

# Lynnwood to Everett Light Rail

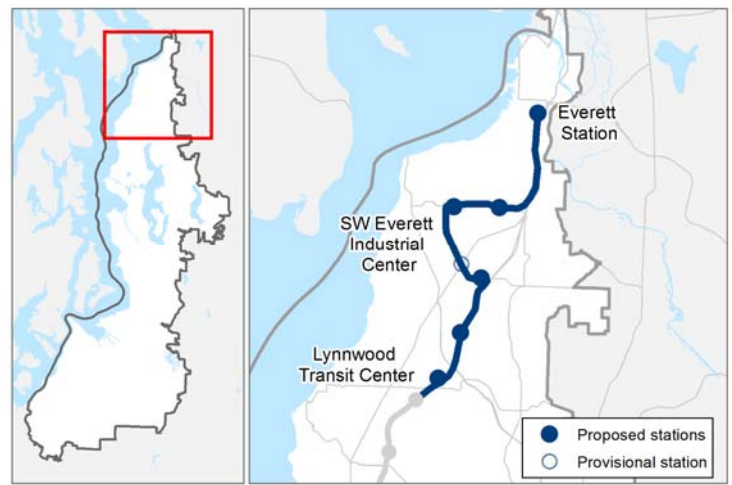
Subarea	Snohomish
Primary Mode	Light Rail
Facility Type	Corridor
Length	16.3 miles
Date Last Modified	July 21, 2016

## SHORT PROJECT DESCRIPTION

This project would provide a 16.3-mile elevated and at-grade light rail extension from the Lynnwood Transit Center to Everett Station via Airport Way to Southwest Everett Industrial Center, then along SR 526 to I-5 and a short segment along Broadway to Everett Station, with six stations. A provisional station is identified but is not included in the capital cost or other project measures.

*Note: The elements included in this representative project will be refined during future phases of project development and are subject to change.*

## PROJECT AREA AND REPRESENTATIVE ALIGNMENT



## KEY ATTRIBUTES

<b>REGIONAL LIGHT RAIL SPINE</b> <i>Does this project help complete the light rail spine?</i>	Yes
<b>CAPITAL COST</b> <i>Cost in Millions of 2014 \$</i>	\$2,828 — \$3,026
<b>RIDERSHIP</b> <i>2040 daily project riders</i>	37,000 — 45,000
<b>PROJECT ELEMENTS</b>	<ul style="list-style-type: none"> <li>• Approximately 16.3 miles of elevated and at-grade light rail, all in exclusive right-of-way</li> <li>• Six stations serving West Alderwood Mall, Ash Way park-and-ride, Mariner park-and-ride, Southwest Everett Industrial Center, SR 526/Evergreen Way and Everett Station, with a provisional station at SR 99/Airport Road</li> <li>• Stations accommodate 4-car trains</li> <li>• New 550-space parking structure at Mariner Park and Ride, and new 1,000-space parking structure at Everett Station</li> <li>• New bus/rail interface facility at the Mariner Park-and-Ride Station</li> <li>• Peak headways: 3 minutes between Lynnwood Transit Center and Mariner Park-and-Ride, and 6 minutes between Mariner Park-and-Ride and Everett Station</li> <li>• 1 percent for art per Sound Transit policy</li> <li>• Non-motorized access facilities (bicycle/pedestrian), transit-oriented development (TOD)/planning due diligence, bus/rail integration facilities, and sustainability measures (see separate document titled "Common Project Elements")</li> </ul>
<b>NOT INCLUDED</b>	<ul style="list-style-type: none"> <li>• Costs for the provisional station</li> <li>• Light rail vehicles not included</li> <li>• Costs for operations and maintenance facility not included, but assumed to be built along corridor</li> <li>• See separate documents titled "Common Project Elements," "Light Rail Operations and Maintenance Facilities," and "Light Rail Vehicles"</li> </ul>
<b>ISSUES &amp; RISKS</b>	<ul style="list-style-type: none"> <li>• Crossing over SR 526 requires long spans</li> <li>• Development near an active airport with federal restrictions on heights of nearby facilities</li> </ul>

