



Molalla Forest Road, Traverso Section: Final Development Plan

Prepared for
City of Canby



April 2021

Prepared by
Parametrix

CITATION

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TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 Project Background	1
1.2 Plan Process	4
1.2.1 Advisory Committee.....	4
1.2.2 Public Outreach.....	4
2. TRAIL PRINCIPLES AND USERS.....	5
2.1 Trail Users	5
2.2 Development Plan Principles	5
3. TRAIL DESIGN CONCEPTS	6
3.1 Conditions Summary.....	6
3.2 Trail Design Concepts.....	8
3.2.1 Segment 1 – SE 13th Street to End of Shared Roadway (Approximately 1.7 miles).....	9
3.2.2 Segment 2 – End of Shared Roadway to Molalla Bridge (Approximately 0.7 miles)	11
3.2.3 Segment 3 – Molalla Bridge to S Macksburg Road (Approximately 0.9 miles).....	13
3.2.4 Off-MFR Trails	14
3.3 Access Points.....	14
3.3.1 North Access (13th Avenue).....	14
3.3.2 Mid-Point Access Alternatives	15
3.3.3 S Macksburg Road	18
3.3.4 River Access.....	18
3.4 Amenities and Features	18
4. IMPLEMENTATION.....	22
4.1 Phase 1	22
4.2 Phase 2	23
4.3 Cost Estimate	23
4.4 Future Phases.....	24
4.5 Environmental and Permitting Considerations.....	24
5. OPERATIONS, SAFETY AND SECURITY.....	26
5.1 Trail Management.....	26
5.2 Maintenance	26
5.3 Safety and Emergency Services.....	27
5.4 Volunteers and Civic Organization Engagement.....	28

TABLE OF CONTENTS (CONTINUED)

6. NEXT STEPS..... 28

LIST OF FIGURES

Figure 1. Molalla Forest Road – Traverso Donation Section 2

Figure 2. Molalla Forest Road – Willamette River north of Canby to Glen Avon Bridge south of Molalla 3

Figure 3. Traverso Section Overview 7

Figure 4. Segment 1 Paved Multiuse Trail Alternative 9

Figure 5. Segment 1 Paved Multiuse Trail Alternative 10

Figure 6. Proposed Trail Crossing on south end of Segment 1 11

Figure 7. Segment 2 Preferred Trail Cross Section 12

Figure 8. Connection Alternatives for Rebuilding Washed-Out MFR..... 13

Figure 9. Segment 3 Trail Alternative 14

Figure 10. SE 13th Intersection Concepts..... 15

Figure 11. Mid-Point Access Alternatives..... 17

Figure 12. Examples of Trail Wayfinding and Educational Signage 19

Figure 13. Examples of Regulatory Signage..... 20

Figure 14. Example of Context-Sensitive Fencing Using Natural Materials 21

Figure 15. Potential Phase 1 Terminus 22

LIST OF TABLES

Table 1. Alternatives for Rebuilding Washed-Out MFR 12

Table 2. Cost Summary 23

Table 2. Example Maintenance Schedule..... 26

APPENDICES

- A Opportunities and Constraints Memorandum
- B Public Engagement Summary

1. INTRODUCTION

This Development Plan describes the major features, amenities, design approach, and implementation measures for a future trail on the Traverso Section of the Molalla Forest Road. The Traverso Section is 3.3 miles in length, running from SE 13th Ave on the edge of the City of Canby southeast to Macksburg Road; this Development Plan only concerns this specific section of the Molalla Forest Road. This Development Plan reflects public and stakeholder conversations and feedback and provides a path forward for funding, design, and construction of the trail. This plan was made possible by a grant from Clackamas County Tourism and Cultural Affairs.

The Development Plan is exclusively applicable to the Traverso Section of the Molalla Forest Road, a property generously donated to the City by the Traverso family (see Figure 1). This property presents a unique opportunity to create a safe and enjoyable trail that provides access to nature and recreation for the citizens of Canby and the surrounding community. The Traverso Section connects to the existing Logging Road Trail in the City of Canby.

1.1 Project Background

The Molalla Forest Road (MFR) is a historical logging road that connects the Willamette River just north of the City of Canby to the Molalla River Recreation Area located south of the City of Molalla. The MFR generally follows the alignment of the Molalla River, which includes critical habitat for salmonid species listed under the federal Endangered Species Act, as well as floodplains. Land uses surrounding the MFR primarily consist of farming, low-density rural residential, and natural areas. Parts of the Traverso Section of the MFR are used for property access and by farm equipment, while some areas are inaccessible due to previous flooding. The following list details a brief history of efforts to establish a trail on the MFR:

- 1994 – The Cities of Canby and Molalla and Clackamas County published the *Molalla River Pathway Plan*, a blueprint for a 22.4-mile walking, bicycling, and equestrian trail from Molalla River State Park in Canby to the Glen Avon Bridge in the foothills of the Cascades (see Figure 2).
- 1996 – A flooding event caused significant portions of the MFR to wash out in the Traverso Section. To this day, much of the Traverso Section remains inaccessible due to significant overgrowth, roadway damage, and damage to the Molalla River Bridge.
- 2017 – The Traverso family donated a 3.3-mile segment of the MFR to the City of Canby for development into a future path (Figure 2). The Traverso Section extends from SE 13th Street to S Macksburg Road in unincorporated Clackamas County (see Figure 1).
- 2020 – The City of Canby received a grant from Clackamas County Tourism and Cultural Affairs to create a plan for trail improvements along the Traverso Section of the MFR.

Molalla Forest Road, Traverso Section: Development Plan
 City of Canby

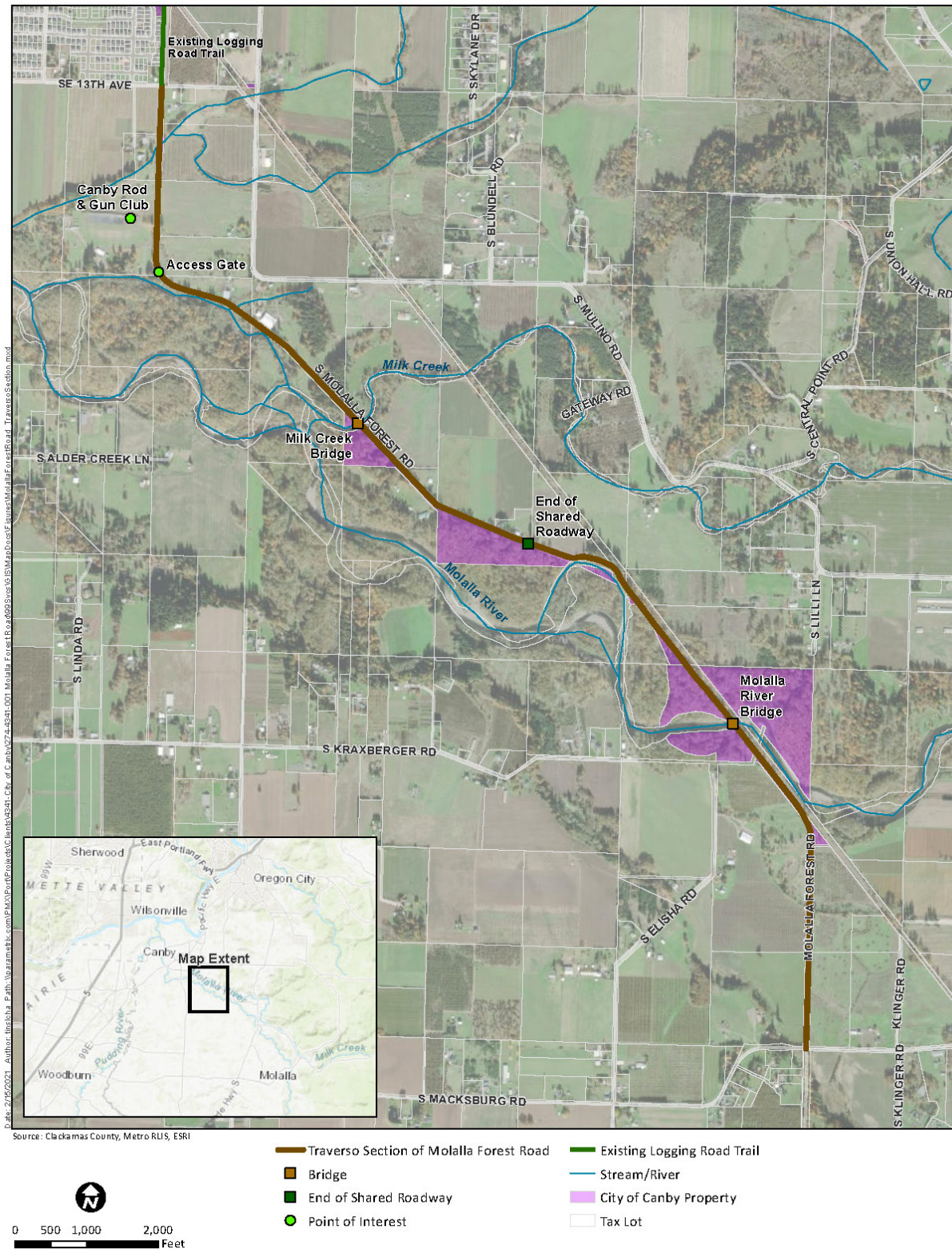
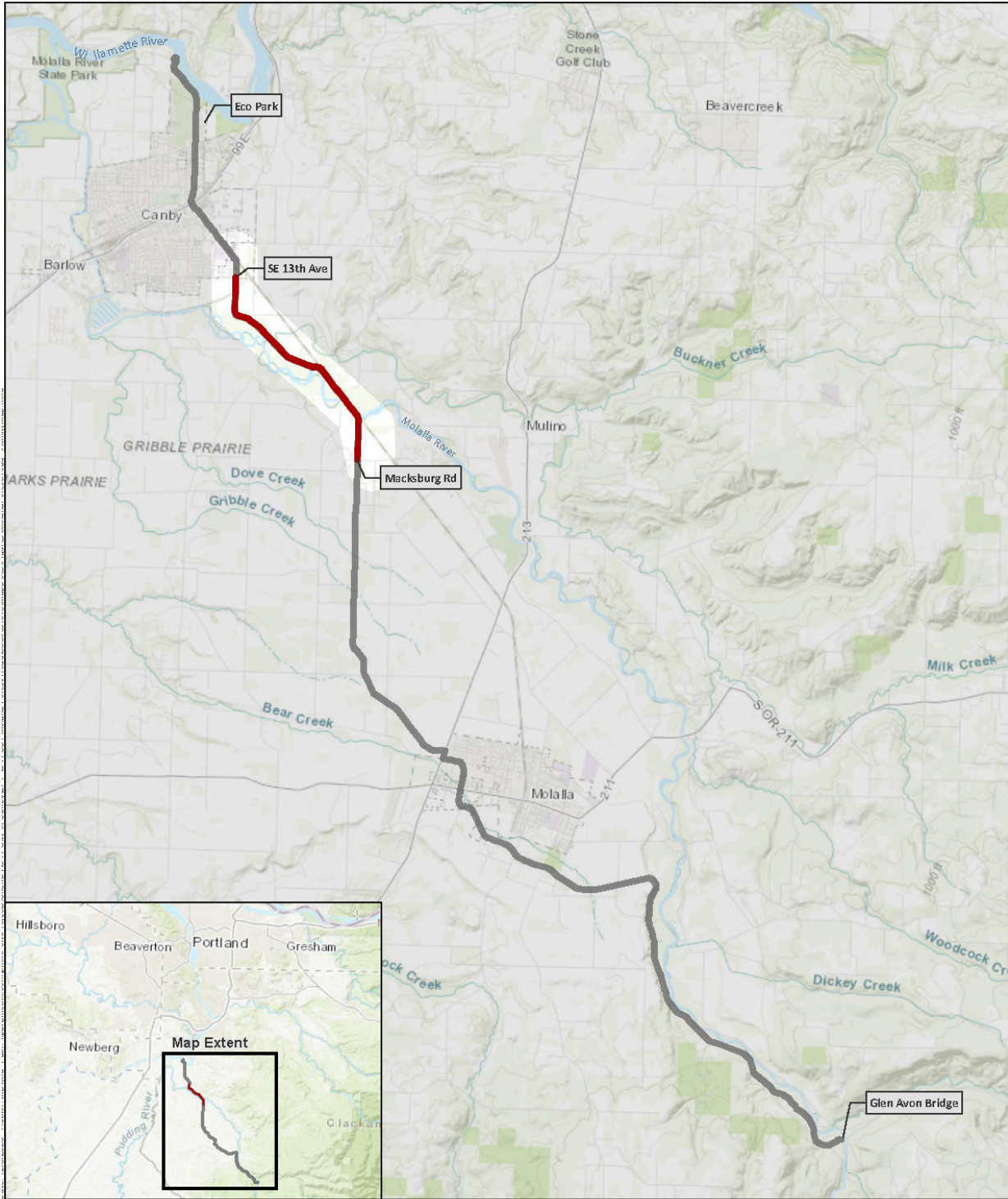
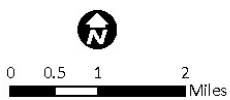


