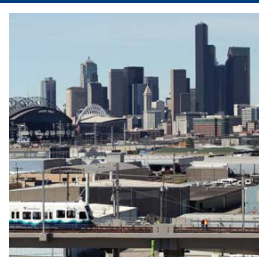


# EAST LINK PROJECT

## FINAL ENVIRONMENTAL IMPACT STATEMENT

### Executive Summary



SEATTLE



MERCER ISLAND



BELLEVUE



OVERLAKE



REDMOND



CENTRAL PUGET SOUND  
REGIONAL TRANSIT AUTHORITY



July 2011



July 15, 2011

Dear Recipient:

The U.S. Department of Transportation Federal Transit Administration (FTA), Sound Transit (the Central Puget Sound Regional Transit Authority), and Washington State Department of Transportation (WSDOT) have prepared this Final Environmental Impact Statement (Final EIS) on the proposed East Link light rail transit project. This project is part of Sound Transit 2, the Regional Transit System Plan for Central Puget Sound. Sound Transit is the project proponent.

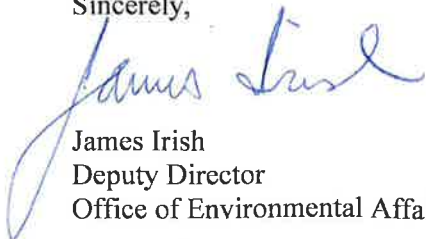
The Final EIS has been prepared pursuant to the National Environmental Policy Act (42 U.S.C 4321 to 4370e) and the State Environmental Policy Act (Ch. 43.21C RCW). It has been prepared to inform the public, agencies and decision makers about the environmental consequences of building and operating the East link extension of the light rail system from downtown Seattle to Mercer Island, Bellevue, and Redmond via Interstate 90. The Final EIS examines project route and station alternatives, including the preferred alternative identified by the Sound Transit Board.

The major choices for the project involve the route of the light rail line and station locations. The Sound Transit Board will consider the Final EIS and other information before selecting the route and station locations. After the Board selects the project to be built, FTA will issue a Record of Decision, which will state FTA's decision on the project and list Sound Transit mitigation commitments to reduce or avoid impacts.

Enclosed is an Executive Summary of the Final EIS. The full Final EIS and separately bound appendices consisting of conceptual design drawings, technical reports, background materials, and responses to comments are also available. Please see the Fact Sheet in this Executive Summary regarding how to obtain these documents.

For additional information about the Final EIS please contact Kent Hale, Senior Environmental Planner (206) 398-5103 or [kent.hale@soundtransit.org](mailto:kent.hale@soundtransit.org).

Sincerely,



James Irish  
Deputy Director  
Office of Environmental Affairs and Sustainability

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**CHIEF EXECUTIVE OFFICER**

Joni Earl



**EAST LINK LIGHT RAIL TRANSIT PROJECT  
SEATTLE, WASHINGTON**

**FINAL ENVIRONMENTAL IMPACT STATEMENT**

Submitted pursuant to  
The National Environmental Policy Act (NEPA) (42 U.S.C. 4322 (2)(c))  
and the State Environmental Policy Act (SEPA) (Ch. 43.21 C RCW)  
by the

**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL TRANSIT ADMINISTRATION**

and

**CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY (SOUND TRANSIT)**

and

**WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
(For SEPA)**

In cooperation with

**FEDERAL HIGHWAY ADMINISTRATION**

**CITY OF SEATTLE**

**CITY OF MERCER ISLAND**

**CITY OF BELLEVUE**

**CITY OF REDMOND**


**KING COUNTY**

**U.S. ARMY CORPS OF ENGINEERS**

**U.S. COAST GUARD**

6/15/2011

Date of approval



R. F. Krochalis, Regional Administrator  
For Federal Transit Administration, Region 10

6/15/11

Date of approval



Perry Weinberg, Director, Office of Environmental  
Affairs and Sustainability  
For Central Puget Sound Regional Transit Authority

6/14/2011

Date of approval



Megan White, Director of Environmental Services  
For Washington State Department of Transportation

See the Fact Sheet for persons who may be contacted for additional information concerning this document.

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## Abstract

Sound Transit proposes to construct and operate an eastern extension of the Link light rail system providing urban transportation improvements in the Central Puget Sound metropolitan region. The East Link project would connect to the existing light rail system in downtown Seattle and extend the system east to Mercer Island, Bellevue, and Redmond. Alternatives are considered in five geographic segments in this EIS. **Segment A, Interstate 90**, connects downtown Seattle to Mercer Island and South Bellevue via I-90. **Segment B, South Bellevue**, connects I-90 to approximately SE 6th Street along one of three corridors: Bellevue Way, 112th Avenue SE, or the BNSF Railway right-of-way. **Segment C, Downtown Bellevue**, would travel through downtown Bellevue between approximately SE 6th Street and an I-405 crossing at either NE 6th Street or NE 12th Street on either an at-grade, elevated, or tunnel profile. **Segment D, Bel-Red/Overlake**, would travel from the I-405 crossing to the Overlake Transit Center, either through the Bel-Red corridor or along SR 520. **Segment E, Downtown Redmond**, would travel from Overlake Transit Center to Downtown Redmond via the SR 520 corridor until West Lake Sammamish Parkway and then proceed through Downtown Redmond via either Redmond Way or in the former BNSF Railway corridor. Alternatives considered include a No Build Alternative, 24 build alternatives (one in Segment A, six in Segment B, ten in Segment C, four in Segment D, and three in Segment E), the No Build Alternative, and four maintenance facility alternatives (three in Segment D and one in Segment E). Each alternative route includes one to four stations; a total of 19 station alternatives, some with multiple location options, exist in the five segments.

Construction is expected to start in 2015, with operation under way between 2022 and 2023. The analysis and impact information in this EIS addresses potential long-term and short-term impacts of transportation; acquisitions, displacements and relocations; land use; economics; social impacts, community facilities, and neighborhoods; visual and aesthetic resources; air quality and greenhouse gas; noise and vibration; ecosystem resources; water resources; energy; geology and soils; hazardous materials; electromagnetic fields; public services; utilities; historic and archaeological resources; and parkland and open space. The analysis also considers issues related to environmental justice, protected park and historic resources, and the cost, funding, and cost-effectiveness of the alternatives.



# Fact Sheet

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## Proposed Action

The Central Puget Sound Regional Transit Authority (Sound Transit) proposes to construct and operate an extension of its electric light rail transit system that would improve transportation connectivity between Seattle, Mercer Island, and the east side of Lake Washington to Bellevue and Redmond. The proposed light rail extension, known as the East Link Light Rail Transit Project (East Link Project), would cross Lake Washington in the center lanes of Interstate 90 (I-90) and would operate in a dedicated right-of-way between Seattle and Redmond. The East Link Light Rail Transit Project is included in Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound (ST2), also known as the Mass Transit Expansion proposal, which was approved by the voters in November 2008.

The East Link corridor is approximately 18 miles long and has been divided into five segments along distinct geographic boundaries: Segment A, Interstate 90 (Seattle to Mercer Island and Bellevue via I-90); Segment B, South Bellevue; Segment C, Downtown Bellevue; Segment D, Bel-Red/Overlake (Downtown Bellevue to Overlake Transit Center); and Segment E, Downtown Redmond (Overlake Transit Center to Downtown Redmond). Alternatives considered include 24 build alternatives (one in Segment A, six in Segment B, ten in Segment C, four in Segment D, and three in Segment E), the No Build Alternative, and four maintenance facility alternatives (three in Segment D and one in Segment E). Each alternative route includes one to four stations; a total of 19 station alternatives, some with multiple location options, exist in the five segments. The segment alternatives would be linked to create a complete, operable light rail system that would connect with the Central Link light rail system at the Chinatown/International District Station in downtown Seattle. The East Link Project might be constructed in phases, depending on available funding or other factors. Sound Transit anticipates that any station including and beyond the last station in Segment C could be considered an interim station.

## Project Proponent

Sound Transit (Central Puget Sound Regional Transit Authority)  
Union Station  
401 South Jackson Street  
Seattle, Washington 98104  
[www.soundtransit.org](http://www.soundtransit.org)

## Dates of Construction and Opening

Sound Transit plans to begin construction of East Link by 2015, with operations underway between 2022 and 2023. Segment E to Downtown Redmond would be constructed after 2023.

## State Environmental Policy Act (SEPA) Lead Agencies

Sound Transit: Nominal Lead Agency  
Union Station  
401 South Jackson Street  
Seattle, Washington 98104  
[www.soundtransit.org](http://www.soundtransit.org)

Washington State Department of Transportation (WSDOT): Co-Lead Agency  
401 Second Avenue South, Suite 300  
Seattle, Washington 98104  
[www.wsdot.wa.gov](http://www.wsdot.wa.gov)

## National Environmental Policy Act (NEPA) Lead Agency

Federal Transit Administration  
915 Second Avenue, Suite 3142  
Seattle, Washington 98174-1002  
[www.fta.dot.gov/office/regional/region10/](http://www.fta.dot.gov/office/regional/region10/)

## SEPA Responsible Officials

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 Seattle, Washington 98104

Dylan Counts, Sound Transit Liaison  
 WSDOT Public Transportation Division  
 401 Second Avenue South, Suite 300  
 Seattle, Washington 98104

## Anticipated Permits and Approvals

Permit or Approval	Issuing Agency
<b>Federal</b>	
Section 106 Review	Federal Transit Administration
Section 4(f) Review	Federal Transit Administration, U.S. Department of Transportation
Section 6(f) Review	U.S. Department of the Interior
Clean Water Act, Section 404 and Section 10	U.S. Army Corps of Engineers
Federal Endangered Species Act Review	U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Service
Interchange Justification Report	Federal Highway Administration
Airspace Lease for Use of Interstate Right-of-Way	Federal Highway Administration
Breaks-in-Limited Access	Federal Highway Administration
Conversion of highway travel lanes to transit only	Federal Highway Administration
<b>State and County</b>	
Hydraulic Project Approval	Washington Department of Fish and Wildlife
Aquatic Use Authorization: Aquatic Lease	Washington Department of Natural Resources
Public Utility Commission Permits	Washington Public Utility Commission
Section 106 Review	Washington State Department of Archaeology and Historic Preservation
National Pollution Discharge Elimination System Stormwater Discharge Permit	Washington State Department of Ecology
Coastal Zone Management Consistency Certification	Washington State Department of Ecology
Temporary Modification of Water Quality Criteria	Washington State Department of Ecology

Permit or Approval	Issuing Agency
Underground Storage Tank Notification Requirement	Washington State Department of Ecology
Water Quality Certification: Section 401	Washington State Department of Ecology
Air Space Lease: Interstate or State Routes	Washington State Department of Transportation
<b>Cities</b>	
Shoreline Permits	Cities of Seattle, Mercer Island, Bellevue, Redmond
Street Use Permits	Cities of Bellevue and Redmond
Construction Permits	Cities of Seattle, Mercer Island, Bellevue, Redmond
Right-of-Way Permits or Franchise for Use of City Right-of-Way	Cities of Bellevue, Redmond and Port of Seattle
Environmental Critical Areas/Sensitive Areas Review	Cities of Bellevue and Redmond
Development Permits	Cities of Bellevue and Redmond
Noise Variance	Cities of Seattle, Mercer Island, Bellevue and Redmond
Street Vacations	Cities of Bellevue and Redmond
Certificates of Approval	Cities of Seattle and Redmond Landmark Preservation Boards
<b>Other</b>	
Various Approvals: Planning, Design Review, and Arts Commissions	Cities of Bellevue, Redmond, Seattle, Mercer Island
Notification of Intent to Perform Demolition or Asbestos Removal	Puget Sound Clean Air Agency
Pipeline and Utility Crossing: Permits	Utility Providers
Utility Approvals: Easements and Use Agreements	Utility Providers

## Principal Contributors

See Appendix A2, List of Preparers.

## Date of Issue of the Final EIS

July 15, 2011

## Next Actions

Following publication of the Final EIS, the Sound Transit Board of Directors will make a final decision on the route and station locations to be built for the project. Also, after the Final EIS is published, the Federal Transit Administration (FTA) is expected to issue its Record of Decision (ROD) on the project.

## Related Documents

### Environmental Documents

- 112th Avenue Light Rail Options Concept Design Report (Sound Transit, June 2010)
- Segment C – Evaluation of Hospital Station Options (Sound Transit, June 2010)

- Final Environmental Impact Statement, Transportation 2040: Metropolitan Transportation Plan for the Central Puget Sound Region (Puget Sound Regional Council, March 2010)
- Downtown Bellevue Light Rail Alternatives Concept Design Report (Sound Transit, February 2010)
- East Link Project Draft and Supplemental Draft EIS (Sound Transit, December 2008; November 2010)
- East Link Project Environmental Scoping Information Report Seattle to Bellevue to Redmond (Sound Transit, August 2006)
- North Link Final Supplemental EIS (Sound Transit, April 7, 2006)
- Regional Transit System Plan Final Supplemental EIS (Sound Transit, June 2005)
- Airport Link Environmental Assessment (EA)/SEPA Addendum (Sound Transit, May 26, 2005)

- I-90 Two-Way Transit and HOV Operations Project Final EIS/ROD (WSDOT and Sound Transit, May 2004)
- Central Link Light Rail Transit Project Environmental Assessment Initial Segment (Sound Transit, February 5, 2002)
- Central Link Light Rail Transit Project Final EIS Addendum Initial Segment (Sound Transit, November 16, 2001)
- Central Link Light Rail Transit Project Final Supplemental EIS, Tukwila Freeway Route (Sound Transit, November 16, 2001)
- Central Link Light Rail Transit Project Final EIS (Sound Transit, November 5, 1999)

## Other Documents

- Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound (Sound Transit, July 2008)
- VISION 2040, 2008 Update (PSRC, April 2008)
- Transportation 2040 (PSRC, May 2010)
- East Corridor High-Capacity Transit Mode Analysis History (Sound Transit, 2006)
- Regional Transit Long-Range Plan (Sound Transit, July 2005)
- East Link Project Sound Transit Board Briefing Book Light Rail Alternatives Seattle to Bellevue to Redmond (Sound Transit, November 2006)
- Coordination Plan, Updated December 2008 (Sound Transit, 2008)
- East Link Light Rail B7/C9T to NE 2nd Portal (B7 – Revised) Alternative: City of Bellevue RP03 – Interim Analysis Report (City of Bellevue, 2011)

## Cost and Availability

This Final EIS is available for public review in a variety of formats and locations. The Final EIS is available on the Sound Transit website ([www.soundtransit.org/eastlink](http://www.soundtransit.org/eastlink)). The Final EIS is also available on DVD or CD at no cost from Sound Transit. Paper copies of the Final EIS are available for the cost listed below:

- Executive Summary: FREE
- Final EIS: \$25.00
- Appendices to Final EIS: \$15.00 each
- Conceptual design drawings: \$25.00
- Technical background reports: \$15.00 each

Copies of the Final EIS and related documents listed above are available for review or purchase at the offices of Sound Transit, Union Station, 401 South Jackson Street, Seattle, Washington 98104. To request any of the documents, please contact Elma Borbe at (206) 398-5445. To review these documents, please call the Sound Transit librarian at (206) 398-5344 during normal business hours (weekdays from 8:00 a.m. to 5:00 p.m.) to arrange an appointment.

Paper copies of the Final EIS documents are also available for review at the following public places:

- Bellevue College Library
- King County Library System
  - Bellevue Regional Library
  - Mercer Island Public Library
  - Redmond Regional Library
- Seattle Public Library branches
  - Downtown Branch
  - International District / Chinatown Branch Library
  - Douglas Truth Branch Library
- University of Washington Library
- Washington State Department of Transportation Library
- Washington State Library

## Appeals

Washington State Environmental Policy Act (SEPA) challenges to this Final EIS are governed by Sound Transit Resolution R7-1 and the SEPA rules and regulations (Ch. 43.21C RCW and WAC 197-11-680). Sound Transit Resolution R7-1 is available online at: <http://www.soundtransit.org/About-Sound-Transit/Board-of-Directors/Board-archives/Resolutions-archive.xml>. (1994-1997 Resolutions)

As provided in Resolution R7-1, appeals of SEPA determinations must be made in writing by filing a letter of appeal and paying the required fee within 14 days following the date the environmental document is issued. Letters of appeal should be addressed to Joni Earl, Chief Executive Officer, Sound Transit, Union Station, 401 South Jackson Street, Seattle, Washington 98104-2826.

For this Final EIS, appeals must be received by Sound Transit on or before 5:00 p.m. on July 29, 2011. Additional details about the appeals process and requirements are set out in Resolution R7-1 and in the SEPA rules and regulations.

# Preface

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Local, regional, and state agencies have been studying high-capacity transportation alternatives to connect Seattle with the Eastside of King County since the mid-1960s. In 1976, when expansion plans for Interstate 90 (I-90) were stalled, the affected entities of Seattle, Mercer Island, Bellevue, and the Washington State Highway Commission signed a Memorandum Agreement on the Design and Construction of the I-90 bridge, which called for conversion of the center roadway to dedicated transit usage in the future.

In 2004, the Puget Sound Regional Council (PSRC) prepared the *Central Puget Sound Regional High Capacity Transit Corridor Assessment* to establish a basis for more detailed planning studies and environmental analysis. Applying the adopted land use and metropolitan transportation plan, the report found that the cross-lake corridor, connecting the urban centers of Seattle, Bellevue, Overlake and Redmond, had the highest potential for near-term development of high-capacity transit (HCT) alternatives. Sound Transit's updated Long-Range Plan (2006) includes HCT across I-90 serving these urban centers, and the Sound Transit Board has adopted light rail as the mode for this corridor, now referred to as the East Link Project.

Today, much of Central Link is in operation, and Sound Transit is moving forward with the next phase of mass transit improvements in the Puget Sound region, Sound Transit 2 (ST2). ST2 includes construction of the East Link Project, which is an extension of light rail service from Seattle to Mercer Island, Bellevue, and Redmond via I-90. The ST2 plan funds East Link construction to the Overlake Transit Center in Redmond and provides for environmental review and preliminary engineering from Overlake Transit Center to Downtown Redmond.

Sound Transit, together with the Federal Transit Administration (FTA) and Washington State Department of Transportation (WSDOT), have prepared this Final Environmental Impact Statement (EIS) for the East Link Project in compliance with the National Environmental Policy Act (NEPA), and the Washington State Environmental Policy Act (SEPA). This Final EIS does the following:

- Describes the alternatives and their potential impacts



*Aerial of East Link Corridor*

- Provides environmental information to assist decision-makers in selecting the project to be built
- Identifies measures to avoid and minimize impacts and, when necessary, compensate for adverse impacts
- Considers cumulative impacts as part of the environmental review process
- Provides information for other environmental processes, including compliance with the following:
  - Endangered Species Act
  - Section 106 of the National Historic Preservation Act of 1966
  - Section 4(f) of the Department of Transportation Act of 1966, 49 United States Code (U.S.C.) 303
  - Section 6(f) of the Land and Water Conservation Funds Act
  - Executive Order 12898 - Environmental Justice

The scope of environmental review and the range of alternatives evaluated in the Final EIS respond to the following: public and agency comments received during the public scoping process that began in September 2006; public and agency comments received on the 2008 Draft EIS and the 2010 Supplemental Draft EIS (SDEIS); and feedback from the public and agencies received through community workshops, briefings, stakeholder presentations, and

agency coordination meetings held since the environmental review process began.

In order to comply with NEPA and SEPA and to enhance readability, this Final EIS focuses on the most relevant information regarding project definition, potential adverse impacts, and trade-offs among alternatives. The study area for the Final EIS varies by topic and is described within each section of the document, as appropriate. The Final EIS is organized as follows:

The **Executive Summary** is a separately bound condensed version of the overall document that briefly describes the purpose and need for the project, the project's goals and objectives, and the alternatives being considered. It presents the major impacts for each alternative and potential mitigation, reviews the project's financial characteristics, and provides a brief comparison of the different alternatives. The Executive Summary concludes by identifying the major conclusions, areas of uncertainty, and the project's next steps.

**Chapter 1, Purpose and Need**, describes the project's purpose and need, background, and goals and objectives.

**Chapter 2, Alternatives Considered**, describes the alternatives that are studied in this Final EIS. It also presents the history of selecting light rail as the mode of transit and identifies the process used to refine the range of potential project alternatives to the set studied in the Final EIS. This chapter provides a review of construction activities and a comparison of cost estimates by alternative. It concludes by explaining the project's planning and decision-making context, including the major steps in the environmental evaluation and project development process.

**Chapter 3, Transportation Environment and Consequences**, describes the potentially affected existing and future regional and local transportation system and identifies how the project alternatives could affect that system. It then describes potential strategies to reduce or eliminate transportation impacts. The transportation system elements include transit, highways, arterials, local streets, nonmotorized facilities, freight traffic, and navigable waterways.

**Chapter 4, Affected Environment and Environmental Consequences**, describes the potentially affected environmental conditions (built and natural) in the study area, explains the impacts from construction and operation of the project alternatives, and describes avoidance and minimization measures. Finally, when adverse impacts cannot be avoided, mitigation is

identified as appropriate. This chapter includes the following environmental elements:

- Acquisitions, displacements, and relocations
- Land Use
- Economics
- Social impacts, community facilities, and neighborhoods
- Visual and aesthetic resources
- Air quality
- Noise and vibration
- Ecosystem resources (aquatic resources, vegetation and wildlife, and wetlands)
- Water resources
- Energy
- Geology and soils
- Hazardous materials
- Electromagnetic fields
- Public services
- Utilities
- Historic and archaeological resources
- Parklands and open space

**Chapter 5, Cumulative Impacts**, describes relevant past, present, and reasonably foreseeable actions and projects in or around the project vicinity and the cumulative impact of the proposed alternatives on each element of the environment.

**Chapter 6, Alternatives Evaluation**, compares the project alternatives in terms of how effectively they meet the project's goals and objectives.

**Chapter 7, Comments and Responses**, provides a summary of responses to public and agency comments received on the 2008 Draft EIS and the 2010 SDEIS and responses to common public and agency comments.

**Appendices A to K** provide additional details on the project and Final EIS process. **Appendices A to E and I**, attached to the main volume of the Final EIS, include document support information (references, lists of preparers and recipients, and acronyms and glossary), public involvement and agency coordination documentation, federally required reports on environmental justice and Section 4(f) and 6(f) resources (park and recreation areas, wildlife refuges, historic sites, and any facilities that have received Land and Water Conservation Act funding), and an operating plan summary; **Appendix I** presents the preliminary mitigation measures and environmental commitments that will be implemented for the



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*Preferred Alternative* identified in the Final EIS. **Appendices F, G2, and G3** are separately bound technical appendices related to the affected environment and environmental consequences analyses (materials in **Appendix F** are numbered to match their corresponding environmental elements in **Chapter 4**). **Appendix G2** includes list and maps of all potentially affected parcels, and **Appendix G3** includes a list and maps with general locations for documented hazardous materials sites. **Appendix G1** is a separate large-format document containing conceptual design drawings. **Appendix H**, also bound in separate volumes, contains detailed technical reports prepared for transportation, noise and vibration, ecosystems, and historic and archeological resources. **Appendix J**, also bound in four separate volumes, contains copies of public and agency comments received on the 2008 Draft EIS and 2010 SDEIS and responses to those comments. Last, **Appendix K** includes several reports that evaluated various alignment and station configurations in South Bellevue and Downtown Bellevue. This appendix includes studies prepared jointly by Sound Transit and the City of Bellevue, as well as the City of Bellevue's analysis of their B7R option, which includes potential modifications to the B7 alternative.



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# Executive Summary

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## ES.1 Introduction

Current population and employment levels are causing longer hours of congestion for traffic crossing Lake Washington in both directions, and population and employment trends indicate this situation will continue to worsen. On both sides of the lake, the cities of Seattle, Bellevue, and Redmond are rapidly meeting housing and employment density goals set by the Puget Sound Regional Council (PSRC). PSRC's *VISION 2040* plan recognizes that these urban centers will require high-capacity transit (HCT) options to meet their increasing transportation demands. Current transit options are vulnerable to traffic congestion, which affects transit's on-time performance and reliability.

Sound Transit is proposing the East Link Light Rail Transit Project to address these growing transportation needs. The East Link Project would construct an approximately 18-mile-long light rail transit system in a dedicated right-of-way from Downtown Seattle to Mercer Island, Bellevue, Overlake, and Redmond via Interstate 90 (I-90). It would benefit the region by providing frequent and reliable HCT service 20 hours per day six days of the week (18 hours per day on Sundays) in the Seattle-Bellevue-Redmond corridor. The light rail system would provide fast transit travel times and increase transportation capacity in the corridor. Daily ridership in the corridor is projected to be up to 52,500 boardings by 2030, and light rail service can easily be expanded to accommodate future growth.

In December 2008, Sound Transit, the Washington State Department of Transportation (WSDOT), and the Federal Transit Administration (FTA) published a Draft Environmental Impact Statement (Draft EIS) on the East Link Project. The 2008 Draft EIS evaluated a No Build Alternative and 19 build alternatives within five segments (A to E) for an approximately 18-mile extension of the Link light rail system from Downtown Seattle to Redmond across the I-90 bridge.

After the 2008 Draft EIS was published, the Sound Transit Board of Directors reviewed public and agency comments, developed and evaluated new alternatives and design modifications, identified the preferred alternatives for each segment, and then revised the

preferred alternatives while directing staff to include more alternatives for study. New alternatives were added to Segments B and C, and design modifications to alternatives previously studied in the Draft EIS were added in Segments B, C, D, and E.

A Supplemental Draft Environmental Impact Statement (SDEIS) was published in November 2010 to review the new alternatives and design modifications to existing alternatives. New information regarding the historic nature of I-90 in Segment A was also included and evaluated in the SDEIS.

Public and agency comments received on both the 2008 Draft EIS and the 2010 SDEIS are addressed in this Final Environmental Impact Statement (Final EIS) in Chapter 7 and Appendix J.

A preferred alternative must be identified in the Final EIS for projects like this one that are undergoing review under the National Environmental Policy Act (NEPA). A preferred alternative is a statement of the Sound Transit Board's current intent, but it is not a final decision. The Sound Transit Board will not make a final decision on the route and station locations to be built until after the Final EIS is published. The Board's final decision might confirm or amend the preferred alternative identified in the Final EIS.

After selection of the project to be built by the Board, FTA will issue a Record of Decision (ROD) completing the NEPA process. Final design would begin after the ROD has been issued, and construction is expected to start in 2015, with operations underway between 2022 and 2023. Table ES-1 shows historical and anticipated project milestones for the East Link Project.

### ES.1.1 Funding

The East Link Light Rail Transit Project is included in *Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound (ST2)*, also known as the Mass Transit Expansion proposal, which was approved by the voters in November 2008. ST2 funds construction and operation of the portion of the East Link Project from Seattle to the Overlake Transit Center. ST2 includes environmental review but not final design, construction or operation for the portion of the East Link Project from the Overlake Transit Center Station to Downtown Redmond.

**TABLE ES-1**  
Project Milestones

Preliminary Design and Environmental Review	
Draft EIS published	December 2008
Draft EIS comment period	75 days
Sound Transit Board identifies preferred alternative	Spring 2009/ Spring 2010/ Summer 2010
SDEIS published	Fall 2010
SDEIS comment period	60 days
Final EIS published	Summer 2011
Sound Transit Board selects project to be built	Summer 2011
Federal Record of Decision	Fall 2011
Final Design, Construction, and Operation — ST2 Targets	
Final Design	2012 - 2015
Construction: Seattle to Overlake	2015 - 2022
Start of Service: Seattle to Overlake	2022 - 2023

While the final length and configuration of the constructed project would depend on project funding, final project design, track profiles, and project costs, this Final EIS covers the entire Seattle to Downtown Redmond project corridor.

### ES.1.2 Preferred Alternative

The *Preferred Alternative* identified by the Board has the following route, shown in Exhibit ES-1:

- Segment A: *Preferred Interstate 90 Alternative (A1)*
- Segment B: *Preferred 112th SE Modified Alternative (B2M)*
- Segment C: *Preferred 108th NE At-Grade Alternative (C11A)* or *Preferred 110th NE Tunnel Alternative (C9T)*
- Segment D: *Preferred NE 16th At-Grade Alternative (D2A)*

In Segment E, *Preferred Marymoor Alternative (E2)* is preferred; however, as noted above, Segment E to Downtown Redmond is currently not funded as part of ST2.

Comparative costs are presented as a range in this Final EIS to reflect the risk that final project costs could exceed the base project estimate. The low end of the range is the base cost estimates and the high end of the range includes a project reserve. The range for each alternative also includes design options for that alternative. The preferred alternatives for Segment A through Segment E are estimated to cost \$2.9 to \$3.4 billion in 2007 dollars if *Preferred Alternative C11A* is selected, or \$3.1 to \$3.7 billion in 2007 dollars if

*Preferred Alternative C9T* is selected. The higher cost for *Preferred Alternative C9T* is due to the construction of a tunnel in Downtown Bellevue. For Segment A through Segment D (ending at the Overlake Transit Center – the easternmost station of Segment D), the project with *Preferred Alternative C9T* would be \$2.6 billion or \$3.1 billion with reserve. The project with *Preferred Alternative C11A* would be approximately \$2.3 billion or \$2.7 billion with reserve.

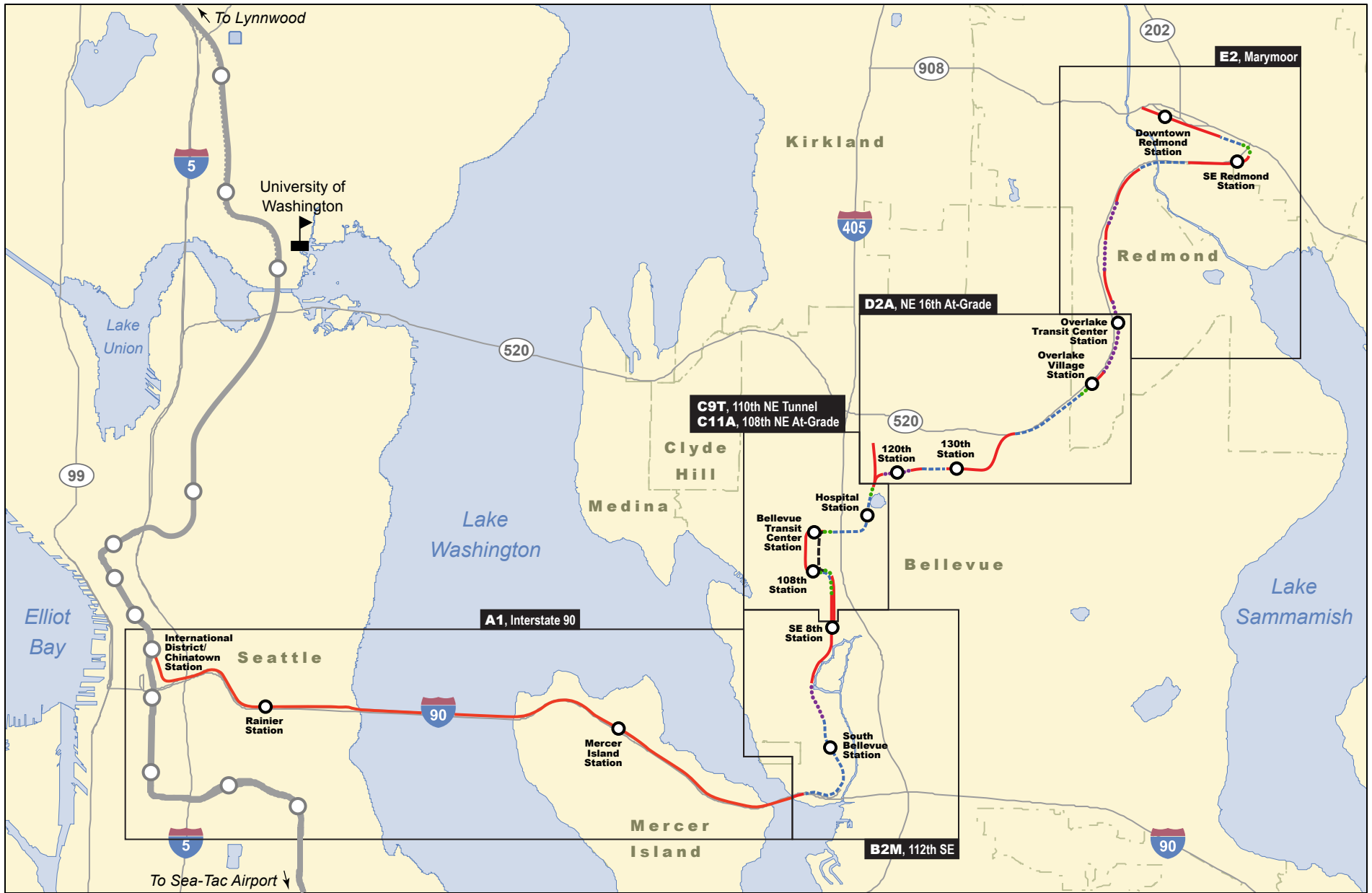
ST2 provides funding for an at-grade or elevated alternative in Downtown Bellevue (Segment C). The Sound Transit Board would require additional funding sources in order to select a tunnel alternative in this segment. The Sound Transit Board identified two preferred alternatives in Segment C in April 2010: *Preferred Alternative C11A* and *Preferred Alternative C9T*. *Preferred Tunnel Alternative C9T* is preferred based on a term sheet (a preliminary agreement) executed between Sound Transit and the City of Bellevue. The term sheet relates to finding additional funding sources and scope reductions that would reduce the affordability gap for this tunnel alternative. *Preferred Alternative C11A* is preferred if additional funding and reductions in scope cannot be found in order to afford the tunnel.

