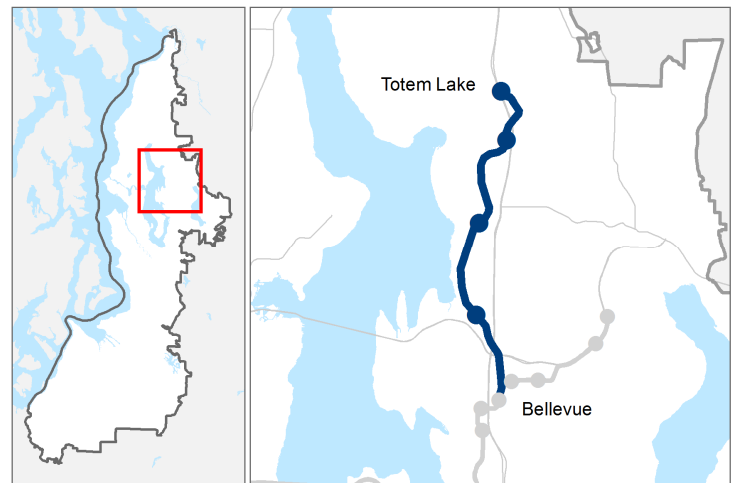


E-03-SegA: Totem Lake to Wilburton Station LRT

Project Number	E-03-SegA
Subarea	East King
Primary Mode	Light Rail
Facility Type	Corridor
Length	8 miles
Version	ST Board Workshop
Date Last Modified	11-25-2015

PROJECT AREA AND REPRESENTATIVE ALIGNMENT



SHORT PROJECT DESCRIPTION

This project would build light rail from Totem Lake to Bellevue's Wilburton Station, utilizing the Eastside Rail Corridor/Cross Kirkland Corridor.

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

KEY ATTRIBUTES

REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	No
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$1,353 — \$1,448
RIDERSHIP <i>2040 daily boardings</i>	4,000 — 5,000
PROJECT ELEMENTS	<ul style="list-style-type: none"> • Approximately 8 miles of a mixture of at-grade and elevated light rail • One elevated station: Totem Lake • Three at-grade stations: Kirkland NE 112th Street, 6th Street South, South Kirkland Park-and-Ride • Stations accommodate 4-car trains • Minor improvements to East Link Wilburton Station to accommodate riders from this line • 1,000 park-and-ride stalls constructed at Kingsgate Park-and-Ride • Signals and gates to improve at-grade rail crossings • Accommodation of the Cross Kirkland Corridor/Eastside Rail Corridor trail per Sound Transit's High Capacity Transit Easement (2012); the trail will generally be located on the western side of the corridor • Purchase of 12 light rail vehicles • Peak headways: 7.5 minutes • Maintenance and storage facility • 1 percent for art per Sound Transit policy • Non-motorized access facilities (bicycle/pedestrian), bus/rail integration facilities, transit-oriented development (TOD)/planning due diligence, bus/rail integration facilities, and sustainability measures (see separate document titled "Common Project Elements")
NOT INCLUDED	<ul style="list-style-type: none"> • Construction of trail in Eastside Rail Corridor in Bellevue, (except relocation as required by the HCT Easement Agreement) • Relocation of 72" King County interceptor sewer line in Eastside Rail Corridor/Cross Kirkland Corridor • Relocation of potential future PSE transmission line in Eastside Rail Corridor/Cross Kirkland Corridor

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KEY ATTRIBUTES	
NOT INCLUDED	<ul style="list-style-type: none">• See separate document titled "Common Project Elements"
ISSUES & RISKS	<ul style="list-style-type: none">• Alignment is in close proximity to residential uses, and corridor includes at-grade rail crossings• Project construction will interrupt East Link operations at interlined section• Providing land for a maintenance facility will require acquisition of private property• King County sewer line is located in the Eastside Rail Corridor/Cross Kirkland Corridor• Light rail is a permitted use in Bellevue, where an ST2 project is located; it is not currently a permitted use in Kirkland; light rail is included in both cities' Comprehensive Plans and other planning documents• Coordination with Kirkland regarding the relocation and replacement of the Cross Kirkland Corridor trail

E-03-SegA: Totem Lake to Wilburton Station LRT

Sound Transit has developed a conceptual scope of work for this candidate 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 is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, number of stations, 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:

This project would build light rail from Wilburton/NE 8th Street to Kirkland/Totem Lake. This project would travel from East Link's planned Wilburton Station north to Totem Lake. North of the Wilburton Station and the turn-out for East Link to Redmond, the project continues at-grade along the Eastside Rail Corridor/Cross Kirkland Corridor right-of-way and provides station access at the South Kirkland Park-and-Ride, 6th Street South and NE 112th Street in Kirkland. The project crosses under I-405 and transitions to an elevated guideway and leaves the Eastside Rail Corridor/Cross Kirkland Corridor, turning north to an elevated terminal station in Totem Lake on the east side of I-405. The Totem Lake freeway station and Kingsgate Park-and-Ride are located nearby. In Bellevue, the project would construct tail tracks (for turning back vehicles) in the Eastside Rail Corridor south of where East Link leaves the Eastside Rail Corridor to cross over I-405 to Downtown Bellevue.