Figure 1. Molalla Forest Road – Traverso Donation Section



Source: Clackamas County, Metro RUS, ESRI

Vicinity Map
 Molalla Forest Road



— Molalla Forest Road - Traverso Section
 — Molalla Forest Road

Clackamas County, Oregon

Figure 2. Molalla Forest Road – Willamette River north of Canby to Glen Avon Bridge south of Molalla

1.2 Plan Process

The Development Plan process started in October 2020 and was completed in April 2021. The process started with identifying opportunities and constraints for trail development in the corridor (Appendix A), as well as developing key principles that support trail planning in the corridor. The City engaged stakeholders via a project Advisory Committee and through outreach to the general public.

1.2.1 Advisory Committee

The project Advisory Committee is composed of a broad group of community stakeholders including property owners along the Traverso Section, representatives of the Molalla River Watch, citizens, City of Canby staff, local law enforcement, and others. This diverse group of stakeholders ensured that diverse viewpoints were introduced to the project planning discussion. The Advisory Committee met three times during the planning process and will continue to advise the City as the trail moves from planning to later stages of refinement and implementation.

It is the intent of the City that the Advisory Committee will continue on after the Development Plan process to inform later stages of trail development.

1.2.2 Public Outreach

The project team conducted two rounds of outreach as part of the Development Plan process. This effort represented the start of ongoing engagement with the community that is required to continue refining the trail project and its future design and construction. For detailed summaries of outreach, see Appendix B.

Key themes from outreach include:

- Provide opportunities for all users to safely recreate
- Include trail connectivity and continuity in planning
- Create opportunities for the local economy to benefit
- Ensure the project accommodates a variety of uses
- Preserve nature and provide educational opportunities
- Improve legal access to the Molalla River for fishing, swimming, boating, and other outdoor recreation
- Address property owner concerns about privacy, security, and trail access
- Review the need for facilities and amenities
- Address property owner concerns about illegal uses occurring in the corridor today

When reviewing the Draft Development Plan, people expressed strong support for considering formal access to the Molalla River, but noted that potential environmental issues and trespassing are major concerns if access is provided. Additionally, there was no clear consensus that equestrian use of the trail would be desirable. People thought that maintenance and enforcement are very important and that a volunteer group to assist with these activities is critical.

Findings from outreach directly informed this Development Plan, including the trail configuration in the corridor, amenities, and implementation.

2. TRAIL PRINCIPLES AND USERS

2.1 Trail Users

The 1994 *Molalla River Pathway Plan* described the intended users as bicyclists, joggers, equestrians, and those who use mobility devices (e.g., wheelchairs and walkers). The trail will be developed as a multiuse trail meeting state standards for width and surfacing. Identifying user groups is critical to developing trail design concepts that meet the varied and unique needs of different users. Based on discussions with stakeholders, the project team identified the following key user groups that were considered during creation of this MFR Development Plan:

- Pedestrians – walkers, joggers, and hikers
- People who have physical disabilities who may use mobility devices such as wheelchairs. Accommodating these users is also important in meeting federal funding standards (Americans with Disabilities Act [ADA]).¹
- Road cyclists, mountain bike, and gravel cyclists
- Users with pets

Equestrian use was considered during drafting of the Plan. However, public outreach indicated mixed desire for equestrian use of the trail, and there are challenges in terms of creating a space for equestrian staging along the Traverso Section. Additionally, there would be potential conflicts between pedestrians, cyclists, and equestrian users in the constrained trail environment.

2.2 Development Plan Principles

Based on discussions and feedback from the City, stakeholders, and the broader community, the project team developed the following principles for the Development Plan:

- Provide opportunities for different trail users, especially transportation-disadvantaged community members, to enjoy the trail and minimize potential conflicts between them.
- Respect adjacent private property owners, maintain existing property access, and collaborate to resolve concerns and integrate solutions into the Development Plan .
- Enhance access to the Molalla River and provide off-trail recreation opportunities on City-owned land.
- Build trail improvements that complement the natural setting, and include opportunities for education about the environment and the history of the corridor.
- Develop trail access points and parking areas that maximize safety and security, while minimizing impacts to adjacent private property.
- Provide safe and comfortable connections to the existing and future walking, cycling, and trail network.

These principles informed this Development Plan process, as well as future phases of design, construction, and trail operations and maintenance.

¹ The trail would not provide any other exceptions for motorized vehicles including all-terrain vehicles (ATVs), dirt bikes, or other recreational motorized vehicles.

3. TRAIL DESIGN CONCEPTS

3.1 Conditions Summary

Figure 3 shows the Traverso Section major features and segmentation used to develop trail design concepts. As of late 2020, the Traverso Section of the MFR consisted of the original asphalt-paved roadway in varying degrees of disrepair. Two bridge structures exist along the MFR – the Milk Creek Bridge and the Molalla River Bridge. The following provides a general description of existing conditions in the Traverso Section.

Segment 1

- The northernmost section near SE 13th Street is currently a shared roadway, used for private property access and deliveries, as well as by farm equipment.
- Between SE 13th Street to Milk Creek Bridge, the roadway ranges from fair to poor condition, with relatively intact but poorly maintained asphalt in some places and substantially deteriorated asphalt or pot-holed areas in others.
- The Milk Creek Bridge is a single-span prestressed concrete girder bridge that is 12 feet wide and approximately 100 feet long. The concrete bridge deck is in serviceable condition with some small areas of minor deterioration. Currently, the Milk Creek Bridge sees very little vehicle traffic, consisting mainly of local access to nearby properties.
- The roadway surface from Milk Creek Bridge to the end of the shared roadway near the washout consists primarily of deteriorated chip-seal pavement that degrades to gravel. Some patches of remnant pavement are still present. This segment has high potential of future use as a trail segment, assuming repaving and/or asphalt rehabilitation.