Projectwide ridership and boardings for the East Link *Preferred Alternative* were calculated in all five segments (*Preferred Alternatives A1, B2M, C11A* and *C9T, D2A, and E2*). Two forecasts were provided because of the two preferred alternatives (*Preferred Alternatives C11A* and *C9T*) in Segment C. Overall, projectwide ridership is very similar between the two preferred alternative forecasts, with 49,000 riders for *Preferred Alternative C11A* and 50,000 for *Preferred Alternative C9T* in the year 2030. The two alternatives would have very similar station and segment boardings within Segments A, D, and E. In Segment B, *Preferred Alternative C9T* would have 1,000 more boardings (5,500 compared with *Preferred Alternative C11A* with 4,500). The opposite is true for Segment C, where *Preferred Alternative C11A* would have 1,000 more boardings than *Preferred Alternative C9T* (8,000 versus 7,000). One reason for the boarding differences between these two segments is the station locations. *Preferred Alternative C11A* has a 108th Station in Segment C and *Preferred Alternative C9T* has a SE 8th Station in Segment B.

### ES.1.3 Phasing

The East Link Project may be constructed in phases, depending on available funding or other factors. Sound Transit anticipates that any station from the Hospital Station in Bellevue east to the city of





City Limits

**East Link Light Rail Alternatives**

- East Link Segment
- Station

**Route Profile**

- At-Grade
- Elevated
- Retained-Cut
- Retained-Fill
- Tunnel

**Link Light Rail**

- Link Alignment and Stations



0 0.5 1 Mile

Exhibit ES-1  
**Preferred Alternative**  
**Segments A, B, C, D, and E**  
*East Link Project*

Redmond could be considered an interim terminus station. The minimum planned project would be to open East Link from Seattle to the Hospital Station (Segments A through C) with a planned opening by 2022 or 2023. Subsequent to the preparation of the 2008 Draft EIS, Sound Transit updated revenue forecasts to reflect the effects of the recession. The new revenue forecasts project lower available funds over the life of ST2 by an estimated 25 percent. The Sound Transit Board could adjust the targeted opening dates for East Link in response to the updated revenue forecasts.

## ES.2 Purpose and Need

### ES.2.1 Purpose

The purpose of the East Link Project is to expand the Sound Transit Link light rail system from Seattle to Mercer Island, Bellevue, and Redmond via I-90 in order to provide a reliable and efficient alternative for moving people throughout the region. The following project objectives support this purpose:

- Improve speed and reliability and expand the region's transportation system capacity through an exclusive light rail transit right-of-way, while preserving the environment.
- Increase mobility and accessibility to and from the region's highest employment and housing concentrations.
- Support regional land use and transportation plans—*VISION 2040* and *Transportation 2040*—to direct growth into high-density urban and manufacturing centers in Downtown Bellevue, Overlake, and Redmond by providing an HCT connection between these centers, Seattle, and other regional destinations.
- Continue to implement the goals and objectives identified in Sound Transit's Long-Range Plan, which guides the development of the regional HCT system. The main transportation goal is to "provide a public transportation system that helps ensure long-term mobility, connectivity, and convenience for the citizens of the Puget Sound Region for generations to come" and to "provide reliable, convenient, and safe public transportation services between regional growth centers and create an integrated system of transit services."
- Implement the HCT element of the WSDOT *I-90 Two-Way Transit and High Occupancy Vehicle (HOV) Operations Project Final EIS* (sometimes called the R8A Project); the Federal Highway Administration (FHWA) Record of Decision

(September 28, 2004); the FTA Record of Decision (April 15, 2011); and the August 2004 Amendment to the 1976 Memorandum Agreement between King County, City of Bellevue, City of Seattle, City of Mercer Island, Washington State Transportation Commission (now WSDOT), and Sound Transit. These documents stipulate that the ultimate configuration of I-90 should accommodate all phases of the I-90 Two-Way Transit and HOV Operations Project with HCT in the center lanes. The amendment directs the agencies "to provide high-capacity transit in the center lanes of I-90 between Bellevue and Seattle as quickly as possible . . ." The amendment and Final EIS define HCT as ". . . a transit system operating in dedicated right-of-way, such as light rail, monorail, or a substantially equivalent system."

- More fully develop a regional transit system that would integrate with the Central Link light rail line, thus providing direct connections among the largest urban centers in King County.
- Fulfill Sound Transit's legislative mandate to meet public transportation and mobility needs for HCT infrastructure in the Central Puget Sound region, as established by the State High-Capacity Transportation Systems Act (Chapter 81.104 Revised Code of Washington).

### ES.2.2 Need

There are several reasons why existing transit will not be able to serve future transit needs in the project vicinity.

#### Increased Demand for Transit Services

Transit demand across Lake Washington is expected to approximately double in the next 30 years as residential and employment growth continue on both sides of the lake. In addition, a similar growth in transit demand between Bellevue and Redmond through 2030 is estimated from the regional transit model as a result of strong population and employment growth in the study area.

#### Regional Urban Center Growth Plans Require High-Capacity Transit Investments

The PSRC long-range transportation planning document *VISION 2040* identifies Seattle, Bellevue, Overlake, and Redmond as urban centers. As a result, each city has adopted plans to create concentrated centers of high-density, mixed-use, pedestrian-oriented development under the assumption that they will receive HCT to support their changing transportation needs.

### Increased Congestion on I-90

The I-90 corridor is expected to reach maximum vehicle capacity during peak-hour travel as early as 2015, and the roadway capacity of the I-90 bridge is constrained by bottlenecks at interchanges with I-405 in Bellevue and I-5 in Seattle. Even with planned improvements on the State Route (SR) 520 and I-90 Lake Washington bridge crossings, the westbound travel time on I-90 is expected to double during peak commute hours by 2030, thus reducing the mobility of people crossing I-90 during the peak hours.

### Operating Deficiencies in Regional Bus Transit

With urban centers throughout the region increasing in population density, it is essential to identify ways to overcome the following limitations of the existing regional bus system:

- **Increasing Congestion.** Because use of bus transit is highly sensitive to expectations of travel time, growth in transit ridership may be constrained as use of HOV lanes expands and corridor congestion increases, resulting in longer bus travel times. WSDOT and Sound Transit transportation modeling indicates that the duration of congestion periods along I-90 in the morning (AM) and afternoon (PM) peak periods is expected to lengthen by more than an hour in both directions by 2030, and bus speeds from Seattle-to-Bellevue and Bellevue-to-Redmond are projected to decrease by 30 percent or more.
- **Decreased Reliability.** The reliability of current bus service in the corridor east of Lake Washington is poor because of congestion on local arterials and on I-90. Lack of reliability makes it difficult for users to have confidence they will reach their destinations on time and reduces the attractiveness of bus service.
- **Limited Transit Capacity and Connectivity.** High-density employment centers generate a demand for reliable daily business and commuter travel that is not well served by the existing bus transit system because of its poor reliability and speed in the project corridor. The limited capacity of existing arterials in urban areas often limits the ability to increase bus service and/or stops.

### ES.3 East Link Meets the Need

The East Link Project would meet the stated need by providing greater capacity and reliability and improving travel time for people traveling between Seattle, Bellevue, and Redmond. To meet planned growth in the corridor, Bellevue, Seattle, and Redmond have made land use and planning decisions based upon increased employment and residential

density, which would be more fully realized with the long-term promise of an HCT connection across I-90. East Link is this connection. Specifically, the project would:

- Meet growing transit and mobility demands by more than doubling person-moving capacity across Lake Washington on I-90.
- Strengthen the transportation linkages between the major urban employment and residential centers through which this project passes: Seattle, Mercer Island, Bellevue, Overlake, and Redmond.
- Substantially reduce travel time for most transit riders.

Light rail travel between Seattle and Downtown Bellevue would reliably take less than 20 minutes, and light rail service to Downtown Redmond would take about 35 minutes, regardless of the time of day or level of road congestion. Furthermore, adding to the existing Central Link system, which already connects Downtown Seattle with Sea-Tac International Airport and will be extended north to the University of Washington in 2016, provides enhanced benefits of connecting multiple regional destinations using one mode.

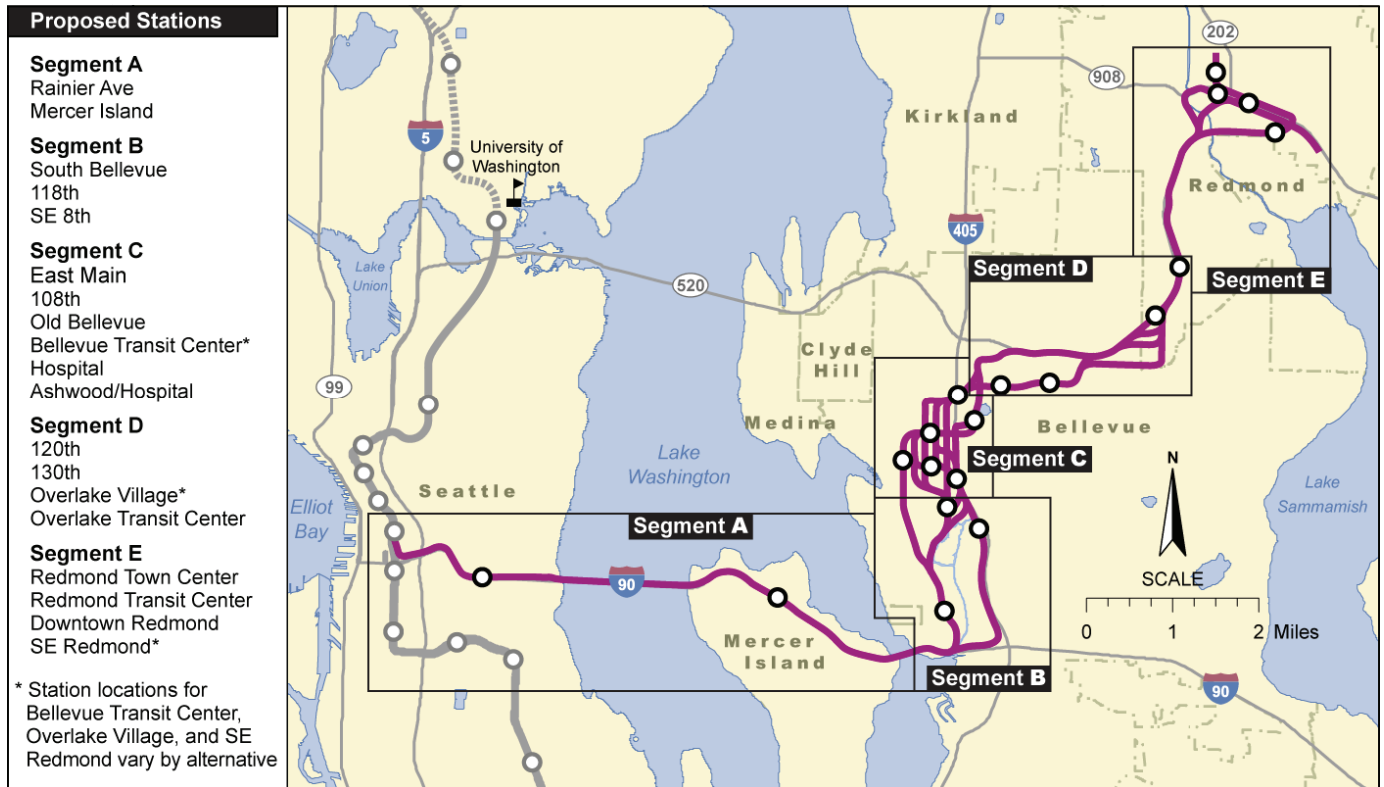
In addition, the frequency of transit throughout the day would also improve because light rail would operate 20 hours per day 6 days of the week (18 hours per day on Sundays) with headways of 7 to 15 minutes, in comparison to average bus headways of 15 to 30 minutes or longer. Light rail would provide more reliable service than existing transit and greater capacity for moving people within the corridor because it would not be limited to existing roadway infrastructure and slowed by traffic congestion.

### ES.4 Project Corridor

The East Link Project would serve the regional destinations of Downtown Seattle, Mercer Island, Downtown Bellevue, Overlake, and Downtown Redmond. The study area for East Link is divided into five segments (Exhibit ES-2) for evaluation purposes. The study area for each impact category varies along this corridor, ranging from 200 feet on each side of the route to evaluation of the entire Puget Sound region.

### ES.5 Comparison of Alternatives

During the early planning stages of the East Link Project, Sound Transit developed and reviewed 35 preliminary alternatives for the corridor between Seattle and Redmond. The purpose was to identify the most promising alternatives to propose during the EIS scoping process and to analyze in the 2008 Draft EIS.



**EXHIBIT ES-2**  
Project-Wide East Link Study Area

Several alternatives were eliminated because of ridership, cost, construction risk, and environmental impacts.

Public scoping initiated the environmental review process. The scoping period took place from September 1, 2006, to October 2, 2006. Sound Transit conducted the scoping process in consultation with city and county agencies; affected tribes; regional, state, and federal agencies; interest groups; businesses; affected communities; and the public.

When the alternative development process was complete, a No Build Alternative, 19 build alternatives, and 4 maintenance facility alternatives were carried forward for analysis in the Draft EIS: one Segment A alternative, five Segment B alternatives, six Segment C alternatives, four Segment D alternatives, and three Segment E alternatives.

The new alternatives developed in response to public comment on the Draft EIS were reviewed in the SDEIS for additional public comment. These new alternatives have been added to the Final EIS, for a total of 24 build alternatives and 4 maintenance facilities alternatives and optional storage tracks locations. This Final EIS evaluates one Segment A, six Segment B, ten Segment C, four Segment D, and three Segment E light rail alternatives. The preferred alternatives for each

segment were identified by the Sound Transit Board in May 2009 and July 2010.

### ES.5.1 No Build Alternative

The No Build Alternative represents the transportation system and environment as they would exist without the proposed project. The No Build Alternative provides a baseline condition for comparing impacts of the build alternatives and includes two future transportation forecast years, 2020 and 2030.

For the transportation analysis in the East Link Project Final EIS, there are two No Build Alternatives related to implementing the various stages of the I-90 Two-Way Transit and HOV Operations Project. The final stage of the I-90 Two-Way Transit and HOV Operations Project would place HOV lanes in the outer roadway between Seattle and Mercer Island. One No Build Alternative includes construction and use of these outer roadway HOV lanes along with the center roadway before construction of the East Link Project, while the other assumes the HOV lanes in the outer roadways would start operating when the I-90 center roadway closes for construction of East Link, and therefore HOV users would not be able to use both facilities at the same time. Because the two No Build Alternatives are relevant only in Segment A, they are discussed in greater detail in the summary of that segment below. All other environmental analyses

evaluated one No Build Alternative, which assumes a completed I-90 Two-Way Transit and HOV Operations Project, with HOV lanes in the outer roadway as well as the center roadway.

### Environmental Impacts of the No Build Alternative

Under the No Build Alternative, increased roadway congestion into and out of urban centers would occur, even with planned local and regional roadway improvements. Many intersections would operate poorly and not meet standards. Vehicle travel times would increase, especially on I-90, and in some cases double from today. This would limit the region's mobility and constrain access between the designated Puget Sound urban centers. With this increase in congestion, public transit speeds would decrease by 30 percent from today as well as transit reliability. This would reduce the attractiveness of transit as a transportation option and potentially lead to lower overall transit ridership. Even so, projected residential and employment growth is expected to double transit ridership demand across Lake Washington and between Bellevue and Redmond by 2030 with the No Build Alternative, further highlighting the importance of providing reliable transit service.



Simulation of Light Rail on I-90 with Completed I-90 Two-Way Transit and HOV Operations Project

The No Build Alternative would be inconsistent with many of the regional land use and transportation policies by not instituting a high-capacity transit system connecting the region's highest-growth centers. It would also be inconsistent with local plans and policies that encourage increased density and transit-oriented development patterns.

Planned land use changes in the Bel-Red and Overlake neighborhoods might occur more slowly or might not reach their full potential. Residents in the study area would not be provided with a reliable mode of public transportation or increased transit accessibility.

Transportation options would be constrained, leading to more traffic congestion where higher density is planned or causing less dense, more widespread development patterns. Increased congestion could also negatively impact quality of life for study area residents and hinder future economic development.

Under the No Build Alternative, there would be no adverse construction or permanent operational impacts. However, the benefits of the project for regional air and water quality resulting from reduced vehicle miles traveled, retrofitting of existing stormwater handling systems, and reduced pollutant loading into study area streams and Lake Washington would also not be realized.

## ES.5.2 Build Alternatives

The East Link Project would be a composite of one alternative from each of the five geographic segments in the study area. There are 24 alternatives spread over these five segments, as identified in the bulleted list below. The *Preferred Alternative* is called out in italics.

### Segment A, Interstate 90

- *Preferred I-90 Alternative (A1)*

### Segment B, South Bellevue

- *Preferred 112th SE Modified Alternative (B2M)*, which has two variations depending on the connection to *Preferred Alternative C11A* versus *Preferred Alternative C9T*
- Bellevue Way Alternative (B1)
- 112th SE At-Grade Alternative (B2A)
- 112th SE Elevated Alternative (B2E)
- 112th SE Bypass Alternative (B3), and the Alternative B3 - 114th Extension Design Option
- BNSF Alternative (B7)

### Segment C, Downtown Bellevue

- *Preferred 108th NE At-Grade Alternative (C11A)*
- *Preferred 110th NE Tunnel Alternative (C9T)*, including the C9T-East Main Station Design Option
- Bellevue Way Tunnel Alternative (C1T)
- 106th NE Tunnel Alternative (C2T)
- 108th NE Tunnel Alternative (C3T)
- Couplet Alternative (C4A)
- 112th NE Elevated Alternative (C7E)
- 110th NE Elevated Alternative (C8E)
- 110th NE At-Grade Alternative (C9A)
- 114th NE Elevated Alternative (C14E)

### Segment D, Bel-Red/Overlake

- *Preferred NE 16th At-Grade Alternative (D2A)*, including the Alternative D2A - 120th Station and NE 24th Design Options



- NE 16th Elevated Alternative (D2E)
- NE 20th Alternative (D3)
- SR 520 Alternative (D5)

**Segment E, Downtown Redmond**

- Preferred Marymoor Alternative (E2), including the Alternative E2 - Redmond Transit Center Station Design Option
- Redmond Way Alternative (E1)
- Leary Way Alternative (E4)

**Maintenance Facilities**

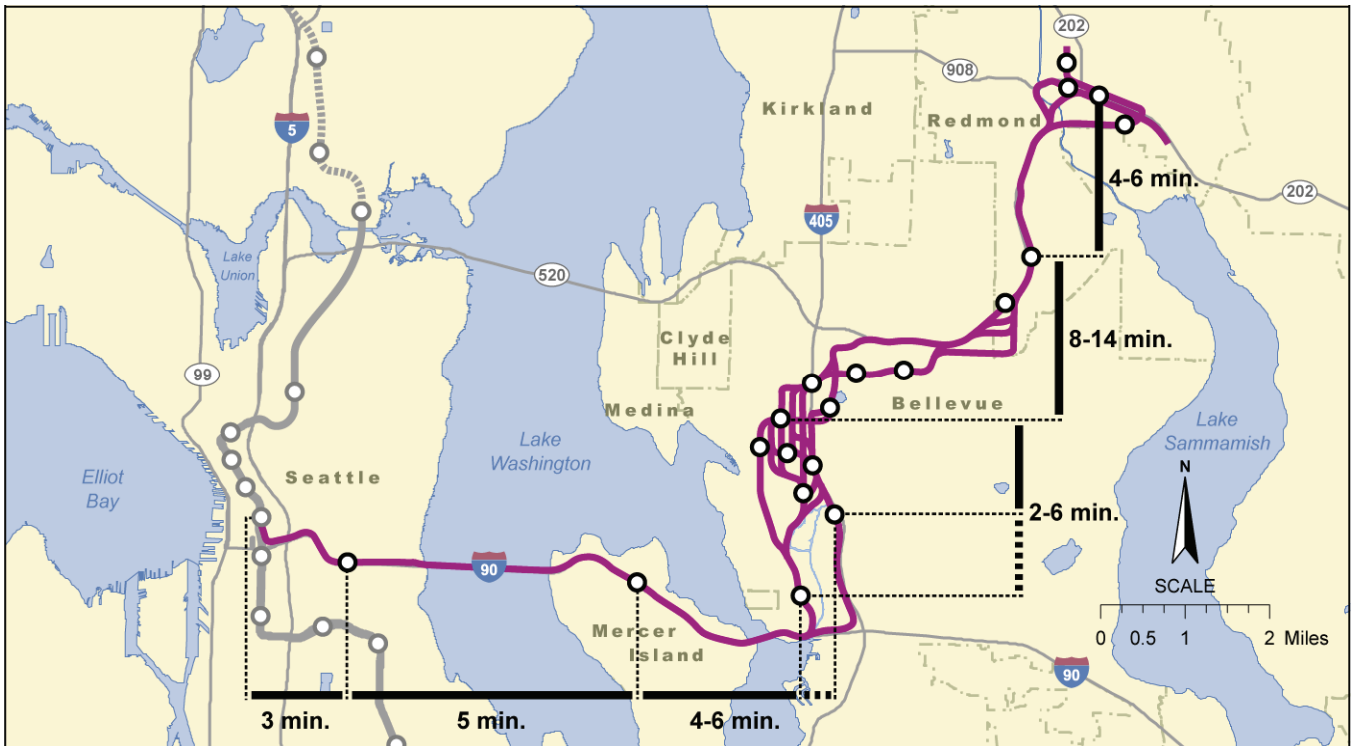
Within Segments D and E, there are four alternative sites for a new Sound Transit maintenance facility:

- 116th Maintenance Facility (MF1)
- BNSF Maintenance Facility (MF2)
- SR 520 Maintenance Facility (MF3)
- SE Redmond Maintenance Facility (MF5)

In addition to the East Link alternatives studied, the City of Bellevue also studied a variation of the BNSF Alternative B7 with a station at I-90 and Bellevue Way SE connecting to C9T via a tunnel portal beginning at NE 2nd Street. This variation is referred to as B7R. A summary comparison of the City’s B7R with the East Link B7 and C9T is provided following the East Link Segment C alternatives description.

Exhibit ES-3 is a schematic of estimated travel times for the East Link Project alternatives. Table ES-2 provides a segment-level comparison of all the alternatives considered for the segments. Following the table, the segments and the alternatives are discussed in more detail. The issues that differentiate alternatives within each segment, such as estimated capital cost (in 2007 dollars), ridership, construction, transportation, and environmental impacts, are compared in segment-level tables. The environmental impact compared may differ depending on what resources are affected in that segment. In addition, each alternative is addressed individually with an overview of features, performance, environmental impact issues, construction impacts, and construction risk level. Following these descriptions of the segments and alternatives is a summary description of the maintenance facility alternatives and a brief summary of the projectwide analysis.

The remainder of this Executive Summary provides an overview of significant and unavoidable adverse impacts; areas of controversy; issues to be resolved; avoidance, minimization, and mitigation measures; a summary of other required environmental evaluations; and the next steps for the East Link Project.



Note: Estimated East Link travel time between the Mercer Island Station and the South Bellevue Station is 4 minutes (solid line), between the Mercer Island Station and the 118th Station is 6 minutes (solid plus dashed line), between the South Bellevue Station and Bellevue Transit Center is from 4 to 6 minutes (solid plus dashed line), and between the 118th Station and the Bellevue Transit Center it is about 2 to 4 minutes (solid line).

**EXHIBIT ES-3**  
Light Rail Travel Times in the East Link Corridor



**TABLE ES-2**  
Summary of Alternative Analysis

Alternative	Planned Number of Stations	Segment Daily Boardings (2030) <sup>a</sup>	East Link Daily Ridership Totals (2030) <sup>a</sup>	Segment Travel Time (minutes)	Key Environmental Issues	Estimated Cost (\$2007 in millions) <sup>b</sup>
<b>Segment A, Interstate 90</b>						
<i>Preferred I 90 Alternative (A1)</i>	2	5,000 5,000	49,000 – 50,000 49,500	11	Improved person throughput and capacity. Similar or improved vehicle and truck travel time. I-90 access changes. Traffic intersection impacts.	635 to 750
<b>Segment B, South Bellevue</b>						
<i>Preferred 112th SE Modified Alternative (B2M) to C11A</i>	1	4,500 5,000	49,000 49,000	5	Noise impacts, ecosystem impacts, park impacts, impacts on the Winters House	470 to 540
<i>Preferred 112th SE Modified Alternative (B2M) to C9T</i>	2	5,500 5,000	50,000 49,000	5	Noise impacts, ecosystem impacts, park impacts, impacts on the Winters House	480 to 550
Bellevue Way Alternative (B1)	1	4,500	52,500	5	Residential and business displacements, visual impacts, noise and vibration impacts, ecosystem impacts, park impacts	355 to 405
112th SE At-Grade Alternative (B2A)	2	5,000	49,000	5	Residential displacements, visual impacts, ecosystem impacts, park impacts, noise impacts	390 to 450
12th SE Elevated Alternative (B2E)	2	5,000	50,000	5	Visual impacts, noise impacts, ecosystem impacts, park impacts	445 to 510
112th SE Bypass Alternative (B3)	1	4,500	49,500	5	Residential displacements, visual impacts, noise impacts, ecosystem impacts, park impacts	430 to 490
B3 - 114th Extension Design Option	1	4,500	49,500	5	Residential and business displacements, visual impacts, noise impacts, ecosystem impacts, park impacts	500 to 575
BNSF Alternative (B7)	1	1,500	48,000	5	Business displacements, noise impacts, ecosystem impacts, park impacts, traffic intersection impacts	515 to 590
<b>Segment C, Downtown Bellevue</b>						
<i>Preferred 108th NE At-Grade Alternative (C11A)</i>	3	8,000 8,000	49,000 49,000	10	Residential and business displacements, noise impacts, park impacts, traffic intersection impacts	555 to 690
<i>Preferred 110th NE Tunnel Alternative (C9T)<sup>c</sup></i>	2 to 3	7,000 8,000	50,000 51,000	6	Residential and business displacements, noise impacts, park impacts, traffic intersection impacts	790 to 1,025
Bellevue Way Tunnel Alternative (C1T)	3	9,000	52,500	5	Residential and business displacements, noise and vibration impacts	1,405 to 1,615
106th NE Tunnel Alternative (C2T)	2 to 3	8,500	52,000	5	Residential and business displacements, hazardous material sites, noise impacts, groundborne noise impacts, wetland impacts, habitat impacts, park impacts, one historic property, utility relocation, traffic intersection impacts	1,115 to 1,365
108th NE Tunnel Alternative (C3T)	2 to 3	9,000	52,500	4	Residential and business displacements, visual impacts, noise impacts, ground-borne noise impacts, residential impacts	975 to 1,260

**TABLE ES-2 CONTINUED**  
Summary of Alternative Analysis

Alternative	Planned Number of Stations	Segment Daily Boardings (2030) <sup>a</sup>	East Link Daily Ridership Totals (2030) <sup>a</sup>	Segment Travel Time (minutes)	Key Environmental Issues	Estimated Cost (\$2007 in millions) <sup>b</sup>
Couplet Alternative (C4A)	2 to 3	8,000	49,500	11	Residential and business displacements, visual impacts, noise impacts, vibration impacts, park impacts, traffic intersection impacts	535 to 705
112th NE Elevated Alternative (C7E)	2 to 3	7,000	50,500	4	Business displacements, noise impacts	435 to 600
110th NE Elevated Alternative (C8E)	2 to 3	8,000	51,500	4	Business displacements, visual impacts, noise and vibration impacts, park impacts, traffic intersection impacts, residential impacts	615 to 705
110th NE At-Grade Alternative (C9A)	2 to 3	7,500	48,500	9	Business displacements, visual impacts, noise impacts, vibration impacts, traffic intersection impacts, residential impacts	465 to 645
114th NE Elevated Alternative (C14E)	2	5,500	48,500	4	Business displacements, noise impacts	495 to 575
<b>Segment D, Bel-Red/Overlake</b>						
<i>Preferred NE 16th At-Grade Alternative (D2A)<sup>d</sup></i>	3 to 4	<i>6,500-7,000</i> 7,000	<i>49,000-50,000</i> 51,000	8	Business displacements, hazardous material sites, ecosystem impacts	670 to 765
D2A - NE 24th Design Option	3 to 4	7,000	49,500	10	Business displacements, hazardous material sites, ecosystem impacts	710 to 820
NE 16th Elevated Alternative (D2E)	3 to 4	7,000	50,000	9	Business displacements, hazardous material sites, ecosystem impacts	695 to 840
NE 20th Alternative (D3)	3 to 4	6,500	49,000	10	Business displacements, ecosystem impacts, hazardous material sites	735 to 875
SR 520 Alternative (D5)	2	6,000	49,500	7	Business displacements, ecosystem impacts, hazardous material sites	470 to 580
<b>Segment E, Downtown Redmond</b>						
<i>Preferred Marymoor Alternative (E2)</i>	2	<i>3,500</i> 3,500	<i>49,000-50,000</i> 49,500	6	Business displacements, noise impacts, park impacts	555 to 635
E2 - Redmond Transit Center Station Design Option	3	4,000	50,000	6	Residential and business displacements, noise impacts, park impacts	690 to 795
Redmond Way Alternative (E1)	2	3,500	49,500	6	Business displacements, visual impacts, noise impacts, park impacts, traffic intersection impacts	595 to 685
Leary Way Alternative (E4)	2	3,500	50,000	6	Business displacements, visual impacts, noise impacts, historic property impact, traffic intersection impacts	505 to 580

<sup>a</sup> Ridership reported for each alternative is based on the representative East Link route (a combination of Alternatives A1, B3, C4A, D2A - NE 24th Design Option, and E2) where the only portion that changes is the alternative in that segment. Ridership for each preferred alternative when connected to the preferred alternatives in other segments is also shown in italics. See Chapter 3, Transportation Environment and Consequences, for more details.

<sup>b</sup> Ranges show project costs with and without project reserve. Cost numbers also include ranges for the D2 Roadway options in Segment A, and the different connector options in Segments C and D.

<sup>c</sup> The range includes the C9T-East Main Station Design Option.

<sup>d</sup> Impacts for D2A - 120th Station Design Option would not vary from those of *Preferred Alternative D2A*.

## Segment A: Interstate 90

Segment A begins in the Downtown Seattle Transit Tunnel at the International District/Chinatown Station, which is in an urban area consisting of high-density residential, retail, and office uses. There are large event centers nearby, such as Safeco Field and Qwest Field and Event Center, and some industrial land uses. The alternative travels eastward on I-90 across north Beacon Hill and Rainier Valley, which encompass a mix of residential and commercial uses and parklands at the intersection of Rainier Avenue South and I-90. The route then travels on the I-90 floating bridge across Lake Washington to Mercer Island, mostly a low-density residential community. The Mercer Island Town Center is located immediately south of I-90 and has a mixture of multifamily residential, commercial, and offices. The route remains on I-90 across Mercer Island and Lake Washington to south Bellevue.

In Segment A, one alternative is proposed: *Preferred Interstate 90 Alternative (A1)*, which connects with the Central Link system at the International District/Chinatown Station. From there it enters I-90 via the D2 Roadway (an exclusive access road for transit/HOVs to the reversible center roadway of I-90). It provides a station in the center of I-90, between Rainier Avenue and 23rd Avenue, just east of the current I-90 Rainier bus stop. The Rainier Station includes pedestrian connections to 23rd Avenue South and Rainier Avenue South. *Preferred Alternative A1* continues in the I-90 reversible center lanes, first crossing Lake Washington to a Mercer Island station between 77th and 80th Avenues, and then crossing the I-90 East Channel bridge to connect to Segment B in south Bellevue.

