

# E-03-SegB: Bellevue Wilburton Station to Central Issaquah LRT

Project Number	E-03-SEGB
Subarea	East King
Primary Mode	Light Rail
Facility Type	Corridor
Length	9 miles
Version	ST Board Workshop
Date Last Modified	12-23-2015

## PROJECT AREA AND REPRESENTATIVE ALIGNMENT



### SHORT PROJECT DESCRIPTION

This project would build light rail from Bellevue's Wilburton Station to Issaquah, utilizing the Eastside Rail Corridor, I-405, and the I-90 median. The project would also include improvements to pedestrian facilities on the 142<sup>nd</sup> Place SE overpass at Eastgate.

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

### KEY ATTRIBUTES

<b>REGIONAL LIGHT RAIL SPINE</b> <i>Does this project help complete the light rail spine?</i>	No
<b>CAPITAL COST</b> <i>Cost in Millions of 2014 \$</i>	\$2,115 — \$2,263
<b>RIDERSHIP</b> <i>2040 daily boardings</i>	8,000 — 10,000
<b>PROJECT ELEMENTS</b>	<ul style="list-style-type: none"> <li>• Approximately 9 miles of at-grade and elevated light rail</li> <li>• Three elevated stations: Central Issaquah, Lakemont, Richards Road (Factoria)</li> <li>• One at-grade station: Eastgate</li> <li>• Stations accommodate 4-car trains</li> <li>• Minor improvements to East Link Wilburton Station to accommodate riders from this line</li> <li>• Combined 1,000 stalls constructed in Central Issaquah and at a new facility at Lakemont</li> <li>• Signals and gates to improve at-grade rail crossings</li> <li>• Improvements to pedestrian facilities on the 142<sup>nd</sup> Place SE overpass at Eastgate to widen the sidewalk on the west side and provide weather protection</li> <li>• Maintenance and storage facility and purchase of 12 light rail vehicles</li> <li>• Peak headways: 7.5 minutes</li> <li>• 1 percent for art per Sound Transit policy</li> <li>• 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")</li> </ul>
<b>NOT INCLUDED</b>	<ul style="list-style-type: none"> <li>• Construction of trail in Eastside Rail Corridor in Bellevue, (except relocation as required by the HCT Easement Agreement)</li> <li>• Relocation of 72" King County interceptor sewer line in Eastside Rail Corridor</li> <li>• Relocation of potential future PSE transmission line in Eastside Rail Corridor</li> <li>• See separate document titled "Common Project Elements"</li> </ul>

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KEY ATTRIBUTES

ISSUES & RISKS

- Alignment is in close proximity to residential uses
- Light rail guideway requires new structure adjacent to historic Wilburton trestle
- Project construction will interrupt East Link operations at interlined section
- Improvements to 142<sup>nd</sup> Place SE overpass will require some closures of the existing freeway station
- Providing land for a maintenance facility will require acquisition of private property
- King County sewer line is located in the Eastside Rail Corridor
- Light rail is a permitted use in Bellevue, where an ST2 project is located; it is not currently a permitted use in Issaquah; light rail is included in both cities' Comprehensive Plans and other planning documents

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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 the East Link Wilburton Station in Bellevue to Central Issaquah (consistent with the Central Issaquah Plan). The project would travel from Central Issaquah to the I-90 median. The elevated LRT guideway continues in the I-90 median to the vicinity of Lakemont Boulevard SE where it leaves the median to a station and park-and-ride on the south side of the freeway. The guideway returns to the median and continues to the Eastgate Park-and-Ride, where it transitions to the north side of I-90 via an elevated structure (transitioning to at-grade). The representative station at Eastgate is at-grade along the southern side of the existing transit center, allowing the existing direct access ramps and 142<sup>nd</sup> Place SE structure to remain. West of the Eastgate Park-and-Ride, the LRT guideway travels along the north side of I-90. An elevated station on the north side of I-90 will be located near Richards Road SE to serve Factoria. The guideway continues along I-90 until it reaches I-405 where it turns north. The LRT guideway travels along the east side of I-405 to SE 8<sup>th</sup> Street. The guideway then transitions to the Eastside Rail Corridor on a new structure adjacent to and east of the historic Wilburton trestle. The guideway would interline with East Link where it joins the Eastside Rail Corridor. The Bellevue to Issaquah line would serve East Link's planned Wilburton Station. North of the Wilburton Station and the turn-out for East Link to Redmond, the project continues at-grade along the Eastside Rail Corridor right-of-way to East Link storage/yard lead tracks to provide for turn-backs. The project would also include improvements to pedestrian facilities on the 142<sup>nd</sup> Place SE overpass at Eastgate.

