



CITY OF SNOHOMISH

*Centennial Trail Extension  
Technical Memorandum*



November 10, 2010

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# *Centennial Trail Extension Technical Memorandum*

November 10, 2010

# Technical Memorandum



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**To:** Karen Guzak, Mayor  
**From:** Nico Vanderhorst, PE; Curtis LaPierre, ASLA;  
Vanessa Lee; Windi Shapley, PE  
**Date:** November 10, 2010  
**Subject:** Centennial Trail Extension Master Plan

## Section I—Introduction and Background

### I.A. Purpose

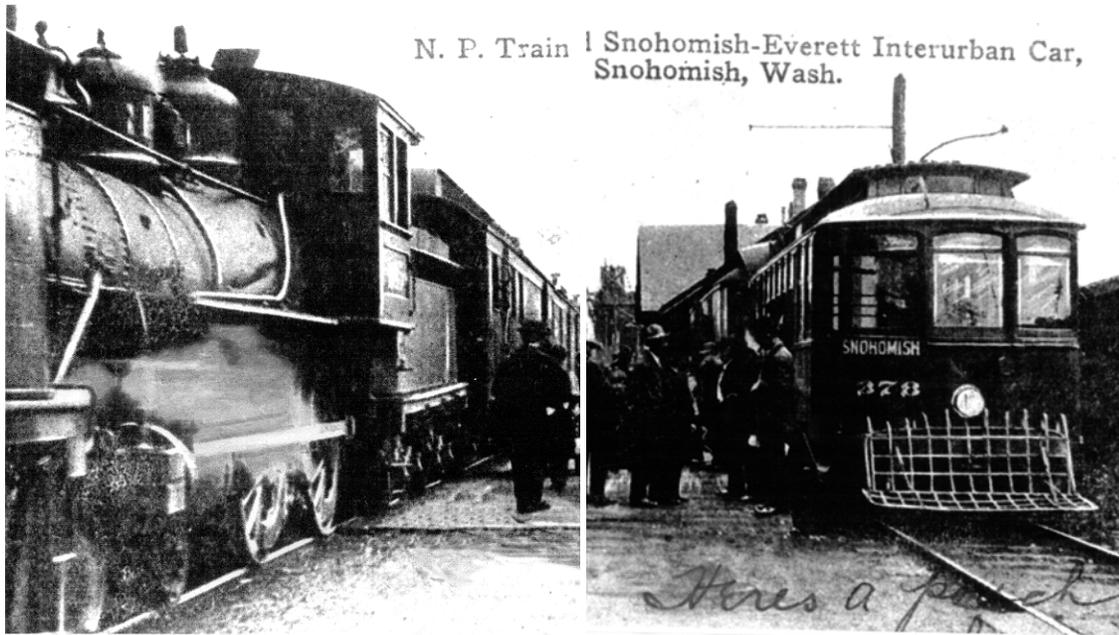
The City of Snohomish is planning to construct a 12-foot wide paved trail within the abandoned Burlington Northern Santa Fe Railroad (BNSF) right-of-way from Bowen Street to the existing Centennial Trail terminus (distance of approximately 3,300 feet) in 2011. Funding is in place for engineering and construction of the trail and related street frontage improvements. Federal Highway Administration (FHWA) grant funding for the project restricts the land to use for public transportation and park uses.

The purpose of this master planning effort is to guide the placement of the trail (alignment), and prepare concepts for future (yet to be funded) park improvements within the trail corridor. The master plan is a means to coordinate the scheduled 2011 construction with future improvements while recognizing both opportunities and constraints that may affect the overall design. In addition, the master plan is an opportunity for the community to comprehensively envision activities and facilities for the trail and central park-like portion of the corridor. The project will provide intersection improvements along the trail and at street crossings, and provide trail users with parking for 15 vehicles.

### I.B. Background History

The original railway right-of-way of the Centennial Trail was built by the Seattle, Lake Shore, and Eastern Railroad (SL&E) in 1889. The last train to operate on the Centennial Trail alignment was in 1998. The railroad transported local and international mail, freight (including timber, lumber, and minerals/precious metals) and tourists. The popular Burke-Gilman and Sammamish River Trails in King County were also sections of this same SL&E line. Today the rail alignment is part of a developing regional trail network connecting to Woodinville, Monroe, Everett, Lake Stevens, Arlington and beyond.