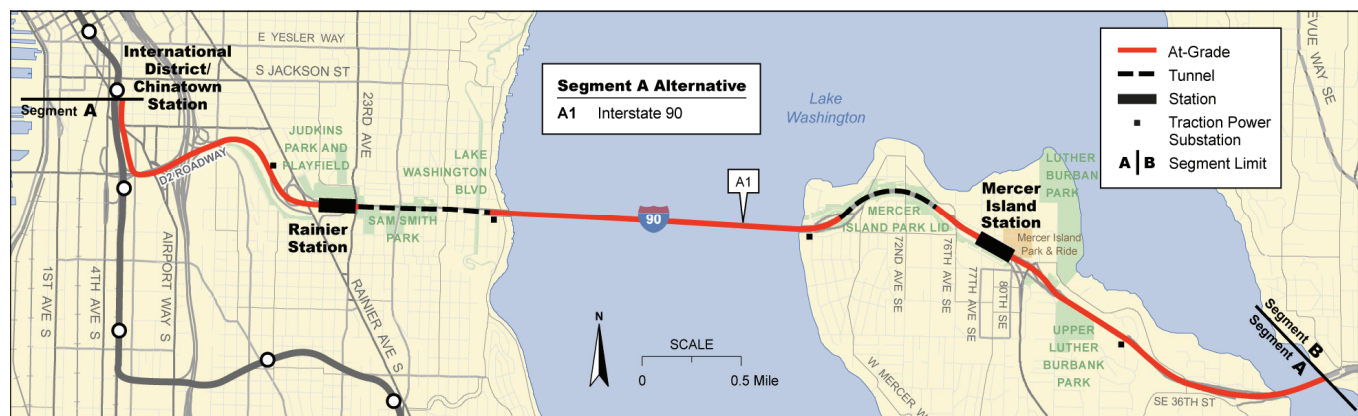
*Preferred Alternative A1* has operational or design options in three locations along the route: operational options on the D2 Roadway, design options for pedestrian connections at the Mercer Island Station,

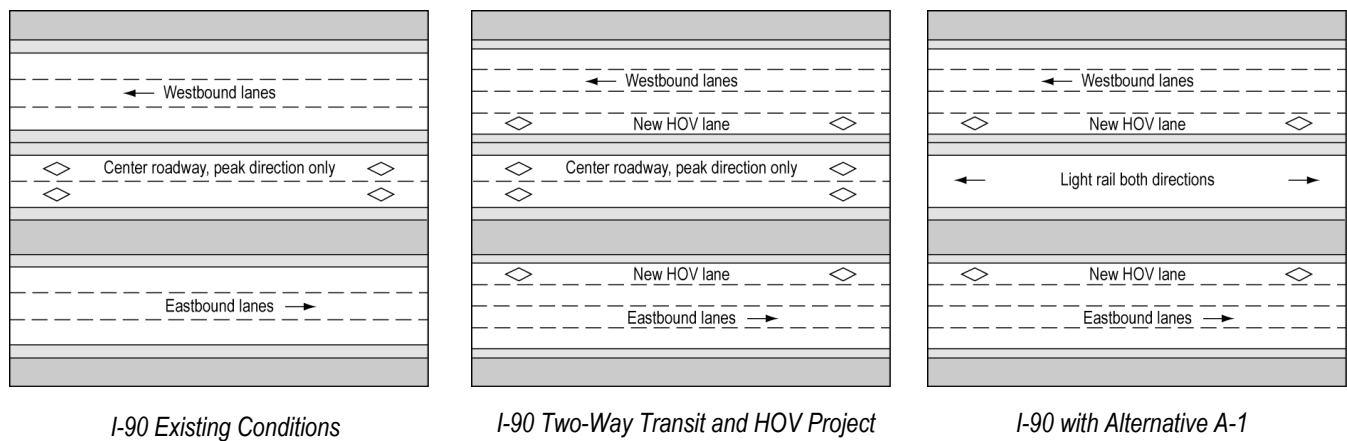
and design options for the location of the eastbound HOV direct-access off-ramp on Mercer Island. Two operational options are available for *Preferred Alternative A1* on the D2 Roadway. The preferred option is where the roadway would operate as a joint light rail/bus facility with embedded track. The other option would operate light rail exclusively on the D2 Roadway.

*Preferred Alternative A1* also has two design options for the pedestrian connections to the Mercer Island Station. The preferred design option is pedestrian access via 80th Avenue SE and 77th Avenue SE. The alternate option is pedestrian access at 80th Street but none at 77th Street; instead, it has a pedestrian bridge over the eastbound lanes of I-90 to the station and connects to the Mercer Island Sculpture Garden and Town Center shopping district at approximately 78th Avenue SE.

*Preferred Alternative A1* includes three design options for the location of the eastbound HOV direct-access off-ramp on Mercer Island. The preferred option is to locate this ramp at Island Crest Way. The other options are to locate the ramp at 77th Avenue SE or to not provide the ramp at all because general-purpose ramps to 77th Avenue SE and Island Crest Way already exist.

The East Link Project would require the I-90 center roadway to be dedicated to HCT, as stipulated in the 1976 Memorandum Agreement (as amended in 2004) by Seattle, Mercer Island, Bellevue, King County Metro, WSDOT, and Sound Transit. Today, the reversible center roadway is dedicated to peak-direction HOV lanes, and the outer roadways are general-purpose lanes. HOV lanes are being built on the outer roadways in a three-stage project (the I-90 Two-Way Transit and HOV Project) with the following stages, thus allowing HOVs to travel in both directions any time of the day (Exhibit ES-4):





**EXHIBIT ES-4**

I-90 Configuration Before and After Preferred Alternative A1

1. Stage 1 has constructed a westbound HOV lane on the outer roadway between East Mercer Way and 80th Avenue SE and a direct-access exit ramp at 80th Avenue SE. The existing ramps at Bellevue Way have been modified for two-way HOV operation.
2. Stage 2 will provide an eastbound HOV lane on the outer roadway between East Mercer Way and 80th Avenue SE and will modify an existing direct-access ramp at 80th Avenue SE.
3. Stage 3 will construct HOV lanes in both outer roadways between the Mercer Island Town Center and Rainier Avenue South in Seattle. In addition, an eastbound direct-access exit ramp will be added at 77th Avenue SE.

The entire I-90 Two-Way Transit and HOV Operations Project would need to be constructed prior to the East Link Project so that HOV traffic can be moved from the center roadway to the outer roadways. If the I-90 Two-Way Transit and HOV Operations Project is completed well before East Link Project construction begins, the reversible center roadway would be available for bus transit and HOVs in conjunction with the new outer roadway HOV lanes.

Stage 1 was recently completed and Stage 2 is being constructed, but Stage 3 may not be completed until just before East Link Project construction begins. Because the HOV lanes in the outer roadway might not be completed until just before construction of the East Link Project, Preferred Alternative A1 was analyzed against two No Build Alternatives:

1. One with the Stage 3 HOV lanes constructed immediately before East Link, so that HOV and transit traffic shifts from using the center roadway to the outer roadway HOV lanes, but never uses

both at the same time. This is referred to as “with Stages 1 and 2 only”.

2. One with the Stage 3 HOV lanes complete and the center roadway available for transit, HOV users, and single-occupant-vehicle Mercer Island residents. In this No Build Alternative, both the center roadway and outer HOV lanes are open the entire distance between Seattle and Bellevue (see center of Exhibit ES-4). This is referred to as “with Stages 1 through 3.”

With either of these No Build Alternatives, single-occupant-vehicle Mercer Island residents are assumed to not be eligible to use the outer roadway HOV lanes.

See far right of ES-4 for the I-90 Two-Way Transit and HOV Operations Project together with the Preferred Alternative A1.

**Components**

- **Rainier Station** between 23rd Avenue South and Rainier Avenue South.
- **Mercer Island Station**, with existing park-and-ride garage between 77th and 80th Avenues SE.
- **Four traction power substations (TPSS)**, two on the Seattle side and two on Mercer Island. The first TPSS on the Seattle side is located along the D2 Roadway near the intersection of South Norman Street and Poplar Place South, and the second is located at the west end of the floating bridge. On Mercer Island, the first TPSS is located at the east end of the floating bridge, adjacent to a WSDOT maintenance facility, and the second TPSS is located near the Shorewood Drive crossing of I-90.

**I-90 Floating Bridge Design Considerations**

Preferred Alternative A1 has several design considerations regarding the compatibility of light rail

with the I-90 floating bridge. The Washington State Legislature Joint Transportation Committee commissioned an independent review team (IRT) to evaluate the bridge design with light rail. The IRT concluded that all issues identified as potentially affecting feasibility can be addressed. Specific concerns involve the expansion joints on the transition span between the approach bridges and the floating bridge, the additional weight of rail and trains on the bridge pontoons, stray electrical currents, installation of light rail components on the bridge, seismic upgrades, and bridge maintenance changes.

**Expansion Joints.** The I-90 bridge includes land-based fixed spans attached to the floating mid-section of the bridge. The existing traffic expansion joint between the fixed and floating portions of the bridge allows for bridge movement, and the new light rail expansion joint would need to accommodate this movement also. Because this would be the first known example of rail operation on a floating bridge, Sound Transit compared the anticipated movement on the I-90 bridge with the movements of other modern passenger rail suspension bridges that have similar movement. This comparison demonstrates that it is feasible to design a light rail track system to accommodate the movements of the I-90 floating bridge. Sound Transit developed a conceptual design for the track expansion joints and will further develop plans for design and prototyping of the joint, with continued coordination with WSDOT during the design.

**Additional East Link Weight.** Load testing was conducted by WSDOT and Sound Transit in September 2005. Results of the load test confirmed previous findings that the bridge can be structurally retrofitted to carry the loads associated with the light rail system in addition to general traffic on the roadway. The additional weight would not change the bridge's ability to remain safe during storm events.

**Stray Currents.** Stray electrical current from light rail operation could corrode the steel components of the bridge. The project could include up to three layers of protection: isolating the rail by constructing special insulating systems, installing a stray current collector mat, and potentially a cathodic protection system. Additionally, the project would place a monitoring system on the bridge to monitor stray current levels.

**Light Rail Installation.** The rails are typically attached to a bridge by placing them on concrete plinth blocks. These blocks, the overhead catenary poles, and other pieces of rail equipment are normally attached to a bridge deck with mechanical attachments. However, the bridge deck has a dense fabric of reinforcing steel

and post-tensioning cable. Therefore, if mechanical attachments are used, it is important to locate this steel to avoid damaging the deck. Sound Transit has demonstrated that it can locate the steel using the proven method of ground-penetrating radar. Sound Transit would work with WSDOT to determine the most appropriate method for attaching the rail components on the bridge.

**Seismic Upgrades.** WSDOT has recently adopted a new seismic retrofit policy for bridges, including portions of I-90 where the light rail would be located. Placing light rail on the I-90 structures would not change their seismic vulnerability. However, Sound Transit would improve the earthquake resistance of the bridge superstructures in the I-90 corridor used by light rail, consistent with WSDOT's own practices for retrofitting existing structures. The floating bridge is generally not vulnerable to seismic events due to the dampening effect of the lake water.

**Bridge Maintenance.** Some maintenance procedures may change with light rail on the bridge. Sound Transit would work with WSDOT to make sure that the bridge can continue to be maintained satisfactorily.

### Evaluation Summary

Table ES-3 provides a summary of Segment A features and impacts.

**Markets Served by Stations:** *Preferred Alternative A1* would serve Downtown Seattle, North Rainier Valley Urban Village, Central Area neighborhood, and Mercer Island.

**Estimated Cost:** \$635 to 750 million.

**Stations:** Rainier and Mercer Island.

**Ridership:** Forecasts predict 5,000 daily boardings at the stations in this segment in 2030.

**Transportation Impacts:** When compared to either No Build Alternative, light rail would increase total person throughput (a measure of the number of people crossing a point) across Lake Washington on I-90 during peak traffic periods. The difference in total AM and PM peak-hour person throughput between the project and each No Build Alternative is shown in Exhibit ES-5. Exhibit ES-6 shows the I-90 mode share, or percentage of people using each transportation mode, in 2030. The transit mode share would increase with light rail. Light rail would not only provide an increase in transit use but also allow greater person throughput on I-90. Travel times across I-90 for vehicles would also improve or remain similar with East Link.

Compared with the No Build Alternative (with Stages 1 through 3 completed), East Link would increase the

number of people able to travel across I-90 without adding lanes. The East Link Project has the capacity to comfortably carry 600 persons per 4-car train and 800 persons with crowded conditions. Therefore, with the project, the center roadway would have a peak-hour capacity of up to 18,000 to 24,000 people per hour (equivalent to between 7 to 10 freeway lanes of traffic), which would more than double the person-carrying capacity of I-90 today. Although congestion would still occur on I-90 with the East Link Project, it would be shorter in duration and affect a smaller area as people shift to ride light rail.

Freight trucks would experience benefits similar to general purpose traffic, including improved travel time along I-90. If light rail and buses jointly use the D2 Roadway, buses would experience up to a 2-minute savings inbound in the AM peak period to Downtown Seattle and experience up to a 6-minute savings outbound in the PM peak period from Downtown Seattle on I-90 compared to the operational option where buses would not be eligible to use the D2 Roadway. However, some of the savings would be reduced when buses travel along 5th Avenue South to and from the D2 Roadway. It would take up to 2 additional minutes to travel along 5th Avenue South compared to 4th Avenue South. Additionally, depending on the joint-use operating policy of the D2 Roadway, up to 3 additional minutes of average delay, in either direction, could be incurred by buses while waiting for clearance to enter the D2 Roadway.

Depending on the design options, up to seven intersections on Mercer Island would operate below the city or state’s level of service standard and worse than the No Build Alternatives, but these impacts could all be mitigated to the same or better level of service than the No Build Alternative.

**TABLE ES-3**  
Segment A Summary

Features		Preferred Alternative A1	
<b>Number of Stations</b>		2	
<b>Estimated Cost</b> in millions, 2007 \$		\$635 to \$750 <sup>b</sup>	
<b>2030 Daily Ridership<sup>a</sup></b>	Daily Segment Boardings	5,000 / 5,000	
	Total East Link Ridership	49,000-50,000 / 49,500	
<b>Travel Time</b> in minutes		11	
<b>Length</b> in miles		6.9	
<b>Comparative Cost-Effectiveness</b> – annualized cost divided by annual segment ridership in 2030		\$8.60	
<b>Construction Risk<sup>f</sup></b>		Low	
<b>Environmental Impacts</b>			
Transportation Impacts		Improved person throughput and capacity. Similar or improved vehicle and truck travel time. Depending on the design option selected, up to 7 intersections would have traffic impacts that can be mitigated and increased bus travel times with light-rail-only option on D2 Roadway	
I-90 Total Person Throughput Across Lake Washington	AM	Increase over No Build <sup>c</sup>	5,050
		Increase over No Build <sup>d</sup>	3,450
	PM	Increase over No Build <sup>c</sup>	5,550
		Increase over No Build <sup>d</sup>	1,850
Noise-Impacted Receptors (number after mitigation)		1 (0)	
Groundborne Noise - Impacted Buildings (number after mitigation)		25 (0)	
Public Services		May increase emergency service response times	
Permanent impacts to parks (before mitigation)		0.2 to 0.5 acres <sup>e</sup>	
Other construction impacts		I-90 access changes	

<sup>a</sup> Ridership reported for each alternative is based on the representative East Link route (a combination of Alternatives A1, B3, C4A, D2A - NE 24th Design Option, and E2) where the only portion that changes is the alternative in that segment. Ridership for each preferred alternative when connected to the preferred alternatives in other segments is also shown in italics. See Chapter 3, Transportation Environment and Consequences, for more details.

<sup>b</sup> The cost for the project to use the I-90 center roadway is addressed in a term sheet between WSDOT and Sound Transit, which is not yet finalized nor included in this estimate.

<sup>c</sup> This no-build condition assumes HOV lanes in the outer roadways are not built between Mercer Island and Rainier Avenue South (Stages 1 and 2 only).

<sup>d</sup> This no-build condition assumes HOV lanes are built in the outer roadways (Stages 1 – 3 completed).

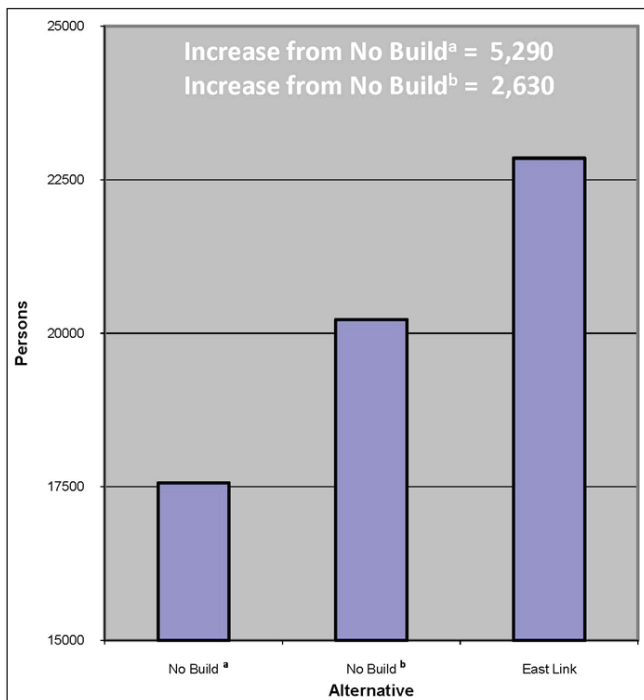
<sup>e</sup> Acres of parkland impacted depends on which pedestrian connections to the Mercer Island Station are constructed.

<sup>f</sup> Construction risk considers risks related to geology, utilities, traffic and safety relative to the other alternatives, see Chapter 6.

**Potential Environmental Impacts During Operation:**

Because *Preferred Alternative A1* is predominantly within existing roadway, there would be few environmental impacts. Emergency service vehicles would be limited to the outer roadway, which may lengthen response times. Acquiring small parts of two I-90 lid parks, Benvenuto Park in Seattle and Park on the Lid in Mercer Island, would be required for station entrances. Mitigation of these impacts would include enhancement of existing facilities. Noise impacts would occur at one single-family house, but this can





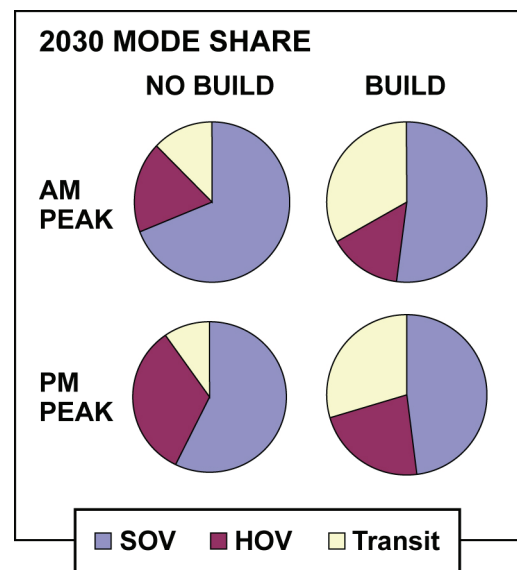
<sup>a</sup> With Stages 1 and 2 of the I-90 Two-Way Transit and HOV Operations Project  
<sup>b</sup> With Stages 1 through 3 of the I-90 Two-Way Transit and HOV Operations Project

**EXHIBIT ES-5**  
Average of the Year 2030 Total AM and PM Peak-Hour Person Throughput Across Lake Washington on I-90

be mitigated. Groundborne noise impacts would occur at 25 residences over the Mt. Baker Tunnel, but these would be mitigated. The Rainier and Mercer Island Stations would be designed to reduce high existing traffic noise levels for light rail patrons.

It has recently been determined that the segment of I-90 in the project corridor is eligible for the National Register of Historic Places (NRHP). The project would not adversely affect this historic resource.

**Temporary Impacts During Construction:** Before construction of East Link, all stages of the I-90 Two-Way Transit and HOV Operations Project would be completed, providing outer-roadway HOV lanes from Bellevue to Rainier Avenue. Construction impacts would be minimal because most of the East Link



**EXHIBIT ES-6**  
I-90 2030 Mode Share

construction would occur within the center roadway of I-90. Compared to the no-build condition, travel times for traffic and freight during peak periods would be similar or improved, although person throughput would be less in the peak directions but greater in the reverse peak directions. Light rail construction on I-90 would close the D2 Roadway, as well as the reversible center roadway. With these closures, bus service would be rerouted to the HOV lanes in the outer roadways. Noise and dust are not expected to affect adjacent land uses. There would be some in-water work to retrofit the I-90 bridges.

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## Segment B: South Bellevue

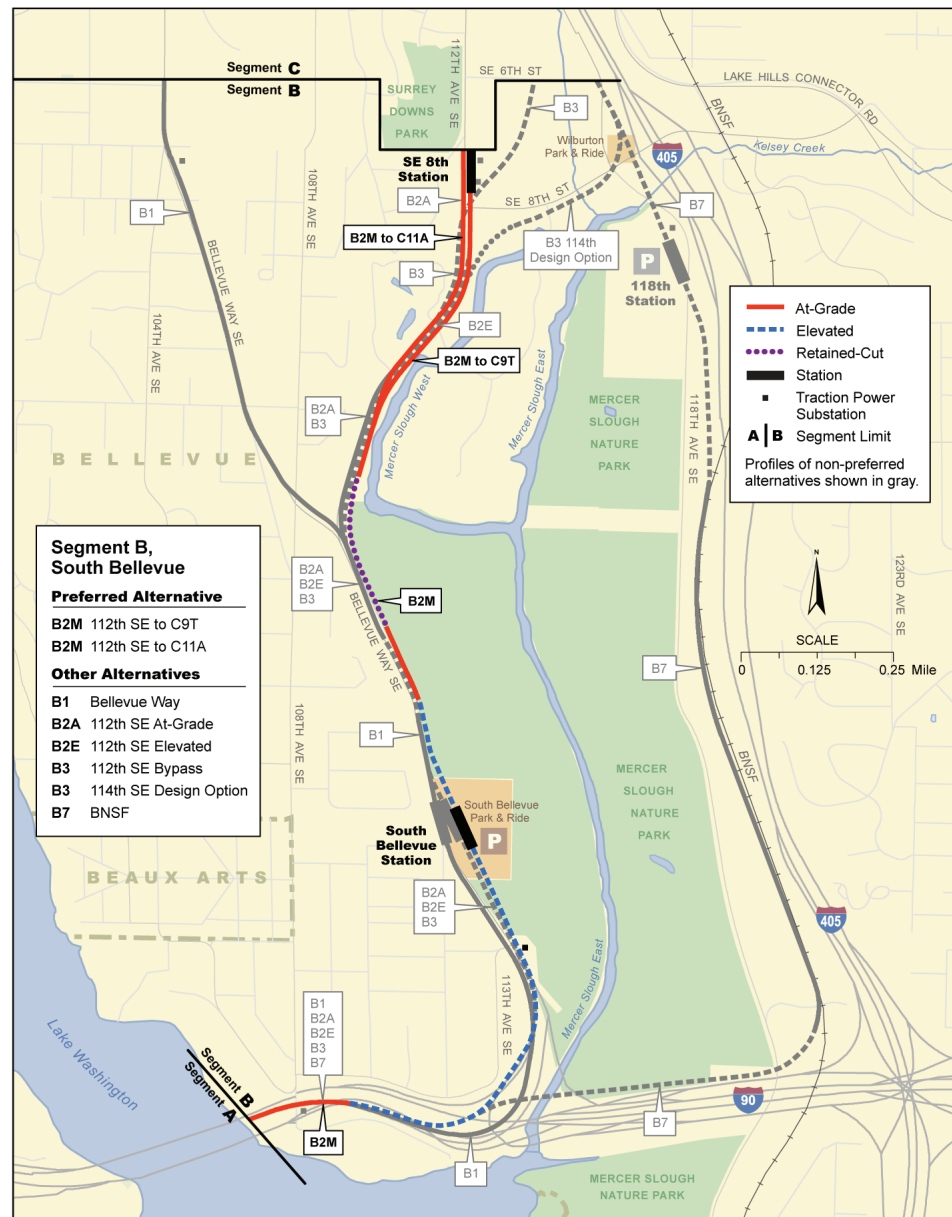
Segment B travels from the I-90 center roadway northward to approximately SE 6th Street. The south portion of Segment B is dominated by the Mercer Slough Nature Park and the residential communities of south Bellevue. North of the Mercer Slough Nature Park and following Bellevue Way SE, single-family and multifamily housing are interspersed with commercial retail uses. To the north, along 112th Avenue SE, the west side is mostly residential uses and the east side mostly office parks. A strip of multifamily residential and office uses and a small pocket of industrial uses are located immediately east of 118th Avenue SE and west of I-405 and the former BNSF Railway corridor, and west of 118th Avenue SE near SE 8th Street.

### Alternatives

Segment B has six alternatives, all connecting to Segment A from I-90 and to Segment C in Downtown Bellevue:

- Preferred 112th SE Modified Alternative (B2M), which has two variations depending on the connection to C11A versus C9T
- Bellevue Way Alternative (B1)
- 112th SE At-Grade Alternative (B2A)
- 112th SE Elevated Alternative (B2E)
- 112th SE Bypass Alternative (B3)
- BNSF Alternative (B7)

All the alternatives leave the I-90 center roadway at Bellevue Way SE. Five of the alternatives follow Bellevue Way north, and Alternative B7 continues parallel to I-90 on an elevated structure across Mercer Slough.



Alternative B3 also has a design option: the B3 - 114th Design Option connects to alternatives in Segment C farther to the east than the original Alternative B3.

### Components

**South Bellevue Station:** At-grade or elevated station. Expands existing park-and-ride lot from 520 to approximately 1,400 stalls in a multistory garage serving Preferred Alternative B2M and B1, B2A, B2E, and B3 alternatives.

**SE 8th Station:** At-grade or elevated station that would serve the Preferred Alternative B2M to C9T and Alternatives B2A and B2E.

**118th Station:** New park-and-ride structure with about 1,000 stalls in multi-story garage that serves Alternative B7. This station replaces the Wilburton Park-and-Ride lot, which has 186 parking stalls.

**Traction Power Substation Locations:**

One to two TPSS would be necessary per Segment B alternative from the following locations: under the I-90 bridge in Bellevue, east of SE 30th Street at Bellevue Way SE, east of Bellevue Way at SE 8th Street, east of 112th Avenue SE at SE 8th Street, or west of 118th Avenue SE by the 118th Station.

**Connectors from Segment A**

Segment B alternatives exit I-90 either at-grade on existing HOV ramps to/from Bellevue Way (B1) or elevated over the westbound I-90 lanes. Alternative B1 requires removal of the eastbound HOV off-ramp and the westbound HOV on-ramp. The remaining Segment B alternatives have an elevated connection to Bellevue Way SE, which allows the preservation of HOV direct access to westbound I-90, and the option to either close or keep open the eastbound HOV off-ramp. Keeping the ramp open would require reconstructing the ramp and making other interchange modifications. *Preferred Alternative B2M* maintains both ramps as required by WSDOT.

## Comparison of Segment B Alternatives

The variations of *Preferred Alternative B2M* connecting to *Preferred Alternatives C11A* or *C9T* have only minor differences in impacts on parks and wetland buffer effects. *B2M to C9T* has slightly higher cost and more impacts in these categories, but *B2M to C11A* would have slightly higher noise impacts before mitigation.

Generally, Alternative B1 and the 112th Avenue SE alternatives (*Preferred Alternative B2M*; Alternatives B2A, B2E, and B3) would have similar impacts, but B1 would cause the highest number of residential displacements, full property acquisitions, and traffic-related noise impacts. As indicated in Table ES-4, Alternative B1 would have the lowest estimated cost among the Segment B alternatives but would only connect to the Bellevue Way Tunnel Alternative (C1T) in Segment C, which together results in the overall highest cost of the combined Segment B and C alternatives. Alternative B1, followed by B7, would have the highest noise impacts before mitigation. All others would have similar noise effects. Among the alternatives traveling along 112th Avenue SE, Alternative B2A would be the least expensive because construction is mostly at-grade, and the B3 - 114th Design Option would be the most expensive. Alternative B7 would be the most expensive alternative in Segment B. Alternative B7 would not have any residential displacements, but would have the second highest business and highest employee displacements, the greatest number of light rail-related noise impacts, and the greatest permanent impact on wetlands and other high-value habitat because of its construction across Mercer Slough Nature Park. Alternative B7 would also have substantially lower segment boardings and lower overall ridership, creating a cost per rider in South Bellevue over four times that of the other alternatives. All operational effects on intersection operations can be mitigated.

With alternatives that include the South Bellevue Station, roadway modifications to Bellevue Way SE would improve access to and from the station. The B3 - 114th Design Option would reduce wetland impacts compared with Alternative B3 but would displace the most businesses and the second highest number of employees of the Segment B alternatives.

All alternatives traveling along Bellevue Way SE from I-90 have been designed to avoid the historic Winters House, including *Preferred Alternative B2M*, which would be located in front of the Winters House in a 170-foot-long lidded retained cut to minimize effects on the historic resource. However, despite minimization measures, *Preferred Alternative B2M* could potentially impact this resource during construction. To the extent possible, all Segment B alternatives along Bellevue Way SE have also been designed to minimize property acquisition from the Mercer Slough Nature Park. Except for *Preferred Alternative B2M*, right-of-way expansion for these alternatives is primarily to the west of Bellevue Way SE and requires vegetation removal, and would require retaining walls along the west side of Bellevue Way. This would reduce visual quality in this corridor for B1, B2A, B2E, B3, but not *Preferred Alternative B2M* since it preserves the west side of Bellevue Way and has a lower profile where views are most sensitive. Constructing Segment B alternatives that travel along Bellevue Way SE would result in temporary traffic detours, lane closures, and increased congestion on Bellevue Way SE for Alternative B1 and both Bellevue Way and 112th Avenue SE for *Preferred Alternative B2M*, B2A, B2E, and B3 Alternatives. These would also close the South Bellevue Park-and-Ride lot during construction, requiring temporary lease of parking or shifting parking to other park-and-ride lots.

**TABLE ES-4**  
Comparison of Segment B Alternatives

Features		Alternatives							
		Preferred B2M to C11A	Preferred B2M to C9T	B1	B2A	B2E	B3	B3 – 114th Design Option	B7
<b>Number of Stations</b>		1	2	1	2	2	1	1	1
<b>Estimated Cost</b> (millions, 2007\$)		\$470 - \$540	\$480 - \$550	\$355 - \$405	\$390 - \$450	\$445 - \$510	\$430 - \$490	\$500 - \$575	\$515 - \$590
<b>2030 Daily Ridership<sup>a</sup></b>	Segment boardings	4,500 5,000	5,500 5,000	4,500	5,000	5,000	4,500	4,500	1,500
	Total East Link ridership	49,000 49,000	50,000 49,000	52,500	49,000	50,000	49,500	49,500	48,000
<b>Travel Time through Segment</b> (minutes)		5	5	5	5	5	5	5	5
<b>Length</b> (miles)		2.2	2.2	2.3	2.1	2.1	2.3	2.4	2.6
<b>Comparative Cost-Effectiveness</b> - annualized cost divided by annual segment ridership in 2030		\$8.80	\$8.20	\$7.00	\$7.30	\$7.55	\$7.70	\$8.90	\$30.90
<b>Construction Risk<sup>b</sup></b>		Moderate	Moderate	Low	Low	Low	Low	Low	Moderate
<b>Environmental Impacts</b>									
Residential Displacements (# of housing units)		1	1	12	4	1	4	4	0
Economics: Business Displacements (# of employees)		0 (0)	0 (0)	2 (10)	0 (0)	0 (0)	0 (0)	14 (170)	6 (160)
Full/Partial Property Acquisitions		1/15	1/15	20/72	4/24	2/27	4/19	5/22	8/9
Decrease in Visual Quality		No	No	Yes	Yes	Yes	Yes	Yes	No
Noise-Impacted Receptors (number after mitigation <sup>c</sup> )	Traffic-related	0	0 <sup>d</sup>	136 (0)	17 (0)	0	17 (0)	17 (0)	0
	Light Rail-related	79 (0)	66 (0) <sup>d</sup>	132 (0)	78 (0)	106 (0)	83 (0)	77 (0)	176 (0)
Vibration - Impacted Buildings (number after mitigation)		0	0 to 1 (0) <sup>e</sup>	1 (0)	0	0	0	0	0
Groundborne Noise - Impacted Buildings (number after mitigation)		1 (0)	1 (0)	0	0	0	0	0	0
Wetland: permanent/temporary (acres)		0.1/0.5	0.1/0.5	0.2/0.9	0.2/0.7	0.2/0.6	0.7/1.2	0.2/0.6	1.9/2.9
Wetland buffer: permanent/temporary (acres)		3.3/4.0	4.5/3.7	1.8/3.0	3.4/3.7	2.8/3.5	3.4/3.9	3.6/4.8	0.4/0.6
High-Value Wildlife Habitat Loss (acres)		0.6	0.7	1.7	0.7	0.4	0.7	0.7	3.0
Park Impacts (area in acres before mitigation)	Permanent	2.9	3.0	0.9	1.8	0.7	1.8	1.8	0.9
	Temporary	3.6	3.5	2.6	2.6	1.8	2.6	2.9	1.7
Historic Properties potentially impacted		1	1	0	0	0	0	0	0
Intersections Not Meeting Local Standards and Operating Worse than No Build Alternative (No. after mitigation)		0 (0)	0 (0)	2(0)	1 (0)	1 (0)	1 (0)	1(0)	3 (0)

<sup>a</sup> Ridership reported for each alternative is based on the representative East Link route (a combination of Alternatives A1, B3, C4A, D2A - NE 24th Design Option, and E2) where the only portion that changes is the alternative in that segment. Ridership for each preferred alternative when connected to the preferred alternatives in other segments is also shown in italics. See Chapter 3, Transportation Environment and Consequences, for more details.