Assumptions:

- Generally within existing transportation rights-of-way, mostly the Eastside Rail Corridor/Cross Kirkland Corridor, but with sections along local arterials
- Accommodates potential future multi-use trail along the Eastside Rail Corridor in Bellevue
- Construction of a parking garage at Kingsgate will temporarily displace parking and parking may be temporarily provided nearby; costs for temporary parking replacement have been included in the cost estimate for this project, but a specific location for the parking replacement has not been identified
- For non-motorized station access allowances, all stations are categorized as suburban stations
- For bus/rail integration, facilities have been assumed at Totem Lake and 6th Street South

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.

Right-of-Way and Property Acquisition:

- Right-of-way required for guideway is mostly within the Eastside Rail Corridor/Cross Kirkland Corridor and arterial rights-of-way, but property acquisitions are possible for some adjacent parcels
- Property acquisition required for stations, parking, and maintenance and storage facility
- Property acquisition for bus/rail integration 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)
- Master use
- Land use approvals (Conditional use, design review, site plans, Comprehensive Plan or development code consistency, Special Use Permits)
- WSDOT and FHWA approvals for use of and/or crossings of I-405, I-90, and SR 520 rights-of-way
- All required local, state, and federal environmental permits
- NEPA/SEPA and related regulations

Project Dependencies:

- Requires development of operations and maintenance facility
- Affected by Expansion of Kingsgate Park-and-Ride (also assumed as part of E-02a-Seg A, E-02b-Seg A and E-06)

E-03-SegA: Totem Lake to Wilburton Station LRT

Potential Project Partners:

- WSDOT
- Cities of Kirkland and Bellevue
- King County
- FTA
- FHWA

Cost:

Sound Transit has developed a conceptual scope of work for this candidate 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 is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, number of stations, 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	\$72.11	\$77.15
Preliminary Engineering & Environmental Review	\$40.22	\$43.04
Final Design & Specifications	\$79.62	\$85.19
Property Acquisition & Permits	\$118.27	\$126.54
Construction	\$812.07	\$868.92
Construction Management	\$71.65	\$76.67
Third Parties	\$16.32	\$17.47
Vehicles	\$63.60	\$68.05
Contingency	\$79.62	\$85.19
Total	\$1,353.47	\$1,448.22

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.

ITEM	COST	COST WITH RESERVE
TOD planning and due diligence	\$0.82	\$0.87
Sustainability	\$10.58	\$11.32
Parking access	\$51.56	\$55.17
Non-motorized (bicycle/pedestrian) access	\$35.15	\$37.61
Bus/rail integration facilities	\$5.51	\$5.89

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Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 <p>Regional Light Rail Spine Does project help complete regional light rail spine?</p>	No	
 <p>Ridership 2040 daily station boardings</p>	4,000 — 5,000	
 <p>Capital Cost Cost in Millions of 2014 \$</p>	\$1,353 — \$1,448	
 <p>Annual O&M Cost Cost in Millions of 2014 \$</p>	\$24.19	
 <p>Travel Time In-vehicle travel time along the project (segment)</p>	16 min	
 <p>Reliability Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</p>	Medium-High	Some at-grade crossings
 <p>System Integration Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</p>	Medium	Medium-low to medium number of existing daily transit connections from Totem Lake to Wilburton and future integration opportunities with light rail service
 <p>Ease of Non-motorized Access Qualitative assessment of issues and effects related to non-motorized modes</p>	Medium-Low	Low to medium intersection densities providing non-motorized access and arterial crossings of I-405. Open space near S Kirkland Park-and-Ride a barrier
	<p>Percent of Non-motorized Access Percent of daily boardings</p>	25-35%
 <p>Connections to PSRC-designated Regional Centers Number of PSRC-designated regional growth and manufacturing/industrial centers served</p>	1+ centers	Kirkland Totem Lake is directly served. Bellevue Downtown is indirectly served
 <p>Land Use and Development/TOD Potential Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</p>	Medium	Moderate support in local and regional plans; approx. 40% land is compatibly zoned
	<p>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</p> <p>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential stations</p>	Medium Pop/acre = 2014: 8; 2040: 10 Emp/acre = 2014: 7; 2040: 14 Pop + Emp/acre = 2014: 15; 2040: 23
 <p>Socioeconomic Benefits Existing minority / low-income populations within 0.5 mile of potential stations</p> <p>2014 and 2040 population within 0.5 mile of potential stations</p> <p>2014 and 2040 employment within 0.5 mile of potential stations</p>	25% Minority; 6% Low-Income Pop: 2014: 15,100; 2040: 19,200 Emp: 2014: 14,700; 2040: 27,600	

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