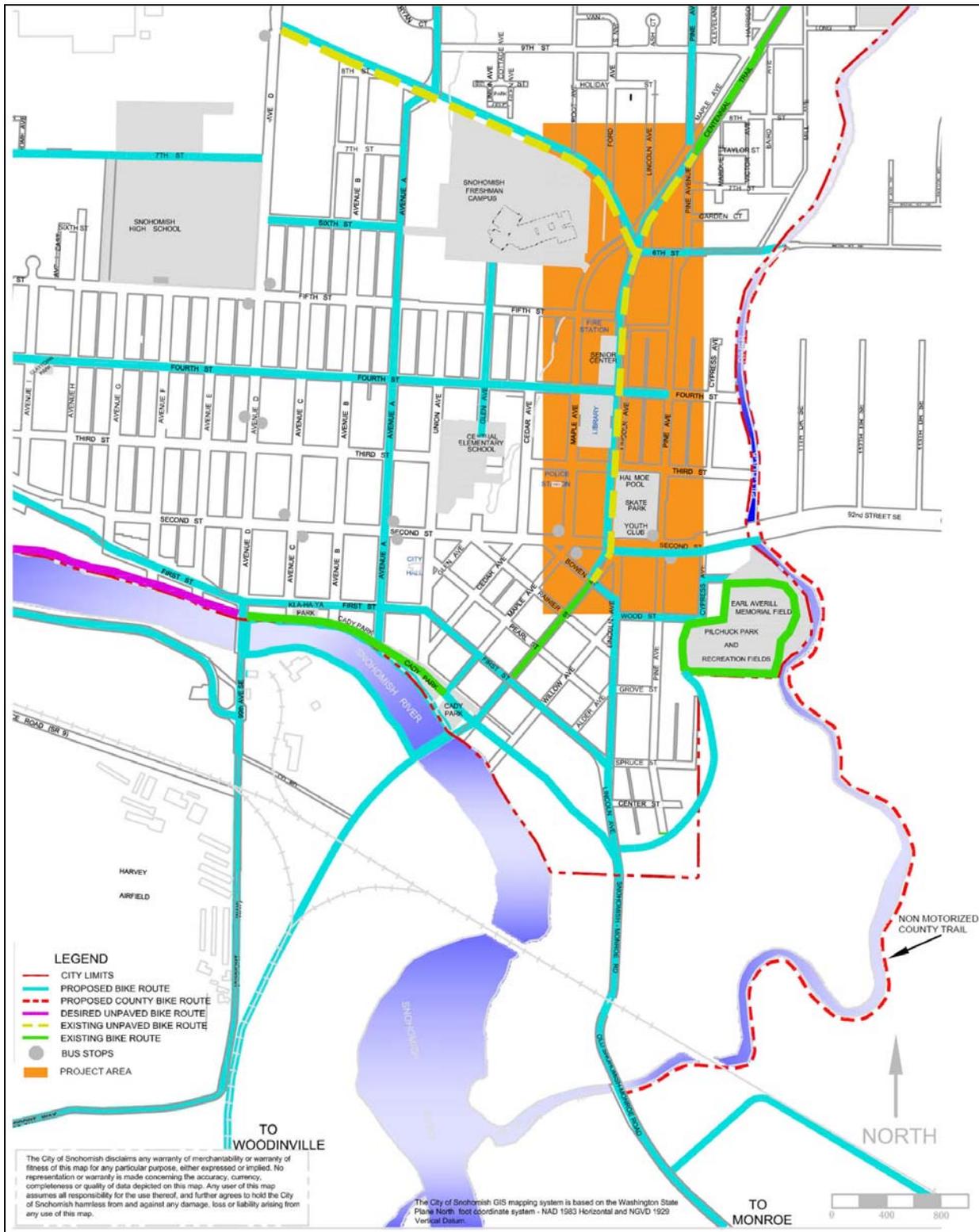
Snohomish County developed sections of the Centennial Trail beginning in 1989 during the State's centennial celebration. Today the trail spans 23 miles of completed trail from Snohomish to Bryant. The Centennial Trail Extension project will link the existing Centennial Trail to the Riverfront Trail historic downtown Snohomish.



Source: Granite Falls Historical Museum

The Centennial Trail Extension Master Plan has been developed in coordination with the Pilchuck District Study. The Pilchuck District subarea planning project is an area-wide evaluation of existing land use policies and regulations, street standards, and design standards for an 86-acre study area of the City. The primary purposes of the subarea plan are: 1) to establish a clear and cohesive land use policies for the future of the study area consistent with City Council priorities, realistic land-market expectations, and prior policy direction; and 2) to establish implementing regulations and standards that will affect the policy intent. The primary long-term goals of the planning process are: 1) to increase densities in the subject area (from Strategic Plan); 2) to foster a walkable community (from Strategic Plan); 3) to reduce the potential for future land use conflicts; and 4) to encourage private investment in the study area. A related objective, incorporated with the overall Pilchuck District project, is the designation of the Pilchuck District as a receiving area for Transfer of Development Rights (TDR).

Centennial Trail Extension Master Plan



Vicinity Map

## I.C. Existing Conditions Analysis

### I.C.1. Trail Property

The existing trail consists of portions of abandoned railroad right-of-way between Bowen Street and Pine Avenue. The trail property varies in width from 30 feet at the narrowest along Maple Avenue on the north end of the project to 80 feet between Second Street and Sixth Street. Along the west side of the trail property for much of the project length, there are existing railroad tracks atop railroad ballast materials. The remaining area consists of grass and small trees or shrubs (birch and maples). Several encroachments exist along the trail alignment and include a parking/driveway encroachment at the Snohomish Co-op between Bowen Street and Second Street, a parking encroachment at Hal Moe Pool, Lincoln Avenue street encroachment, and a wall/fence encroachment at Olympic 4x4.

### I.C.2. Parking along Lincoln Avenue

Lincoln Avenue between Third Street and Fifth Street typically consists of 16-foot wide pavement, and an approximately 12-foot wide gravel parking strip and five-foot wide sidewalk on the east side of the road. The existing pavement along Lincoln Avenue is not centered in the existing 40-foot Lincoln Avenue right-of-way and encroaches into the trail property by approximately 6 feet. The west shoulder of Lincoln Avenue, which is on trail property, is currently signed and utilized as parallel parking.

### I.C.3. Adjacent Land Uses

Commercial land uses adjacent to the trail corridor include the Snohomish Co-op (farm feed and diesel/propane); the auto-license center and nail salon; and McDaniel's Do-It Center (home improvement), parking lot, and storage warehouse. Further north on the corridor are larger and more auto-related uses such as Jamie's Auto Repair and Olympic 4x4.