<sup>b</sup> Construction risk considers risks related to geology, utilities, traffic and safety relative to the other alternatives, see Chapter 6.

<sup>c</sup> Some impacts mitigated with building sound insulation, which does not reduce exterior noise levels.

<sup>d</sup> Total traffic and light-rail noise impacts are the same with B2M to C9T and with B2M to C9T with the C9T-East Main Station Design Option.

<sup>e</sup> One vibration impact would occur only if the C9T-East Main Station Design Option is selected.

## Preferred 112th Avenue SE Modified Alternative (B2M) to C11A

*Preferred Alternative B2M* is elevated in the I-90 center roadway, crosses over westbound I-90, and continues elevated on the east side of Bellevue Way SE to the South Bellevue Station, located at the current South Bellevue Park-and-Ride lot, which would be redeveloped with an approximately 1,400 stall parking garage. This alternative maintains the westbound and eastbound I-90 HOV ramp connections to Bellevue Way. After leaving the station, the route transitions to a retained cut on the east side of Bellevue Way SE within Mercer Slough Nature Park to the intersection of Bellevue Way SE and 112th Avenue SE. There would be a 170-foot-long lidded retained cut in front of the Winters House. When connecting to *Preferred 108th NE At-Grade Alternative (C11A)*, *Preferred Alternative B2M* transitions from a retained cut to at-grade on the east side of 112th Avenue SE. South of SE 15th Street, *Preferred Alternative B2M* crosses the northbound lanes of 112th Avenue SE at a gated crossing and continues north in the center of 112th Avenue SE at-grade until reaching Segment C at SE 6th Street.

### Evaluation Summary

**Markets Served by Stations:** Regional South Bellevue Park-and-Ride lot, south Bellevue neighborhoods.

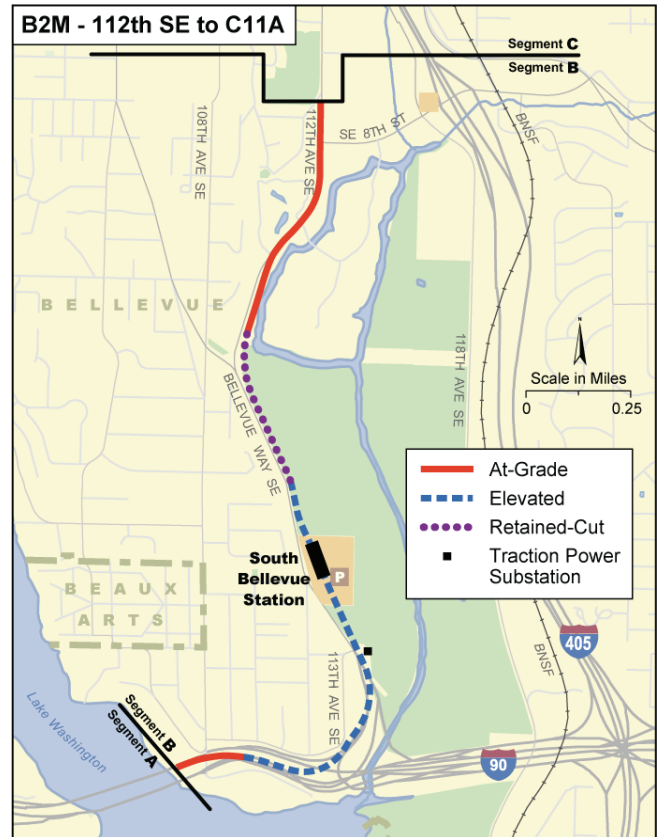
**Estimated Cost:** \$470 million to \$540 million.

**Ridership:** Forecasts predict 4,500 to 5,000 daily boardings for *Preferred Alternative B2M* in 2030.

**Transportation Impacts:** This alternative would preserve both HOV access ramps from I-90 to Bellevue Way SE and not result in traffic impacts at any intersections. To improve existing station and neighborhood access on Bellevue Way SE, *Preferred Alternative B2M to C11A* would include either installing a new traffic signal with U-turns at the South Bellevue Station or converting the center two-way, left-turn lane from the South Bellevue Station to I-90 into a southbound HOV lane with new traffic signals. If the latter is constructed, property access along Bellevue Way between I-90 and the South Bellevue Station and access to the Swaylocken boat ramp would be modified. A gate would be used when the train crosses the northbound lanes of 112th Avenue SE just south of SE 15th Street, and a signalized crossing would be provided at the SE 8th Street intersection.

### Potential Environmental Impacts During Operation:

*B2M to C11A* would displace one residence and no businesses. This alternative would also permanently impact 2.9 acres of parkland, 0.1 acre of wetlands, 3.3



acres of wetland buffers, and 79 noise receptors, and would have potential groundborne noise impacts at the Winters House. Each impact would be mitigated.

### Temporary Impacts During Construction:

Constructing *Preferred Alternative B2M to C11A* would temporarily result in traffic detours, lane closures, and increased congestion along Bellevue Way SE and 112th Avenue SE. The South Bellevue Park-and-Ride lot would be closed during construction, requiring temporary lease of parking areas or shifting parking to other park-and-ride lots. Bus stops would be temporarily relocated along the existing route or to nearby areas. *B2M* would temporarily impact 3.6 acres of Mercer Slough Nature Park and relocate uses of the Winters House and the blueberry farm retail operation and close the associated parking lots. Park trails, including the Periphery Trail along Bellevue Way SE, would require temporary relocation or change in access. *B2M to C11A* would temporarily impact 0.5 acre of wetlands and 4.0 acres of wetland buffers. Construction noise would occur. The historic Winters House would potentially be impacted during construction and the project would include measures to mitigate any damage to the building.

**Construction Risks:** Construction risks would generally be low but would be moderate in the retained cut portions of this alternative.



## Preferred 112th Avenue SE Modified Alternative (B2M) to C9T

*Preferred Alternative B2M* is elevated in the I-90 center roadway, crosses over westbound I-90, and continues elevated on the east side of Bellevue Way SE to the South Bellevue Station, located at the current South Bellevue Park-and-Ride lot, which would be redeveloped with an approximately 1,400-stall parking garage. This alternative maintains the westbound and eastbound I-90 HOV ramps. After leaving the station, the route transitions to a retained cut on the east side of Bellevue Way within Mercer Slough Nature Park to the intersection of Bellevue Way SE and 112th Avenue SE. There is a 170-foot-long lidded retained cut in front of the Winters House. When connecting to *Preferred 110th NE Tunnel Alternative (C9T)*, B2M transitions to at-grade on the east side of 112th Avenue SE and enters the at-grade SE 8th Station north of SE 8th Street. From there, *Preferred Alternative B2M to C9T* remains at-grade until reaching Segment C at SE 6th Street. Under the C9T – East Main Station Design Option, the SE 8th Station would not be built.

### Evaluation Summary

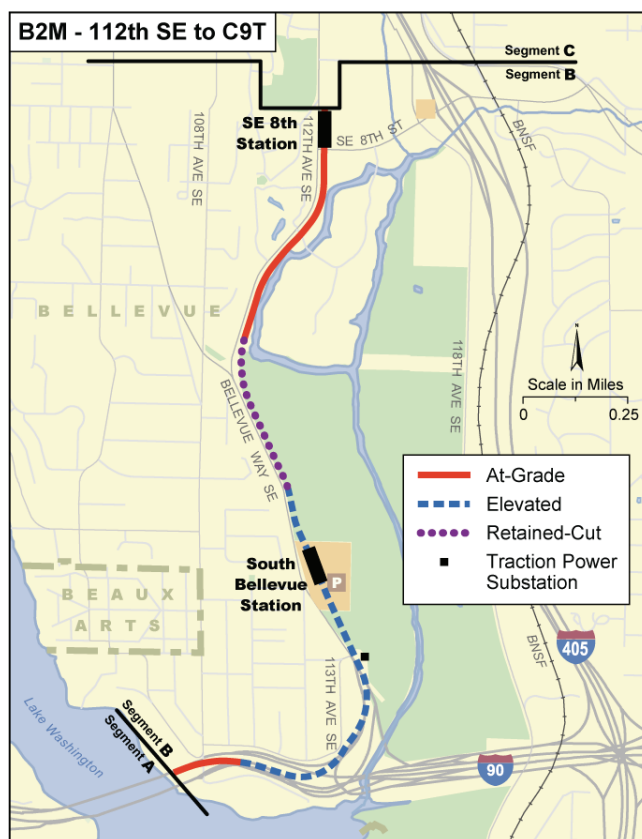
**Markets Served by Stations:** Regional South Bellevue Park-and-Ride lot, the south Bellevue neighborhoods, commercial area east of 112th Avenue SE.

**Estimated Cost:** \$480 million to \$550 million.

**Ridership:** Forecasts predict 5,000 to 5,500 daily boardings for *Preferred Alternative B2M* in 2030.

**Transportation Impacts:** B2M would preserve both HOV access ramps from I-90 to Bellevue Way SE. To improve existing station and neighborhood access on Bellevue Way SE, *Preferred Alternative B2M to C9T* would include either, installing a new traffic signal with U-turns at the South Bellevue Station or converting the center two-way left-turn lane from the South Bellevue Station to I-90 into a southbound HOV lane with new traffic signals. If the latter is constructed, property access along Bellevue Way SE between I-90 and the South Bellevue Station and access to the Sweylocken boat ramp would be modified. A maintenance driveway to Lincoln Plaza would need to be closed, but access from SE 6th Street would be maintained. The option to close SE 15th access to Bellefield Office Park would eliminate conflicts and require vehicles to access the business park from SE 8th Street and maintain intersection LOS standards.

**Potential Environmental Impacts During Operation:** *Preferred Alternative B2M to C9T* would displace one residence and no businesses and permanently impact 3.0 acres of parkland, 0.1 acre of wetlands, 4.5 acres of wetland buffers, up to 66 noise receptors. B2M would



have potential groundborne noise impacts at the Winters House, but each impact would be mitigated.

**Temporary Impacts During Construction:** B2M to C9T would result in temporary traffic detours, lane closures, and increased congestion on Bellevue Way SE and 112th Avenue SE. The South Bellevue Park-and-Ride Lot would be closed, requiring temporary lease of parking areas or shifting parking to other park-and-ride lots and temporarily relocating bus stops along the existing route or nearby. B2M would temporarily impact 3.5 acres of Mercer Slough Nature Park and relocate uses of the Winters House and the blueberry farm retail operation and close the associated parking lots. Park trails, including the Periphery Trail along Bellevue Way SE would require temporary relocation or change in access. Construction would also temporarily impact 0.5 acre of wetlands and 3.7 acres of wetland buffers. Construction noise would occur. The historic Winters House would potentially be impacted and the project would include measures to mitigate any damage to the building.

**Construction Risks:** Construction risks would be moderate due to the retained-cut portion.

## Bellevue Way Alternative (B1)

The **Bellevue Way Alternative (B1)** travels from the I-90 center roadway and onto Bellevue Way SE at-grade to the South Bellevue Station. The Bellevue Way HOV westbound on-ramp and eastbound off-ramp to I-90 would be removed. The light rail then travels in the Bellevue Way SE median until reaching Segment C at SE 6th Street. This is the only alternative in Segment B that is entirely at-grade, and the only alternative that connects to the Bellevue Way Tunnel Alternative (C1T). This alternative also modifies the South Bellevue Park-and-Ride lot to a four-story parking structure with approximately 1,400 stalls.

### Evaluation Summary

**Markets Served by Stations:** Regional South Bellevue Park-and-Ride lot, south Bellevue residential neighborhoods.

**Estimated Cost:** \$355 million to \$405 million.

**Ridership:** Forecasts predict 4,500 daily boardings at the station in this alternative in 2030.

**Transportation Impacts:** Removing the Bellevue Way HOV on- and off-ramps to I-90 would increase peak period travel times for HOV users heading westbound on I-90 by 8 to 12 minutes but would not impact travel times for eastbound HOV users. Alternative B1 would modify property access along Bellevue Way north of the 112th Avenue SE intersection and between the South Bellevue Station and I-90 to right-turn in/right-turn out because of the at-grade median profile. Between the 112th Avenue SE intersection and the South Bellevue Station an existing median is already in place; therefore, no change in property access would occur for this section. Where feasible, U-turn movements would be provided at signalized intersections along Bellevue Way to minimize circulation impacts. Traffic impacts would occur at two intersections. These impacts could be fully mitigated.

### Potential Environmental Impacts During Operation:

Alternative B1 would displace 12 residences and 2 businesses. This alternative would permanently impact 0.9 acre of parkland, 0.2 acre of wetlands, and 1.8 acres of wetland buffers, and have 268 noise impacts. Sound Transit would mitigate each of these project impacts.

### Temporary Impacts During Construction:

Constructing Alternative B1 would temporarily result in traffic detours, lane closures, and increased congestion along Bellevue Way SE. B1 would temporarily impact the Periphery Trail along Bellevue Way SE and require temporary relocation of the trail



to keep it open during construction. The South Bellevue Park-and-Ride lot would be closed during construction, requiring temporary lease of parking areas or shifting parking to other park-and-ride lots. Bus stops would be temporarily relocated along the existing route or to nearby areas. Construction would temporarily impact 2.6 acres of Mercer Slough Nature Park and would result in 0.9 acre of temporary wetland impacts and 3.0 acres of temporary impacts on wetland buffers. Construction noise would occur.

**Construction Risks:** Construction risk is considered low.



Bellevue Way Alternative (B1) Simulation



## 112th SE At-Grade Alternative (B2A)

The **112th SE At-Grade Alternative (B2A)** is elevated as it exits I-90 over the westbound lanes and travels on the east side of Bellevue Way SE to the South Bellevue Station. After leaving the station, Alternative B2A transitions to at-grade in the median of Bellevue Way SE and continues onto the median of 112th Avenue SE to the SE 8th Station. The eastbound HOV off-ramp from I-90 to Bellevue Way would be removed or reconstructed. Use of the center median of 112th Avenue SE would minimize property acquisition. With this alternative, the South Bellevue Station is elevated, and the park-and-ride facility includes a four-story parking structure with approximately 1,400 stalls. The SE 8th Station is at-grade in the median.

### Evaluation Summary

**Markets Served by Stations:** Regional South Bellevue Park-and-Ride lot, the south Bellevue neighborhoods, commercial area east of 112th Avenue SE.

**Estimated Cost:** \$390 million to \$450 million.

**Ridership:** Forecasts predict 5,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Two options are proposed with Alternative B2A on Bellevue Way SE to improve station and neighborhood access by either, installing a new traffic signal with U-turns at the South Bellevue Station or converting the center two-way left-turn lane from the South Bellevue Station to I-90 into a southbound HOV lane with new traffic signals. If the option to provide a southbound HOV lane is constructed, property access along Bellevue Way SE between I-90 and the South Bellevue Station and Sweylocken boat launch access would be modified. Traffic at the intersection of Bellevue Way SE and 112th Avenue SE would experience delays due to light rail vehicles traveling at-grade through the intersection. This impact can be fully mitigated.



112th SE At-Grade Alternative (B2A) Simulation



**Potential Environmental Impacts During Operation:** Alternative B2A would displace four residences along Bellevue Way SE and no businesses. This alternative would permanently impact 1.8 acres of parkland, 0.2 acre of wetlands, and 3.4 acres of wetland buffers, and would have 95 noise impacts. Sound Transit would mitigate each of these project-related impacts.

**Temporary Impacts During Construction:** Constructing Alternative B2A would temporarily result in traffic detours, lane closures, and increased congestion along Bellevue Way SE and 112th Avenue SE. It would also temporarily impact the Periphery Trail along Bellevue Way SE and temporarily relocate the trail to keep it open during construction. The South Bellevue Park-and-Ride lot would be closed during construction, requiring temporary lease of parking areas or shifting parking to other park-and-ride lots. Bus stops would be temporarily relocated along the existing route or to nearby areas. Construction would temporarily impact 2.6 acres of Mercer Slough Nature Park and result in 0.7 acre of temporary wetland impacts and 3.7 acres of temporary wetland buffers impacts. Construction noise would occur.

**Construction Risks:** Construction risk is considered low.

## 112th SE Elevated Alternative (B2E)

The 112th SE Elevated Alternative (B2E) is elevated as it exits I-90 over the westbound lanes and travels to the east side of Bellevue Way SE to the South Bellevue Station. After leaving the station, Alternative B2E crosses to the west side of Bellevue Way SE until 112th Avenue SE, then crosses over to continue along the east side of 112th Avenue SE to the SE 8th Station. This alternative requires the fewest property acquisitions in Segment B. Most of the additional right-of-way would be acquired along the west side of Bellevue Way SE and on the east side of 112th Avenue SE. The eastbound HOV off-ramp from I-90 to Bellevue Way would be removed or reconstructed. Both stations are elevated, and the South Bellevue Station includes a four-story parking structure with approximately 1,400 stalls.

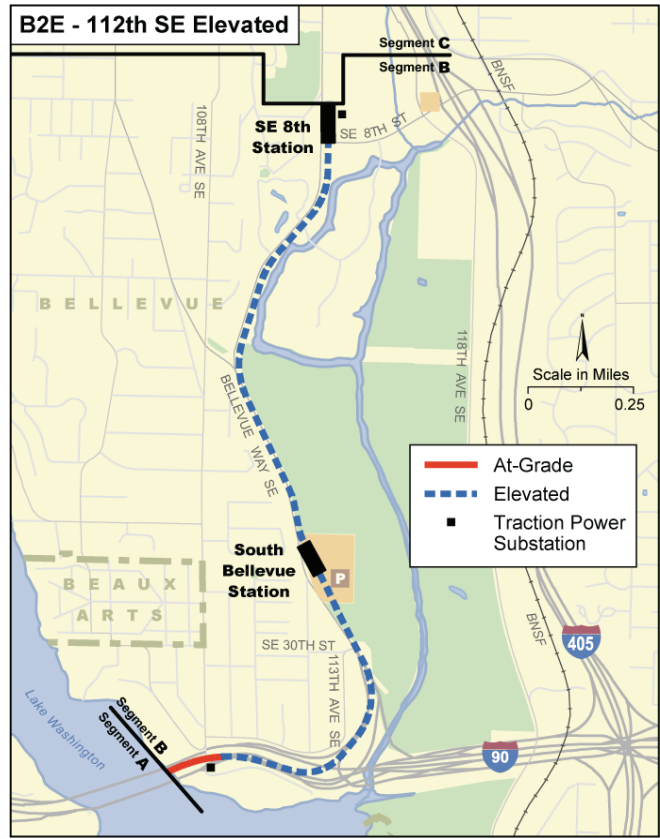
### Evaluation Summary

**Markets Served by Stations:** Regional South Bellevue Park-and-Ride lot, the west and south Bellevue residential neighborhoods, commercial area east of 112th Avenue SE.

**Estimated Cost:** \$445 million to \$510 million

**Ridership:** Forecasts predict 5,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Two options are proposed with Alternative B2E on Bellevue Way SE to improve station and neighborhood access by either installing a new traffic signal with U-turns at the South Bellevue Station or converting the center two-way left-turn lane from the South Bellevue Station to I-90 into a southbound HOV lane with new traffic signals. If the option to provide a southbound HOV lane is constructed, property access along Bellevue Way SE between I-90 and the South Bellevue Station and Sweylocken boat launch access would be modified. Because of trips created due to the stations, there



would be an impact at one intersection that can be fully mitigated.

**Potential Environmental Impacts During Operation:** Alternative B2E would displace one residence and no businesses. This alternative would permanently impact 0.7 acre of parkland, 0.2 acre of wetlands, and 2.8 acres of wetland buffers, and would have 106 noise impacts. Sound Transit would mitigate all identified project-related noise impacts.

**Temporary Impacts During Construction:** Constructing Alternative B2E would temporarily result in traffic detours, lane closures, and increased congestion along Bellevue Way SE and 112th Avenue SE. It would also require temporarily relocating the Periphery Trail along Bellevue Way SE during construction. The South Bellevue Park-and-Ride lot would be closed during construction, requiring temporary lease of parking areas or shifting parking to other park-and-ride lots. Bus stops would be temporarily relocated along the existing route or to nearby areas. B2E would temporarily impact 1.8 acres of Mercer Slough Nature Park, 0.6 acre of wetland, and 3.5 acres of wetland buffers. Construction noise would occur.

**Construction Risks:** Construction risk is considered low.



112th SE Elevated Alternative (B2E) Simulation

## 112th SE Bypass Alternative (B3)

The 112th SE Bypass Alternative (B3) is elevated as it exits I-90 over the westbound lanes and continues on Bellevue Way SE to the South Bellevue Station. Alternative B3 then transitions to an at-grade profile in the medians of Bellevue Way SE and 112th Avenue SE. At SE 15th Street, it transitions to elevated and then at SE 8th Street turns into a new right-of-way behind commercial buildings to approximately SE 6th Street. The South Bellevue Station is elevated and includes a four-story parking structure with approximately 1,400 stalls.

Alternative B3 - 114th Extension Design Option crosses Bellefield Office Park, continues east and turns north at 114th Avenue SE through the Wilburton Park-and-Ride lot and crosses 114th Avenue SE to connect to Segment C.

### Evaluation Summary

**Markets Served by Station:** Regional South Bellevue Park-and-Ride lot, south Bellevue residential neighborhoods.

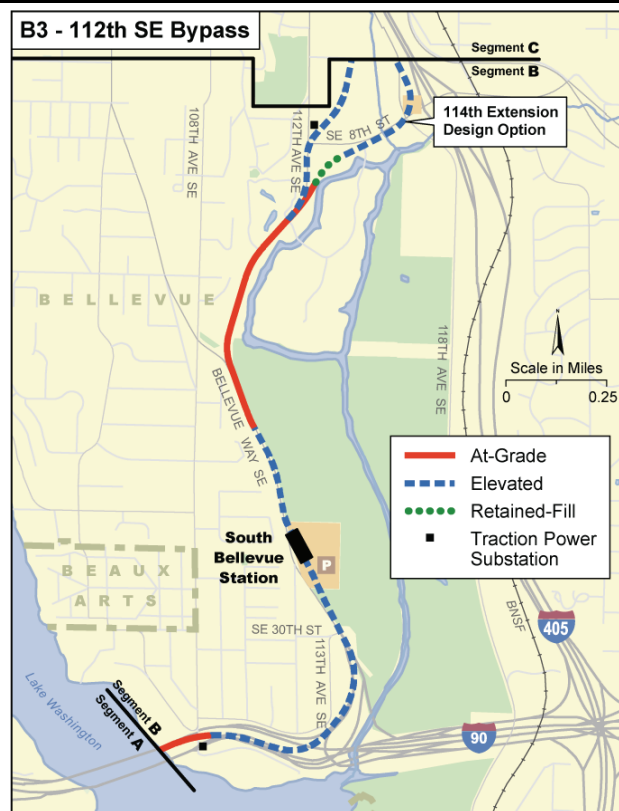
**Estimated Cost:** \$430 million to \$490 million (\$575 million with design option).

**Ridership:** Forecasts predict 4,500 daily boardings at the station in this alternative in 2030.

**Transportation Impacts:** Two options are proposed with Alternative B3 on Bellevue Way SE to improve access by either, installing a new traffic signal with U-turns at the South Bellevue Station or converting the center two-way left-turn lane from the South Bellevue Station to I-90 into a southbound HOV lane with new traffic signals. If the option to provide a southbound HOV lane is constructed, property access along Bellevue Way SE between I-90 and the South Bellevue Station and Sweylocken boat launch access would be modified. The B3 - 114th Design Option would require a gated crossing of 112th Avenue south of SE 8th Street. Traffic at the intersection of Bellevue Way SE and 112th Avenue SE would experience delays. This impact can be fully mitigated.

### Potential Environmental Impacts During

**Operation:** Alternative B3 would displace four residences directly adjacent to Bellevue Way SE, but no businesses, whereas B3 - 114th Design Option would displace the same number of residences but 14 businesses. This alternative would permanently impact 1.8 acres of parkland regardless of whether or not the design option is selected. Alternative B3 would impact 0.7 acre of wetlands or 0.2 acre with



the design option. However, B3 - 114th Design Option would permanently impact 3.6 acres of wetland buffers while Alternative B3 alone would impact 3.4 acres. Alternative B3 would have 100 noise impacts or 94 noise impacts with the design option. Sound Transit would mitigate each of these project impacts.

### Temporary Impacts During Construction:

Constructing Alternative B3 would temporarily result in traffic detours, lane closures, and increased congestion along Bellevue Way SE and 112th Avenue SE. It would also temporarily impact the Periphery Trail along Bellevue Way and require temporary relocation of the trail to keep it open during construction. The South Bellevue Park-and-Ride lot would be closed during construction, requiring temporary lease of parking areas or shifting parking to other park-and-ride lots. Bus stops would be temporarily relocated along the existing route or to nearby areas. Construction would temporarily impact 2.6 to 2.9 acres of Mercer Slough Nature Park, 0.6 to 1.2 acres of wetland, and 3.9 to 4.8 acres of wetland buffers. Construction noise would occur.

**Construction Risks:** Construction risk is considered low.



## BNSF Alternative (B7)

The **BNSF Alternative (B7)** is elevated as it exits I-90 over the westbound lanes and continues parallel to I-90 in an eastbound direction in Mercer Slough Nature Park. The eastbound HOV off-ramp from I-90 to Bellevue Way SE would be removed or reconstructed. The light rail is elevated until it turns north inside the former BNSF Railway corridor west of I-405. Once inside the former BNSF corridor, Alternative B7 transitions to an at-grade profile. Where the former BNSF Railway corridor turns east over I-405, Alternative B7 transitions to elevated and veers west, crossing 118th Avenue SE to the 118th Station south of SE 8th Street. This alternative includes a new four-story park-and-ride structure with about 1,030 spaces to replace the existing Wilburton Park-and-Ride lot, with nearby access to and from I-405.

### Evaluation Summary

**Markets Served by Stations:** The 118th Station serves primarily as a park-and-ride lot but also serves nearby commercial uses and residences located west and east of I-405.

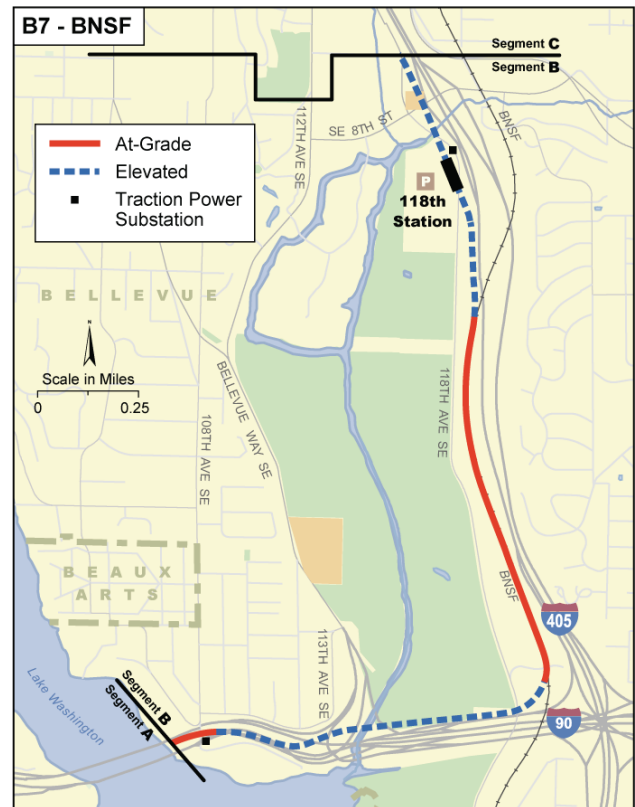
**Estimated Cost:** \$515 million to \$590 million.

**Ridership:** Forecasts predict 1,500 daily boardings at the station with this alternative in 2030.

**Transportation Impacts:** Alternative B7 is either outside of the roadway right-of-way or elevated and therefore would not affect access. However, intersection operations would be impacted at SE 8th Street and 118th Avenue SE due to traffic entering and exiting the new park-and-ride lot. This could be improved by adding a northbound right-turn pocket on 118th Avenue SE, which would result in a delay similar to or slightly better than no-build conditions. Two other impacts would occur at intersections, but can also be fully mitigated.

### Potential Environmental Impacts During

**Operation:** Alternative B7 would not displace any residential units but would displace six businesses. This alternative would permanently impact 0.9 acre of parkland, 1.9 acres of wetlands, 0.4 acre of wetland buffers, and approximately 3.0 acres of high-value habitat, and would have 176 noise impacts. All impacts would be mitigated. Recent WSDOT studies found that peat movement in



Mercer Slough can affect the I-90 bridge structures, which may also affect the B7 bridge structure in this area.

### Temporary Impacts During Construction:

Construction of Alternative B7 would not impact the Periphery Trail since it does not involve construction along Bellevue Way SE. Construction in Mercer Slough and the former BNSF Railway corridor would minimize traffic impacts. However, work adjacent to 118th Avenue SE would cause partial long-term lane closures and increased congestion. The South Bellevue Park-and-Ride lot would remain operational during construction. Construction would temporarily impact 1.7 acres of Mercer Slough Nature Park and would result in 2.9 acres of temporary wetland impacts and 0.6 acre of temporary impacts on wetland buffers. Construction noise would occur.

**Construction Risks:** Overall, construction risk would be moderate, with the greatest risk associated with crossing Mercer Slough.



**East Main Station:** This station serves routes connecting from Alternatives B3, B3 - 114th Design Option, or B7. This station would be in a retained cut for Alternatives C2T or C3T, or elevated for *Preferred Alternative C9T*, Alternatives C4A, C7E, C8E, or C9A. With *Preferred Alternative C9T* from B2M, an at-grade East Main Station Design Option on 112th Avenue SE would replace the SE 8th Station in Segment B.

**Bellevue Transit Center Station:** This station serves all alternatives, with elevated bridges for Alternatives C7E and C14E; at-grade for *Preferred Alternative C11A* and Alternatives C4A and C9A; and underground for all tunnel alternatives.

**Hospital Station:** This elevated Hospital Station serves *Preferred Alternatives C11A* and C9T and Alternatives C1T, C2T, C9A, and C14E and would not preclude development of a pedestrian or trail connection over NE 8th Street that would be designed and constructed by others. Potential interim terminus.

**Ashwood/Hospital Station:** This elevated station, serves Alternatives C3T, C4A, C7E, and C8E. Potential interim terminus.

**Traction Power Substation Locations:** Substations would be located at Main Street and 112th Avenue NE

(*Preferred Alternatives C11A, C9T*), the Hospital Station (Alternatives C1T, C9A, C14E), or the Ashwood/Hospital Station (Alternatives C3T, C4A, C7E, C8E).

### Connectors to Segment B

**From 112th Avenue SE:** *Preferred Alternative C9T* and *Preferred Alternative C11A* connect from *Preferred Alternative B2M*. Alternatives C2T and C3T connect from B2E. Alternatives C4A, C7E, or C9A connect from both B2E and B2A alternatives.

