

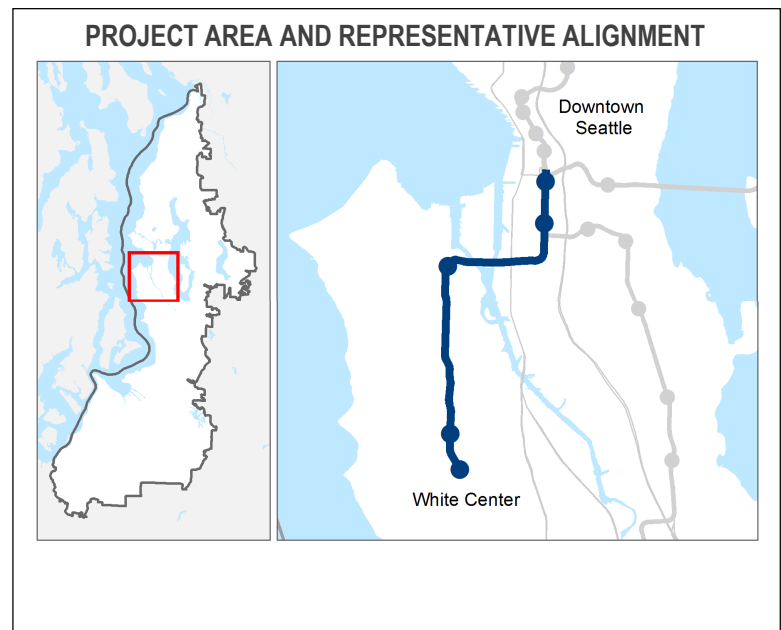
C-03c: Downtown Seattle to White Center via Delridge Way SW LRT

Project Number	C-03c
Subarea	North King
Primary Mode	Light Rail
Facility Type	Corridor
Length	6.5 miles
Version	ST Board Workshop
Date Last Modified	11-25-2015

SHORT PROJECT DESCRIPTION

This project would provide light rail from Downtown Seattle to White Center via Delridge Way SW with both elevated and at-grade sections, a new rail-only fixed span crossing of the Duwamish River, and five stations.

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>	\$1,913 — \$2,047
RIDERSHIP <i>2040 daily boardings</i>	19,000 — 22,000
PROJECT ELEMENTS	<ul style="list-style-type: none"> • Approximately 6.5 miles of light rail with a mixture of at-grade, and elevated profiles • Two elevated stations: SODO and Delridge; three at-grade stations: Stadium, Thistle, and White Center • Stations accommodate 4-car trains • High-level rail-only fixed span crossing of the Duwamish River • Operations and maintenance facility • Purchase of 33 light rail vehicles; peak headways: 6 minutes • 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, and sustainability measures (see separate document titled "Common Project Elements")
NOT INCLUDED	<ul style="list-style-type: none"> • Parking not included • See separate document titled "Common Project Elements"
ISSUES & RISKS	<ul style="list-style-type: none"> • The project crosses the Duwamish River in vicinity of Terminal 18 which is a highly constrained and utilized corridor with potential for soil contamination; a fixed span crossing is assumed and would require an over-water clearance of approximately 150 feet • Topography in West Seattle presents design challenges • At-grade profiles included in this project could result in more potential conflicts with other modes; this could affect speed and reliability • Light rail currently operates in Seattle and specific station area standards are codified; light rail is included in the Comprehensive Plan 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 of completion 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 representative light rail project would connect from West Seattle to downtown Seattle on Delridge Way, Spokane Street, and the SODO Busway. The assumed alignment would include five stations— two elevated station, and three at-grade stations. This alignment would include a tunnel portal south International District/Chinatown Station along the SODO Busway, a new rail-only high-rise bridge structure over the Duwamish Waterway (with a vertical clearance of approximately 150 feet above the waterway), elevated alignment over Alaskan Way Viaduct (SR99) and S. Spokane Viaduct, and at-grade center running LRT track guideway along Delridge Way SW.

Assumptions:

- Generally within an existing city street right-of-way, but where alignment is at-grade and center roadway running, right-of-way may be needed to accommodate left-turn pockets; along Delridge Way SW, there are many small impacts to properties fronting the street
- Where alignment is running at-grade, some existing on-street parking would need to be removed and would not be replaced
- For non-motorized station access allowances, the International District/Chinatown station is categorized as Urban/CBD; all other stations for this project are characterized Urban
- For bus/rail integration, facilities have been assumed at the Delridge and White Center stations

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:

- Potential property acquisitions anticipated at stations and intersections where protected turns are to be maintained
- The alignment would require property acquisition for the operations and maintenance facility, access to the facility, and traction power substations
- Property acquisition for bus/rail integration facility

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)
- USCG Bridge Permit
- US Army Corps of Engineers Section 10
- FAA/Air Navigation Review
- All required local, state, and federal environmental permits
- NEPA/SEPA and related regulations

Project Dependencies:

The operations plan assumes that trains from West Seattle would continue north through the Downtown Seattle Transit Tunnel to Northgate and beyond.

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Potential Project Partners:

- WSDOT
- City of Seattle
- Port of Seattle
- U.S. Army Corps of Engineers
- Coast Guard
- FTA
- Transit partners serving project: King County Metro

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Cost:

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In Millions of 2014\$

ITEM	COST	COST WITH RESERVE
Agency Administration	\$102.70	\$109.89
Preliminary Engineering & Environmental Review	\$49.67	\$53.14
Final Design & Specifications	\$98.35	\$105.24
Property Acquisition & Permits	\$277.24	\$296.65
Construction	\$1,003.19	\$1,073.42
Construction Management	\$88.52	\$94.71
Third Parties	\$19.87	\$21.26
Vehicles	\$174.90	\$187.14
Contingency	\$98.35	\$105.24
Total	\$1,912.80	\$2,046.69

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	\$0.69	\$0.74
Sustainability	\$12.92	\$13.83
Parking access	N/A	N/A
Non-motorized (bicycle/pedestrian) access	\$22.19	\$23.74
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>	19,000 — 22,000	
 <p>Capital Cost Cost in Millions of 2014 \$</p>	\$1,913 — \$2,047	
 <p>Annual O&M Cost Cost in Millions of 2014 \$</p>	\$33.54	
 <p>Travel Time In-vehicle travel time along the project (segment)</p>	18 min	
 <p>Reliability Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</p>	Medium-High	Mixture of elevated and at-grade sections; reliability could be affected by cross street traffic
 <p>System Integration Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</p>	Medium	Low to medium number of existing daily transit connections from White Center to SODO; opportunities for integration with realigned bus 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 with large parcels, open space and stadium as barriers
	<p>Percent of Non-motorized Access Percent of daily boardings</p>	70-80%
 <p>Connections to PSRC-designated Regional Centers Number of PSRC-designated regional growth and manufacturing/industrial centers served</p>	2 centers	Seattle CBD, Duwamish MIC
 <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-Low	Moderate support in local and regional plans; approx. 15% 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
 <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>	54% minority; 18% low-income	
	<p>Pop: 2014: 16,700; 2040: 22,900</p> <p>Emp: 2014: 25,900; 2040: 37,800</p>	

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