Institutional land uses that will be well served by the trail include the Snohomish Library and the Snohomish Senior Center. Adjacent recreational institutions are the Boys and Girls Club, Skate Park, Tillicum Kiwanis Playground, Hal Moe Pool site (closed), Snohomish Soccer Dome, Yoga Circle Studio, and the future Aquatic Center at the Maple Avenue campus. Connections to these uses are further described in Section II.F.

Residential parcels line the trail along Lincoln Ave, and lessen as you travel further north on Lincoln Street. Currently, residents use the trail property for their car and boat parking. The affordable senior housing building on Fifth Street is also an important facility that will be served by the Centennial Trail Extension.

## I.D. Design Criteria

### I.D.1. Guiding Principles

The master planning process included the creation of Guiding Principles at the outset of the project to set guideposts to help the participants decide if ideas would move the plan toward or away from these overall master plan goals:

- Provide high quality outdoor spaces for the enjoyment of community members and visitors.
- Plan for improvements that will benefit the adjacent neighborhood and downtown businesses.
- Enhance the historic image of Snohomish and interpret the railroad history.
- Recommend improvements that employ sustainable materials and limit resource input over time.
- Make the best use of the opportunities provided by the property and allow for adaptation to changes.
- Create a notable community gathering and activity space that connects neighborhoods.
- Provide for safer trail use including intersection crossings.

### I.D.2. Program Elements

Otak examined a range of potential activities in the park and along the trail. From on-site observations and public feedback, the matrix below helps to evaluate and prioritize the elements required to partake in biking, walking, sitting, and community gathering activities. The most essential elements include open lawn areas, wayfinding, restrooms, and water fountains; the somewhat essential elements include parking, historic interpretation, sunny/shady/protected seating, and screening/enhancing views. To facilitate community gathering in this park, additional elements including bike racks, vendor spaces, open shed/paved surface, and flexible open space are either mostly or somewhat essential. The program elements in this matrix are further described and manifested in the Centennial Trail Extension master plan.

PROGRAM IDEAS & ELEMENTS														
<b>BIKE</b> <ul style="list-style-type: none"> <li>• Park Vehicle w/ Bike Carriers</li> <li>• Get Ready - Organize, Plan Destination, Stretch</li> <li>• Return Rest - Get Refreshed, Walk Around, Lay on Grass, Sit on Benches, Fill Water Bottle, Visit Shops, Use Restroom</li> </ul>					<b>SIT &amp; ENJOY</b> <ul style="list-style-type: none"> <li>• Socialize - Meet Friends, Meet New People, People Watch</li> <li>• Enjoy Sun &amp; Shade</li> <li>• Enjoy Views of Architecture, Trees, Landforms</li> <li>• Spaces w/ Comfortable Micro-Climate</li> </ul>									
<b>WALK</b> <ul style="list-style-type: none"> <li>• From Local Places, Senior Home, Library</li> <li>• From Parked Vehicle, Bus</li> <li>• Return Rest</li> <li>• Learn About Snohomish</li> </ul>					<b>COMMUNITY GATHERINGS</b> <ul style="list-style-type: none"> <li>• Craft/Art Fair</li> <li>• Music Performances, Outdoor Theater</li> <li>• Organized (sponsored) Bike, Walking/Running Events</li> <li>• Speeches - Political Gatherings</li> </ul>									
<b>LEGEND</b> ○ Not Essential ◐ Somewhat Essential ● Mostly Essential														
	Parking	Water Fountain	Open Lawn Areas	Wayfinding	Restroom	Bike Racks	Historic Interpretation	Sunny Seating	Shady Seating	Protected Seating	Screening/Enhancing Views	Vendor Spaces	Open Shed/Paved Surface	Open Flex Space
BIKE	◐	●	●	●	●	●	◐	○	○	○	◐	○	○	○
WALK	◐	●	●	●	●	○	◐	○	○	○	◐	○	○	○
SIT & ENJOY OUTDOORS	◐	●	●	●	●	○	◐	●	●	●	◐	○	○	○
COMMUNITY GATHERING	●	●	●	●	●	◐	◐	◐	◐	◐	◐	●	●	●

## Section II—Master Plan

### II.A. Overall Trail/Park Master Plan Concepts

The Centennial Trail Extension Master Plan consists of two integrated components: the trail and the park. The trail alignment is set along the east side of the property to allow for larger contiguous park area. This linear park consists of four main park-like blocks: the Boys and Girls Club Block (Second to Third Street), the Library Block (Third to Fourth Street), the Senior Center Block (Fourth to Fifth Street), and the Soccer Block (Fifth to Sixth Street). The north project terminus caps off the park at the corner of Pine and Maple. (Refer to the Centennial Trail Extension Master Plan graphic).

The planned trail begins at Bowen Street and skirts the west edge of the Co-op property (Intersection 1). It meets a shared sidewalk connection before crossing Second Street at a proposed new signalized intersection (Intersection 2). The trail passes through the first park block and crosses Third Street at a raised crossing (Intersection 3). Next, it travels through the Library Block plaza and crosses the busier Fourth Street intersection (Intersection 4) at grade. Continuing north, the trail passes the Senior Block elements and curves to a more open continuous stretch (there is no Fifth Street crossing) to cross a raised intersection at Sixth Street (Intersection 5). It then curves again to hit a straightaway to the North Trailhead. Finally, the trail crosses Pine Avenue and meets the

sidewalk along the east side of Pine to meet the existing trailhead (Intersection 6). Master Plan concepts for Intersections 5 and 6 (Sixth Street; Pine and Maple Avenue) are realignments which will further study factors beyond the scope of the Centennial Trail Extension project.