**From District Courthouse:** Alternatives C2T or C3T connect from Alternative B2A via tunnel under Surrey Downs Park.

**From Bellevue Way:** Alternative C1T uniquely connects from Alternative B1 via Bellevue Way NE.

**From Alternative B3 and B3 - 114th Design Option or Alternative B7:** These connectors follow similar routes south of Main Street along 114th Avenue SE to the East Main Station before crossing Main Street to all Segment C alternatives except Alternative C1T. These connectors would not include an East Main Station for *Preferred Alternative C11A* and C14E.

## Comparison of Segment C Alternatives

The at-grade alternatives (*Preferred Alternative C11A*, C9A, and C4A) would have similar ridership, cost, and cost-effectiveness. The tunnel alternatives (*Preferred Alternative C9T*, C1T, C2T, and C3T) would have the middle to high-end range of ridership but also the highest estimated costs, which makes them less cost-effective. *Preferred Alternative C9T* is the shortest, least expensive, and most cost-effective of the tunnel alternatives. Tunnel alternatives present the greatest construction risk. Alternative C8E would have the highest ridership of the elevated alternatives, and Alternative C14E would have the lowest.

Alternative C1T would require the most residential displacements, while *Preferred Alternative C9T* and Alternatives C9A, C2T, and C3T would have the fewest business displacements. Generally, connectors from 112th Avenue SE (B2M, B2A, B2E) would have higher displacements but lower costs than other connectors. All noise and vibration impacts can be substantially mitigated, except for a few instances of residual vibration impacts for C11A, C9T, C4A, C8E, C9A, and C14E. Long-term visual impacts would only occur with C3T, C4A, C8E, and C9A.

Construction impacts in Segment C would include lane closures, dislocating buses from the Bellevue

Transit Center, utility relocation, noise, vibration, dust, truck traffic, and associated impacts on businesses. Tunnel construction would require longer construction periods than elevated and at-grade portions. Bellevue Transit Center would be closed during construction for C1T, C2T, C3T, and partially or fully closed for the *Preferred Alternatives C11A* and C9T. *Preferred Alternatives C11A* and C9T would affect landscaping and portions of the Courthouse parking of Surrey Downs Park, but C9T would also affect a portion of the Courthouse building during construction. The connection from Alternative B2A to tunnel Alternatives C2T and C3T would require construction staging at the current District Court location at the north end of Surrey Downs Park, whereas connections from B2A for other Segment C alternatives would only affect the street-side landscaping. After construction, the park would be restored. Alternatives that cross I-405 at NE 12th Street (Alternatives C3T, C4A, and C8E) would occupy much of McCormick Park, which would be restored and possibly enlarged after construction, but there would be a residual visual impact. Construction of *Preferred Alternative C11A* and Alternatives C2T, C3T, and C4A could temporarily change the setting of the potential Surrey Downs historic district.

**TABLE ES-5**  
Comparison of Segment C Alternatives

Features		Alternatives									
		Preferred C11A	Preferred C9T <sup>a</sup>	C1T	C2T	C3T	C4A	C7E	C8E	C9A	C14E
<b>Number of Stations</b>		3	2 to 3	3	2 to 3	2 to 3	2 to 3	2 to 3	2 to 3	2 to 3	2
<b>Estimated Cost</b> (millions, 2007 \$)		\$555 to \$690	\$790 to \$1,025	\$1,405 to \$1,615	\$1,115 to \$1,365	\$975 to \$1,260	\$535 to \$705	\$435 to \$600	\$615 to \$705	\$465 to \$645	\$495 to \$575
<b>2030 Daily Ridership</b>	Segment boardings <sup>b</sup>	8,000 8,000	7,000 8,000	9,000	8,500	9,000	8,000	7,000	8,000	7,500	5,500
	Total East Link ridership <sup>b</sup>	49,000 49,000	50,000 51,000	52,500	52,000	52,500	49,500	50,500	51,500	48,500	48,500
<b>Travel Time through Segment</b> (minutes)		10	6	5	5	4	11	4	4	9	4
<b>Length</b> (miles)		2.0 to 2.1	1.7 to 1.8	1.9	2.1 to 2.2	1.8 to 2.0	1.6 to 1.7	1.4 to 1.5	1.6 to 1.7	1.7	1.3
<b>Comparative Cost-Effectiveness</b> - annualized cost divided by annual segment ridership in 2030		\$5.60 to \$6.25	\$7.95 to \$9.30	\$12.90	\$10.60 to \$12.05	\$8.50 to \$10.70	\$5.75 to \$7.30	\$4.70 to \$6.80	\$5.85 to \$6.30	\$5.40 to \$5.95	\$6.95 to \$7.25
<b>Construction Risk<sup>c</sup></b>		Moderate	High	High	High	High	Moderate	Low	Low	Moderate	Low
<b>Environmental Impacts</b>											
Residential Displacements (# of housing units) <sup>d</sup>		0 to 46	0 to 46	91	0 to 12	7 to 19	8	0	2	0 to 1	0
Business Displacements (# of employees) <sup>d</sup>		39 to 40 (330 to 380)	17 to 18 (160 to 370)	21 (250)	13 to 20 (170 to 240)	15 to 22 (180 to 270)	36 to 37 (490 to 550)	29 to 30 (670 to 730)	33 (750)	17 to 18 (170 to 230)	24 (390)
Full/Partial Property Acquisitions <sup>d</sup>		22 to 28/ 30 to 33	12 to 18/ 21 to 22	16/ 40	8 to 27/ 17 to 20	17 to 36/ 12 to 15	28 to 29/ 25 to 29	4 to 5/ 13 to 18	11/ 21	11/ 15 to 18	11/ 13
Decrease in Visual Quality		No	No	No	No	Yes	Yes	No	Yes	No to Yes	No
Hazardous Material Sites		2	2	7	3	2	2	0	0	2	1
Noise-Impacted Receptors (number after mitigation <sup>e</sup> ) <sup>d</sup>	Traffic-related	0	0	18 (0)	0	0	0	0	0	0	0
	Light Rail-related	184 to 204 (0)	119 to 140 (0)	100 (0)	100 to 179 (0)	26 to 105 (0)	439 to 450 (0)	208 to 282 (0)	425 (0)	199 to 241 (0)	148 (0)
Vibration - Impacted Buildings (number after mitigation)		6 (1)	3 to 8 (1)	2 (0)	0	0	7 (2)	0	6 (2)	6 (3)	3 (1)
Groundborne Noise - Impacted Buildings (number after mitigation) <sup>d</sup>		0	1 (0)	1 (0)	0 to 1 (0)	1 to 12 (0)	0	0	0	0	0

**TABLE ES-5 CONTINUED**  
Comparison of Segment C Alternatives

Features		Alternatives									
		<i>Preferred C11A</i>	<i>Preferred C9T<sup>a</sup></i>	C1T	C2T	C3T	C4A	C7E	C8E	C9A	C14E
Wetlands: permanent/temporary (acres)		0	0	0	0	0	0	0	0	0 to < 0.1/0 to 0.1	0 to < 0.1/0 to 0.1
Wetlands Buffer: permanent/temporary (acres) <sup>d</sup>		0 to 0.1/0 to 0.1	0 to 0.1/<0.1 to 0.1	0	0 to 0.1/0 to 0.1	0 to 0.1/0 to 0.1	0 to 0.1/0 to 0.1	0 to 0.1/0 to 0.1	0.1/ 0.1	0 to 0.1/0 to 0.1	0.1/ 0.1
High-Value Wildlife Habitat Loss (acres) <sup>d</sup>		0	0 to 0.3	0	0 to 0.2	0 to 0.2	0 to 0.2	0 to 0.2	0	0	0
Park Impacts – area in acres before mitigation <sup>d</sup>	Permanent	0 to 0.5	0.1 to 0.6	0	0 to < 0.1	0.9	0.9 to 1.4	0 to 0.4	0.2	<0.1	0
	Temporary	0 to 0.6	0.3 to 0.8	0	0 to 5.7	1.8 to 7.5	1.6 to 2.0	0 to 0.4	0.9	0.2	0
Historic Properties Potentially Impacted		1	0	0	1	1	1	0	0	0	0
Utility Relocation		High	High	High	High	Medium	High	Low	Low	High	Low
Intersections Not Meeting Local Standards and Operating Worse than No Build Alternative (No. after mitigation)		3 (0)	1 (0)	2 (0)	1 (0)	2 (0)	3 (0)	1 (0)	4 (0)	3 (0)	0 (0)

<sup>a</sup> The range shown includes the number of impacts if the C9T-East Main Station Design Option is selected

<sup>b</sup> Ridership reported for each alternative is based on the representative East Link route (a combination of Alternatives A1, B3, C4A, D2A - NE 24th Design Option, and E2) where the only portion that changes is the alternative in that segment. Ridership for each preferred alternative when connected to the preferred alternatives in other segments is also shown in italics. See Chapter 3, Transportation Environment and Consequences, for more details.

<sup>c</sup> Construction risk considers risks related to geology, utilities, traffic and safety relative to the other alternatives, see Chapter 6.

<sup>d</sup> The range shown represents the range of impacts with the different possible connectors

<sup>e</sup> Some impacts mitigated with building sound insulation, which does not reduce exterior noise levels.



## Preferred 108th Avenue NE At-Grade Alternative (C11A)

*Preferred 108th NE At-Grade Alternative (C11A)* connects with *Preferred Alternative B2M* or Alternatives B3, B3 - 114th Design Option, or B7. From B2M, C9T begins on the east side of 112th Avenue SE, then travels on the south side of Main Street in a retained cut to the 108th Station between 108th and 110th Avenues NE, and turns north at-grade over Main Street to the center of 108th Avenue NE. At NE 6th Street, *Preferred Alternative C11A* turns east in the center of NE 6th Street to the at-grade Bellevue Transit Center Station, then crosses 110th Avenue NE at-grade, transitioning to a retained fill and then to an elevated profile between 110th and 112th Avenues NE before crossing 112th Avenue NE, I-405, and 116th Avenue NE to the Hospital Station in the former BNSF Railway corridor. *Preferred Alternative C11A* connects with Segment D alternatives from the former BNSF Railway corridor.

### Evaluation Summary

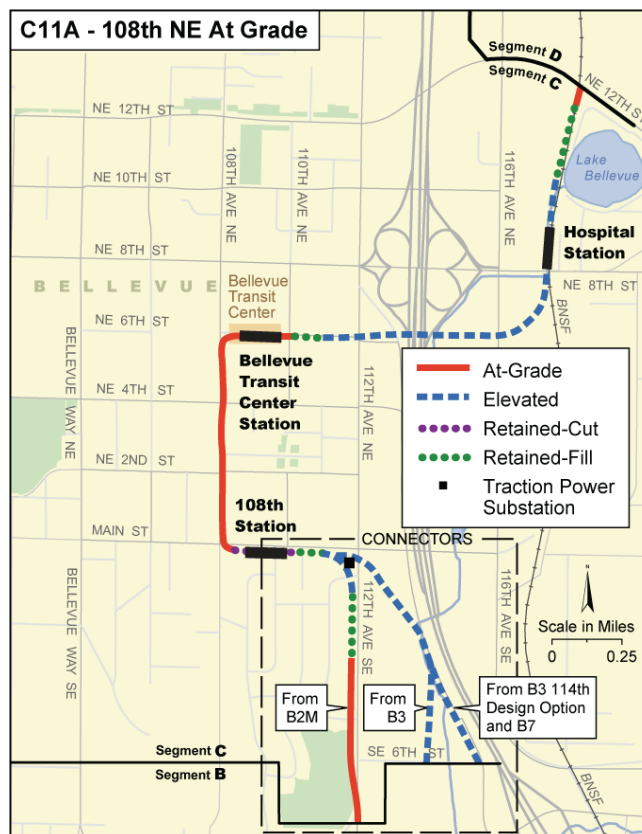
**Markets Served by Stations:** Bellevue city center, City Hall, Bellevue Transit Center, Meydenbauer Center, NE 6th Street pedestrian corridor, Overlake Hospital and Group Health medical centers east of I-405, south downtown, Surrey Downs neighborhood.

**Estimated Cost:** \$555 million to \$690 million.

**Ridership:** Forecasts predict 8,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** SE 4th Street would no longer have direct access to 112th Avenue SE, but access would remain at SE 1st Street. The access from 110th Avenue SE and 110th Place SE would be redirected to the intersection of 108th Avenue SE and Main Street. In 2030, three intersections would fail to meet operation standards and have increased delay compared to the No Build Alternative. One intersection would be mitigated with roadway capacity improvements, and operational traffic management strategies would be proposed at the other two intersections in Downtown Bellevue to improve the efficiency of the roadway system. Because of the residential parking zone in the Surrey Downs neighborhood, no impacts would be associated with hide-and-ride parking at the 108th Station.

**Potential Environmental Impacts During Operation:** *Preferred Alternative C11A* from B2M would result in 46 residential displacements (0 if from Alternatives B3 or B7), and displace 39 businesses (40 businesses if from Alternatives B3 or B7). *Preferred Alternative C11A* from B2M would remove 0.5 acre of landscaping and parking from Surrey Downs Park without impairing the recreational areas or degrading visual quality.



While properties adjacent to 112th Avenue SE and Main Street would be removed, none would be contributing properties to the potential Surrey Downs historic district. Land acquired along 112th Avenue SE would be landscaped and replace land used in Surrey Downs Park. This alternative would have 184 to 204 noise impacts, all of which Sound Transit would mitigate. Vibration would affect six buildings, and one vibration impact would need to be addressed further during final design.

**Temporary Impacts During Construction:** Impacts could include short-term and long-term lane closures, increased congestion, the loss of on-street parking, and bus route revisions. Partial road closures would likely occur on 112th Avenue SE, Main Street, 108th Avenue NE, and NE 6th Street. Adjacent businesses would experience temporary adverse impacts from changes in circulation and access. During construction, the Bellevue Transit Center would be partially or fully closed, requiring transit service modifications. Construction would require utilities to be either relocated or encased. Construction noise would occur. Construction could temporarily change the setting of the potential Surrey Downs historic district.

**Construction Risks:** Construction risk would be moderate.

## Preferred 110th Avenue NE Tunnel Alternative (C9T)

*Preferred 110th NE Tunnel Alternative (C9T)* connects with *Preferred Alternative B2M*, or connects with Alternatives B3, B3 - 114th Design Option, or B7, which would include the East Main Station. From *B2M*, *C9T* begins on the east side of 112th Avenue SE, then transitions to the west side at SE 6th Street before turning west into a tunnel portal on Main Street. *C9T* then turns north under 110th Avenue NE to the Bellevue Transit Center Station at NE 4th Street. *C9T* continues north to NE 6th Street, turns east and exits the tunnel portal, transitions to an elevated profile in the center of NE 6th Street, and then crosses to the north side of NE 6th Street to pass over 112th Avenue NE, I-405, and 116th Avenue NE. *C9T* then turns north along the former BNSF Railway corridor, crosses NE 8th Street to the elevated Hospital Station within the former BNSF Railway corridor.

The C9T – East Main Station Design Option is a station option on 112th Avenue SE with a connection from *Preferred Alternative B2M* that would replace the SE 8th Station in Segment B.

### Evaluation Summary

**Markets Served by Stations:** Bellevue city center, City Hall, Bellevue Transit Center, Meydenbauer Center, NE 6th Street pedestrian corridor, Overlake Hospital and Group Health medical centers east of I-405.

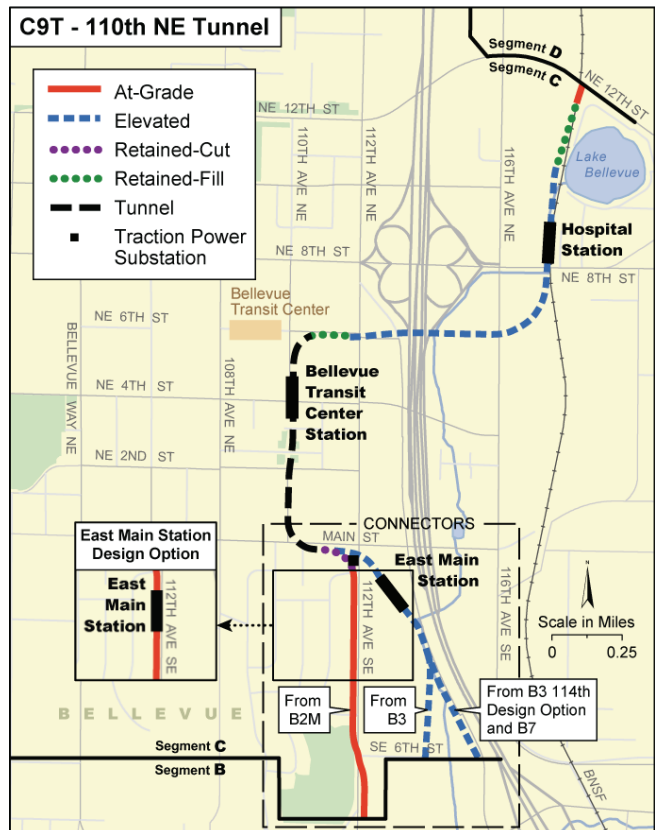
**Estimated Cost:** \$790 million to \$1,025 million.

**Ridership:** Forecasts predict 7,000 to 8,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** *Preferred Alternative C9T* from *B2M* includes an at-grade signalized crossing at 112th Avenue SE and SE 6th Street. SE 1st Street would be closed at 112th Avenue SE and SE 4th Street would be realigned to the 112th Avenue SE/SE 6th Street intersection to maintain access to the neighborhood.

One intersection would not meet intersection operation standards and have greater delay than the No Build Alternative. Operational traffic management strategies would be proposed at this location to improve the efficiency of the downtown roadway system.

**Potential Environmental Impacts During Operation:** *Preferred Alternative C9T* from *B2M* would result in 46 residential and 17 business displacements. With a connection from either Alternatives B3 or B7, *C9T* would result in no residential and 18 business displacements. Realignment of SE 4th Street would require permanent acquisition of 0.5 acre of Surrey Downs Park. Land acquired along 112th Avenue SE would be landscaped and replace land used in Surrey Downs Park. A Bellevue Transit Center Station entrance would acquire a portion of the NE 2nd Pocket Park; however, this park would



remain usable as open space. Although *C9T* would require property acquisitions along Main Street and 112th Avenue SE, it would not affect the potential Surrey Downs historic district. It would result in 119 to 140 noise impacts, all of which Sound Transit would mitigate. Vibration would affect three buildings with *Preferred Alternative C9T* and eight buildings with *C9T - East Main Station Design Option*. With both scenarios, one vibration impact would need to be further addressed during final design. Groundborne noise would impact one building, but this impact would be fully mitigated.

**Temporary Impacts During Construction:** Detours and lane closures from cut-and-cover tunnel construction would increase congestion, affect residents and businesses along 110th Avenue NE between Main and NE 6th Streets; however, traffic and access would be maintained to the extent possible. Adjacent businesses would experience temporary adverse impacts from changes in circulation, access, noise and dust. 112th Avenue SE, Main Street, and NE 6th Street would also likely have partial road closures. The Bellevue Transit Center would be partially or fully closed, requiring transit service modifications. Cut-and-cover construction would require underground utilities to be either relocated or suspended to minimize disruptions in service and soil settlement.

**Construction Risks:** Construction risk would be high.

## Bellevue Way Tunnel Alternative (C1T)

The **Bellevue Way Tunnel Alternative (C1T)** continues at-grade in the median of Bellevue Way SE from Alternative B1, then transitions to a tunnel to an underground Old Bellevue Station north of Main Street. At NE 6th Street, the tunnel turns east to align with an underground Bellevue Transit Center Station. Alternative C1T exits the tunnel east of 110th Avenue NE, transitions to an elevated profile, and crosses 112th Avenue NE, I-405, and 116th Avenue NE before turning north inside the former BNSF Railway corridor up to the Hospital Station, and then to NE 12th Street. This is the only alternative that connects from Alternative B1 in Segment B and the only alternative with an Old Bellevue Station.

### Evaluation Summary

**Markets Served by Stations:** The Old Bellevue area, Bellevue city center, Bellevue Transit Center, City Hall, Meydenbauer Center, the NE 6th Street pedestrian corridor, Overlake Hospital and Group Health medical centers.

**Estimated Cost:** \$1,405 to \$1,615 million.

**Ridership:** Forecasts predict 9,000 daily boardings at the stations in this alternative in 2030.

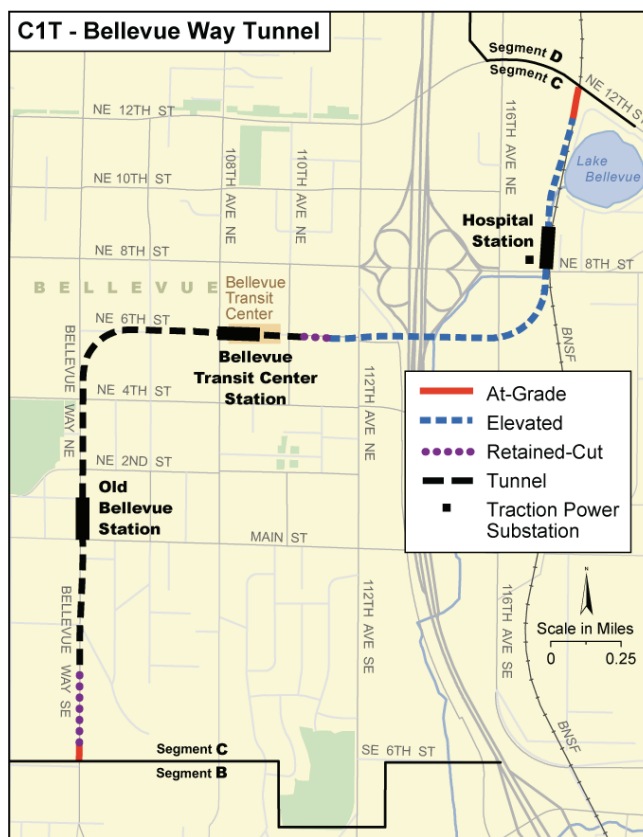
**Transportation Impacts:** In 2030, two intersections would fail to meet operation standards and have increased delay compared to the No Build Alternative. One would be mitigated by roadway capacity improvements, and operational traffic management strategies would be proposed at the other intersection. Left-turn movements along Bellevue Way SE would not be allowed between SE 6th Street and SE Kilmarnock Street.

### Potential Environmental Impacts During Operation:

Alternative C1T would displace 91 residences and 21 businesses. This alternative would not impact any parkland. Although this alternative would be located close to one historic property, the former Safeway store, it would not have any impact on this resource.

Alternative C1T would result in 118 noise impacts, all of which Sound Transit would mitigate. Vibration impacts would occur for two buildings, and groundborne noise would affect one building, all of which could be mitigated.

**Temporary Impacts During Construction:** Cut-and-cover construction increases congestion, creates traffic circulation impacts, and would require temporary partial closures of Bellevue Way and NE 6th Street. Adjacent businesses would experience temporary



adverse impacts from changes in circulation and access during construction.

In addition, the Bellevue Transit Center would temporarily close for construction of the new station and existing bus stops would be relocated to adjacent streets. Cut-and-cover construction would require underground utilities to be either relocated or suspended above the cut to minimize disruptions in service and utilities would be relocated under the elevated guideway as well. C1T would impact both the most and the highest number of high-risk hazardous material sites along the route. Construction noise would occur. Soil settlement is possible during tunnel construction.

**Construction Risks:** Construction risk is considered high due to cut-and-cover tunneling. Sequential excavation mining under the Bellevue Arts Museum presents the highest risk of any construction method.



## 106th NE Tunnel Alternative (C2T)

The **106th NE Tunnel Alternative (C2T)** could connect to Segment B from the District Courthouse (Alternative B2A), or from Alternatives B2E, B3, or B7. Alternative C2T travels along 106th Avenue NE in a tunnel and turns east under NE 6th Street to the Bellevue Transit Center Station. Alternative C2T exits the tunnel east of 110th Avenue NE, transitions to an elevated profile, and crosses 112th Avenue NE, I-405, and 116th Avenue NE before turning north inside the former BNSF Railway corridor to the Hospital Station, and to Segment D. The East Main Station would be added if connecting from Alternatives B3 or B7.

### Evaluation Summary

**Markets Served by Stations:** Bellevue city center, City Hall, Bellevue Transit Center, Meydenbauer Center, NE 6th Street pedestrian corridor, Overlake Hospital and Group Health medical centers east of I-405, southeast downtown, Surrey Downs.

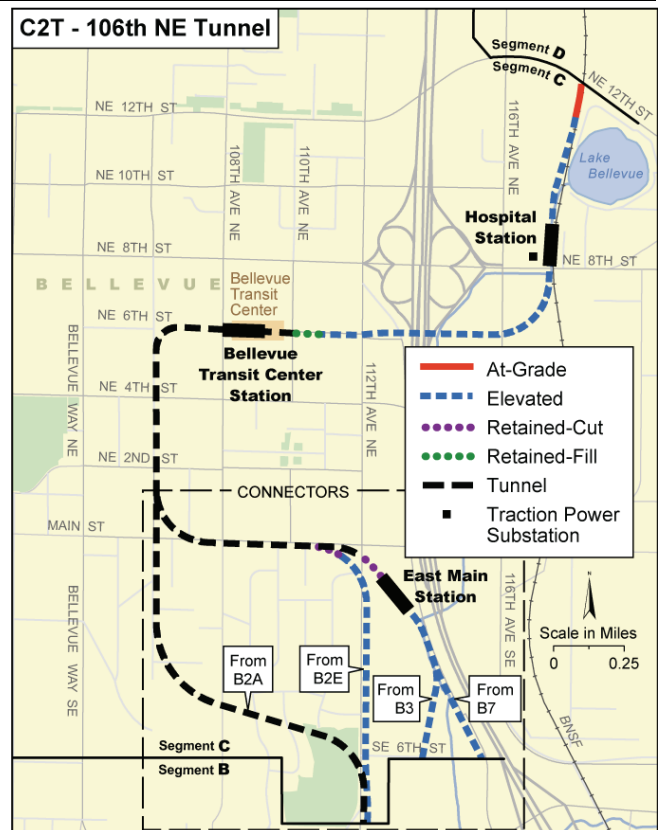
**Estimated Cost:** \$1,115 to \$1,365 million.

**Ridership:** Forecasts predict 8,500 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** In 2030, one intersection would fail to meet operation standards and have increased delay compared to the No Build Alternative. Operational traffic management strategies would be proposed at this location.

**Potential Environmental Impacts During Operation:** Alternative C2T would have a range of displacement impacts depending on the connector chosen. Alternative C2T connecting to Alternative B2E would displace 12 residences; other connectors would displace zero or one residence. Alternative C2T connecting with Alternative B2E would have the most business displacements (20 businesses), and with Alternative B2A would have the least (13 businesses). Displacements would be primarily for construction staging areas. The Alternative B2A connector would pass through Surrey Downs Park; however, as the rail would be in a tunnel in this location, it would permanently impact less than one acre of the park. The Alternatives B2E or B2A connectors would pass near the potential Surrey Downs historic district but would not permanently affect this area.

Light rail noise impacts would occur at the Hilton Hotel with the Alternatives B3 or B7 connectors, but these impacts would be mitigated. Noise from light rail operation would affect additional receptors when connecting from Alternative B2E. Alternative C2T would result in 100 to 179 noise impacts, all of which Sound Transit would mitigate. Groundborne noise



would affect zero to one building depending on the connector selected, but this impact would be mitigated. No vibration impacts would occur.

**Temporary Impacts During Construction:** Partial road closures and increased congestion could occur on 106th Avenue NE and NE 6th Street due to cut-and-cover construction. Staging for the Alternative B2A connector would result in the closure of the northern half of Surrey Downs Park (the District Courthouse part of the park). In addition, the Bellevue Transit Center would temporarily close for construction of the new station and existing bus stops would be relocated to adjacent streets. Adjacent businesses would experience temporary adverse impacts from changes in circulation and access during construction. Utilities may have to be relocated when in conflict with cut-and-cover construction or elevated structures. Construction noise would occur. Construction could temporarily change the setting of the potential Surrey Downs historic district. There is a potential during tunnel construction for soil settlement and groundwater issues.

**Construction Risks:** Construction risk is considered high due to cut-and-cover tunneling.

## 108th NE Tunnel Alternative (C3T)

The 108th NE Tunnel Alternative (C3T) is a bored tunnel that could connect to Segment B from the District Courthouse (B2A), from Alternative B2E, or from I-405 (B3 or B7). Alternative C3T travels along 108th Avenue NE in a tunnel to the Bellevue Transit Center, then turns east at NE 12th Street and transitions to an elevated profile to cross over 112th Avenue NE and I-405. The Ashwood/Hospital Station is located just east of I-405. Connections from Alternatives B3 or B7 would add the East Main Station.

### Evaluation Summary

**Markets Served by Stations:** The Bellevue city center, Bellevue Transit Center, City Hall, Meydenbauer Center, NE 6th Street pedestrian corridor, Overlake Hospital and Group Health medical centers, southeast downtown, Surrey Downs.

**Estimated Cost:** \$975 to \$1,260 million.

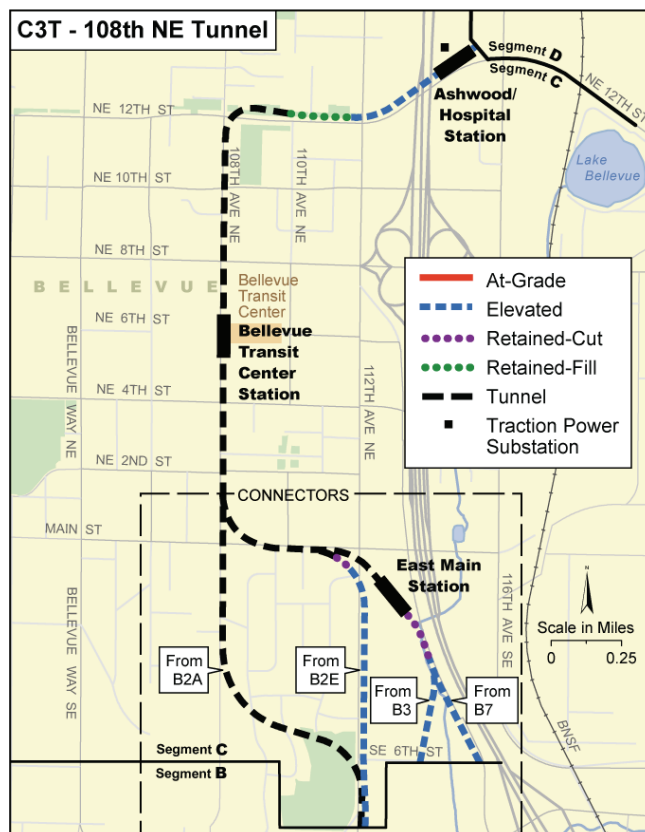
**Ridership:** Forecasts predict 9,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** In 2030, two intersections would fail to meet operation standards and have increased delay compared to the No Build Alternative. These impacts can be mitigated. The transition from tunnel to above-grade profile along NE 12th Street would require a permanent change in access to a portion of the Northtowne neighborhood.

### Potential Environmental Impacts During Operation:

The range of displacement impacts is dependent on the connector. Connecting to Alternative B2E would have 19 residential and 22 business displacements, the highest number versus the other connectors. Alternative C3T with the Alternative B2E connector would displace more residences than any of the other Segment C alternatives. Most displacements would be related to construction staging areas. The Alternative B2A connector would pass through Surrey Downs Park; in a tunnel profile, leaving less than one acre of permanent impact on the park. Although 0.9 acre of McCormick Park would be acquired for Alternative C3T, property acquired for staging would potentially result in a net increase of 0.7 acre at this park. The transition from a tunnel to an elevated profile would result in visual impacts for users of McCormick Park. The Alternatives B2E or B2A connectors would pass near the potential Surrey Downs historic district but would not permanently affect this area.

Alternative C3T would result in 26 to 105 noise impacts due to connectors from Alternatives B2A, B2E, B3, or B7, all of which Sound Transit would mitigate.



Groundborne noise would affect 1 to 12 buildings, depending on the connector selected, but these impacts would be mitigated. Vibration impacts would not occur with Alternative C3T.

**Temporary Impacts During Construction:** Partial road closures could occur on 108th Avenue NE during construction of this station. Staging would include closure of McCormick Park for about 4 to 5 years during construction. Staging for the Alternative B2A connector would result in the closure of the northern half of Surrey Downs Park (the District Courthouse part of the park). In addition, the Bellevue Transit Center would temporarily close for construction of the new station and existing bus stops would be relocated to adjacent streets. Adjacent businesses would experience temporary adverse impacts from changes in circulation and access during construction. Utilities may have to be relocated in areas of cut-and-cover construction or elevated structures. Construction noise would occur. Construction could temporarily change the setting of the potential Surrey Downs historic district. Soil settlement would be possible during tunnel construction.