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KEY ATTRIBUTES	
ISSUES & RISKS	<ul style="list-style-type: none"><li>• Development of alignment along 128<sup>th</sup> Street SW and Airport Road, which are high-volume arterials with a large number of driveways, intersections, and adjacent properties</li><li>• Maintenance of traffic during construction along arterials, SR 526, I-5</li><li>• Construction along I-5 and SR 526 in areas with limited access and available right-of-way</li><li>• Construction effects to bus transit operations for Community Transit Swift BRT along 128th Avenue SW and Airport Road</li><li>• Multimodal access for a station serving the Southwest Everett Industrial Center</li><li>• Light rail is not currently a permitted use in Everett and is permitted in Snohomish County as an essential public facility and as a conditional use or through a development agreement; it is included in both Comprehensive Plans and other planning documents</li></ul>

# Lynnwood to Everett Light Rail

Sound Transit developed a conceptual scope of work for this project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information was developed to assist the Sound Transit Board as it developed the ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

## Long Description:

The 16.3-mile, 6-station representative alignment for the light rail extension begins at the Lynnwood Transit Center station, the terminus of the Lynnwood Link Extension. The first part of the alignment runs elevated along Alderwood Mall Boulevard, crossing to an elevated station in the vicinity of West Alderwood Mall, then runs north generally adjacent to and parallel to I-5, crossing over the SR 525/I-405 interchange and staying elevated to reach an elevated station at the Ash Way park-and-ride. The alignment continues with a mix of at-grade and elevated profiles north along I-5 to an elevated light rail station near the Mariner park-and-ride. From there, it continues west elevated along 128<sup>th</sup> Street SW and Airport Road and turns east at SR 526 to an elevated station serving the Southwest Everett Industrial Center. It then crosses over SR 526 on an elevated structure, descends to mostly at-grade and retained fill along SR 526 with an at-grade station in the vicinity of SR 526/Evergreen Way. As the alignment continues east along SR 526 and then turns north along I-5, it becomes mostly at-grade with retained cut and fill sections, then is elevated to reach an elevated station in the Everett Station area. The station at the Mariner park-and-ride has a 550-stall parking structure and a new bus/rail transit interface facility, and the Everett Station has a new 1,000-space parking structure; both of these structures may replace areas currently used for surface parking, displacing up to 600 surface parking spaces. A provisional station at SR 99/Airport is not included in the estimated project cost, nor is it included in travel time estimates, ridership forecasts or other measures of project performance.

## Assumptions:

- Generally along existing roadways, with sections along state routes, major arterials and I-5
- For non-motorized station access allowances, the Everett Station is characterized as Urban with an intermodal transit center, and all other stations are categorized as suburban.

## Environmental:

Sound Transit will complete project-level state and federal environmental reviews as necessary; provide mitigation for significant impacts; obtain and meet the conditions of all required permits and approvals; and strive to exceed compliance and continually improve its environmental performance.

## Utilities:

Utility relocation as needed to complete the project, including fiber optics, sewer, water, overhead electric/communications, etc., with overhead and underground utilities located along several sections of the corridor.

## Right-of-Way and Property Acquisition:

Elevated alignment, stations and parking may require acquiring part or all of some adjacent parcels, particularly in areas with other development near the right-of-way and where the alignment turns to follow different transportation facilities

## Potential Permits/Approvals Needed:

- Building permits: electrical, mechanical, plumbing
- Utility connection permits
- Construction-related permits (clearing and grading, stormwater management, street use, haul routes, use of city right-of-way)
- Land use approvals (conditional use, design review, site plans, comprehensive plan or development code consistency, special use permits)
- Federal Aviation Administration/Air Navigation Review and other approvals
- All required local, state and federal environmental permits
- NEPA/SEPA and related regulations

## Project Dependencies:

- Dependent on the completion of the Lynnwood Link Extension
- Funding for the provisional station is not included in the Draft ST3 System Plan
- Purchase of additional light rail vehicles is required to operate service on this corridor