All trail crossings with the exception of Bowen Street and Sixth Street are designed to cross as close as feasible to a typical crosswalk location. Because of higher traffic volumes, the trail crossing at Second Street calls for additional intersection improvements including the installation of a traffic signal. It is recommended that all crossings include the implementation of bulb-outs to reduce crossing distances and times. Due to existing conditions and trail property constraints, Bowen Street and Sixth Street trail crossings are located mid-block. Raised trail crossings will be implemented at intersections with minor streets including Bowen Street, Third Street and Sixth Street, where traffic speeds and volumes are low. Trail crossings at intersections where traffic speeds are low but traffic is moderate will have signed and striped crosswalks. This is at Fourth Street and Pine Avenue.



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## II.B. Master Plan Trail Alignment

### II.B.1 General Alignment Description

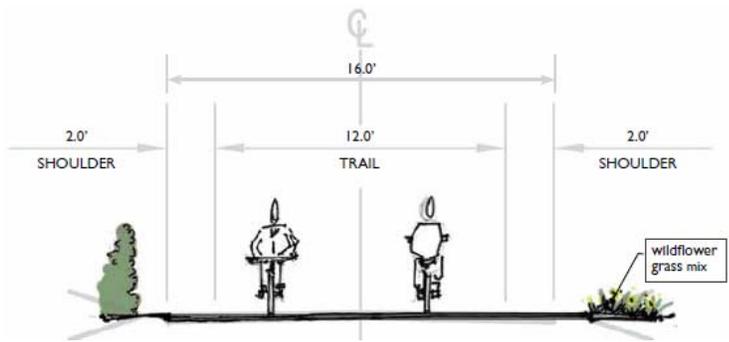
Beginning at the southern-most project limits, the proposed trail connects to the existing trail on the south side of Bowen Street. Due to existing conditions and trail property constraints, the trail alignment is shifted to follow the existing railroad track alignment from the south connection to Second Street. From Second Street north to midway along the Senior Center Block, the trail alignment generally follows the eastern edge of the available trail property. At this point along the trail, the trail alignment then follows a large radius curve through the Soccer Dome Block and intersects mid-block at Sixth Street. Following the Sixth Street crossing, the trail alignment curves through a narrow portion of trail property and then follows the existing railroad track alignment adjacent to Maple Avenue up to Seventh Street. The trail alignment then crosses Pine Avenue at Seventh Street and follows along the east side of Pine Avenue before connecting to the existing Snohomish County trail at the northern most project limits.

### II.B.2 Vertical and Horizontal Alignment

The vertical and horizontal alignment of the trail has been designed in accordance with the 1999 AASHTO Guide for the Development of Bicycle Facilities. Based on a design speed of 20 mph, the horizontal radii are typically 100 feet or greater. The exception is at locations where existing conditions/trail property constraints require a smaller radius or where slowing bicycles and pedestrians at intersections is desirable. These exceptions occur at the connection to the existing trail south of Bowen Street, on the south side of Second Street, and at the Pine Avenue crossing. The vertical alignment of the trail will be designed with slopes less than five percent.

### II.B.3 Trail Section

The proposed trail section is designed in accordance with the 1999 AASHTO Guide for the Development of Bicycle Facilities and to match the section of the existing trail north and south of the project. The trail section will be 12 feet of asphalt pavement with two-foot gravel shoulders. The trail will be designed with a maximum cross-slope of two percent. A minimum three-foot clear zone beyond the two-foot gravel shoulders will typically be maintained along the trail alignment. The proposed trail pavement section is three inches of asphalt concrete pavement over four inches of crushed surfacing base course which is intended for a high-use trail and occasional use by maintenance vehicles.