Segment 2

- South of the end of the shared roadway, the original roadway is overgrown and there is an approximate 1,000-foot-long section that completely washed away in the 1996 flood. The bank is continuing to erode in this section, and there is no walkable surface at the original road elevation on City property.
- The 1996 event combined with a lack of use and maintenance has rendered some segments along the Segment 2 impassable by vehicles or pedestrians.

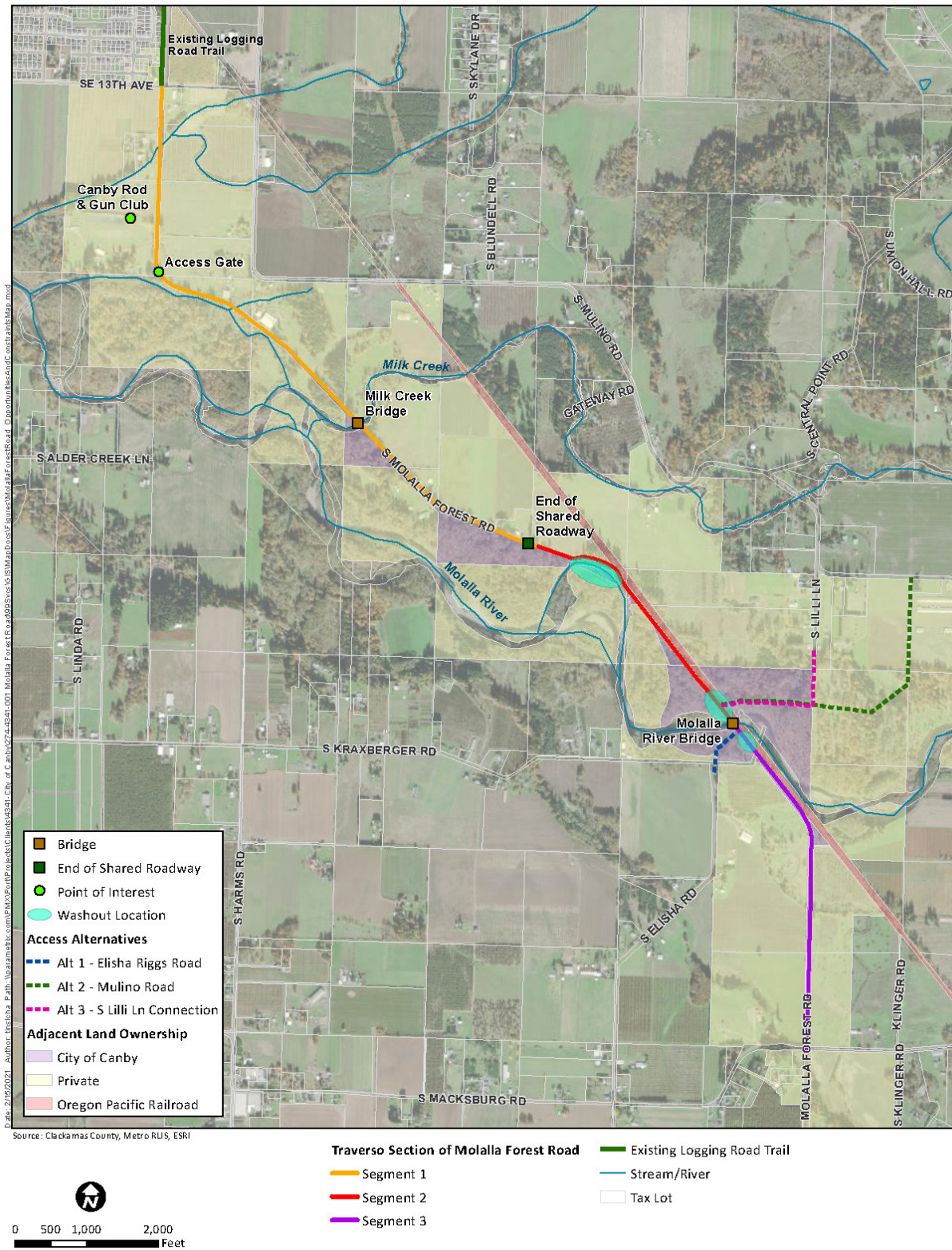


Figure 3. Traverso Section Overview

Segment 3

- The Molalla River Bridge is a two-span prestressed concrete girder bridge that is 12 feet wide and approximately 180 feet long. The concrete bridge deck is deteriorating with several soft spots where the aggregate has separated from the concrete. The north end approach structure is missing completely, resulting in an approximate 60-foot gap between the bank and the north end of the bridge. There is an approximately 20-foot-wide hole at the south end where the earthen approach fill has washed away. The damage at both ends has rendered the bridge inaccessible for vehicles and only accessible for pedestrians at the south end.
- South of the bridge, the existing roadway is overgrown and the surface is deteriorated. This section is not used by property owners to access property, but there is incidental farm equipment use by adjacent properties.

For more details about the existing condition of the corridor, see Appendix A

3.2 Trail Design Concepts

This Development Plan includes trail design concepts for the three segments of the Traverso Section (Figure 3). Trail design concepts were developed with consideration of the following:

- **Accessible Multiuse Trail** – The trail will generally be designed to be a multiuse trail accessible for people of all abilities, including for those who use mobility devices. The trail is intended primarily for use by walkers, hikers, and cyclists.
- **Surfacing** – A continuous paved or hard-surface trail is proposed for the entire Traverso Section, except for potential off-MFR side trails which would be soft-surface. Several segments of the Traverso Section are currently used for vehicle access to properties and by farm equipment; a hard-surface trail is needed to maintain these uses. Future pavement design will need to consider areas of the trail that would experience routine vehicle, road cyclist, and mobility device use.
- **Maintenance/Emergency Vehicle Access** – For those sections of the trail that do not have regular vehicle access to property (primarily Segments 2 and 3), the trail will be designed to allow for maintenance and emergency vehicle access. Since motorized use will otherwise be prohibited, removable bollards will be located at points where the trail intersects sections of the trail that do allow vehicles.
- **Crime Prevention Through Environmental Design (CPTED)** – CPTED is a suite of design principles that uses the built environment to reduce the incidence of unwanted behavior and activities. CPTED relies on four principles: natural surveillance, territorial reinforcement, natural access control, and maintenance to foster the best outcomes. The trail concepts described in this section, in addition to the amenities and implementation measures in Section 4, rely on CPTED principles to ensure a safe and enjoyable experience for trail users, as well as to address safety and security concerns from private property owners.

The remainder of this section details segment-by-segment trail development concepts.

3.2.1 Segment 1 – SE 13th Street to End of Shared Roadway (Approximately 1.7 miles)

Figure 4 and Figure 5 show alternative trail cross sections for Segment 1. Further design work and outreach is needed prior to determining the preferred trail cross section. The Traverso property deed requires that any potential trail be on the east side of the MFR property in the vicinity of the Canby Rod and Gun Club. Additionally, Segment 1 is critical to accessing homes, farms, and businesses along this section of the MFR. The road is used for accessing properties by car, for deliveries (including large trucks to the Canby Rod and Gun Club), and for farm using the road. Therefore, the alternative trail cross sections all propose maintaining the existing roadway and augmenting the corridor with trail facilities on the east side of the corridor, until the trail passes to the southeast of the gun club, where it would cross the road and continue on the west side of the roadway.

Notably, it is proposed that cyclists ride on the road in this section, with sharrows (pavement markings as shown in Figure 4) indicating that cyclists are likely to be present. Because the roadway experiences low vehicle traffic, cyclist use of the main road should function well. Public outreach indicated a slight preference for separating cyclists from pedestrian traffic as shown in Figure 4.

The trail concept for this segment envisions widening of the existing paved surface. This widening would likely trigger stormwater conveyance and potentially water quality treatment requirements that would be incorporated into the design and are considered in the cost estimates in Section 4. Additionally, construction of the trail would require retaining structures in some places and the potential for culvert extensions to accommodate the wider cross section; these improvements are constructable, but do increase the cost of the proposal.