**Construction Risks:** Construction risk is considered high due to tunnel boring methods, although less risky than the cut-and-cover construction method.

## Couplet Alternative (C4A)

The **Couplet Alternative (C4A)** connects from Segment B as an elevated structure and transitions to at-grade on Main Street. Alternative C4A travels between Main Street and NE 12th Street as an at-grade couplet running counterflow to traffic on one-way roadways (northbound track on the east side of 110th Avenue NE and the southbound track on the west side of 108th Avenue NE). Both tracks combine going east on NE 12th Street to cross over 112th Avenue NE and I-405. The Bellevue Transit Center Station would be on 108th and 110th avenues NE, south of NE 6th Street, and the Ashwood/Hospital Station would be located just east of I-405. The East Main Station would be added if connecting from the 112th SE Bypass (B3) or BNSF (B7) Alternatives.

### Evaluation Summary

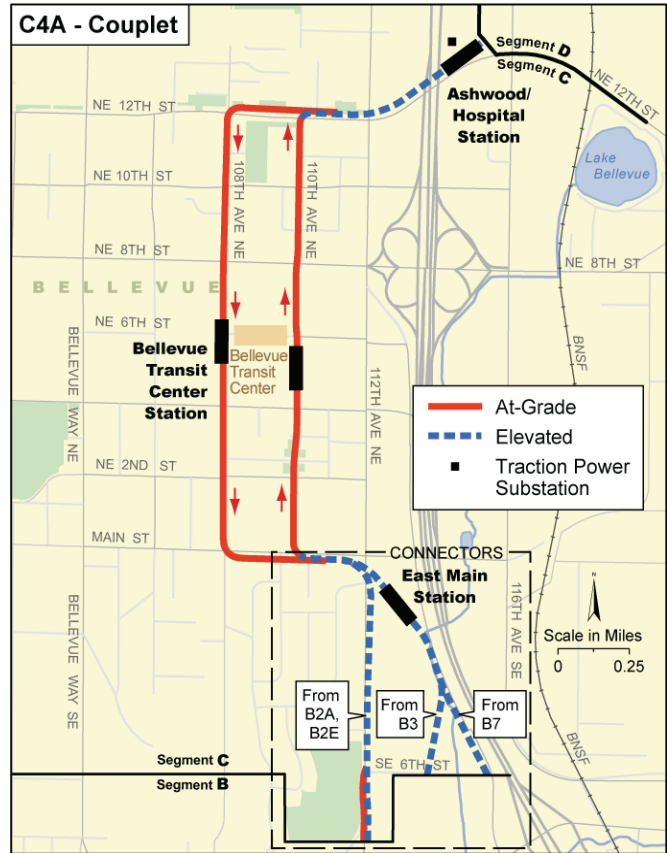
**Markets Served by Stations:** Bellevue city center, Bellevue Transit Center, City Hall, Meydenbauer Center, NE 6th Street pedestrian corridor, Overlake Hospital and Group Health medical centers, southeast downtown, Surrey Downs.

**Estimated Cost:** \$535 to \$705 million.

**Ridership:** Forecasts predict 8,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Alternative C4A would convert 110th Avenue NE and 108th Avenue NE from two-way flow to a one-way couplet. Intersection operations would be adversely affected at three intersections which can be mitigated through roadway capacity improvements or operational traffic management strategies. To minimize turning movements on one-way streets, some access to businesses may have to be closed.

**Potential Environmental Impacts During Operation:** Alternative C4A would have a range of displacement impacts, depending on the connector chosen. With Alternative B3 or B7 connectors, this alternative would displace 37 businesses, the most of all the Segment C alternatives, one more displacement than with the Alternatives B2A or B2E connector. Eight residential displacements would occur regardless of the connector chosen. The elevated Alternative B2A connector would require 0.5 acre of the Surrey Downs Park. Although portions of McCormick Park would be acquired, adjacent areas acquired for staging would be converted to park use after construction, which would create a net increase at McCormick Park of approximately 0.2 acre. Alternative C4A would cause visual impacts for users of McCormick Park, where this alternative transitions from a tunnel to an elevated profile.



Alternative C4A would not permanently affect the potential Surrey Downs historic district, regardless of the connector chosen.

C4A would result in 439 to 450 noise impacts, all of which Sound Transit would mitigate. No groundborne noise impacts would occur, regardless of the connector chosen. All connectors would have vibration impacts on seven buildings; two impacts would need to be addressed further in final design.

**Temporary Impacts During Construction:** Increased congestion and partial road closures would occur on 108th and 110th avenues NE, Main Street, and NE 12th Street. Construction staging would result in the closure of McCormick Park to the public for about 4 to 5 years. Adjacent businesses would experience temporary adverse impacts from changes in circulation and access, noise and dust. Utilities directly under the trackway and overhead utilities in conflict would need to be relocated. Soil settlement would not be likely to occur. Construction could temporarily change the setting of the potential Surrey Downs historic district.

**Construction Risks:** Construction risk would be moderate due to construction constraints in a highly urban corridor and conflicts with traffic and utilities.



## 112th NE Elevated Alternative (C7E)

The 112th NE Elevated Alternative (C7E) connects from Segment B in an elevated profile and continues in an elevated profile along 112th Avenue, turns east at NE 12th Street, and crosses I-405 to connect with the Segment D alternatives. The Bellevue Transit Center Station would be located south of NE 6th Street, with an overhead pedestrian walkway that connects the light rail station to the existing Bellevue Transit Center at street-level. The Ashwood/Hospital Station would be located just east of I-405. The East Main Station would be added if connecting from Alternatives B3 or B7.

### Evaluation Summary

**Markets Served by Stations:** The eastern side of Downtown Bellevue, City Hall, Meydenbauer Center, NE 6th Street pedestrian corridor, northeast corner of downtown, Overlake Hospital and Group Health medical centers, southeast downtown, Surrey Downs.

**Estimated Cost:** \$435 to \$600 million.

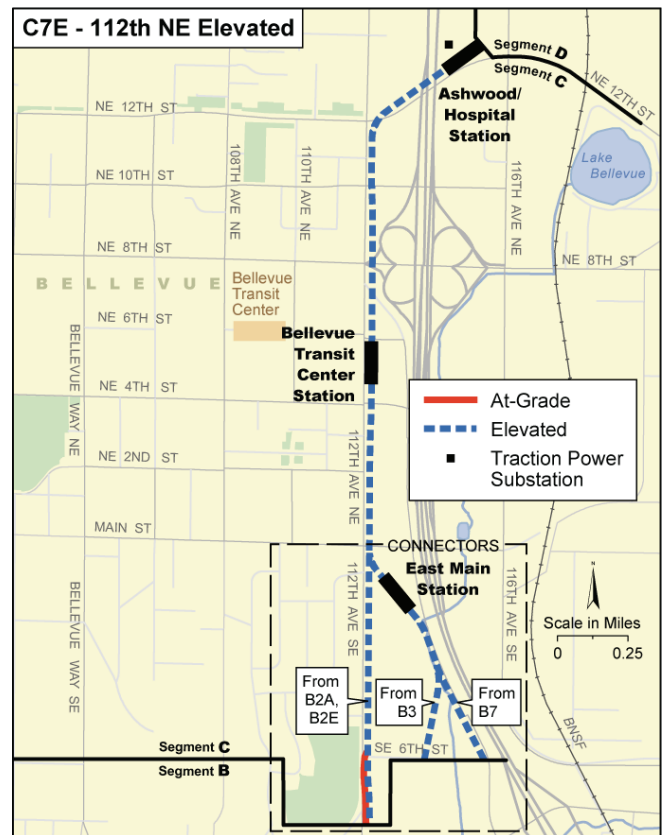
**Ridership:** Forecasts predict 7,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** In 2030, one intersection would fail to meet operation standards and have increased delay compared to the No Build Alternative. This impact would be mitigated.

**Potential Environmental Impacts During Operation:** Alternative C7E would not result in residential displacements. The combination of Alternative C7E with either Alternatives B3 or B7 connector would displace 30 businesses, one more business than with either Alternatives B2A or B2E connector. The Alternative B2A connector would displace 0.4 acre of Surrey Downs Park; the other connections would not result in a loss of parkland.

Noise impacts from light rail operation would occur for all connectors, resulting in 208 to 282 noise impacts overall, but these impacts would be mitigated. Alternative C7E would not result in vibration or groundborne noise impacts.

**Temporary Impacts During Construction:** Most of the construction would be outside of the 112th Avenue right-of-way. Construction staging areas would be located at each of the stations. Short-term partial closures of 112th Avenue NE would occur, and temporary changes in access may occur. Adjacent businesses would experience temporary adverse impacts from changes in circulation and access during construction. Overhead utilities must be relocated when in conflict with elevated structures, but impacts



*Simulation of pedestrian walkway on NE 6th Street with Alternative C7E*

from utility relocations are considered low. Construction noise impacts would occur, and soil settlement would not be likely to occur.

**Construction Risks:** Construction risk would be low.



## 110th NE Elevated Alternative (C8E)

The 110th NE Elevated Alternative (C8E) only connects to Segment B from Alternatives B3 or B7. Alternative C8E travels north along 114th Avenue NE/I-405, turns west at NE 2nd Street and then north again onto 110th Avenue NE to an elevated Bellevue Transit Center Station before turning east at NE 12th Street and crossing I-405 to connect with the Segment D alternatives. For this alternative, the Bellevue Transit Center Station would be elevated south of NE 6th Street.

### Evaluation Summary

**Markets Served by Stations:** The southeast Downtown Bellevue, city center, Bellevue Transit Center, City Hall, Meydenbauer Center, NE 6th Street pedestrian corridor, northeast corner of downtown, the Overlake Hospital and Group Health medical centers, Surrey Downs.

**Estimated Cost:** \$615 to \$705 million.

**Ridership:** Forecasts predict 8,000 daily boardings at the stations in this alternative in 2030.

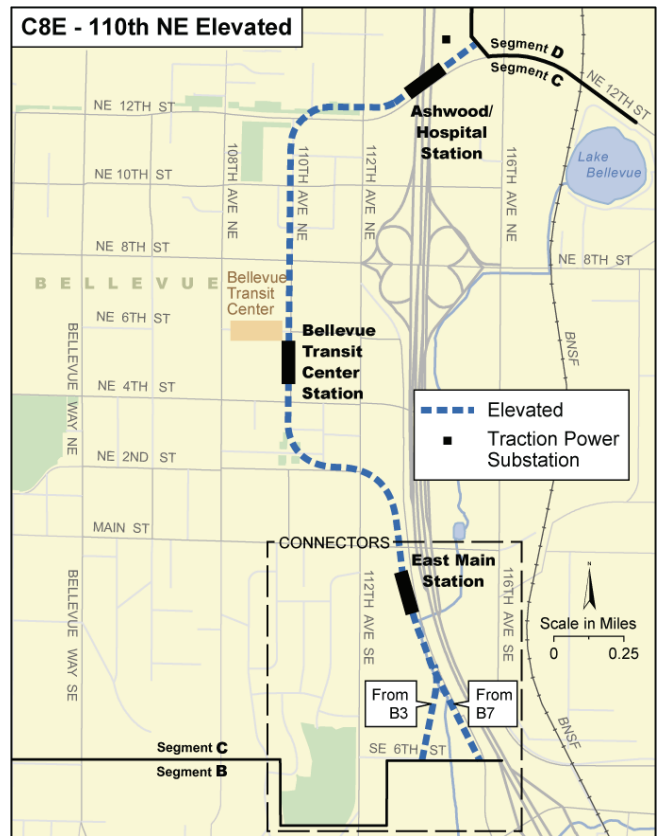
**Transportation Impacts:** Alternative C8E would reduce 110th Avenue by one lane between NE 4th Street and NE 12th Street, thereby creating an impact at four intersections. These impacts can be mitigated at two intersections with roadway capacity improvements. Operational traffic management strategies would be proposed at the other two intersections.

### Potential Environmental Impacts During Operation.

Alternative C8E would displace 2 residences and 33 businesses. Although 0.2 acre of McCormick Park would be impacted, additional property acquired for staging would be converted to park use after construction, permanently increasing the park size by



Simulation of elevated guideway over NE 12th at 110th Avenue NE with Alternative C8E



about 0.1 acre. No permanent impacts on historic buildings would occur.

Alternative C8E would result in 425 noise impacts, all of which Sound Transit would mitigate. Vibration impacts would occur at six buildings, and two of these impacts would need to be further addressed during final design. No groundborne noise impacts would occur.

There would be visual changes, related to the elevated structure, to McCormick Park, the Pocket Parks at 2nd Place NE and 110th Avenue, and on the 110th Avenue NE pedestrian corridor adjacent to City Hall.

**Temporary Impacts During Construction.** There would be increased congestion with the long-term partial closures of 110th Avenue NE, and temporary changes in access. Construction staging would require McCormick Park to be closed for about 4 to 5 years. Adjacent businesses would experience temporary adverse impacts from changes in circulation and access. Overhead utilities would need to be relocated, but impacts from utility relocations are considered low. Construction noise would occur, and soil settlement is not likely to occur.

**Construction Risks:** Construction risk would be low.

## 110th Avenue NE At-Grade Alternative (C9A)

The 110th NE At-Grade Alternative (C9A) could connect with Alternatives B3, B3 - 114th Design Option, B7, or B2A. Alternative C9A travels at-grade along the south side of Main Street, turns north in the center of 110th Avenue NE, and travels at-grade in the center of the street to NE 6th Street, where it turns east to a Bellevue Transit Center Station located between 110th and 112th Avenues NE. From the station, this alternative travels east in an elevated profile over 112th Avenue NE, I-405, and 116th Avenue NE. Alternative C9A then turns north along the former BNSF Railway corridor to cross NE 8th Street and reach the elevated Hospital Station and then connects with Segment D alternatives from the former BNSF Railway corridor. Alternative C9A has an East Main Station if connecting to Alternatives B3, B3 -114th Design Option, or B7.

### Evaluation Summary

**Markets Served by Stations:** The Bellevue city center, City Hall, Bellevue Transit Center, Meydenbauer Center, NE 6th Street pedestrian corridor, the Overlake and Group Health medical centers east of I-405, southeast downtown, Surrey Downs.

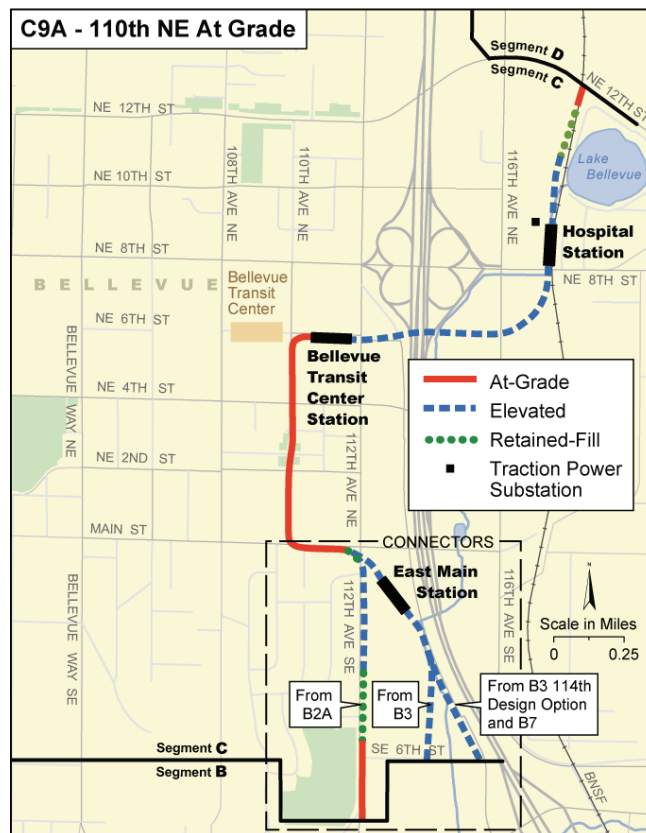
**Estimated cost:** \$465 million to \$645 million.

**Ridership:** Forecasts predict 7,500 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Along 110th Avenue NE in the center median, property access and circulation would be limited to right-in/right-out. Alternative C9A would impact three intersections. One intersection can be mitigated through roadway capacity improvements, and operational traffic management strategies would be proposed at the other two intersections. Alternative C9A includes widening 112th Avenue SE to the east for northbound traffic where the profile is at-grade and transitioning to elevated, which would result in the loss of access to SE 4th Street for northbound traffic.

**Potential Environmental Impacts During Operation:** Alternative C9A would acquire up to 1 residence, and up to 18 businesses. Alternative C9A would permanently acquire less than 0.1 acre of the NE 2nd Street Pocket Park. There would be no impacts on Surrey Downs Park. None of the connectors or the portion of Alternative C9A along Main Street would impact the potential Surrey Downs historic district.

Alternative C9A would result in 199 to 241 noise impacts, all of which Sound Transit would mitigate. Vibration would affect six buildings, and three of



these impacts would need to be further addressed during final design.

For the B2A connector, removing trees along 112th Avenue SE along with the presence of the elevated guideway would change the visual setting and would reduce the medium visual quality category to low. No visual quality impacts would occur with the other connectors.

**Temporary Impacts During Construction:** At-grade construction activities would include detour routes, short-term and long-term lane closures, increased congestion, loss of on-street parking, and bus route impacts. Partial road closures would likely occur on 112th Avenue SE, Main Street, 110th Avenue NE, and NE 6th Street. The limited and/or restricted access would affect businesses during construction. Utilities would need to be relocated. Construction noise would occur. Soil settlement impacts are unlikely to occur.

**Construction Risks:** Construction risk would be moderate.

## 114th Avenue NE Elevated Alternative (C14E)

The **114th NE Elevated Alternative (C14E)** connects to Alternatives B3, B3 - 114th Design Option, and B7. Alternative C14E is elevated adjacent to I-405 in the 114th Avenue NE corridor to the Bellevue Transit Center Station and turns eastward north of NE 6th Street. The Bellevue Transit Center Station is located between NE 4th and 6th Streets, 1,300 feet east of the existing Bellevue Transit Center. Access from the existing Bellevue Transit Center to the station is provided via an elevated moving sidewalk from the station to City Hall Plaza, located across the street from the Bellevue Transit Center. After crossing I-405, Alternative C14E crosses 116th Avenue NE in an elevated profile and then turns north in the former BNSF Railway corridor to an elevated Hospital Station. Alternative C14E does not include the East Main Station.

### Evaluation Summary

**Markets Served by Stations:** The eastern side of Downtown Bellevue, Bellevue City Hall, Meydenbauer Center, the Overlake and Group Health medical centers.

**Estimated cost:** \$495 million to \$575 million.

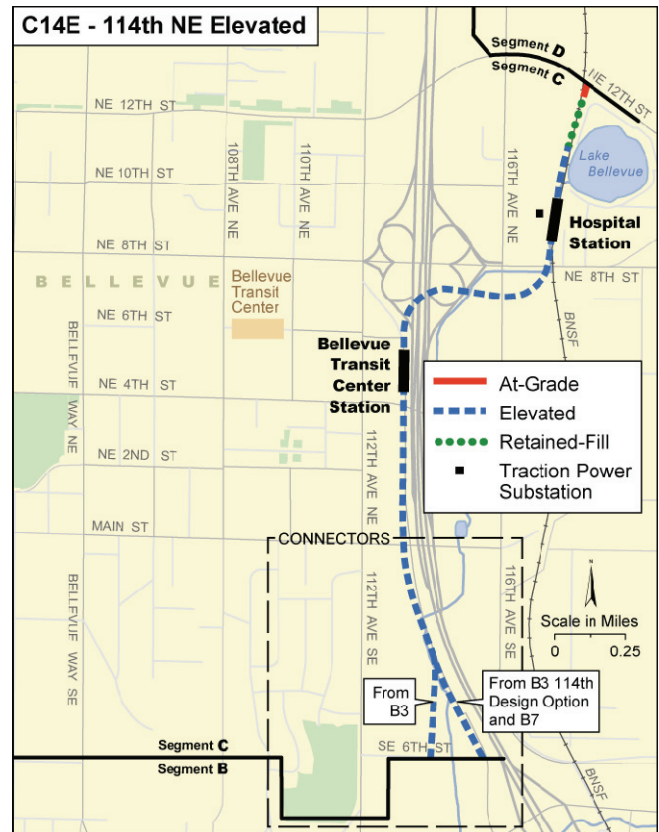
**Ridership:** Forecasts predict 5,500 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Alternative C14E is grade-separated throughout Segment C; there would be no signalized crossings or access and circulation impacts.

**Potential Environmental Impacts During Operation:** Alternative C14E would displace 24 businesses but would not acquire any residences. No parkland or historic properties would be affected by Alternative C14E. Alternative C14E would result in 148 noise impacts, all of which Sound Transit would mitigate. No groundborne noise impacts would occur. Vibration would affect three buildings, and one of these impacts would need to be further addressed during final design. Alternative C14E's elevated profile would be seen from nearby areas and along 114th Avenue NE.

The tent structure on the elevated walkway to the Bellevue Transit Center would block views of the Cascade Mountains from east-west running streets or areas along 110th Avenue NE (such as the City Hall Plaza or the Bellevue Transit Center Station).

**Temporary Impacts During Construction:** Constructing Alternative C14E along 114th Avenue NE would likely reduce the road to one lane of traffic



*Simulation of Bellevue Transit Center Station with Alternative C14E*

between Main and NE 6th Streets, but business and emergency access would be maintained. This alternative would have a low level of impacts from utility relocations. Construction noise would occur. Soil settlement during construction is unlikely.

**Construction Risks:** Construction risk would be low.



## B7/C9T-Revised (B7R)

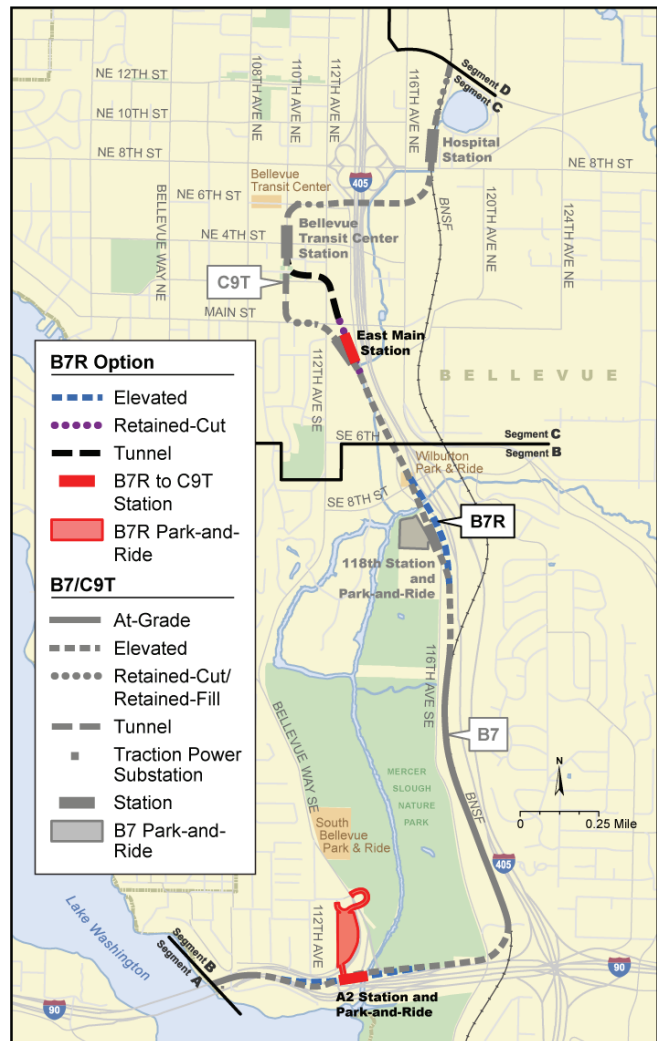
The **B7/C9T Revised (B7R)** is a modification of Alternative B7 and *Preferred Alternative C9T*, designed and analyzed by the City of Bellevue. After the SDEIS was published, the City initiated a conceptual design and screening-level evaluation of these options or modifications to Alternative B7/C9T. The City of Bellevue's B7-Revised Interim Analysis Report (May 2011) can be found in Appendix K of the Final EIS.

The City of Bellevue's B7R follows the same general route as Alternative B7 connecting to the *Preferred Alternative C9T* studied in the Final EIS except the route between the East Main Station and Bellevue Transit Center Station continues north to NE 2nd Street, rather than turning west at Main Street. The B7R has a light rail station (referred to as A2) located adjacent to and north of I-90 over the I-90/Bellevue Way SE interchange, with a pedestrian walkway to a new parking garage and bus transfer center on the west side of Bellevue Way SE in the Enatai neighborhood. The A2 Station replaces the 118th Station of Alternative B7. Roadway access to the parking garage would require a new overpass over Bellevue Way SE. The revised C9T connection from B7R includes an East Main Station and Bellevue Transit Center Station. While not studied by City of Bellevue, the extension north to the Hospital Station and Segment D is assumed to be the same as *Preferred Alternative C9T*.

B7R includes two options for accommodating the former BNSF Railway corridor's "railbanked" status. One option assumes joint, or shared, use of tracks by light rail and freight or commuter rail trains, which is inconsistent with Sound Transit's design criteria. The second option accommodates space for future freight rail operations with an interim trail use, more consistent with Sound Transit's current design in the corridor.

Costs were not developed with the same assumptions as Sound Transit's cost analysis and therefore are not directly comparable. However the City of Bellevue's estimates declare that the B7R modifications increase the project cost approximately \$10 to \$14 million more than the East Link B7 and C9T alternative combination; which is approximately \$150 million more than the *Preferred Alternative B2M* and C9T combination and approximately \$400 million more than the *Preferred Alternative B2M* and C11A combination.

A comparison of impacts between B7R, including the modified C9T, to the East Link Project Alternatives B7



and *Preferred Alternative C9T* is provided in Table ES-6 on the next page. Note that the methodologies used by the City of Bellevue in its review sometimes differ from the methodologies used by Sound Transit in this EIS, so some impacts are not directly comparable.

The B7R would serve the South Bellevue and downtown Bellevue transit markets. Ridership would be 12,500 within Segments B and C. With mitigation, B7R would result in improved traffic operations along Bellevue Way SE compared with B7 which does not affect or change this roadway. B7R would have greater residential displacements, property acquisition, visual, noise, park, and ecosystem impacts than B7 and C9T. But, B7R would have less business and employee displacements than B7 and C9T. The B7R A2 Station parking garage would result in visual impacts and require residential acquisitions, while the 118th Station for B7 requires business displacements. Like B7, the B7R Mercer Slough Nature Park impacts are in areas of wetlands and wetland buffer. B7R would be on a

retained fill on the east side of Sturtevant Creek, requiring relocation of the creek. Construction of B7R may result in higher ecosystem impacts along Mercer Slough, the wetland areas surrounding the slough and Sturtevant Creek than B7 with C9T. Also, the modified

route for C9T would potentially remove the proposed Low Income Housing Institute’s housing project along NE 2nd Street.

Table ES-6 displays differences in impacts between B7R and Alternatives B7 and Preferred Alternative C9T.

**TABLE ES-6**  
Summary Comparison of B7R and B7/C9T

Resource		City of Bellevue’s B7R Option			B7/C9T Alternatives
		From Segment A to Bellevue Transit Center Station <sup>a</sup>	C9T from Bellevue Transit Center Station to Segment D <sup>b</sup>	Total for B7R	
Ridership <sup>c</sup>	Segments B and C	12,500		<b>12,500</b>	<b>10,500</b>
	Projectwide	50,500		<b>50,500</b>	<b>49,000</b>
Noise Impacts		239	100	<b>339</b>	<b>316</b>
Acquisitions	Full	25	3	<b>28</b>	<b>20</b>
	Partial	10	13	<b>23</b>	<b>30</b>
Residential displacements		12	0	<b>12</b>	<b>0</b>
Business displacements (no. of employees)		9 (215)	10 (100)	<b>19 (315)</b>	<b>24 (370)</b>
Wetland (acres permanent)		2.1	0	<b>2.1</b>	<b>1.9</b>
Wetland buffers (acres permanent)		1.0	0	<b>1.0</b>	<b>0.5</b>
Parks (acres permanent and temporary)		2.3 <sup>d</sup>	0.4	<b>2.7</b>	<b>3.0</b>

<sup>a</sup> Source: City of Bellevue B7R Initial Summary Report (2011).

<sup>b</sup> Source: Applying East Link Project impacts for C9T north of Bellevue Transit Center in order to compare against impacts from East Link Project B7 and C9T Alternatives combination.

<sup>c</sup> Ridership is calculated for segment combinations and is not available for areas less than the segment level.

<sup>d</sup> Includes 2.3 acres included in B7R analysis and 0.4 acre of impact to NE 2nd Pocket Park from Bellevue Transit Center Station entrance. Impacts to Pocket Park might be greater but are not identified in B7R analysis.



**130th Station:** Located on NE 16th Street between 130th and 132nd Avenues NE and could include a park-and-ride lot with 300 parking spaces.

**Overlake Village Station:** Location depends on the Segment D alternative. The existing park-and-ride lot has approximately 200 parking stalls.

**Overlake Transit Center Station:** For all Segment D alternatives, the existing Overlake Transit Center Park-and-Ride Lot would be reconfigured to accommodate the new station and up to 320 cars.

**Storage/Tail Track:** Trail track up to 850 feet beyond the station platform of any interim station to accommodate layover of up to a four-car train. Storage and lead track located within the former BNSF Railway corridor near the Segment C to D connection to *Preferred Alternative D2A*. An operations

building/office and parking for operators would also be provided.

**Traction Power Substations:** Specific locations would depend on the alternative selected. One substation would be located near the 120th Station (*Preferred Alternative D2A*), another would be located near the midpoint of the segment (Alternatives D2E, D3, D5), and another near the Overlake Transit Center Station at the east end of the segment (*Preferred Alternative D2A*, Alternatives D2E, D3, D5).

#### **Connectors from Segment C**

**BNSF:** From *Preferred Alternatives C11A* or *C9T* and Alternatives C1T, C2T, C9A, or C14E.

**NE 12th Street:** From Alternatives C3T, C4A, C7E, or C8E.

## **Comparison of Segment D Alternatives**

*Preferred Alternative D2A* and Alternatives D2E and D3 travel parallel to and north of a new NE 15th Street corridor from Segment C east to 136th Place NE. All three of these alternatives would have traffic impacts at intersections in Redmond, which would be mitigated.

Although all alternatives in Segment D would cross several streams, impacts on habitat would be minimal and, in some cases, beneficial with mitigation. None of the Segment D alternatives would have residential displacements or visual or parkland impacts. As indicated in Table ES-7, the D2A - NE 24th Design Option and Alternative D3 would displace the most employees of the Segment D alternatives, although Alternative D5 would displace the most businesses. Alternative D3 would also have moderate construction risk, and would have the greatest estimated cost. When connecting from Segment C via NE 12th Street, Alternatives D2E, D3, and D5 would have noise impacts on one receptor, the Children's Hospital Bellevue Clinic and Surgery Center. This noise impact could be mitigated with a sound wall. Alternative D5 would also have noise impacts on 10 multifamily units on the south side of SR 520 that could be mitigated.

Alternative D5 would have the lowest estimated cost, but because of its location adjacent to SR 520, it would have the fewest stations and the least influence on transit-oriented development opportunities in the Bel-Red Subarea.

Ridership for all Segment D alternatives would be similar, with *Preferred Alternative D2A* having the highest. This supports future growth from the City of Bellevue and Redmond plans (the Bel-Red Subarea Plan [City of Bellevue, 2009] and Overlake Neighborhood Plan [City of Redmond, 2007]). These two plans have been approved by both cities' councils and included in their long-range development and economic goals. Therefore, growth in these areas was adjusted in these ridership forecasts with assistance from PSRC and the Cities of Bellevue and Redmond.

Any station in Segment D may serve as an interim terminus, which would include tail tracks beyond the station for storage and turnback operations. In addition, *Preferred Alternative D2A* includes storage tracks located in the former BNSF Railway corridor north of the Segment C/D boundary. The storage tracks also include parking for operators, and office/storage space.