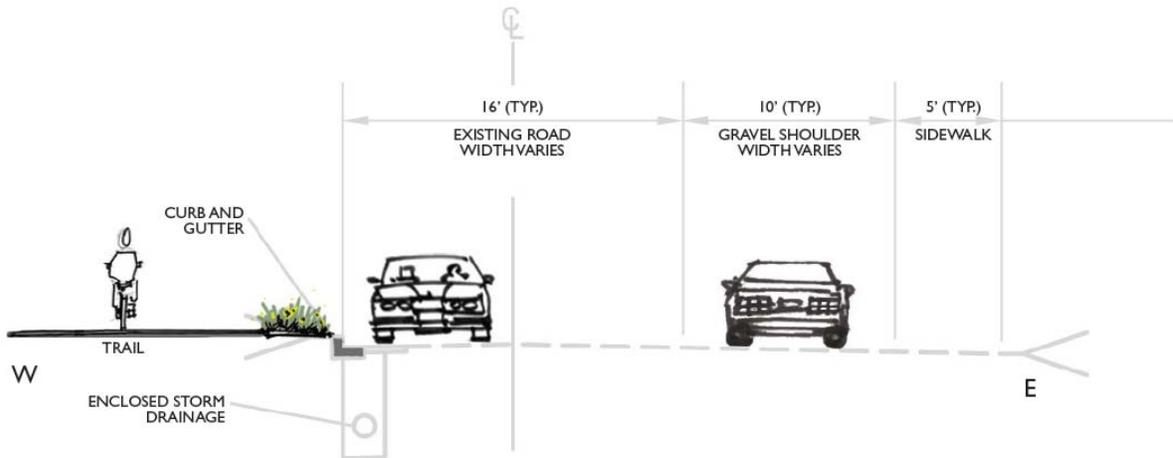


Typical Trail Section

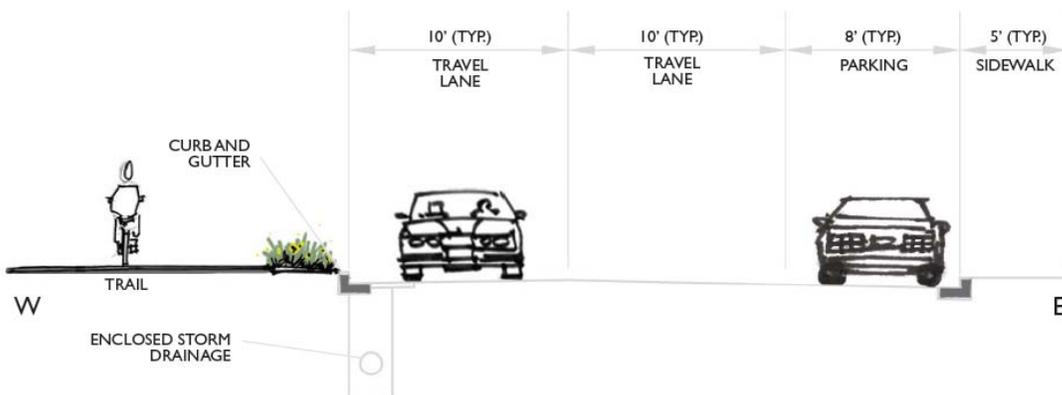
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## II.C. Lincoln Avenue Frontage Improvements

Frontage improvements along the west side of Lincoln Avenue from Third Street to Fifth Street are required as part of the development of the trail property. The existing road section along this portion of Lincoln Avenue is typically 16-feet of pavement, a 12-foot gravel shoulder and five-foot sidewalk on the east-side. The existing pavement along Lincoln Avenue is not centered in the existing 40-foot Lincoln Avenue right-of-way. The planned future Lincoln Avenue road section will be 28 feet of pavement with curb, gutter, and sidewalk on the east side of the road. The frontage improvements required as part of the development of the trail will be limited to the installation of curb, gutter and storm drainage along the west side of Lincoln. Lincoln Avenue’s proposed cross-section will include two ten-foot travel lanes and an eight-foot parking lane on the east side as shown on the next page.



Lincoln Avenue/Trail Improvements—Typical Section



Lincoln Avenue—Future Section



INSERT 11”X17” – 2C, PAGE 1

## II.D. Parking for Trail Users

After some deliberation, it was concluded that 15 designated parking spots would be constructed by the Snohomish library. The present library parking lot has a single-loaded driveway on the east side of the lot which lends itself to a simple addition of parking stalls.

Existing park property currently utilized for parking on the west edge of Lincoln Avenue will be restored as park space, and thus there is no planned parking along the west side of Lincoln. The Boys and Girls Club lot may provide shared trail parking.

## II.E. Storm Drainage

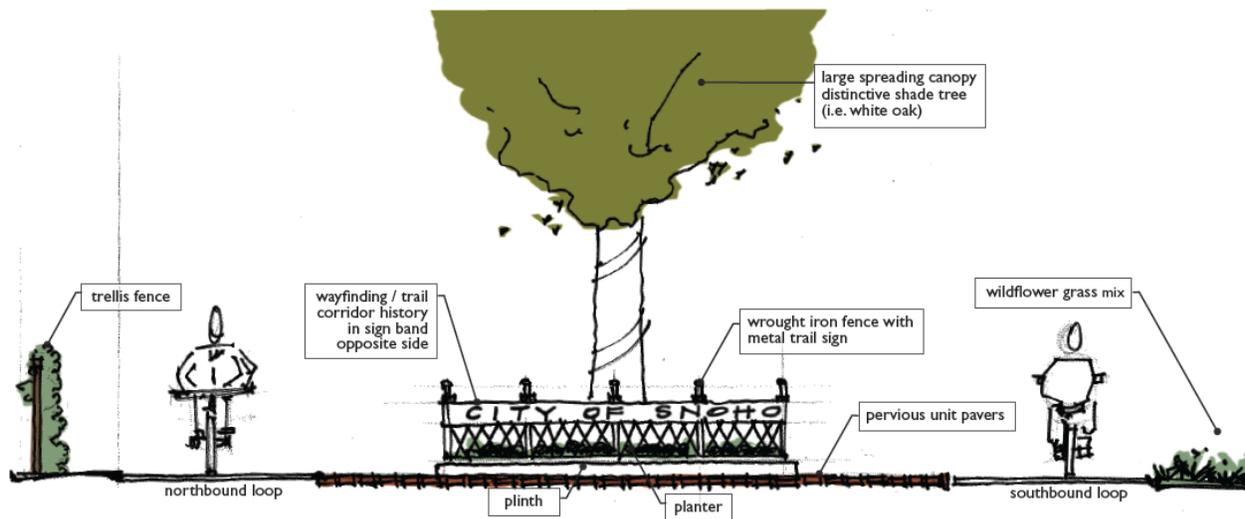
Storm water detention and water quality design will be in accordance with the requirements of the Washington State Department of Ecology, presently the 2005 Stormwater Management Manual for Western Washington. Due to existing site conditions and drainage of portions of the site to the Snohomish River, it is anticipated that the project will be largely exempt from stormwater detention requirements. Since the project does not propose new pollution generating surfaces, it is also anticipated that, other than for the new parking areas, water quality improvements will not be required.