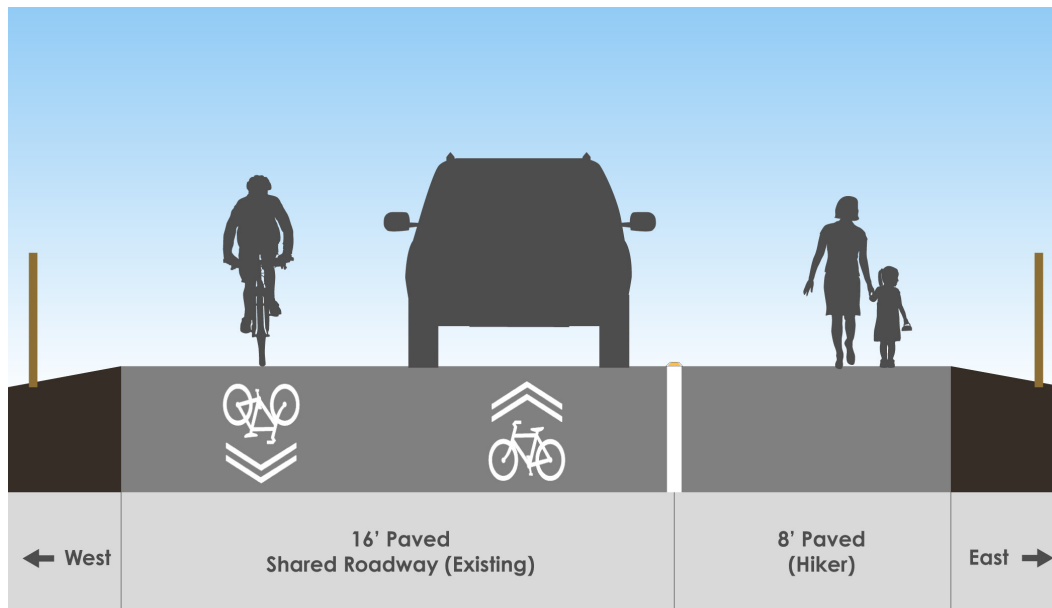


Figure 4. Segment 1 Paved Multiuse Trail Alternative

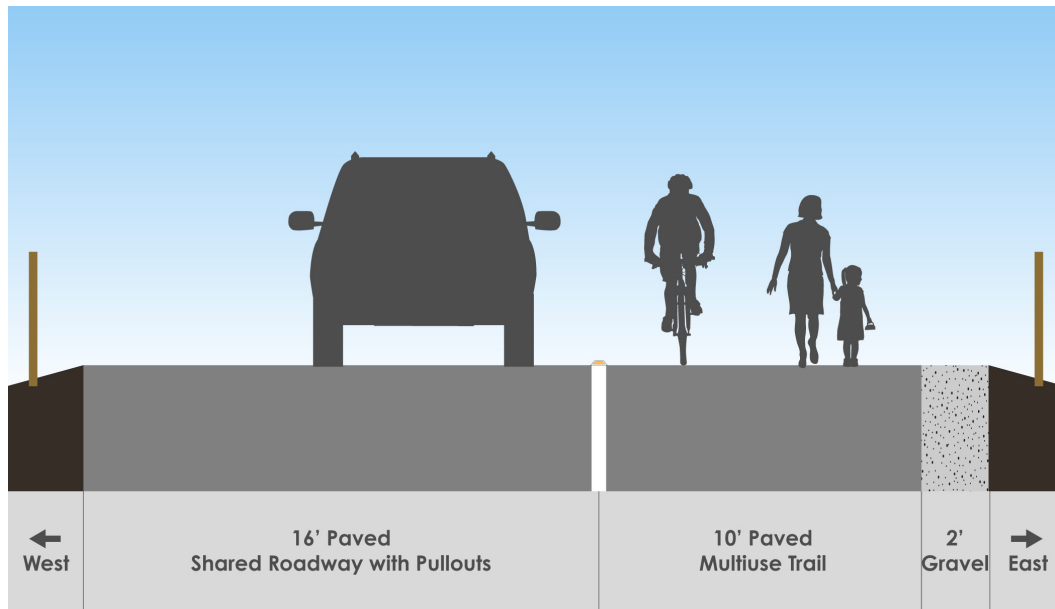


Figure 5. Segment 1 Paved Multiuse Trail Alternative

The Milk Creek Bridge, located about midway on Segment 1, is approximately 100 feet long and 12 feet wide, carrying a single lane of traffic. Two alternatives are proposed for the Milk Creek Bridge:

- Minimal improvements – Repair deck surface, add railing, and add warning signage to the bridge. Trail users would look for vehicle traffic and cross the bridge. Warning signage would alert drivers that trail users may be on the bridge. Button-activated warning lights could be installed so trail users could indicate they are using the bridge. Vehicle use of the MFR here is very low.
- Major improvements – Construct parallel Milk Creek trail crossing structure. This would provide the greatest separation from the roadway and potential vehicle conflicts. However, this alternative would be very costly compared to the potential safety or comfort benefit for users.

To accommodate the previously mentioned deed condition that the trail be on the east side of the MFR until it passes beyond the gun club property, a crossing could be built where the trail crosses to the other side of the MFR. The trail would continue on this side of the corridor until its terminus at Macksburg Road. Figure 6 shows the proposed crossing location.

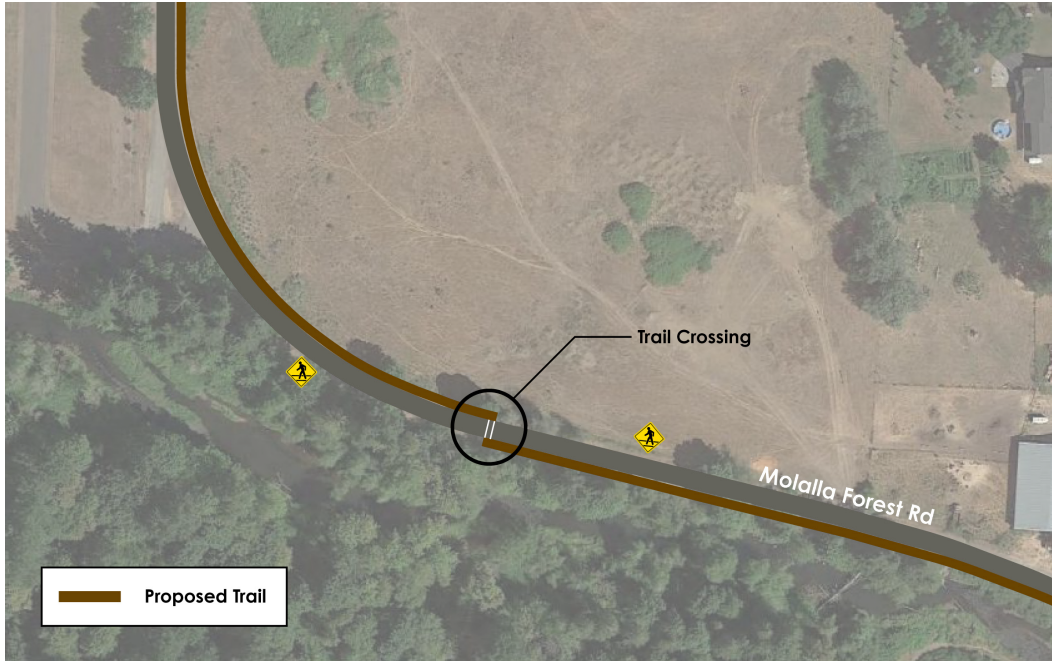


Figure 6. Proposed Trail Crossing on south end of Segment 1

3.2.2 Segment 2 – End of Shared Roadway to Molalla Bridge (Approximately 0.7 miles)

This section includes the most complex design considerations in the corridor related to the washout and river crossing. At the north end of Segment 2, starting at the end of the shared roadway, the trail is not used for private property access. The roadbed in Segment 2 is deteriorated and overgrown by brush, and is missing altogether in the 1996 washout area. Clearing the brush from this area and restoring good sight lines would allow for more “eyes on the trail” to deter unwanted activities. The preferred trail cross section accommodates a multiuse trail that would be exclusive to pedestrians, cyclists, and useable by maintenance or emergency vehicles as needed (see Figure 7).

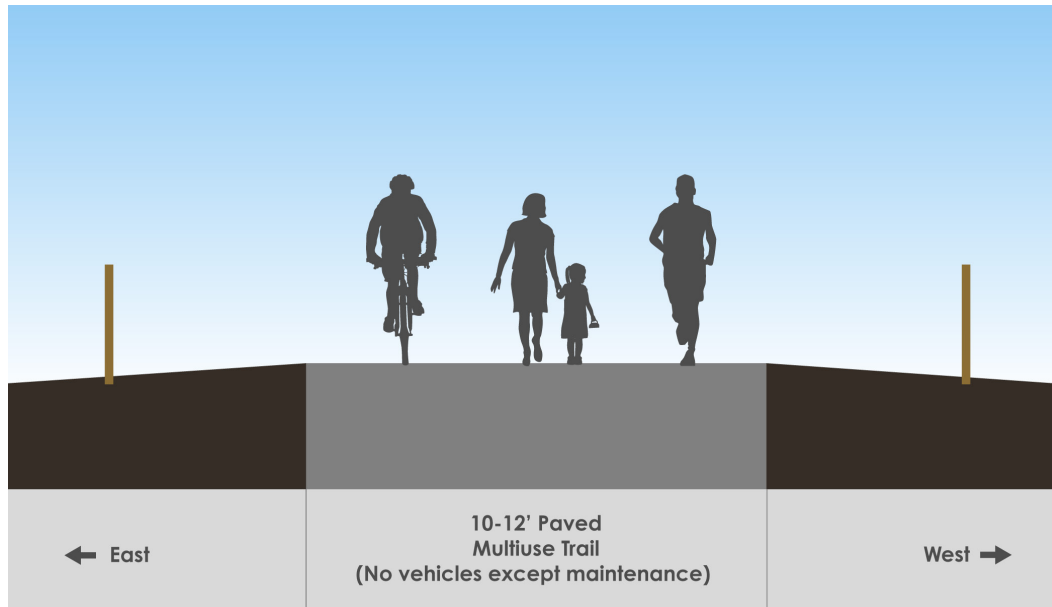


Figure 7. Segment 2 Preferred Trail Cross Section

The Molalla River Bridge structure is intact, and field visits indicated that it is in useable condition, though further engineering investigation is needed. Table 1 describes different alternatives for constructing a trail in the washout area and connecting to the existing bridge structure. Figure 8 shows the different alignments of these alternatives.