### Assumptions:

- Generally within existing transportation rights-of-way, mostly I-405, I-90, and the Eastside Rail Corridor, but with sections along local arterials
- Accommodates interim trail along the Eastside Rail Corridor in Bellevue
- Reconstruction of the 142<sup>nd</sup> Place SE overpass at Eastgate will not be required
- For non-motorized station access allowances, the Factoria, Eastgate, Lakemont and Central Issaquah stations are categorized as suburban stations
- For bus/rail integration, facilities have been assumed at Eastgate and Central Issaquah.

### 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 I-405, I-90, the Eastside Rail 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)
- All required local, state, and federal environmental permits
- WSDOT and FHWA approval for the use of and/or crossings of I-405 and I-90 rights-of-way
- NEPA/SEPA and related regulations

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**Project Dependencies:**

Requires development of operations and maintenance facility

**Potential Project Partners:**

- WSDOT
- Cities of Bellevue and Issaquah
- King County
- Transit partner serving project: King County Metro
- FTA
- FHWA

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## Cost:

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*In Millions of 2014\$*

ITEM	COST	COST WITH RESERVE
Agency Administration	\$112.30	\$120.17
Preliminary Engineering & Environmental Review	\$65.72	\$70.32
Final Design & Specifications	\$130.60	\$139.74
Property Acquisition & Permits	\$135.62	\$145.12
Construction	\$1,332.14	\$1,425.39
Construction Management	\$117.54	\$125.77
Third Parties	\$26.52	\$28.38
Vehicles	\$63.60	\$68.05
Contingency	\$130.60	\$139.74
<b>Total</b>	<b>\$2,114.65</b>	<b>\$2,262.68</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.*

ITEM	COST	COST WITH RESERVE
TOD planning and due diligence	\$0.82	\$0.87
Sustainability	\$12.64	\$13.53
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><b>Regional Light Rail Spine</b> <i>Does project help complete regional light rail spine?</i></p>	No	
 <p><b>Ridership</b> <i>2040 daily station boardings</i></p>	8,000 — 10,000	
 <p><b>Capital Cost</b> <i>Cost in Millions of 2014 \$</i></p>	\$2,115 — \$2,263	
 <p><b>Annual O&amp;M Cost</b> <i>Cost in Millions of 2014 \$</i></p>	\$21.86	
 <p><b>Travel Time</b> <i>In-vehicle travel time along the project (segment)</i></p>	16 min	
 <p><b>Reliability</b> <i>Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</i></p>	Medium-High	Some at-grade crossings
 <p><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></p>	Medium-Low	Low to medium number of existing daily transit connections from Wilburton to Issaquah and future integration opportunities with light rail service
 <p><b>Ease of Non-motorized Access</b> <i>Qualitative assessment of issues and effects related to non-motorized modes</i></p>	Medium-Low	Low to medium intersection densities providing non-motorized access and arterial crossings of I-405; Large parcels, I-90 and open space (Lakemont area) are barriers
	<p><b>Percent of Non-motorized Mode of Access</b> <i>Percent of daily boardings</i></p>	25-35%
 <p><b>Connections to PSRC-designated Regional Centers</b> <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i></p>	1+ centers	Central Issaquah is directly served. Bellevue Downtown is indirectly served
 <p><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></p> <p><i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i></p> <p><i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential station areas</i></p>	Medium	Moderate support in local and regional plans; approx. 30% land is compatibly zoned
	<p>Medium</p> <p>Pop/acre = 2014: 5; 2040: 5 Emp/acre = 2014: 7; 2040: 12 Pop + Emp/acre = 2014: 12; 2040: 18</p>	Moderate market support
 <p><b>Socioeconomic Benefits</b> <i>Existing minority / low-income populations within 0.5 mile of potential station areas</i></p> <p><i>2014 and 2040 population within 0.5 mile of potential station areas</i></p> <p><i>2014 and 2040 employment within 0.5 mile of potential station areas</i></p>	<p>35% Minority; 8% Low-Income</p> <p>Pop: 2014: 8,900; 2040: 10,300</p> <p>Emp: 2014: 13,500; 2040: 23,400</p>	

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