## II.F. Wayfinding and Connections

This trail will connect to future housing, commercial, and existing transit destinations. At the first public meeting, a need for wayfinding elements was expressed. Along the trail there are a number of entry features and six wayfinding kiosk locations—restroom (1), plaza (2), Senior Center (2), and North Trailhead plinth (1). These kiosks include maps and interpretive panels. Wayfinding maps locate trail users and panels could interpret Snohomish railroad history. An example map is featured below as well as the entry feature:



Concept—Wayfinding Map in Sign Band



North Trailhead Section View

Connections to the trail are numerous and important to the use of the Centennial Trail Extension. The master plan seeks to find the balance between too many and too few access points. The main connections are the ends of the existing trail (to the regional trail network). There also exists a connection to the Interurban Trail along Ford Avenue to the northwest. A connection to the future Aquatic Center (at Maple Avenue) is under consideration.

Connections to the existing recreational and civic complex are important. There are entrances proposed to the park from the Boys and Girls Club, Skate Park/Playground, Library parking lot, Senior Center, and Fifth Street. A system of three- to four-foot high railings would define the space of the park blocks, but allow for users to enter at various intervals. The park is to be screened off from the McDaniel's parking lot. Also proposed are windbreak planting and screening from abutting parking lots.

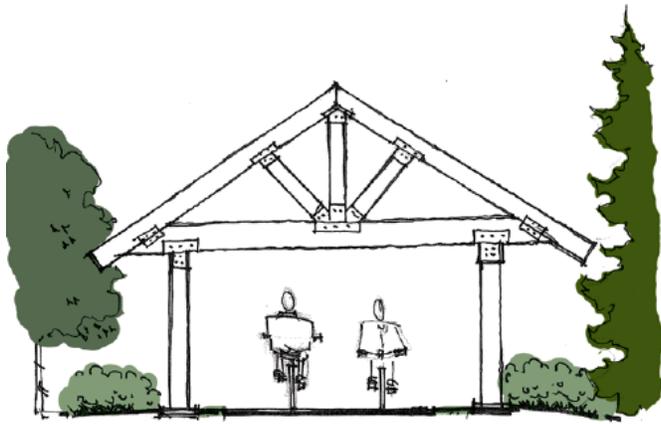
As requested by residents, the Lincoln Avenue side of the park blocks is screened with landscaped hedge railings so that residents on the street are buffered from trail users. Similarly, the Soccer Block is screened from Olympic 4x4, and the Lincoln Block straightaway is blocked with evergreen hedges on the east side and rail fence on the Maple Avenue side. This tangential portion of the trail, as well as the horizontal curve at the Soccer Dome, has minimal connection points to provide cyclists a generally uninterrupted trip.



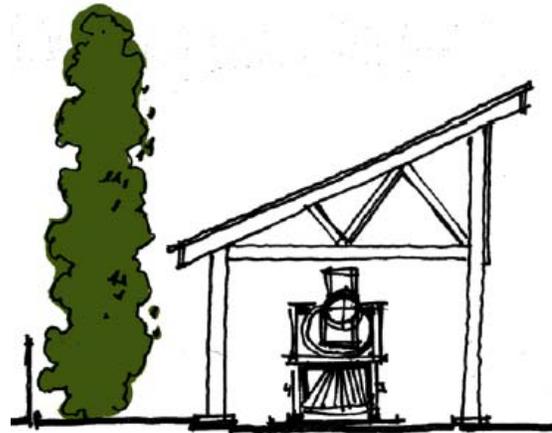
In concert with the project’s Guiding Principles, the style of the park is greatly influenced by the historic image of Snohomish. The park elements are of exposed heavy timber trusses, and either look as though evolved from historic structures or are actual pieces from history.

## II.G. Boys & Girls Block

The Boys and Girls Block plan contains many of the elements that recall old Snohomish railroad days (see Sheet B). The **park entry** sets the theme of this style. This is an approximately 20- by 25-foot trellis-like structure that could either be an architectural feature or an actual plant trellis. Next, the **restroom** and **information kiosk** (20 by 40 feet) provides a facility to trail users, as well as users of the playground and skate park. The structure would be similar to an old train depot with a hip and gable roof acting as a front porch to provide some shelter from the rain. The **railcar shed** (~15 by 150 feet) is the primary feature of this block. Various types of train cars are programmed for different uses along a preserved section of rail. A flatcar hooked up with power and lighting could be transformed into a small stage for music. A boxcar could be used for concessions, and a locomotive or speeder car could provide an interpretive display. The shed should be post and beam framed with standing seam metal roofing.



Park Entry



Railcar Shed

## II.H. Library Block

This is the natural heart and potential cultural town square of the future Pilchuck District (see Sheet C). The Pilchuck District is being planned for higher development density as a walkable, transit-oriented community surrounding the Centennial Trail. The potential exists to create a receiving area here to accept the transfer of development rights from working forests to the Pilchuck District.