Table 1. Alternatives for Rebuilding Washed-Out MFR

Alt. No. ¹	Alternative Description	Pros/C	Likely Cost
1	Rebuild the trail along the original MFR alignment	<ul style="list-style-type: none"> • Would not require easements • Requires significant infill, structural support, and grading 	\$\$\$
2	Reconstruct the MFR along the elevated stable ground adjacent to the railroad corridor <i>(recommended approach)</i>	<ul style="list-style-type: none"> • Requires an easement on private property with minimal impacts • Lowest-cost solution 	\$
3	Rebuild the MFR along the railroad right of way	<ul style="list-style-type: none"> • Requires an easement from the railway; this may be difficult to obtain • More difficult from a construction and permitting perspective 	\$\$

1 Number refers to the alternative shown in Figure 8.

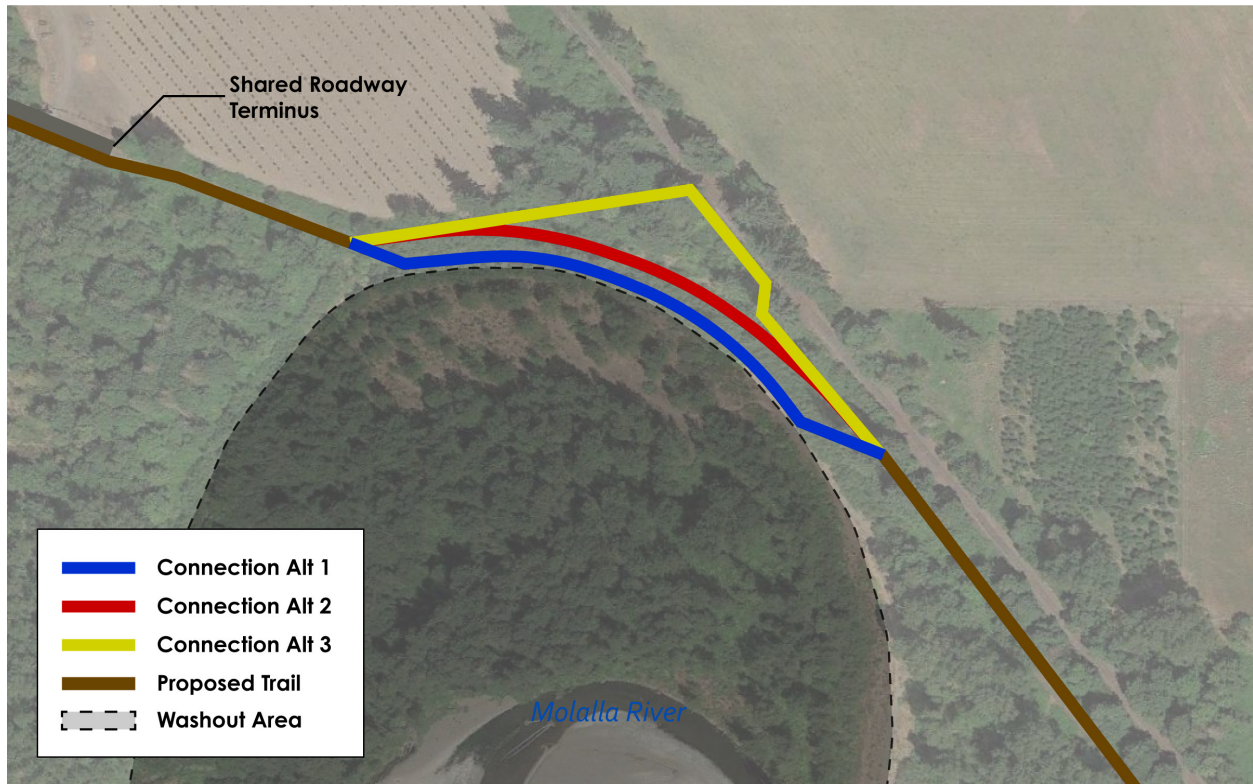


Figure 8. Connection Alternatives for Rebuilding Washed-Out MFR

3.2.3 Segment 3 – Molalla Bridge to S Macksburg Road (Approximately 0.9 miles)

This segment of the Traverso Section is not used by vehicles to access property, though it is used occasionally by farm equipment. The trail design concept accommodates this use.

The trail concept for this segment widens the existing paved surface (see Figure 9). This widening would trigger stormwater conveyance and potentially water quality treatment requirements that would be incorporated into the design and are considered in the cost estimates in Section 4.

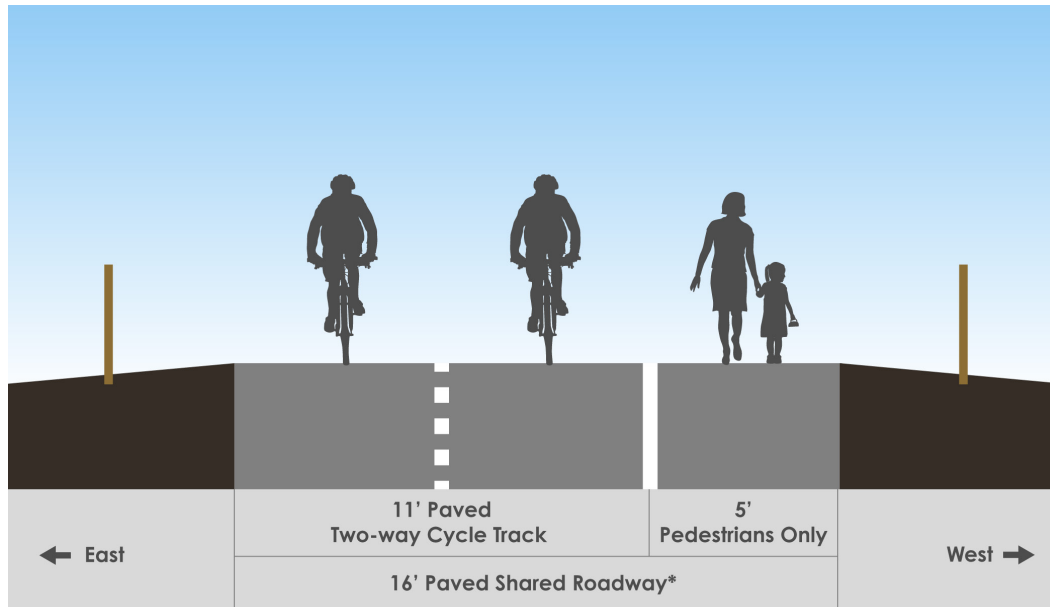


Figure 9. Segment 3 Trail Alternative

3.2.4 Off-MFR Trails

The Traverso Section property owned by the City of Canby has several locations where the property extends well beyond the MFR roadbed. Soft-surface trails could be considered as side trails from the main MFR trail route. Soft-surface paths would increase access to nature and the recreational value of the trail system. Increased access to nature would provide opportunities for environmental education and interpretation, which were identified by the advisory committee and public as important features. Section 4 of this Development Plan includes discussion of a potential off-MFR trail that would serve as a terminus for Phase 1 improvements to the Traverso Section.

3.3 Access Points

Trail access is important to provide multiple opportunities for users to access the trail, ensure access for those who use mobility devices (ADA accessibility), and for redundant accesses to facilitate quick emergency response and trail safety enforcement activities.

3.3.1 North Access (SE 13th Avenue)

The north end of the Traverso Section would connect directly to the existing shared-use path in the City of Canby at the intersection of SE 13th Avenue and Sequoia Parkway. No parking area or major trailhead access is proposed for this section because of this direct connection to the existing trail. Additionally, there is no obvious location for developing a trailhead or parking in the vicinity.

The intersection of SE 13th Avenue and Sequoia is an all-way stop-controlled intersection. Minor improvements to the intersection are needed to facilitate safe crossings for cyclists and pedestrians. Figure 10 shows conceptual intersection improvements. Additionally, signage is proposed to deter non-local traffic from using the road near this intersection.

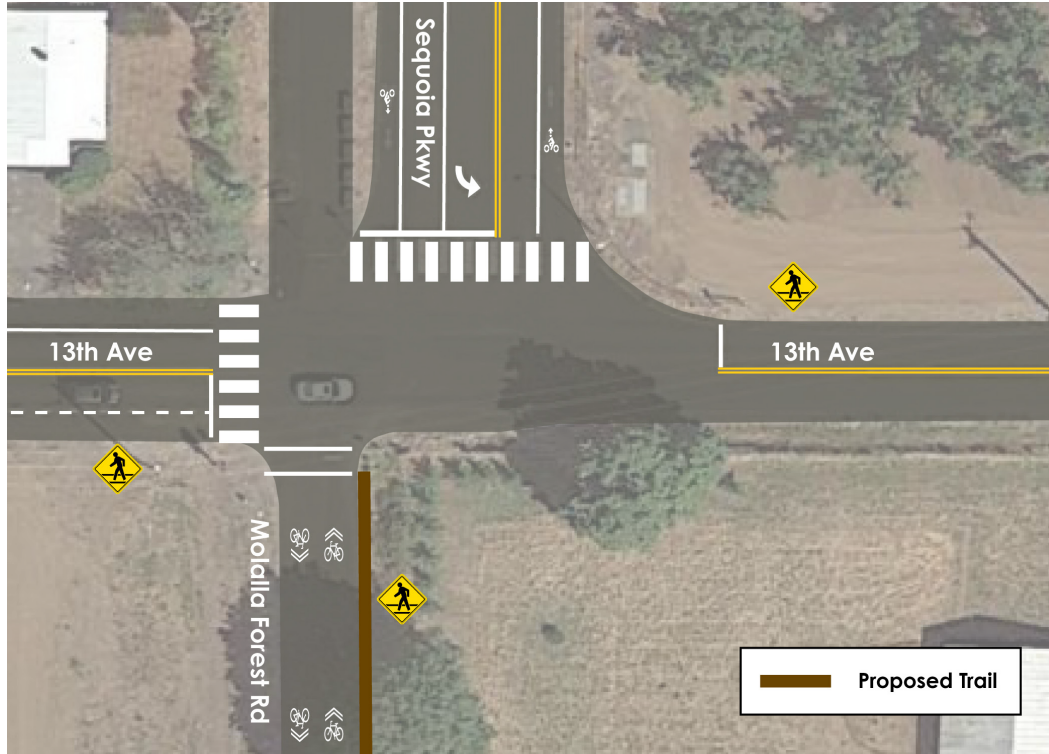


Figure 10. SE 13th Intersection Concepts

3.3.2 Mid-Point Access Alternatives

The original 1994 *Molalla River Pathway Plan* conceived of a trailhead near the Molalla River. A trailhead access point near the Molalla River is desirable to facilitate trail access for all users and improve connectivity and maintenance and emergency access. There are several alternatives that could be considered to facilitate access at this location (see Figure 11); these alternatives require further public and property owner outreach as well as engineering and environmental investigation prior to moving forward.