**TABLE ES-7**  
Comparison of Segment D Alternatives

Feature		Alternatives				
		<i>Preferred D2A<sup>a</sup></i>	<b>D2A - NE 24th Design Option</b>	<b>D2E</b>	<b>D3</b>	<b>D5</b>
<b>Number of Stations</b>		3 to 4	3 to 4	3 to 4	3 to 4	2
<b>Estimated Cost</b> (millions, 2007 \$)		\$670 to \$765 <sup>b</sup>	\$710 to \$820	\$695 to \$840	\$735 to 875	\$470 to 580
<b>2030 Daily Ridership<sup>c</sup></b>	Segment boardings	<i>6,500 - 7,000</i> 7,000	7,000	7,000	6,500	6,000
	Total East Link ridership	<i>49,000 - 50,000</i> 51,000	49,500	50,000	49,000	49,500
<b>Travel Time through Segment</b> (minutes)		8	10	9	10	7
<b>Length</b> (miles)		3.3	3.5	3.4 to 3.5	3.5 to 3.6	3.5
<b>Comparative Cost-Effectiveness</b> -annualized cost divided by annual segment ridership in 2030		\$7.40 to \$8.35	\$8.35	\$7.85 to \$8.10	\$8.60 to \$8.80	\$5.95 to \$6.40
<b>Construction Risk<sup>d</sup></b>		Low	Low	Low	Moderate	Low
<b>Environmental Impacts</b>						
Business Displacements (number of employees)		34 (550)	69 (1,060)	42 (920)	74 (1,590)	79 (480)
Full/Partial Property Acquisition		8/47	13/ 56	16 /31 to 35	18/85 to 89	2/35 to 40
Decrease in Visual Quality		No	No	No	No	No
Wetlands: permanent/temporary (acres)		0.5/0.5	0.5/0.5	0.2 to 0.3/0.2 to 0.3	0.2/0.1	0.2 to 0.3/0.4
Wetlands buffer: permanent/temporary (acres)		0.6/1.7	0.6/1.7	0.5/0.6 to 0.7	0.1/0.1 to 0.2	0.6 to 0.7/0.8
High-Value Wildlife Habitat Loss (acres)		0.9	0.8	0.5	<0.1 to 0.1	1.3 to 1.4
Hazardous Material Sites		2	3	3	4	3
Noise-Impacted Receptors due to light rail (number after mitigation)		0	0	1 to 2 (0)	0 to 1 (0)	10 to 11 (0)
Stream Crossings		2	2	2	3	1
Intersections Not Meeting Local Standards and Operating Worse Than No Build Alternative (No. after mitigation)		1-2 (0)	1 (0)	2 (0)	1 (0)	1 (0)

<sup>a</sup> Range includes impacts with and without the Alternative D2A – 120th Station Design Option.

<sup>b</sup> Storage tracks for this alternative are unique and would cost an additional \$57 million.

<sup>c</sup> Ridership reported for each alternative is based on the representative East Link route (a combination of Alternatives A1, B3, C4A, D2A - NE 24th Design Option, and E2) where the only portion that changes is the alternative in that segment. Ridership for each preferred alternative when connected to the preferred alternatives in other segments is also shown in italics. See Chapter 3, Transportation Environment and Consequences, for more details.

<sup>d</sup> Construction risk considers risks related to geology, utilities, traffic and safety relative to the other alternatives, see Chapter 6.

## Preferred NE 16th At-Grade Alternative (D2A)

*Preferred Alternative D2A* travels parallel to and north of a new NE 15th Street corridor. From Segment C, it travels under 120th Avenue NE and 124th Avenue NE, continues at-grade on NE 16th Street, turns north at 136th Place NE, and crosses NE 20th Street, transitioning to an elevated structure along the south side of SR 520. It remains adjacent to SR 520 north of NE 24th Street, transitioning to an at-grade profile and continues along SR 520 until terminating at the Overlake Transit Center Station. Segment E alternatives would connect on the south side of NE 40th Street. Any station on the *Preferred Alternative D2A* route may serve as an interim terminus, which would include tracks beyond the station for storage and turnback operations. In addition, *Preferred Alternative D2A* includes storage tracks located in the former BNSF Railway corridor north of the Segment C/D boundary. The D2A - 120th Station Design Option is at-grade instead of a retained cut between 120th and 124th Avenues NE. The D2A - NE 24th Design Option leaves the SR 520 corridor, runs elevated along the north side of NE 24th Street, becomes at-grade east of 148th Avenue NE, and turns north along the west side of 152nd Avenue NE to the Overlake Village Station and then runs along SR 520. A park-and-ride with 300 stalls would be provided at either the 120th or 130th Station; the Overlake Transit Center Station would provide 320 stalls.

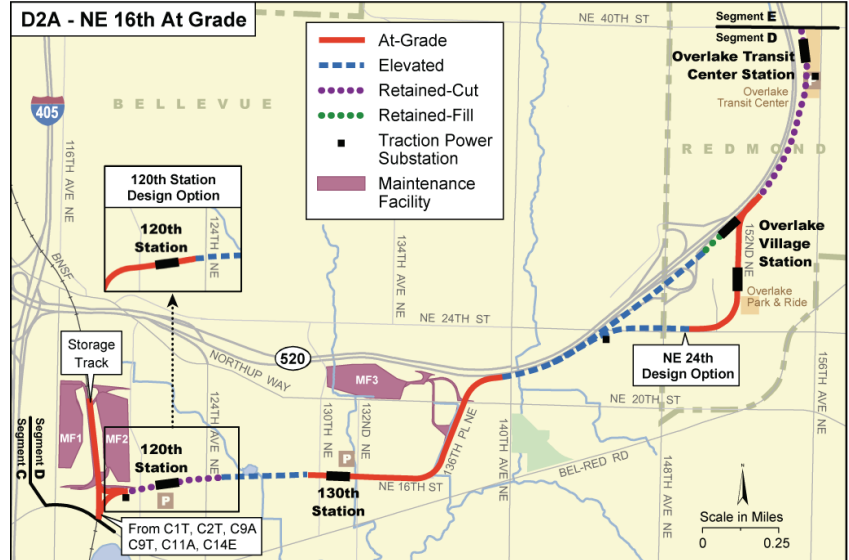
### Evaluation Summary

**Markets Served by Stations:** Bel-Red corridor, Overlake Village, Microsoft headquarters.

**Estimated Cost:** \$670 million to \$765 million (to \$820 million with D2A - NE 24th Design Option).

**Ridership:** Forecasts predict 6,500 to 7,000 daily boardings at the stations in this alternative in 2030, and 7,000 daily boardings with the D2A - NE 24th Design Option.

**Transportation Impacts:** Crossing gates would be included with the D2A - 120th Station Design Option, in contrast to the preferred retained-cut 120th Station, which would minimize impacts. At-grade crossings at 130th Avenue NE, 132nd Avenue NE, NE 16th Street, and NE 20th Street would be signalized, and remaining cross streets (i.e., 134th Avenue NE), and driveways would be restricted to right-in/right-out access. The D2A - NE 24th Design Option would have



gates at the 152nd Avenue NE at-grade crossing. One to two intersections would fail to meet operating standards and have a higher delay than the No Build Alternative. These intersections can be mitigated. With the D2A -NE 24th Design Option, just one intersection would require mitigation.

#### Potential Environmental Impacts during Operation:

*Preferred Alternative D2A* would cross two streams, and affect approximately 0.5 acre of wetland and 0.9 acre of high-value wildlife habitat (0.8 with D2A - NE 24th Design Option) associated with these crossings. The D2A - NE 24th Design Option would displace up to 69 businesses and affect up to 1,060 employees, as compared with 34 business displacements affecting 550 employees with D2A. The D2A - NE 24th Design Option would remove large trees along NE 24th Street and 152nd Avenue NE, but would not lower the medium visual quality category for this area.

**Temporary Impacts during Construction:** Impacts could include short-term and long-term lane closures, the loss of on-street parking, and bus route impacts. Partial lane closures would occur along NE 16th Street, 136th Place NE, and Microsoft Road, although short-periods of full closure might occur along NE 16th Street and 136th Place NE. The Overlake Transit Center would temporarily close and relocate bus stops to nearby streets. The loss of parking could be mitigated by routing transit riders to nearby park-and-ride lots, providing leased parking lots, or new parking areas. With the D2A - NE 24th Design Option, partial lane closures could occur along NE 24th Street and 152nd Avenue NE.

**Construction Risks:** Construction risks would be low.

## NE 16th Elevated Alternative (D2E)

The NE 16th Elevated Alternative (D2E) follows a new east-west street at approximately NE 15th Street until 136th Place NE, where it turns north to and follows SR 520 until NE 24th Street. It then becomes at-grade at 148th Avenue NE, and heads east until 152nd Avenue NE, returning to and following SR 520 in a retained cut to the Overlake Transit Center Station. Alternative D2E supports the dense, transit-oriented land-use redevelopment plans of Bellevue and Redmond. Any station in Alternative D2E may serve as an interim terminus, which could include tracks beyond the station for storage and turnback operations. A park-and-ride with 300 stalls would be provided at the 130th Station; the Overlake Transit Center Station would provide 320 stalls.

### Evaluation Summary

**Markets Served by Stations:** Bel-Red corridor, Overlake Village, Microsoft headquarters.

**Estimated Cost:** \$695 million to \$840 million.

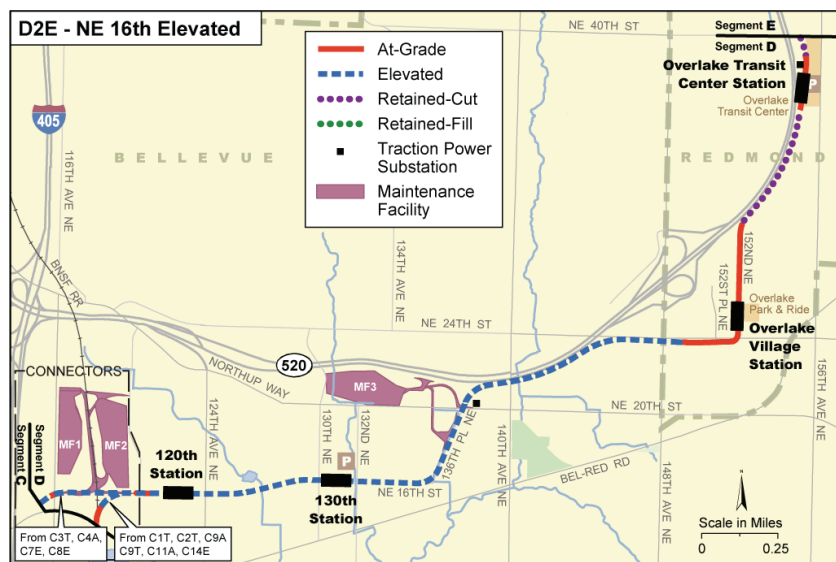
**Ridership:** Forecast predicts 7,000 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Impacts would occur at NE 24th Street and 151st Avenue NE, and at NE 24th Street and 152nd Avenue NE due to the at-grade crossing between these intersections. These impacts can be mitigated through design modifications. Access to properties off 136th Place NE and NE 16th Street would be limited to right-in/right out access. Access to properties west of 152nd Avenue NE would be relocated to NE 24th Street.

### Potential Environmental Impacts During Operation:

Alternative D2E would cross two streams and affect approximately 0.2 to 0.3 acre of wetland and 0.5 acre of high-value wildlife habitat associated with these crossings. One or two noise impacts would be mitigated. Alternative D2E would displace 42 businesses with approximately 920 employees.

**Temporary Impacts During Construction:** Partial roadway closures of 116th and 152nd avenues NE, NE 16th Street, NE 24th Street, 136th Place NE, and Microsoft Road would be required, although short-periods of full closure may occur along NE 16th Street



and 136th Place NE. These closures would include a temporary loss of on-street parking. The Overlake Transit Center would temporarily close and relocate bus stops to nearby streets. The temporary loss of parking could be mitigated by routing transit riders to nearby park-and-ride lots, providing leased parking lots, or new parking areas. Construction noise would occur. Alternative D2E would be located adjacent to three contaminated sites and would have the potential to encounter contaminated soil and groundwater during construction.

**Construction Risks:** Construction risk would be low.



Simulation of light rail at Overlake Transit Center with Alternative D2E

## NE 20th Alternative (D3)

The NE 20th Alternative (D3) follows a new east-west street at approximately NE 15th Street until 136th Place NE, where it turns north and then east into NE 20th Street, entering a retained cut until 152nd Avenue NE. The alternative continues in a retained cut while traveling north to the Overlake Village Station, where it returns to at-grade. It then follows 152nd Avenue NE to SR 520 and parallels SR 520 in a retained cut to the Overlake Transit Center Station. Alternative D3 supports the dense, transit-oriented land-use redevelopment plans of Bellevue and Redmond. For Alternative D3, NE 20th Street would be widened on either side of the road and 152nd Avenue NE would be widened to the east and west around the Overlake Village Station. Any station on this route might serve as an interim terminus, which could include tracks beyond the station for storage and turnback operations. A park-and-ride with 300 stalls would be provided at the 130th Station; the Overlake Transit Center Station would provide 320 stalls.

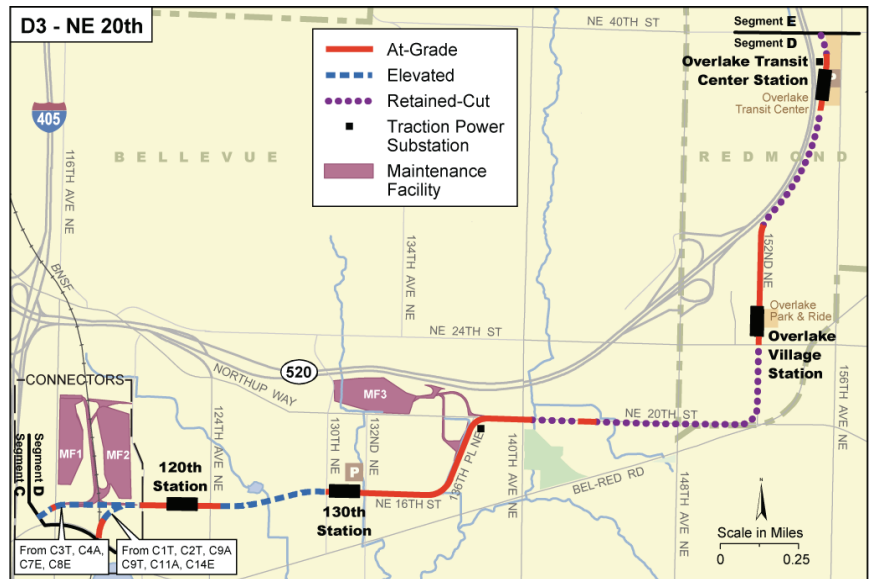
### Evaluation Summary

**Markets Served by Stations:** Bel-Red corridor, Overlake Village, Microsoft headquarters.

**Estimated Cost:** \$735 million to \$875 million.

**Ridership:** Forecast predicts 6,500 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Access to properties on 136th Place NE and NE 16th Street would be limited to right-in/right-out access. This alternative would limit access to businesses on NE 20th Street and 152nd Avenue NE, where there would be a retained cut. The retained cut along NE 20th Street and 152nd Avenue NE would require widening the signalized intersections at 136th Place NE, 140th Avenue NE, and the 14300 block of NE 20th Street. Between these intersections, however, access would be limited to right-in, right-out only access. Property access on 152nd Avenue NE, north of NE 20th Street, would be limited to right-in, right-out only turns. One intersection would be impacted and would be mitigated.



### Potential Environmental Impacts During Operation:

Alternative D3 would cross three streams and affect approximately 0.2 acre of wetland and approximately 0.1 acre of high-value wildlife habitat associated with these crossings. There would be up to one potential noise impact, and it would be mitigated. Alternative D3 would displace 74 businesses with approximately 1,590 employees.

**Temporary Impacts During Construction:** Partial roadway closures would be required on 116th, and 152nd Avenues NE; NE 20th and NE 16th Streets; 136th Place NE; and Microsoft Road, although short-periods of full closure might occur along NE 16th Street and 136th Place NE. These closures would include a temporary loss of on-street parking and possible detours. The Overlake Transit Center would temporarily close and relocate bus stops to nearby streets. The temporary loss of parking could be mitigated by routing transit riders to nearby park-and-ride lots, providing leased parking lots, or new parking areas. Construction noise would occur. Alternative D3 would involve acquiring one contaminated property with the potential for encountering three other sites with contaminated soil and/or groundwater during construction.

**Construction Risks:** Construction risk would be moderate due to a retained cut in an urban corridor and require extensive excavation of soil, conflicts with traffic circulation, and extensive utility relocation.



## SR 520 Alternative (D5)

The SR 520 Alternative (D5) follows the former BNSF Railway corridor, turns east at approximately NE 20th Street, and travels to the south side of SR 520. This alternative crosses over NE 24th Street and under 148th Avenue NE to the Overlake Village Station and then follows SR 520 to the Overlake Transit Center Station. It would have two optional locations for the Overlake Village Station: near Safeway (approximately 26th Street) or on 152nd Avenue NE. Any Alternative D5 station may serve as an interim terminus, which could include tracks beyond the station for storage and turnback operations. The Overlake Transit Center Station would provide 320 stalls.

### Evaluation Summary

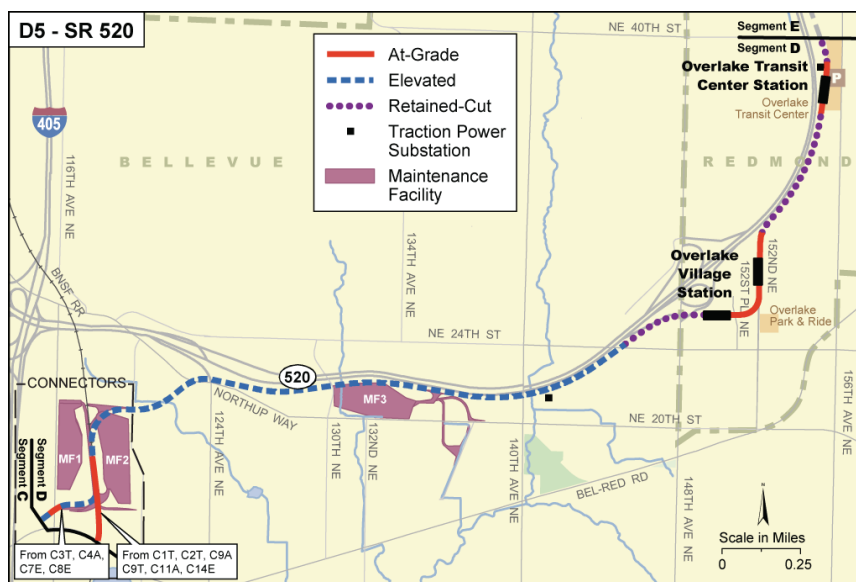
**Markets Served:** Overlake Village, Microsoft headquarters campus.

**Estimated Cost:** \$470 million to \$ 580 million.

**Ridership:** Forecast predicts 6,000 daily boardings at the stations with this alternative in 2030. This alternative has slightly fewer daily boardings than most Segment D alternatives; however, the shortened projected travel time results in a similar daily East Link projectwide ridership.

**Transportation Impacts:** Property access on the west side of 152nd Avenue NE north of the Overlake Village Station would be closed, but access to this property would remain from 151st Place NE. One intersection would fail to meet operating standards and have a higher delay than with the No Build Alternative. This impact can be mitigated.

**Potential Environmental Impacts During Operation:** Alternative D5 would cross one stream and impact approximately 0.2 to 0.3 acre of wetland and 1.3 to 1.4 acres of high-value wildlife habitat associated with



these crossings. Alternative D5 would result in 10 to 11 noise impacts, all of which Sound Transit would mitigate. Alternative D5 would displace 79 businesses with approximately 480 employees when connecting to Segment C.

**Temporary Impacts During Construction:** Partial closures would be required for 116th Avenue NE, 152nd Avenue NE, and Microsoft Road. These closures would include a temporary loss of on-street parking and possible detours. The Overlake Transit Center would temporarily close and relocate bus stops to nearby streets. The Overlake Transit Center would temporarily close and relocate bus stops to nearby streets. The temporary loss of parking could be mitigated by routing transit riders to nearby park-and-ride lots, providing leased parking lots, or new parking areas. Construction noise would occur. Alternative D5 would be located adjacent to three contaminated sites and would have the potential to encounter contaminated soil and groundwater during construction.

**Construction Risks:** Construction risk would be low.

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## Segment E: Downtown Redmond

Segment E travels parallel to SR 520 north and east into Downtown Redmond. Land uses consist of office campuses of three- to four-story buildings between NE 40th Street and NE 51st Street, then transition to suburban low-density, single-family residential, and then to multifamily residential before West Lake Sammamish Parkway NE, where the segment would enter Downtown Redmond. Downtown Redmond is an urban center with mostly one- to four-story commercial structures, while southeast of downtown the land uses change considerably to include light industrial and/or manufacturing. Downtown Redmond includes a substantial amount of land designated for park and open space uses along the Sammamish River and Bear Creek. All alternatives would either cross or travel parallel to these lands. Any of the Segment E stations could be an interim terminus. Maintenance facilities are discussed after descriptions of the Segment E alternatives.

### Alternatives

In Segment E, there would be a single route from the Overlake Transit Center and along SR 520 to the interchange with West Lake Sammamish Parkway NE; the route would then separate into three alternatives through Downtown Redmond:

- Preferred Marymoor Alternative (E2)
- Redmond Way Alternative (E1)
- Leary Way Alternative (E4)

In Downtown Redmond, the alternatives would use a portion of the former BNSF Railway corridor for the route, coming either from Redmond Way, Marymoor Park, or Leary Way. Preferred Alternative E2 would terminate at the Downtown Redmond Station, and



Alternatives E1 and E4 would terminate at the SE Redmond Station near the interchange of SR 520 and SR 202.

Preferred Alternative E2 also has the Redmond Transit Center Station Design Option, which would have a station at Redmond Town Center, after which the route would turn north on 161st Avenue NE in the center of the roadway, with a terminus station at the Redmond Transit Center.

When funding is available to advance Segment E design work, Sound Transit would work with City of Redmond to adjust the design along the former BNSF Railway corridor to accommodate the City's Central

Connector Plan improvements, including a trail and other local and regional utilities, as well as the East Link light rail project.

**Components**

**Downtown Redmond Station:** Serves *Preferred Alternative E2* only and is west of Leary Way NE.

**Redmond Town Center Station:** At-grade station for Alternatives E1, E4, and the E2 - Redmond Transit Center Design Option.

**SE Redmond Station:** At-grade station for all Segment E alternatives; includes a five-story parking structure with 1,400 stalls.

**Redmond Transit Center Station:** At-grade station for the E2 - Redmond Transit Center Design Option only.

**Tail Track:** Beyond the terminus station, up to 850 feet long to accommodate layover of up to a four-car train.

**Traction Power Substations:** There would be a total of two for each alternative. One would be located along the route adjacent to SR 520 or along West Lake Sammamish Parkway NE (E2, E1, E4); the others would be at either the Redmond Town Center Station (E2) or the terminus station at SE Redmond (E1, E4).

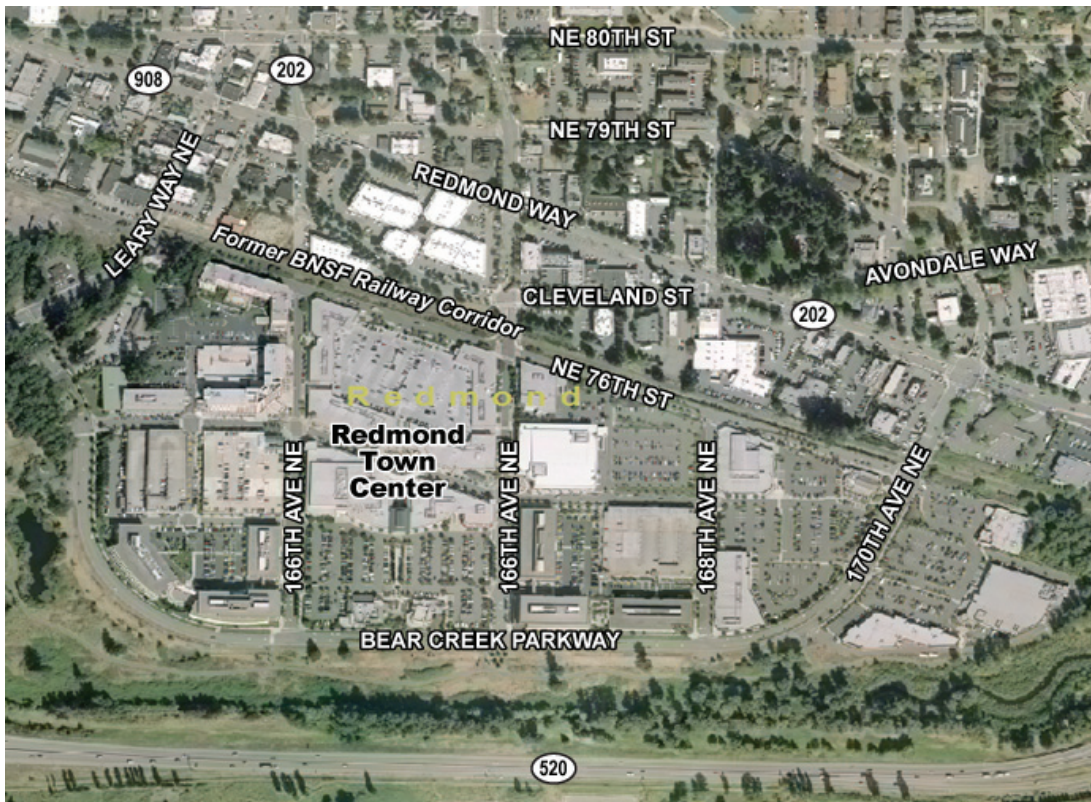
**Connectors to Segment D**

All Segment E alternatives would connect to Segment D at the Overlake Transit Center.

## Comparison of Segment E Alternatives

Impacts from all Segment E alternatives would be similar. The E2 -Redmond Transit Center Design Option would provide one more station than the other Segment E alternatives, but would also have the greatest impact in many categories – the highest estimated cost and the most residential, business, and employee displacements (Table ES-8).

*Preferred Alternative E2* would have the highest permanent impacts on parks. Alternative E1 would have the highest impact on habitat but the lowest impact on parks. E4 would require relocation of a historic structure and E1 and E4 would also result in a decrease in visual quality. All Segment E alternatives would result in noise impacts, which would be mitigated.



*Aerial View of Redmond Town Center*

**TABLE ES-8**  
Comparison of Segment E Alternatives

Feature		Alternatives			
		<i>Preferred E2</i>	<b>E2 - Redmond Transit Center Design Option</b>	<b>E1</b>	<b>E4</b>
<b>Number of Stations</b>		2	3	2	2
<b>Estimated Cost</b> (millions, 2007 \$)		\$555 to \$635	\$690 to \$795	\$595 to \$685	\$505 to \$580
<b>2030 Daily Ridership<sup>a</sup></b>	Segment boardings	3,500 3,500	4,000	3,500	3,500
	Total East Link ridership	<i>49,000 – 50,000</i> 49,500	50,000	49,500	50,000
<b>Travel Time through Segment</b> (minutes)		6	6	6	6
<b>Length</b> (miles)		3.7	3.8	3.7	3.3
<b>Comparative Cost-Effectiveness</b> -annualized cost divided by annual segment ridership in 2030		\$11.00	\$13.00	\$12.05	\$9.75
<b>Construction Risk<sup>b</sup></b>		Low	Low	Low	Low
<b>Environmental Impacts</b>					
Residential Displacements: number of housing units		2	126	2	2
Business Displacements (number of employees)		8 (290)	23 (350)	7 (210)	7 (120)
Full/Partial Property Acquisition		10/26	16/39	8/35	6/29
Decrease in Visual Quality?		No	No	Yes	Yes
High-Value Wildlife Habitat Loss (acres)		1.1	1.2	2.1	1.2
Stream Crossings		2	2	2	2
Noise-Impacted Receptors (number after mitigation <sup>c</sup> )		181 (0)	181 (0)	317 (0)	98 (0)
Vibration - Impacted Buildings (number after mitigation)		3 (1)	3 (1)	3 (1)	3 (0)
Groundborne Noise - Impacted Buildings (number after mitigation)		0	0	0	0
Historic Properties Potentially Impacted		0	0	0	1
Park Impacts (area in acres before mitigation)	Permanent	2.0	2.0	0.2	0.7
	Temporary	3.0	3.5	0.3	0.5
Intersections Meeting Local Standards and Operating Worse than No Build Alternative (No. after mitigation)		4(0)	5 (0)	3 (0)	3 (0)

<sup>a</sup> Ridership reported for each alternative is based on the representative East Link route (a combination of Alternatives A1, B3, C4A, D2A - NE 24th Design Option, and E2) where the only portion that changes is the alternative in that segment. Ridership for each preferred alternative when connected to the preferred alternatives in other segments is also shown in italics. See Chapter 3, Transportation Environment and Consequences, for more details.

<sup>b</sup> This total number does not equal the sum of the individual park impacts due to rounding up of the individual park impact numbers.

<sup>b</sup> Construction risk considers risks related to geology, utilities, traffic and safety relative to the other alternatives, see Chapter 6.

<sup>c</sup> Some impacts mitigated with building sound insulation, which does not reduce exterior noise levels.



## Preferred Marymoor Alternative (E2)

*Preferred Marymoor Alternative E2* travels parallel to, and east of SR 520 in a combination of retained-cut and at-grade profiles and then transitions to an elevated profile on the south side of SR 520 in a new bridge structure over the Sammamish River. The route then descends down to the south side of SR 520 along Marymoor Park. The proposed SE Redmond Station, parking structure, and park-and-ride lot are located on the south side of the SR 520 and SR 202 interchange. After the station, E2 turns west, goes under the SR 520 and SR 202 interchange, and enters the former BNSF Railway corridor elevated over Bear Creek. This alternative then becomes at-grade to cross 170th Avenue NE and continues in the former BNSF Railway corridor to the Downtown Redmond Station and terminus northwest of Leary Way. An 850-foot-long tail track extends past the station for train layover and turnback operations.

*Preferred Alternative E2* also has a design option (E2 - Redmond Transit Center Design Option), which would have a station at Redmond Town Center instead of the Downtown Station, after which the route would turn north on 161st Avenue NE in the center of the roadway, with a terminus station at the Redmond Transit Center.

### Evaluation Summary

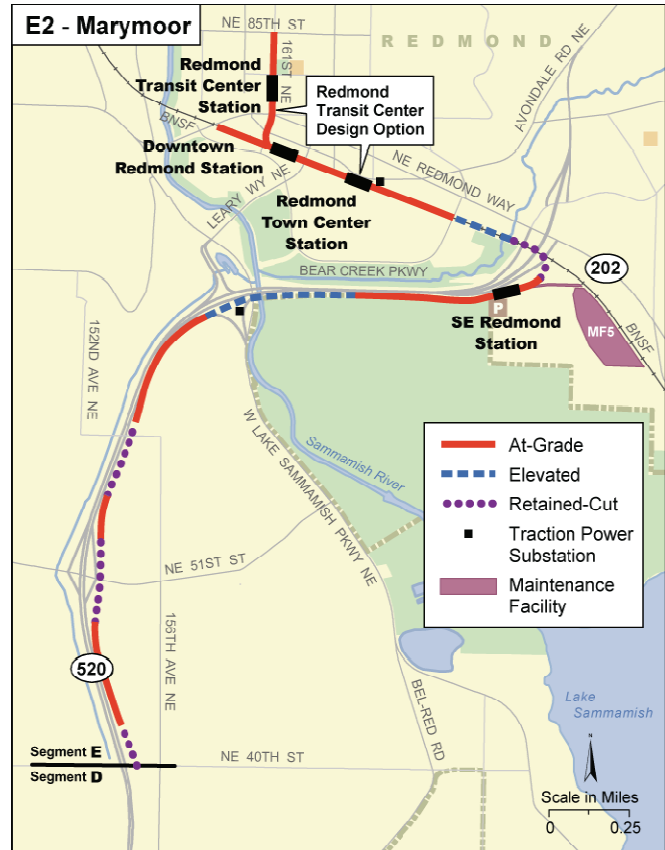
**Markets Served by Stations:** Areas of Downtown Redmond and communities to the northeast and southeast of Redmond with a large park-and-ride station.

**Estimated Cost:** \$555 million to \$635 million (to \$795 million with design option).

**Ridership:** Forecasts predict 3,500 daily boardings at the stations in 2030 and 4,000 daily boardings with the E2 - Redmond Transit Center Design Option.

**Transportation Impacts:** Traffic at the intersections of SR 202 and NE 70th Street; NE 70th Street and 176th Avenue NE; NE 76th Street and 170th Avenue NE; and at SR 202 and East Lake Sammamish Parkway would be adversely affected. With the E2 - Redmond Transit Center Design Option, there would be an additional traffic impact at Redmond Way and 161st Avenue NE from the track in the 161st Avenue NE median. All traffic impacts could be mitigated.