Here, the trail is proposed to transition into a **community marketplace/plaza**. The plaza can be a place for events, art fairs, craft fairs, book fairs, flower shows or even a vintage auto show. The library parking provides opportune temporary vendor access as trucks can back right up to the market stalls. The plaza provides room for about 24 ten-foot by ten-foot stalls. Two **wayfinding kiosks** would be placed at both ends of the plaza. The north library connection provides a visual axis to the trail from the arbor gates that aligns with the library entry. An **interpretive element** of an obelisk form would help to direct your eyes upward and out.



Arbor Gate and Interpretive Panel

Each of the **large plaza shade trees** should have a generous open planter bed of about ten feet by ten feet with perennial ground cover and irrigation. The planter could be bordered with a low decorative wrought iron fence to protect the soil from compaction. The plaza paving could be comprised of either **clay brick pavers** (consistent with the downtown and library) or **concrete unit pavers** designed to have pervious joints to decrease the amount of stormwater runoff and to supplement irrigation.

**Low earth mounds** are shown at each end of the plaza to provide some relief to the land and a separate area for users to observe the activities of the plaza space.

## II.I. Senior Block

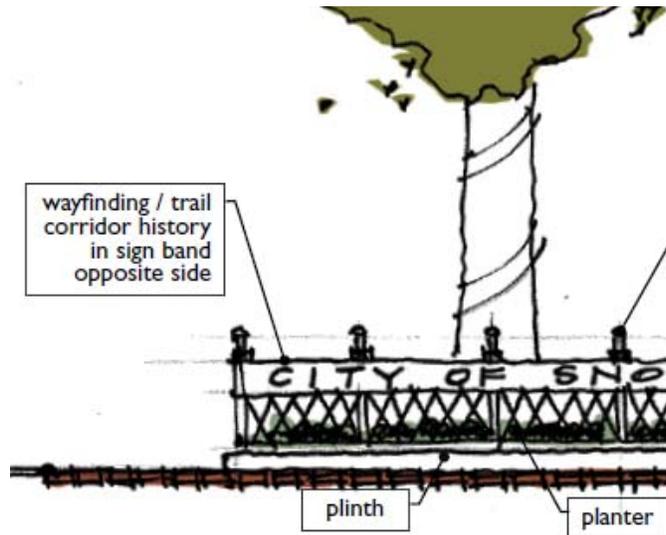
The Senior Block is the outdoor living room of the Park (see Sheet D). Seniors as well as the larger Snohomish community can walk along a **permeable paver walkway** to a **formal lawn** and **perennial or rose garden rooms**. These can support aromatherapy plantings, reflexology path, and related sensory gardens. Adjacent to these hedged rooms are **pea-patch community gardens**. Raised beds provide accessible planting areas for senior use. An **event shelter** (20 feet by 20 feet) provides flexible space for picnicking, extreme bingo and other activities. The park area then transitions to open **lawn space** and shade trees for sitting and picnicking.

## II.J. Soccer Block

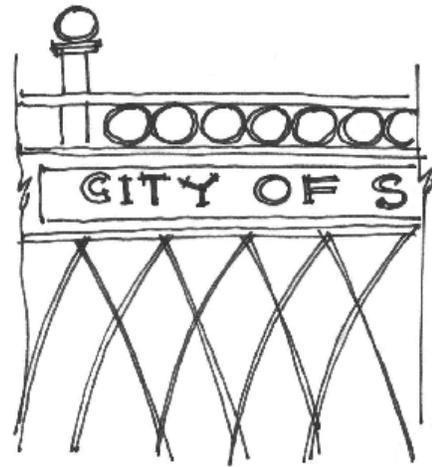
The Soccer Block opens up the trail to more continuous speeds (see Sheet E). The three dozen **signature conifers** in this area screen the mass of the Soccer Dome wall to the west and the Olympic 4x4 site to the east. The curve of the trail to the north of Sixth Street creates two distinct resting spaces—one shady and one sunny. Benches and picnic tables can also be added to these spaces as funding allows.

## II.K. North Trailhead

The North Trailhead uses a restrained but effective approach to mark the entry at the north end of the park (see Sheet G). The proposed entry feature is a single **large distinctive shade tree** (white oak) surrounded by a **paved plinth**. A **decorative wrought iron fence** would surround the tree and include the letters 'City of Snohomish'. The fence features a **wayfinding map** of the trail and possibly interpretive panels. The pavers for the small plaza space surrounding the entry feature should match the pavers used in the Library Block—either clay brick or pervious concrete pavers. The small plaza is intended as a place where trail users can stop and refer to the panels.



North Trailhead – Paving, Plinth and Fence



North Trailhead – Wrought Iron Detail

## II.L. Planting Concepts

### II.L.1 Landscape

The linear park plan features a simple landscape palette of appropriate trees, shrubs/groundcover, and grasses. The first step to prepare the site for landscaping is through the clearing, grubbing and decompaction of the existing site. Clearing and grubbing is the removal of existing vegetation including weeds, grasses and large roots. Decompaction is ripping the soil to a depth of 6 to 12 inches in two directions. It is then beneficial to add a soil amendment such as a two-inch layer of composted yard waste and incorporate it into the top four inches of soil.

#### II.L.1.a Trees

Tree planting along the corridor is important for separating public use from adjacent residents and for providing shade and wind protection. Screening landscaping could include native shrubs. Trees and shrubs should be evaluated and located to avoid creating attractive hiding places. Trees should be planted at least 10 feet from the asphalt trail so as to prevent root damage to the trail.