3.3.2.1 Alternative 1 – S Elisha Road

Given the access limitations at the north end, primary access to the trail could be achieved via S Elisha Road, which is located just south of the Molalla River Bridge and west of the MFR. Clackamas County currently owns the road right-of-way to the City property south of the bridge, which could be potentially developed into a small parking area.

The property adjacent to this access point is privately owned. Further outreach is needed to determine feasibility, including environmental permitting considerations. Additionally, access control at this location would be desirable, such as bollards or other barriers, to prevent or control vehicle access on this road. A strategy would also be needed to manage parking at this location if it moves forward, as demand is anticipated to be high. Elisha Road is owned by Clackamas County and any changes here would require County engagement and concurrence.

3.3.2.2 Alternative 2 – S Mulino Road

An alternative access point to the trail could be achieved off S Mulino Road through private property. Access could be obtained via the private property located immediately to the south of S Mulino Road to provide access to the City of Canby–owned property just north of the Molalla River. Preliminary conversations with one of the property owners indicated they are open to discussions around the long-term purchase of their property for this purpose. This alternative would require a railroad easement, which may be very difficult to obtain.

3.3.2.3 Alternative 3 – S Lilli Lane Connection

Alternative access to the City of Canby property north of the Molalla River could be achieved via S Lilli Lane, which currently terminates at a juncture with private property; an easement through this property could provide a direct connection to the City of Canby property adjacent to the Molalla River. The private property located immediately to the east of the City of Canby property has also expressed openness to considering using part of their property for trail access

This alternative would require a railroad easement which could be very difficult to obtain. Ongoing conversation with adjacent property owners is needed to gain a better understanding of these opportunities.

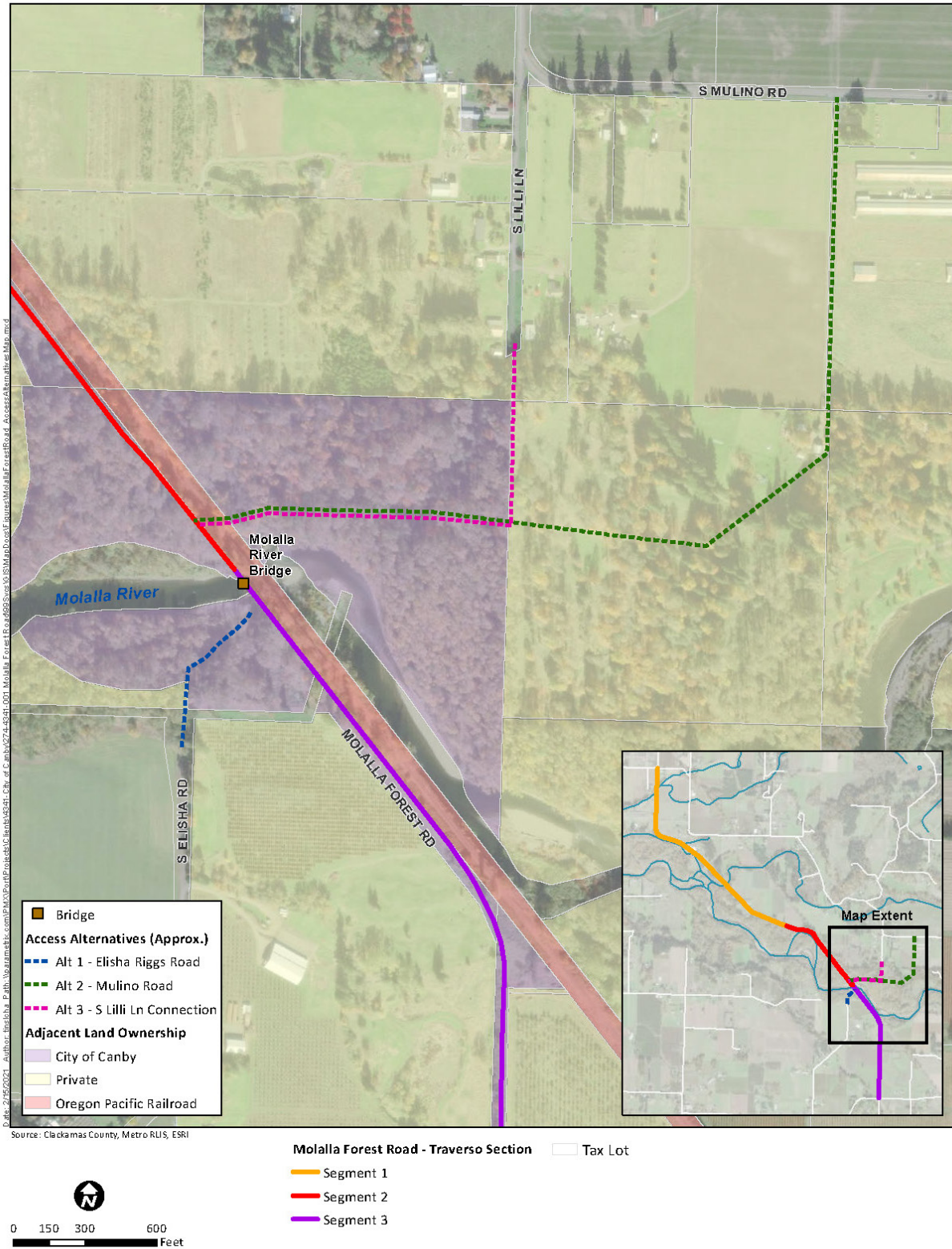


Figure 11. Mid-Point Access Alternatives

3.3.3 S Macksburg Road

Parking opportunities near Macksburg Road are limited, making this an undesirable point for a major trailhead. The City of Canby owns a narrow strip of property that runs along the west side of the MFR. There is an opportunity to use some of this property to create a minor pull-off and parking area for users accessing a future trail, but this location is undesirable for pull-off parking because of high traffic volumes and speeds on Macksburg Road that would make pulling off/onto the road potentially unsafe. If future access is considered, the City could pursue acquiring additional property at this location to construct a formal trailhead access point.

3.3.4 River Access

Access to the Molalla River was discussed with stakeholders during public outreach. Public input received indicated a strong desire from many for access to the Molalla River for fishing, swimming, and boating, though many also expressed concerns about environmental damage, trespassing, and other potential negative issues. According to state law, people are allowed to use the Molalla River for these purposes and to use the river up to the ordinary high water mark. Additionally, the public may engage in “uses incidental to a water dependent use,”² including walking on the shore while fishing. The nearest public river access is approximately 5 river miles downstream at Canby Community Park or 4.5 miles upstream at Wagonwheel Park, meaning there is a long stretch of river without any public access.

River access would provide recreation and environmental education opportunities, including fishing, swimming, and boating access. However, drawbacks include potential riparian environmental harm, potential trespassing onto private property, and the potential for river user demand to exceed trailhead capacity. This Development Plan does not specify whether river access should be integrated into the future trail; this decision requires further engagement and community discussion in a later phase of the project to understand the full implications of providing formal access to the Molalla River.

3.4 Amenities and Features

Trail amenities are important to the user experience; they help establish a unified “look and feel” to the trail and enhance safety and security for users and adjacent property owners.

Branding

The City or stakeholders should establish a unified brand for the Traverso Section trail that could be shared with the existing Logging Road Trail in Canby. Branding elements could include a logo and graphic design standards (colors, fonts, etc.).

Signage

Guidance on signing is available from several sources. The substantial Latino community in Canby means that many trail users may be Spanish-speakers and therefore, bilingual signage is desirable. The FHWA Manual on Uniform Traffic Control Devices (MUTCD) and the Oregon supplement provide guidance on regulatory and warning signs. Regulatory and warning signage needs to be closely coordinated with city, county, and ODOT standards. Signage should be consistent throughout the trail corridor, including the existing shared-use path in the City of Canby, to create a consistent brand and messaging to trail users throughout the entire corridor.

² <https://www.oregon.gov/dsl/WW/Documents/PublicRightUseWaterways.pdf>



Figure 12. Examples of Trail Wayfinding and Educational Signage

- Informational, Education and Interpretation – The setting of the Traverso Section lends itself to informational and educational signage opportunities that highlight the historic nature and uses of the road, the agricultural setting, and natural assets such as the Molalla River.
- Warning, Hazards, and Regulatory – Signage warning users about trail hazards and conditions (e.g., “trail crossing ahead”). Also important is prominent signage that discourages users from straying from the trail and Traverso Section property (e.g., “no trespassing,” “respect private property, please don’t trespass”). Other regulatory signage includes providing information about trail rules (e.g., “no smoking or alcohol use on trail”, “no river access,” “no trespassing – private property”) (see Figure 13).

The Intertwine *Regional Trails Signage Guidelines*³ developed for the Intertwine Trail in the Portland metro area provide an excellent example of signage standards.

Furnishings

Areas for trail users to rest and enjoy the setting are important design considerations. Benches could be placed at trail destinations (see Phase 1 section below). No specific bicycle infrastructure is proposed, though simple staple bike racks could be considered at the trail terminus and at other trail destinations for short-term bicycle use.