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- Construction of new operations and maintenance base capacity in this corridor is required to accommodate the fleet required for this corridor

## Potential Project Partners:

- City of Lynnwood
- City of Everett
- Snohomish County
- WSDOT
- FTA and FHWA
- Transit partners serving project: Everett Transit and Community Transit
- Boeing Company (e.g., for pedestrian/non-motorized access to restricted Boeing plant)

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**Cost:**  
Sound Transit developed a conceptual scope of work for this project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information was developed to assist the Sound Transit Board as it developed the ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

*In Millions of 2014\$*

ITEM	COST	COST WITH RESERVE
Agency Administration	\$150.20	\$160.71
Preliminary Engineering & Environmental Review	\$88.00	\$94.16
Final Design & Specifications	\$174.87	\$187.11
Property Acquisition & Permits	\$263.84	\$282.30
Construction	\$1,783.67	\$1,908.53
Construction Management	\$157.38	\$168.40
Third Parties	\$35.57	\$38.06
Vehicles	\$0.00	\$0.00
Contingency	\$174.87	\$187.11
<b>Total</b>	<b>\$2,828.40</b>	<b>\$3,026.39</b>

*Design Basis:*












Conceptual

*The costs expressed above include allowances for TOD planning and due diligence, Sustainability, Bus/rail integration facilities, and Non-Motorized Access. These allowances, as well as the costs for Parking Access included above, are reflected in the following table. Property acquisition costs are not included in the table below, but are included within the total project cost above. For cost allowances that are not applicable for this project, "N/A" is indicated.*

ITEM	COST	COST WITH RESERVE
TOD planning and due diligence	\$1.16	\$1.25
Sustainability	\$18.12	\$19.38
Parking access	\$80.94	\$86.61
Non-motorized (bicycle/pedestrian) access	\$42.82	\$45.82
Bus transfer facilities	\$2.75	\$2.94

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## Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES	
 <b>Regional Light Rail Spine</b> <i>Does project help complete regional light rail spine?</i>	Yes		
 <b>Ridership</b> <i>2040 daily project riders</i>	37,000 — 45,000		
 <b>Capital Cost</b> <i>Cost in Millions of 2014 \$</i>	\$2,828 — \$3,026	Does not include provisional stations.	
 <b>Annual O&amp;M Cost</b> <i>Cost in Millions of 2014 \$</i>	\$40	Does not include provisional stations	
 <b>Travel Time</b> <i>In-vehicle travel time along the project (segment)</i>	33		
 <b>Reliability</b> <i>Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</i>	High	100% in exclusive right-of-way	
 <b>System Integration</b> <i>Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</i>	Medium	Low to medium-high number of existing daily transit connections, but several stations with opportunities for integration with realigned bus service and planned BRT	
	<b>Ease of Non-motorized Access</b> <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	Medium-Low	Low to medium intersection densities providing access, with large parcels, freeways and major arterials limiting access
	<b>Percent of Non-motorized Mode of Access</b> <i>Percent of daily boardings</i>	20-35%	
	<b>Connections to PSRC-designated Regional Centers</b> <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	3 centers	Lynnwood City Center, Southwest Everett Industrial Center, Everett
	<b>Land Use and Development/TOD Potential</b> <i>Quantitative/qualitative assessment of adopted Plans &amp; Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>	Medium	Strong support in local and regional plans; approximately 55% land compatibly zoned
	<i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>	Medium	Moderate market support
	<i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential station areas</i>	Pop/acre: 2014: 8; 2040: 13 Emp/acre: 2014: 7; 2040: 12 Pop+Emp/acre: 2014: 15; 2040: 25	Includes large industrial parcels and areas of I-5, SR 526 and other major roadways
	<b>Socioeconomic Benefits</b> <i>Existing minority / low-income populations within 0.5 mile of potential station areas</i> <i>2014 and 2040 population within 0.5 mile of potential station areas</i> <i>2014 and 2040 employment within 0.5 mile of potential station areas</i>	42% minority; 17% low-income  Pop: 2014: 24,100; 2040: 38,900  Emp: 2014: 21,300; 2040: 37,000	

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>