Street trees help “green” the street and serve as a traffic calming measure. Suggested street trees include the ‘October Glory’ red maple which is currently planted around the Boys and Girls Club. The large plaza trees could be plane trees while the large canopy shade tree at the Maple/Pine Trailhead could be a white oak. The signature conifer stand at the Soccer Dome could be California incense cedar. And finally, Swedish aspen could serve as an effective windbreak from the easterly winds.

II.L.1.b. Shrubs

Shrubs proposed for the park are drought-tolerant and provide for seasonal interest and color. These include lavender, lavender cotton, blue oat grass, and Moon Bay heavenly bamboo. The hedges for the railings could be Nootka rose.

II.L.1.c. Grasses

To enhance the formality of the garden rooms at the Senior Center, a sod lawn would be installed. Everywhere else a 'Fleur de lawn' mix of low perennial grasses and wildflowers would be planted. This is low maintenance, requiring only infrequent mowing. On the Library Block mounds, native soils should be amended as described above. If the excavated material used to build the grass mounds is rocky, then 6 inches of topsoil should be placed over the mound surface for turfgrasses.

## Section III—2011 Trail Construction Project

### III.A. 2011 Trail Construction Scope

The initial phase of this project is referred to as the '2011 Centennial Trail Extension Project' or '2011 Project'. It will construct the trail in its entirety but will not include all Master Plan improvements. Master Plan improvements can be constructed as funding is available. The 2011 Project is planned to construct the trail from Bowen Street to Pine Avenue at its master-planned location with the exception of future realignments on the south side of Second Street and at Pine Avenue. At Second Street a trail alignment will be constructed to route trail users to the existing sidewalk along Second Street, with signage to direct trail users to the nearest signalized intersection at Maple Avenue. This route will remain in place until a signalized crossing is constructed at Lincoln Avenue. At Pine Avenue a temporary trail alignment will be constructed to align directly with the existing crossing at Maple Avenue. The master-planned crossing of Pine Avenue at Seventh Street will require further analysis and will need to be coordinated with future intersection improvements at Maple Avenue. Bulb-outs, raised crossings, and the potential Sixth Street re-alignment will also not be included in the 2011 Trail Improvements project.

The 2011 construction project elements have been selected to meet Year 6 grant requirements and fit an available construction budget of approximately \$750,000. Bid alternates will be included in the bid package to help fit the available budget.



INSERT 11”X36” GRAPHIC – III.

### III.B. Park Amenities

The 2011 construction project will include some landscape items. These include the plaza trees and conifers in the Soccer Block. This would allow for tree growth once the other park features are in place. Intersection plantings will provide seasonal interest and color before intersection improvements are constructed. The railing and hedges along McDaniel’s will be the first installed to discourage any use of the McDaniel’s lot for trail parking. A portion of any excess soil from excavation and earthwork could be used to create soil mounds in two locations on the Library Block. The mounds should be sloped at a maximum of 6:1 to 8:1. If the 2011 budget allows for the work, the entry arbor in the Boys & Girls Block will be a significant added element. Next in priority will be the Library Block arbor entry, and then the North Trailhead entry feature.

As the Snohomish community acquires future funding, additional Master Plan elements can be constructed. Refer to Section III.C.—Construction Cost Estimate Summary for a listing of items for future grants and volunteer opportunities.

### III.C. Construction Cost Estimate Summary

#### III.C.1. Construction Cost Estimate Overview

Item	Funded	Unfunded
<b>2011 Trail Improvements</b>	<b>\$750,000</b>	
<b>Master Plan Elements (Unfunded)</b>		
Minor Intersection Crossings		\$150,000
Second Street Crossing (not including signal/intersection)		\$100,000
Pine Avenue Crossing		\$200,000
Shelters (trellis- 4, event shelter, railcar shed, restroom)		\$600,000
Plaza Paving		\$350,000
Sixth Improvement and Parking Lot		\$250,000
Miscellaneous Wayfinding		\$50,000
Landscaping/Grading/Railing		\$100,000
Railcars		\$75,000
Miscellaneous Improvements		\$100,000
<b>Total Future Master Plan Elements</b>		<b>\$1,975,000</b>
Signalized Intersection—Second/Lincoln		\$600,000
<b>TOTAL</b>		<b>\$2,575,000</b>

III.C.2. Volunteer/Grant Opportunities

	Item	Qty.	Unit	Unit Cost	Cost
	<b>BOYS &amp; GIRLS BLOCK</b>				
1	Entry Arbor	1	EA	\$31,250	\$31,250
2	Railcars	3	EA	\$25,000	\$75,000
3	Railcar Shed	2,250	SF	\$90	\$202,500
4	Restroom	1	EA	\$312,500	\$312,500
	<b>LIBRARY BLOCK</b>				
5	Plaza Trees (incl. groundcover in each large planter)	14	EA	\$700	\$9,800
	<b>SENIOR BLOCK</b>				
6	Event Shelter	400	SF	\$112.50	\$45,000
	<b>OTHER</b>				
7	Soccer Dome Conifers	33	EA	\$315	\$10,395
8	North Trailhead				
	Paving and Plinth	1	EA	\$3,125	\$3,125
	Decorative Fence	65	LF	\$190	\$12,350
	White Oak (large)	1	EA	\$2,500	\$2,500
9	Arbor Gates	4	EA	\$18,750	\$75,000

Note: Construction costs above are included in Construction Cost Estimate Summary.