Trash receptacles could be provided periodically along the trail. Providing trash receptacles helps discourage littering, though they also carry the risk of illegal use and also require regular trash pickup by maintenance staff. Pet waste stations should be included periodically along the length of the trail. These should be located near trash receptacles, if provided.

Maintenance requirements associated with these amenities are discussed in Section 5.



Figure 13. Examples of Regulatory Signage

³ <https://www.oregonmetro.gov/sites/default/files/2017/11/21/2017-Intertwine-%20Trail-Sign%20Guidelines.pdf>

Fencing and railings

Context-sensitive fencing along the trail could add aesthetic character to the corridor and also help clearly delineate the line between public trail and private property. Railings would be required along crossings and bridge structures for user safety. Fencing provides “territorial reinforcement” by showing clear boundaries for where trail users should and should not be. Figure 14 shows an example of such fencing.



Figure 14. Example of Context-Sensitive Fencing Using Natural Materials

4. IMPLEMENTATION

The following section describes potential phasing of trail improvements. In all cases, additional outreach with property owners, the broader public, and establishment of robust trail management and enforcement protocols is required prior to moving forward (see Section 5).

4.1 Phase 1

The goal of Phase 1 is to develop a useful and enjoyable segment of the trail that is low-cost and relatively uncomplicated to design and construct. Phase 1 would function as an extension of the existing Logging Road Trail in Canby from SE 13th Avenue south to near the washout, and it would essentially develop most of Segment 1. Phase 1 would create 1.5 miles of trail, stopping before the washout area. At this location, the Traverso property includes a relatively large (approximately 9-acre) triangle-shaped parcel that extends to near the Molalla River. Phase 1 could include development of a soft-surface trail on this property that ends at small overlook of the Molalla River (see Figure 15). This would provide a destination for trail users and a natural turnaround point until the trail is extended farther south. River access would not be permitted.

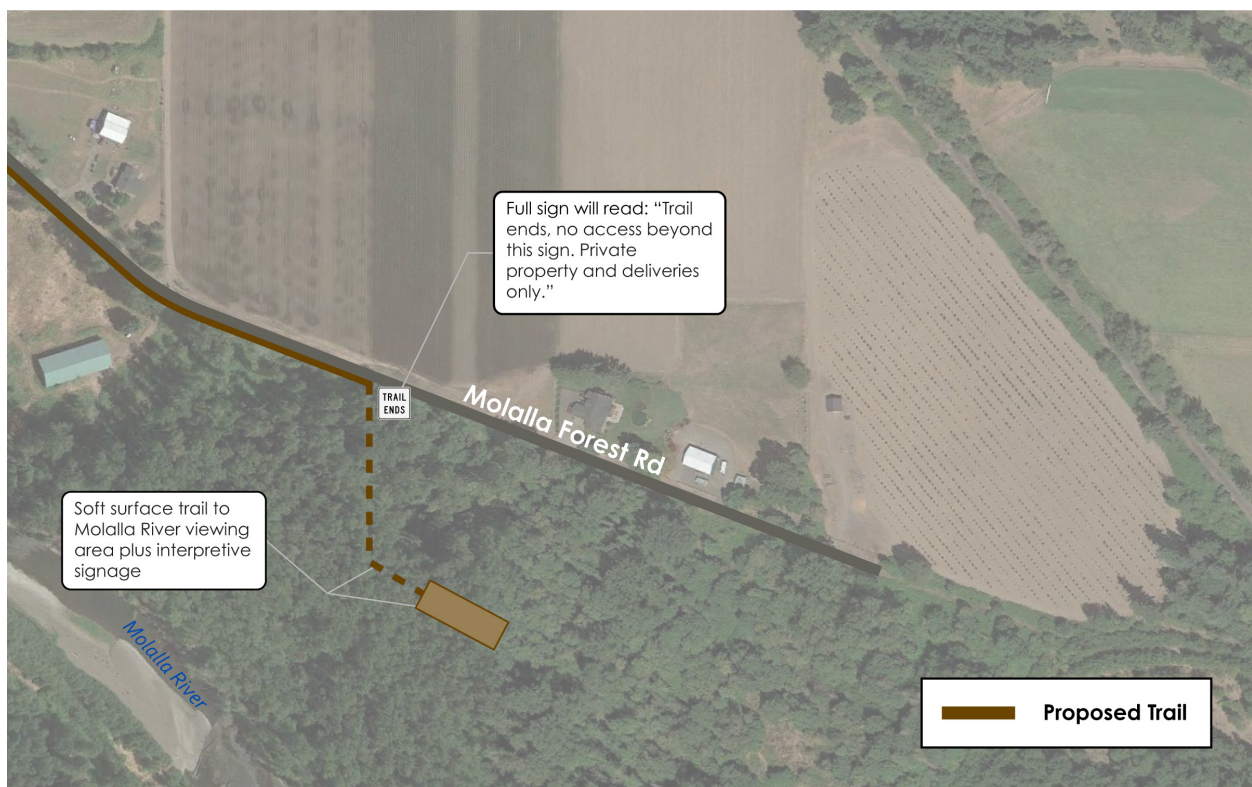


Figure 15. Potential Phase 1 Terminus

Phase 1 would also include:

- Development of signage (wayfinding, regulatory, hazards, etc.)
- Trail fencing
- Trash receptacles and a pet station at the intersection of SE 13th Ave, off of the existing Logging Road Trail. This location would be visible to help deter illegal use and if placed on the existing Logging Road Trail, would limit access to just those using the trail.

Phase 1 requires confirmation of the potential trail terminus as well as further design, environmental permitting considerations, and implementation of trail management elements discussed in Section 5.

4.2 Phase 2

Phase 2 would include full construction of a trail from the washout south to S Macksburg Road (all of Segments 2 and 3). This phase includes complex issues and design considerations including re-establishing the roadbed/trail through or parallel to the washout and addressing the bridge across the Molalla River. It would also include determination of the preferred mid-point access location. Phase 2 requires additional alternatives evaluation to determine the best alternatives that balance costs, potential impacts to environmental resources, the needs of neighboring property owners, and trail users. It also requires determination of design solutions for the washout area and Molalla River Bridge that will be durable and be unlikely to suffer permanent damage as a result of future flooding.

4.3 Cost Estimate

Table 2 shows the estimated costs by segment, including alternatives. Appendix C includes a detailed breakdown of estimated costs. Phase 1 corresponds to the Segment 1 improvements while Phase 2 generally corresponds to the Segments 2 and 3 improvements. The total estimated cost is inclusive of permitting, design, and construction costs.

Table 2. Cost Summary

Segment	Description	Start MP	Stop MP	Total Length (miles)	Total Estimated Cost (Rounded)	Total Estimated Cost/Mile
1A	SE 13th to End of Pavement at Gate	0.00	0.48	0.48		
	Shared Use Roadway				\$ 331,000	\$ 684,000
	Roadway with Multiuse Trail				\$ 482,000	\$ 996,000
1B	End of Pavement at Gate to End of Shared Roadway	0.48	1.76	1.27		
	Shared Use Roadway				\$ 1,908,000	\$ 1,498,000
	Roadway with Multiuse Trail				\$ 2,296,000	\$ 1,802,000
2	End of Shared Roadway to Molalla River Bridge	1.76	2.47	0.72		
	Alt 1 - Rebuild existing				\$ 3,337,000	\$ 4,653,000
	Alt 2: Adjacent to existing				\$ 1,725,000	\$ 2,405,000

Segment	Description	Start MP	Stop MP	Total Length (miles)	Total Estimated Cost (Rounded)	Total Estimated Cost/Mile
3	South of Molalla River Bridge to Macksburg Rd.	2.47	3.41	0.94		
	Multiuse Trail				\$ 1,166,000	\$ 1,241,000
			Total Length	3.41		
Total Cost with Preferred Options (Segment 1 Roadway with Multiuse Trail and Segment 2 Adjacent to Existing)					\$ 5,669,000	\$ 1,660,000

4.4 Future Phases

As envisioned in the original 1994 plan, the Traverso Section is one piece of the greater regional trail vision of connecting Canby to the City of Molalla and points south. Improvements to the Traverso Section conceived in this Development Plan consider this future vision. The City has had preliminary conversations with a property owner south of Macksburg Road who is potentially interested in their property being part of the trail in the future.

The trailhead access points discussed in Section 3 would also serve a future regional trail. Any trailhead access improvements developed at S Macksburg Road should consider the potential for the trail to continue farther south in the future; there was formerly an elevated crossing of the MFR at this location. Given traffic volumes and speeds, an elevated crossing at this location may be ideal in terms of trail user safety and comfort.

4.5 Environmental and Permitting Considerations

The Molalla River is designated as Essential Salmonid Habitat by the Oregon Department of State Lands (DSL) and is designated as critical habitat for Endangered Species Act (ESA)-listed salmonids. The river and surrounding lands are considered high quality habitat by Clackamas County. Land beyond the toe of the bank is within a mapped Federal Emergency Management Agency (FEMA) floodplain. Due to the environmental sensitivity of resources in this area, a site visit and corresponding report would be required to determine the extent of wetlands, waters, and any locally protected natural resources present at the river bend as the project moves beyond conceptual design and into design phases. Impacts to wetlands versus waters will drive permitting requirements. Additionally, the site near the Molalla River is mapped as high-quality habitat by Metro, and the City may need to address local habitat protection ordinance requirements.

