the trail crossing the parking lot, there could be an opportunity to reconfigure parking spaces to minimize loss of parking and improve safety for trail users crossing the parking area and interacting with vehicles.</p>	\$34,000	<p>Busy parking lot – trail alignment at the perimeter of the lot reduces potential conflicts between trail users and drivers reversing out of parking spaces</p> <p>May require reconfiguration of the parking spaces</p>
Segment 5 Central Lawn Area	<i>There are two proposed alternatives for this segment.</i>		
Alternative 5A	<p>Central Lawn. The trail would be routed through the center of the central lawn to avoid impacting water and electrical hook-ups that are present near the seawall.</p> <p>At the northwest end of this segment, the trail would cross SW Portage Road at the roundabout.</p>	\$165,000	<p>Central route would provide a second path through this area of the park; the gravel path along the seawall would remain in place</p> <p>Provides off-street ADA-accessible route to the pavilion</p> <p>Reduces lawn space</p>
Alternative 5B	<p>Seawall. The trail would follow the existing gravel trail alignment along the stone seawall. The wider cross section would require removal or relocation of the water and electrical hook-ups that are used by vendors during festivals and events on the lawn. Only one shoulder along the lawn.</p> <p>At the northwest end of this segment, the trail would travel alongside SW Portage Road at the northern edge of the roundabout.</p>	\$305,000	<p>Seawall alternative would require relocating or removing electrical and water hook-ups</p> <p>Minimal impact to lawn space</p>
Segment 6 Campsite Area	<i>There are two proposed alternatives for this segment.</i>		
Alternative 6A	<p>Lower Route. The trail would follow the bottom of the bluff, alongside the roadway and parking area. The trail would need to go around an existing restroom building. The proposed retaining wall could be terraced to several levels and appear less imposing.</p>	\$1,233,000	<p>Lower route would require retaining wall</p> <p>Avoids negative impacts to campsites</p> <p>Likely to require some tree removal on the slope</p>

Trail Alignment Alternatives	Description	Cost Estimate	Opportunities and Constraints
Alternative 6B	Upper Route. The trail would follow the top edge of the bluff, adjacent to the campsites. This option would require a retaining wall and likely a fence because of the steep slope. A low fence could be built on the other side to provide privacy and screening for the campsites.	\$720,000	Upper route would likely impact campsites – loss of space, noise, loss of privacy, loss of visual connection to the Columbia River Likely to require some tree removal on the slope
Segment 7 Portage Road West End	<i>There is a single alternative for this segment.</i> Portage Road West End. The trail would end at the western end of Marine Park and connect to the future railroad overcrossing that would connect Wa Na Pa Street to SW Portage Road.	\$69,000	Connection to planned rail overcrossing would provide a new park entrance for pedestrians and cyclists Could require relocation of some parking spaces

ADA = Americans with Disabilities Act

Environmental Resources

Most of the study area occurs within the 100-year flood boundary. Thunder Island is entirely within this area, and it extends landward over the entire Marine Park, to the train tracks at the eastern boundary of the study area. A floodplain permit may be required for any activities that involve the use of fill greater than 10 cubic yards or for recreation uses that include paving. Because the trail would have a primarily transportation-focused purpose while also serving recreational uses, a floodplain permit would likely be needed for trail construction.

An Oregon Biodiversity Information Center (ORBIC) database search for rare, threatened, and endangered species located in the study area indicated that only fish species occurring in the Columbia River are of concern within the study area. Several steelhead and salmon runs and associated designated critical habitat may be present within the study area.

The hazardous materials corridor study conducted for this effort concluded that there are several hazardous materials sites near the study area that are listed on regulatory databases; however, these sites are not expected to have adversely impacted the study area. The most likely impacts would be vehicle emissions, leaks, or other releases associated with parking areas.

Historic and Cultural Resources

Marine Park includes significant built-environment historic properties. Marine Park has been listed as a historic district on the National Register of Historic Places since 1974. Trail building activity is unlikely to adversely affect any of the historic contributing features of the park or the park as a whole.

Archaeological Resources

The Cascades Peoples and their ancestors have occupied the floodplains and nearby foothills for millennia. The massive scale of land disturbance and fill during construction of the locks likely relocated or covered evidence of the precontact occupation. Still, it is likely that precontact as well as

historic-period artifacts can be found in fill material throughout the park. Under areas where fill material is shallow, pockets of intact landform may remain, and archaeological deposits could be found in their original context.

As part of this study, Historical Research Associates, Inc. (HRA) conducted an archaeological reconnaissance visual survey on May 20, 2021. An HRA archaeologist walked throughout the park, focusing on the proposed trail corridor, to identify surficial archaeological resources and determine if portions of the landform are intact enough to warrant subsurface sampling. HRA identified three isolated archaeological finds, two from the historic period and one from the precontact period. The objects are no longer in their original context and have lost integrity. HRA recommends no additional pre-construction work at these locations, even if the trail alignment impacts the resources.

HRA recommends an intensive pedestrian survey of the preferred alternative trail option once it has been selected. HRA recommends subsurface sampling if data about the depth of fill material is inconclusive or if the trail construction would go deeper than documented fill deposits. This sampling should include the excavation of subsurface samples, either shovel probes or auger probes spaced 100 to 130 feet spaced apart, to determine the extent of fill or disturbance. If geotechnical data indicates the depth of fill is greater than the depth of ground disturbance caused by the construction of the trail, then HRA recommends monitoring during ground-disturbing activities.

Recommended Alternatives

The recommended Marine Park Trail would include the following alternatives:

- **Marina Fire Lane: Boardwalk.** Both alternatives under consideration for this segment extend the roadway towards the water. The boardwalk creates greater separation between trail users and vehicles using the roadway; the trail would be located partway down the slope, providing grade separation. This alternative is likely to require tree removal.
- **Central Lawn Area: Central Lawn.** The central lawn alternative would provide additional connectivity to this area of Marine Park, adding a hard-surface path through the lawn, near the playground and pavilion, with no impact to the existing gravel path that follows the seawall. This alternative would provide off-street Americans with Disabilities Act (ADA) access to the pavilion; it would also reduce lawn space. This alternative was favored by Port Commission members during the August 2021 commission meeting. The seawall alternative, in comparison, would replace an existing gravel path with a hard-surface trail and would require removal or relocation of the water and electrical hook-ups. These amenities are used by food carts and other vendors during festivals and community events on the lawn.

Campsite Area: Lower Route. The lower route follows the driveway from SW Portage Road around the base of the bluff, adjacent to the campsites. The lower route alternative was favored by the Port Commission members during the August 2021 commission meeting. This alternative better protects the privacy of the campsites located at the top of the bluff. The upper route alternative would negatively impact the campsites, introducing trail traffic and noise from trail users in an area that is currently more private. Privacy screening would be difficult because of space constraints and would obscure the scenic views from the campsites. The upper route could also result in a loss of space for the campsites. The lower route is not without issues—this alternative would require a retaining wall to provide space for trail users outside the roadway and avoid impacting the restroom at the bottom of the slope. The solution could include two smaller retaining walls, stair-stepping up the slope, to reduce the height and visual impact.