If federal funding is granted to the project (or a federal permit required), the provisions of the National Environmental Policy Act (NEPA) would apply. Once project elements have been further refined during design, the City would need to complete the appropriate NEPA process; it is likely that work contemplated on the trail would be classified as a “documented categorical exclusion” for NEPA purposes, which has a reduced level of documentation as compared to an environmental assessment or environmental impact statement.

In addition to federal permits, local permits may be required to improve facilities; the entire Traverso Section is in unincorporated Clackamas County and permitting needs would be determined during design. The Traverso Property is an existing transportation corridor, having been a private logging road

prior to the City's ownership as well as its continued use as an access road by abutting private property owners.

5. OPERATIONS, SAFETY AND SECURITY

The trail management recommendations in this section are based consultant experience with trail management best practices and are informed by the feedback received from the public and adjacent private property owners.

5.1 Trail Management

The Traverso Section is owned entirely by the City of Canby, though the property itself lies outside of the City limits in unincorporated Clackamas County. As the City is the owner of the property, City government is the lead management agency for the trail. It is assumed that Clackamas County regulations pertaining to parks and trail uses would be applicable to the Traverso Section. Section 5.4 also describes the potential roles of volunteers in management and maintenance of the trail; these partnerships between local government and engaged citizens are critical.

5.2 Maintenance

Trail maintenance is critical to the enjoyable use of the trail and to maintaining a clean environment. Consistent maintenance is a core CPTED principle that deters unwanted uses and behavior on trails by reinforcing ownership of the trail and showing regular attention. Canby Parks and Recreation is the proposed lead maintenance authority for the trail. Canby Parks has several full-time staff dedicated to maintaining city parks and recreation facilities, including the existing developed section of the MFR trail within the city limits of Canby.

Table 3 shows an example maintenance schedule for a future fully developed trail on the Traverso Section. This maintenance schedule does not account for natural events such as floods or landslides which could cause unpredictable damage to the trail, nor does it account for materials or equipment costs. The maintenance estimate indicates that trail maintenance would require 0.13 full-time equivalent (about 5 hours per week, perhaps more during times of high use and less during times of low use) of City maintenance staff time. However, many of these activities could be undertaken by volunteers, reducing maintenance costs to the City, as indicated in the rightmost column in the table.

Table 3. Example Maintenance Schedule

Activity	Frequency	Average Annual Labor Hours	Opportunity for Volunteer Engagement?
Mowing: 4-ft min. width each side of trail where applicable.	3-4 times annually	32	Low
Pruning: Prune woody vegetation 4 feet back from sides of trail – 14 feet vertical clearance – remove invasive vines.	Annually	24	Medium
Trash pick-up: access areas (if trash cans provided)	Weekly	104	High
Litter pick-up: Trailside, access areas. Encourage users to pack it in/pack it out.	Monthly	48	High

Activity	Frequency	Average Annual Labor Hours	Opportunity for Volunteer Engagement?
Removal of trees/limbs: Evaluation/removal of unhealthy or dead trees and limbs.	Annually	16	Low
Signage	Periodically	8	Low
Pet cleanup bags	Refilled periodically (occurs same time as trash pickup, no additional hours assumed)	N/A	Medium
Access control: Replace damaged access control devices.	Assume replacement of 10% annually	8	Low
Trail surfacing	Shared roadway – every 10 years Paved path – every 10 years Soft surface – annual maintenance	24	Low
Drainage: Clean inlets, keep swales clear of debris.	Annually	8	High
Bridge inspections: Inspection/maintenance of bridge to ensure structural integrity.	Every 2 years (County or ODOT inspection)	N/A	N/A
	Total	272 (0.13 FTE)	

Source: American Trails

FTE = full-time (employee) equivalent

5.3 Safety and Emergency Services

It is essential that the City establish a robust and formal approach to monitoring the trail to deter unwanted uses and ensure safety and comfort of trail users and adjacent property owners. Property owners noted concerns about existing undesirable uses and behavior in the corridor, including trash dumping, illegal trespassing, and other activities. Establishing a formal structure for enforcement on the future trail, coupled with engaged volunteers to provide a “trail watch” (see Section 5.4), will ensure that there are eyes on the trail to deter illicit activity. It is important to note that research has shown that trails themselves do not attract more crime than other kinds of land uses, and regular users on trails have been shown to deter crime and unwanted behavior.⁴

Because the Traverso Section is in unincorporated Clackamas County, the Clackamas County Sherriff technically has jurisdiction over the area. City staff have had preliminary conversations with the Sherriff about regular patrols of the trail area, including trailhead access areas and shared roadway sections of the trail that will be passable by car. Canby police have also been engaged in the trail planning process.

The City could seek an intergovernmental agreement (IGA) between the City and County for the mutual patrol of the Traverso Section. The IGA would clearly define enforcement responsibilities and jurisdiction, as well as any agreements between the City and County pertaining to City police jurisdiction over the trail. This is an important step to memorializing law enforcement over the trail and ensuring

⁴ <https://www.railstotrails.org/resourcehandler.ashx?id=3503>

that property owners adjacent to the trail or those experiencing an emergency on the trail know who to call and who will respond.

A “good neighbor program” can also be established by the City to support coordination with private property owners and maintain good relationships. If interested, nearby landowners can augment volunteer and municipal/county enforcement by monitoring the trail and notifying the City about maintenance, safety, and other operational matters. It is important that everyone living near the trail know who to contact with questions, suggestions, or concerns and that they will be taken seriously. A good neighbor program would formalize this communication with property owners by:

- Providing information to all abutting property owners on who to call for trail issues (maintenance, emergencies, or otherwise).
- Streamlining communication by identifying a point person at the City who manages communications with private property owners.
- Providing information to new property owners (when property changes hands) about the trail, its allowed uses, and who to contact with concerns or issues.

5.4 Volunteers and Civic Organization Engagement

Given the limited resources of the City of Canby, volunteers (either individuals or groups) represent a major opportunity to share in the work of trail maintenance and safety, while fostering greater community ownership of the trail. The Canby Bicycle and Pedestrian Committee (or subcommittee thereof) is a natural potential “owner” of the trail and could act as a steering committee into the future, serving as a forum for trail management and maintenance issues. This group could be convened for the Traverso Section trail, but also for the existing segment within the city. The steering committee should convene a “Friends of Molalla Forest Road Trail” or similar group to engage in the following volunteer activities:

- Litter pick-up – Conduct regular organized litter pick-up events along the trail.
- Trail watch – An organized group of volunteers that patrol the trail individually or in groups to deter unwanted behavior. Trail watches can be organized easily through online tools and can require minimal time to manage.
- Light repairs and maintenance – Volunteers could be deployed to make light repairs to trail infrastructure or surfacing, address vandalism, and help with other general maintenance activities.
- Education and interpretation – Volunteers could assist with interpretive and education activities in the trail corridor, including development and maintenance of interpretive signage that cover the natural and cultural history of the MFR setting.

6. NEXT STEPS

This Development Plan is the starting point for continued conversation with the public, stakeholders, and property owners to determine the best trail solutions for the Traverso Section. Next steps for the City and stakeholders are as follows:

Conduct additional project refinement work on key areas.

The washout area and Molalla River crossing require more detailed planning and design, environmental review, and refined cost estimates. This Development Plan presents several viable alternatives that should be evaluated further.

Additionally, this Development Plan presents several alternatives for developing trailhead access at the midpoint of the Traverso Section. Each of these alternatives has pros and cons, as discussed previously, and further discussion with the community, stakeholders, property owners, and regulators is required.

Continue to engage the public, stakeholders, and property owners.

During the Development Plan process, the City heard from many interested community members. Continued input from the community is essential to refining trail alternatives that meet community needs while respecting private property rights, minimizing any environmental concerns, and maximizing the benefits of the trail to the community as a whole.

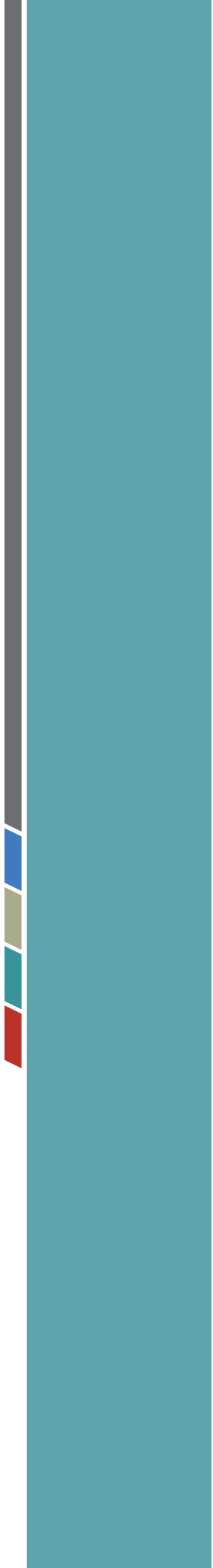
Property owners have expressed concerns about the development of a trail, which this Development Plan acknowledges and describes approaches for mitigating any potential issues. The City should continue conversation with private property owners to ensure that their concerns are addressed; the trail should be viewed as a beneficial asset to not just trail users, but everyone in the greater community.

Determine whether access to the Molalla River is desired.

Public outreach showed a strong interest in facilitating access to the Molalla River. Benefits would include increased community access to recreation, including swimming, fishing, and boating. However, the potential drawbacks include damage to riparian habitat, user demand that exceeds capacity of any trailhead parking area, and potential for trespassing onto private property. The pros and cons of facilitating river access require further discussion with the community and with environmental regulatory authorities and advocates.

Appendix A

Opportunities and Constraints Memorandum



Appendix B

Public Engagement Summary