**Potential Environmental Impacts During Operation:** *Preferred Alternative E2* would displace two residences and eight businesses and affect approximately 290 employees. The E2 - Redmond Transit Center Design Option would displace 126 residences and 23 businesses with approximately 350 employees. *Preferred Alternative E2* would permanently acquire 2



acres of Marymoor Park. E2 would result in 181 noise impacts, all of which Sound Transit would mitigate. Only one of the three buildings that would experience vibration impacts would be further addressed during final design. Neither E2 nor its design option would impact the Justice William White House nor decrease visual quality.

**Temporary Impacts During Construction:** *Preferred Alternative E2* and E2 - Redmond Transit Center Design Option would include a temporary construction easement in Marymoor Park, but construction would not affect park use. Also, temporary trail closures and detours would be included for work near Sammamish River, Bear Creek, and East Lake Sammamish and Bridle Creek trails. Some former BNSF Railway corridor roadway crossings would need to be temporarily closed during station and track construction. Partial closures of NE 40th, NE 51st, and NE 60th Streets; Leary Way; and 164th, 166th, and 170th Avenues NE and the SR 520 on- and off-ramps at SR 520 would be required. Construction of E2 - Redmond Transit Center Design Option would require a long-term full closure of 161st Avenue NE between Redmond Way and NE 85th Street, and would include the temporary loss of on-street parking on this road. Construction noise would occur.

**Construction Risks:** Construction risks would be low.

## Redmond Way Alternative (E1)

The **Redmond Way Alternative (E1)** follows SR 520 to West Lake Sammamish Parkway NE, where it heads north to Redmond Way and turns northeast on the south side of Redmond Way to cross the Sammamish River. Alternative E1 continues along Redmond Way and turns southeast into the former BNSF Railway corridor to the Redmond Town Center Station, then travels over Bear Creek and the SR 520/SR 202 interchange to the terminus at the SE Redmond Station.

### Evaluation Summary

**Markets Served by Stations:** Redmond Town Center and communities northeast and southeast of Redmond with a large park-and-ride terminus station.

**Estimated Cost:** \$595 million to \$685 million.

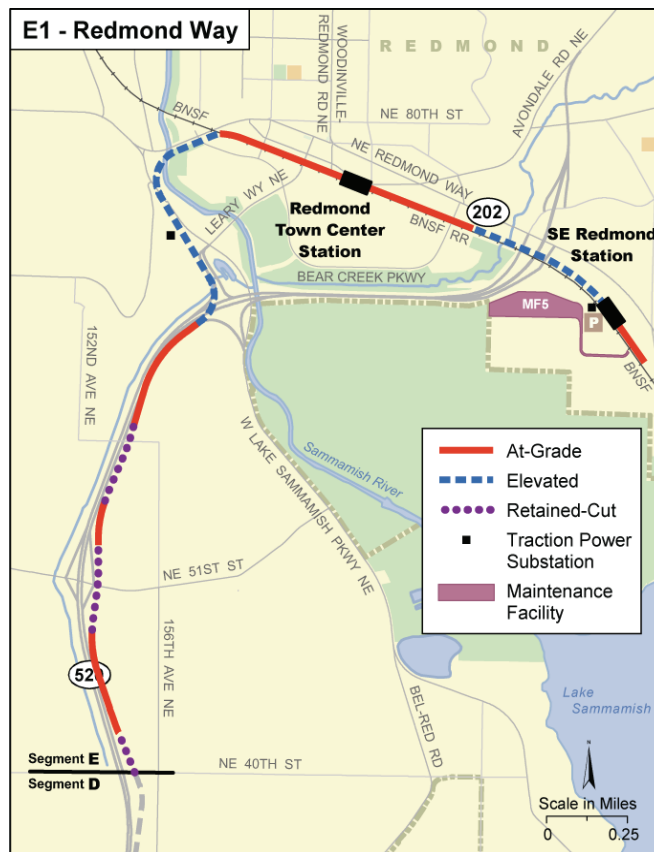
**Ridership:** Forecasts predict 3,500 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Traffic at the intersections of NE 76th Street and 170th Avenue NE, and SR 202 at NE 70th Street and at East Lake Sammamish Parkway would be adversely affected but could be mitigated.

**Potential Environmental Impacts During Operation:** Alternative E1 would displace two residences and seven businesses with approximately 210 employees. This alternative would acquire about one-tenth of an acre each from Luke McRedmond Landing Park and the Sammamish River Trail, but these areas would still be accessible under the elevated guideway. This alternative would also result in 317 noise impacts, all of which Sound Transit would mitigate. Only one of the three vibration impacts would need to be further addressed during final design. Alternative E1 would not impact the Justice William White House. Residences along West Lake Sammamish Parkway NE would experience visual impacts.

**Temporary Impacts During Construction:** Temporary trail closures and detours would be required for work in the vicinity of Sammamish River, Bear Creek, East Lake Sammamish and Bridle Creek trails. Partial closures of NE 40th, NE 51st, and NE 60th Streets; Leary Way; and 164th, 166th, and 170th Avenues NE would be required. A short-term full closure of NE 70th Street would also be required and would include the temporary loss of on-street parking on this road. Construction noise would occur.

**Construction Risks:** Construction risk would be low.



Simulation of Redmond Way Alternative (E1) near Luke McRedmond Landing Park

## Leary Way Alternative (E4)

The **Leary Way Alternative (E4)** follows SR 520 to West Lake Sammamish Parkway NE, where it turns north before heading east on Leary Way and entering Downtown Redmond. From Leary Way, Alternative E4 turns southeast into the former BNSF Railway corridor, and continues over Bear Creek and under SR 520 to the SE Redmond terminus station, which would be at-grade. This would be the shortest Segment E alternative.

### Evaluation Summary

**Markets Served by Stations:** Redmond Town Center and communities northeast and southeast of Redmond with a large park-and-ride terminus station.

**Estimated Cost:** \$505 million to \$580 million.

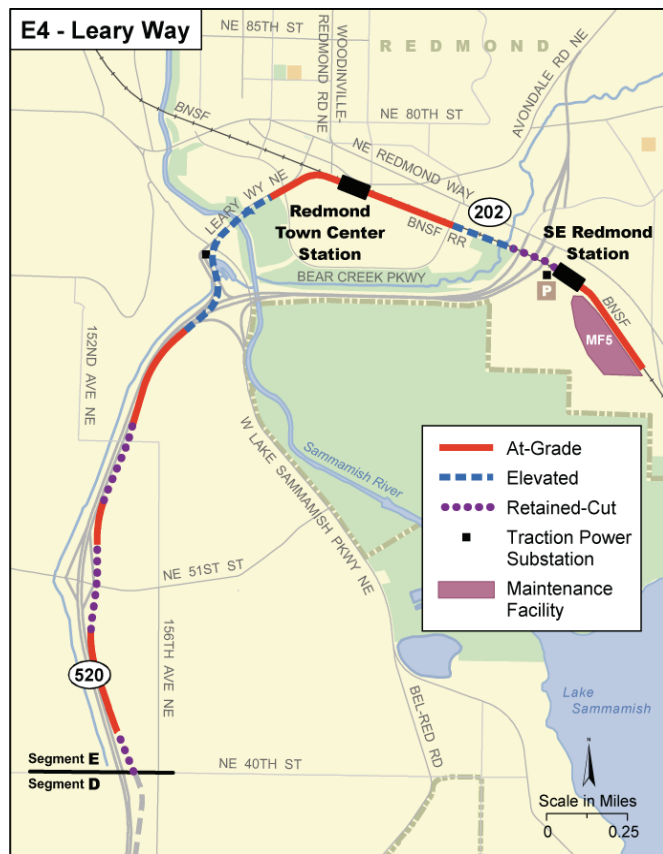
**Ridership:** Forecasts predict 3,500 daily boardings at the stations in this alternative in 2030.

**Transportation Impacts:** Traffic at the intersections of NE 76th Street and 170th Avenue NE, and SR 202 at NE 70th Street and at East Lake Sammamish Parkway would be adversely affected but could be mitigated.

### Potential Environmental Impacts During Operation:

Alternative E4 would displace 2 residences and 7 businesses with approximately 120 employees. Alternative E4 would also convert 0.1 acre of the Sammamish River Trail and 0.7 acre of Town Center Open Space. This alternative would result in 98 noise impacts, all of which Sound Transit would mitigate. This alternative would have vibration impacts on three buildings, but these can all be mitigated. The historic Justice William White House would need to be relocated, which would be considered an adverse impact on this resource. Alternative E4 would require removing trees along Leary Way, which serves as an entryway to Downtown Redmond. Landscape treatment would minimize the impact, but the project would still result in lowering the visual quality along Redmond’s entry into downtown.

**Temporary Impacts During Construction:** There would be temporary impacts on the farmer’s market east of Leary Way during construction. Temporary trail closures and detours would be required for work in the vicinity of the Sammamish River, Bear Creek, East Lake Sammamish, and Bridle Creek trails. Partial closures would be required for NE 40th, NE 51st, and NE 60th Streets; 164th, 166th, and 170th Avenues NE; Leary Way; and the SR 520 on- and off-ramps at SR 202. A short-term full closure of NE 70th Street would also be required and would include the temporary loss of on-street parking on this road. Construction noise would occur.



Simulation of Elevated Light Rail on Leary Way with Alternative E4

**Construction Risks:** Construction risk would be low.

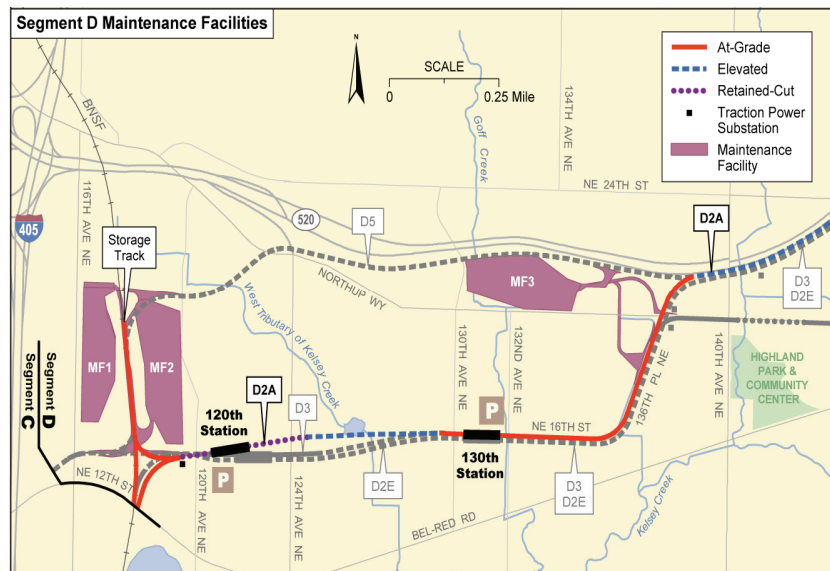


# Maintenance Facilities

Sound Transit’s Link Operations and Maintenance Facility is located south of downtown Seattle. A second storage and light maintenance facility would be needed with full build-out of the East Link Project. A second light rail storage and light maintenance facility was funded as part of ST2 to support systemwide expansion, with funding contributions from the King County and Snohomish County subareas. This facility’s location will be determined through operations analysis and future site planning. Because the facility could be located in the East Link corridor, this Final EIS evaluates alternative sites but does not identify a preferred facility location. This facility would require approximately 10 to 15 acres of land and would primarily serve the following functions:

- Overnight and midday storage for approximately 40 to 50 vehicles
- Car washing facility for exterior vehicle cleaning
- Interior cleaning of light rail vehicles
- Daily service and inspection of revenue vehicles
- Corrective and preventive maintenance
- Maintenance of track facilities
- Operating offices
- Light rail vehicle operator reporting and ready-room areas

With East Link service to Overlake Transit Center as an interim terminus, overnight vehicle storage would be located at the tail tracks at the end of the line



and/or in the storage track in the former BNSF Railway corridor described as part of Preferred Alternative D2A. Vehicle maintenance and repair would remain at the existing Link Operations and Maintenance Facility in Seattle.

## Alternatives

**116th Maintenance Facility (MF1).** MF1 is located between 116th Avenue NE and the former BNSF Railway corridor. Constructing this facility requires major grading and a 60-foot-high retaining wall on the east side of 116th Avenue NE to create a flat area for operations at the level of the former BNSF Railway corridor.

**BNSF Maintenance Facility (MF2).** MF2 is located between 120th Avenue NE and the former BNSF Railway corridor and requires minor grading to create a flat area.

**SR 520 Maintenance Facility (MF3).** MF3 is located adjacent to the south side of the SR 520 right-of-way, roughly between 130th Avenue NE and 135th Avenue NE. This site requires a moderate amount of grading to create a flat area.

**SE Redmond Maintenance Facility (MF5).** MF5 has two possible locations. For Preferred Alternative E2 and Alternative E4, the maintenance facility is located directly adjacent to the former BNSF Railway corridor. These sites require minimal to no grading. For Alternative E1, the maintenance facility is located southwest of the SR 520/SR 202 interchange.



## Comparison of Maintenance Facility Alternatives

The maintenance facilities would not displace any residences or affect any parks (see Table ES-9) and would be located in predominantly commercial/ industrial areas. The areas of MF1, MF2, and MF3 will eventually transition from industrial uses to more retail and commercial uses under new land use plans for this area. This transition, however, is dependent on purchase and redevelopment of these properties by private developers.

MF1 and MF3 would be more expensive to construct and would displace substantially more businesses (up to 82 and 60, respectively) than the other potential maintenance facility locations. The greater cost for these maintenance facilities would be related to greater amounts of excavation and grading required to make these sites level. MF1 and MF3 have the most potential employee displacements, with over 850, while MF5 would be the least costly maintenance facility and could have the fewest employee displacements, with as few as 310. The fewest business displacements would occur under MF2, which would displace five to six businesses, depending on which alternative it connects from.

MF1, MF2, and MF3 might require wetlands and wetland buffers to be filled; however, the impact



*View of Sound Transit's Central Link Operations and Maintenance Facility in Seattle*

acreage would be small. MF3 would result in an increase of 42 linear feet of open stream channel by replacing two culverts with shorter ones on Goff Creek.

**TABLE ES-9**  
Comparison of Maintenance Facility Alternatives

Features	MF1	MF2	MF3	MF5
<b>Estimated Cost</b> (millions, 2007 \$)	\$430 to \$465	\$310 to \$315	\$365 to \$385	\$240 to \$280
<b>Access Track</b> (feet)	1,050 to 1,800	1,500 to 1,600	460 to 1,300	800 to 1,300
<b>Environmental Impacts</b>				
Business Displacements (No. of employees)	77 to 82 (630 to 890)	5 to 6 (450 to 850)	56 to 60 (840 to 890)	16 to 38 (310 to 410)
Acres Converted to Transportation Use	20.1 to 24.1	23.1 to 23.8	19.7 to 25.6	17.7 to 20.4
Wetlands: permanent/temporary (acres)	0 to 0.1/0	0.1/0	<0.1/0	0/0
High-Value Wildlife Habitat Loss (acres)	0 to 0.1	0.1 to 0.2	0	0
Stream Crossings	0	0	1	0
Noise-Impacted Receptors (number after mitigation <sup>a</sup> )	1 (0)	0	0	0
Change in Impervious Surface in acres	+2.5 to +3.7	-0.4 to -3.7	-1.0 to -1.7	+1.8 to +2.3
Construction Risk	Low	Low	Low	Low

Some impacts mitigated with building sound insulation, which does not reduce exterior noise levels.

## ES.6 Projectwide Impacts

Construction of the East Link Project would benefit the region by providing frequent and reliable high-capacity transit service 20 hours a day/6 days a week (18 hours a day on Sundays) in the Seattle-to-Bellevue-to-Redmond corridor. The light rail system would provide faster transit travel times and increase transportation capacity in the corridor. Daily ridership is projected to be up to 52,500 boardings directly attributable to East Link by 2030, and light rail service can easily be expanded to accommodate future growth.

The project is consistent with and would support regional and local land use plans to encourage urban growth centers of high, mixed-use density. PSRC, working with the region's largest cities, has plans to direct much of the expected growth in population and employment into the urban centers in the Puget Sound region, in large part to help reduce sprawl and the related impacts of growth on the environment.

Due to the highly urbanized nature of the study area, impacts on natural resources would be relatively small (see Table ES-10) and most impacts would be related to the built environment. Table ES-10 presents the range of the lowest and highest impacts over the entire project corridor for each impact category before and after mitigation measures are applied. As shown, many projectwide impacts before mitigation concern property acquisition, which is also reflected in business and employee relocation, removal of parklands, and some losses in wetlands. East Link operations may also adversely affect levels of service at traffic intersections. After mitigation, only a few resources would be adversely affected by the project. For instance, the Justice White House in Redmond may require permanent relocation. Many of the adverse impacts on both natural resources and the built environment can be mitigated as discussed in Section ES.7, and all alternatives incorporate impact avoidance and minimization measures.

The East Link Project would also offer environmental improvements over the No Build Alternative. Some project alternatives could result in net benefits to parks and aquatic habitats and would remove contaminated soils encountered along the project route. The project would benefit the region by decreasing daily vehicle miles traveled (VMT) by approximately 230,000 miles and daily vehicle hours traveled (VHT) by approximately 9,000 hours, which would result in lower energy usage and reduced greenhouse gas emissions, thus reducing the overall volume of carbon dioxide (CO<sub>2</sub>) emissions in the region. The proposed

**TABLE ES-10**  
Summary of Project-Wide Impacts

Impact Category		Projectwide Preferred Alternative	Low to High Impact Range
Number of intersections adversely affected, (no. after mitigation)		11 to 13, (0)	9 to 20, (0)
Residential units displaced		49	2 to 229
Businesses displaced, (no. of employees)		59 to 81, (1,000 to 1,170)	54 to 156, (760 to 2,860)
Permanent wetland impacts in acres		0.7	0.3 to 2.6
High-value wildlife habitat loss in acres		2.6 to 3.0	1.7 to 6.0
Number of high-risk hazardous material sites		12	8 to 19
Number of receptors affected by noise due to traffic, (no. after mitigation)		0	0 to 154, (0)
Number of receptors affected by noise due to light rail operation, (no. after mitigation)		367 to 445, (0)	203 to 943, (0)
Number of receptors affected by vibration impacts, (no. after mitigation)		9 to 11, (2)	3 to 11, (0 to 3)
Number of receptors affected by groundborne noise impacts, (no. after mitigation)		26 to 27, (0)	25 to 36, (0)
Park impacts (area in acres before mitigation)	Permanent	5.8 to 6.0	1.3 to 6.5
	Temporary	3.5 to 0.7	2.0 to 13.6
Areas with reduction in visual quality		0	0 to 3
Number of stream crossings		6 to 8	3 to 8
Number of potential impacts on historic properties		1 to 2	0 to 3

project is expected to preserve environmental quality and provide beneficial impacts.

Although construction would be temporary, the duration of civil construction on a light rail project can be between 2 and 5 years on any given portion of the route. During construction, traffic and access may be adversely affected, which can affect adjacent businesses and residents. Light rail construction could temporarily impact the historic Winters House or change the setting for the potential Surrey Downs historic district. Construction would also result in dust, noise, and vibration, as well as lower visual quality around the construction site. There might be temporary impacts on wetlands and an increase in sediment loads in fish-bearing streams. A number of parks would be used or affected during construction, but Sound Transit is committed to mitigating adverse

impacts or restoring these parklands as necessary. Conversely, construction of any of the alternatives could result in increased employment and spending in the project vicinity during construction. The extent of these impacts depends on the source of project funding and the makeup of work crews used during project construction.

In addition, Sound Transit evaluated 23 potential construction risk factors for each alternative in terms of frequency and implication on cost and safety. Sound Transit concluded that the greatest risk would be associated with the Segment C tunnel alternatives, primarily due to two high-risk factors—safety and overall construction cost and bid climate—in addition to other moderate risk factors. Sound Transit concluded that *Preferred Alternative B2M*; *Alternative B7*; *Preferred Alternative C11A*; and *Alternatives C4A, C9A, and D3* would pose a moderate level of construction risk, due primarily to required earthwork, right-of-way, agency coordination, and extensive utility relocation risk factors. All other alternatives would pose a lower construction risk.

## ES.7 Avoidance, Minimization, and Mitigation Measures

Sound Transit is committed to meeting applicable federal, state, and local environmental regulations and applying reasonable mitigation measures to reduce significant adverse impacts. The Final EIS identifies measures to mitigate impacts of the project alternatives. Avoidance and minimization measures committed to as part of the project are identified along with other potential measures that would reduce or eliminate impacts. These measures would be refined through final design and permitting. The NEPA ROD would be issued after the Final EIS and include a list of all committed mitigation measures for the project to be built. A preliminary list of mitigation commitments for the *Preferred Alternative* is included in Appendix I.

The following summarizes select mitigation measures that could be implemented for impacts that the project alternatives might not be able to fully minimize or avoid:

**Wetlands:** Sound Transit is committed to no net loss of wetland function and area on a projectwide basis. To the extent possible, compensatory mitigation that would compensate for lost values in-kind would be identified close to impacts. Mitigation would meet the requirements of local critical area ordinances.

**Noise:** Noise impacts would be mitigated by installing special trackwork, sound walls, building insulation, or other measures.

**Vibration:** Sound Transit would install ballast mats, resilient rail fasteners, or other specialized trackwork.

**Visual Quality:** Sound Transit would incorporate visual enhancement measures into the project where practical and include the following measures to address adverse impacts where they occur could include providing landscaping or visual screening, implementing aesthetic treatment of walls, implementing pedestrian improvements, and minimizing bulk of elevated structures.

**Historic:** Mitigation for impacts to archaeological and historic resources would be documented in a Memorandum of Agreement. An archaeological resources monitoring and treatment plan (ARMTP) or an unanticipated discovery plan would be prepared to guide archaeological monitoring during East Link construction. Mitigation measures would be implemented to address potential impacts to historic properties during construction. A copy of the draft MOA is provided in Appendix I of the Final EIS.

**Parks:** Mitigation measures might include purchasing replacement land, enhancing or restoring existing parks, or providing financial compensation.

**Transportation:** Mitigation of changes in intersection level of service on surface streets may include restriping, adding right- or left-turn pockets, allowing U-turn movements at intersections, signalization, or implementing traffic management strategies.

## ES.8 Significant and Unavoidable Adverse Impacts

With the avoidance, minimization, and mitigation measures described in Chapter 3, Transportation Environment and Consequences, and Chapter 4, Environmental Impacts, of the Final EIS, significant adverse impacts would be avoided for most alternatives. Operational impacts that could not be fully mitigated include the following:

- Removal of vegetation along with the addition of other project components, such as retaining walls or an elevated guideway, would have a visual impact along Bellevue Way SE with Alternatives B1, B2A, B2E, and B3.
- Removal of mature vegetation in McCormick Park and the presence of the light rail transition structure would have a visual impact with Alternatives C3T, C4A, and C8E. In addition, the Alternative C8E elevated structure would have a visual impact on the pedestrian-oriented streetscape along 110th Avenue NE. When connecting from B2A, Alternative C9A would

result in a visual impact at 112th Avenue and Main Street.

- Residual vibration impacts may occur in Segment C along Preferred Alternative C11A or Preferred Alternative C9T when connected to Preferred Alternative B2M, and Alternatives C4A, C8E, C9A, and C14E with all connectors. Residual vibration impacts could also occur along Preferred Alternative E2, E2 - Redmond Transit Center Design Option, and Alternative E1 in Segment E. Potential impacts and the ability to mitigate vibration would be reviewed again in final design.

Temporary impacts during construction may not be avoidable and could be significant and adverse in some locations. These impacts could include temporary longer-term lane or roadway closures, loss of parking, and noise and vibration along portions of any alternative. Detour routes, when available, would reduce the impact of roadway closures, although delays, congestion, and inconvenience would still occur. There could be adverse impacts on businesses adjacent to the alternative corridors that depend on drive-by traffic to attract business or whose customers might wish to avoid traffic and parking difficulties. This impact would be most severe for cut-and-cover tunnel construction for Preferred Alternative C9T and Alternatives C1T and C2T in Segment C, and for retained-cut construction for Alternative D3 in Segment D. Closure of parts or all of McCormick Park would occur during construction of Alternatives C3T, C4A, and C8E in Segment C.

## ES.9 Other Environmental Considerations

### ES.9.1 Section 4(f) and Section 6(f) Resources

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966, as amended and codified at 49 United States Code (U.S.C.) §303, states the following:

*...[It] is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.*

Title 23 Code of Federal Regulations (CFR) Part 774 as amended March 2008 states the following:

*The Administration may not approve the use, as defined in §774.17, of Section 4(f) property unless a determination is made under paragraph (a) or (b) of this section. (a) The Administration determines*

*that: (1) There is no feasible and prudent avoidance alternative, as defined in §774.17, to the use of land from the property; and (2) The action includes all possible planning, as defined in §774.17, to minimize harm to the property resulting from such use; or (b) The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a de minimis impact, as defined in §774.17, on the property.*

Thirteen Section 4(f) park resources and seven historic Section 4(f) resources are potentially affected by the East Link Project.

Sound Transit has incorporated measures of avoidance, minimization, and mitigation or enhancement as conditions of the project such that project use of each park resource would not impact the parks. The officials with jurisdiction over the resources in the cities of Seattle and Mercer Island (Segment A), and Redmond and King County (Segment E), have concurred with FTA regarding impacts and mitigation for Section 4(f) park resources and *de minimis* determinations in their respective jurisdictions. Although Sound Transit and the City of Bellevue have coordinated extensively regarding Section 4(f) resources, concurrence on a determination of *de minimis* was not reached with the City for park resources in Segments B and C, which are: Mercer Slough Nature Park, Surrey Downs Park, NE 2nd Pocket Parks, and McCormick Park.

The FTA, in consultation with the State Historic Preservation Office (SHPO), has determined that the project would potentially impact the following historic resources: Winters House (Segment B), potential Surrey Downs historic district (Segment C), and Justice William White House (Segment E). However, there would be no use or constructive use of the potential Surrey Downs historic district (Segment C) as defined by Section 4(f).

Therefore, only impacts on Mercer Slough Nature Park, Surrey Downs Park, NE 2nd Pocket Parks, McCormick Park, and Winters House in Segments B and C, and the Justice William White House in Segment E require further Section 4(f) analysis.

### Section 4(f) Analysis

**Segments B and C:** The alternatives in Segments B and C are interdependent and were treated together as a single segment for purposes of Section 4(f) analysis. All combined Segment B and C alternatives would affect at least one Section 4(f) resource, which is



Mercer Slough Nature Park. Also, the analysis demonstrates that there is no feasible and prudent alternative that avoids use of Mercer Slough Nature Park. Therefore, the FTA may only approve the alternative(s) that causes the “least overall harm” in light of the purposes of Section 4(f). Determining the alternative(s) that cause the least overall harm is based on an assessment and balancing of seven factors:

1. The ability of the alternative to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)
2. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection
3. The relative significance of each Section 4(f) property
4. The views of the official(s) with jurisdiction over each Section 4(f) property
5. The degree to which each alternative meets the Purpose and Need for the project
6. After reasonable mitigation, the magnitude of any adverse impacts on resources not protected by Section 4(f)
7. Substantial differences in costs among the alternatives

In making the least harm conclusion, a total of 35 Segment B and C combination alternatives were considered and weighed for all seven factors. Almost all the alternatives were identical under Factors 4 and 6 and relatively similar under Factor 3. Factors 1 and 2 divided the alternatives into those with impacts that can be mitigated and those with impacts that cannot be mitigated. Project impacts on all Section 4(f) resources can be effectively mitigated except for the alternatives that impact McCormick Park. Under Factor 5, the alternatives with higher ridership and that support land use were found to have the least harm. Alternatives that could be fully funded are considered to have least harm for Factor 7. The conclusion from analysis of the least harm factors is that 11 of the 35 unique Segment B and C combinations are equally the alternatives with the least overall harm. These are Alternatives C11A-B2M, C11A-B2A, C11A-B2E, C11A-B3, C9T-B2M, C9T-B2A, C9T-B2E, C9A-B2A, C9A-B2E, C9A-B3, and C7E-B2E.

**Segment E:** Alternative E4 is the only alternative that would impact the Justice William White House. *Preferred Alternative E2* is a prudent and feasible alternative that would avoid impacting the house, while the E2 - Redmond Transit Center Design Option, Alternative E1, or realignment of Alternative E4 would not be prudent options to avoid the house.

## Section 6(f)

Conversion of lands that have received grants from the federal Land and Water Conservation Fund (Section 6(f)) to a non-park use requires equivalent land be acquired to replace the impacted area. Part of Mercer Slough Nature Park affected by Preferred Alternative B2M and Alternatives B1, B2A, and B3 was acquired with Section 6(f) funds and would require replacement. The Mercer Slough Nature Park, Marymoor Park, Bear Creek, and East Lake Sammamish Trail have also received grants from Washington State Recreation and Conservation Office (RCO). Converting properties acquired with RCO funds has similar conversion requirements.

## ES.9.2 Environmental Justice

Environmental justice has been addressed in compliance with Presidential Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and the U.S. Department of Transportation order to address environmental justice in minority populations and low-income populations (DOT Order 5610.2). The purpose of the analysis was to determine whether the East Link Project would result in any disproportionately high and adverse impacts on minority and/or low-income populations. The analysis also describes the specific outreach efforts made to involve minority and low-income populations and the benefits from the East Link Project.

The analysis concludes that, after proposed mitigation and design elements are implemented, the East Link Project is not expected to result in any disproportionately high and adverse impacts on minority and low-income populations. In addition, the project would provide substantial benefit to people served by the light rail project, including minority and low-income residents. Operation of the project would provide many benefits, including improved access to transit; a safer, more reliable, and more efficient transportation system; improved mobility through the project vicinity; transit travel time savings; improved accessibility to employment; and extended transit service hours. Although all populations would have access to these benefits to the same extent, they would accrue to a higher degree to minority and low-income populations because these groups are more likely to use transit. These project benefits further support the conclusion that the East Link Project would not result in disproportionately high and adverse impacts on minority or low-income populations.

## ES.10 Areas of Controversy and Issues to be Resolved

Areas of controversy and issues that remain to be resolved include the following:

- In Segment B, the Sound Transit Board's *Preferred Alternative B2M* follows Bellevue Way SE and 112th Avenue SE. The City of Bellevue has indicated a preference for the BNSF Alternative (B7) or the B7R revisions to Alternative B7.
- In Segment C the City of Bellevue and Sound Transit are coordinating to find funding to build the higher-cost *Preferred Tunnel Alternative (Preferred Tunnel Alternative C9T)* instead of the lower cost at-grade *Preferred Alternative (Preferred Alternative C11A)*.
- Since publication of the 2008 Draft EIS, a lawsuit was filed challenging the State of Washington's constitutional authority to approve transition of the I-90 floating bridge center roadway to light rail transit use. In April 2011 the Washington State Supreme Court denied the petitioner's request to prohibit the State from authorizing this transition. Following the Supreme Court's decision, the petitioner filed a similar challenge in Kittitas County Superior Court.
- The route of *Preferred Alternative E2* in Downtown Redmond as shown in Appendix G1 (Conceptual Design Drawings) and in the City of Redmond's Central Connector Master Plan adopted in June 2011 are not entirely consistent primarily because of City plans for utility upgrades and the regional trail extension in the former BNSF Railway corridor and NE 76th Street rights-of-way. Sound Transit is obtaining real property and easements from the Port of Seattle and the City of Redmond for the right to operate light rail in the former BNSF Railway corridor, which would guarantee Sound Transit access to the Downtown Redmond portion of the light rail corridor. When funding is available to advance Segment E, Sound Transit would coordinate with the City of Redmond to

resolve design issues in this corridor. Solutions might include acquiring additional property, relocating utilities, modifying NE 76th Street, and/or modifying the light rail route in Downtown Redmond.

Sound Transit would continue to coordinate with appropriate federal, state, and local agencies and jurisdictions to address these issues.

## ES.11 Next Steps

Following publication of this Final EIS, the following steps are anticipated (see Table ES-1 for project milestones and schedule):

- **Project Decision:** After completion of the Final EIS, the Sound Transit Board will select the project alternative.
- **Federal Approval:** FTA will issue a decision document referred to as the federal Record of Decision (ROD), which states FTA's decision on the project, identifies the alternatives considered, and itemizes mitigation commitments. Issuance of the ROD is required before any federal funding or approvals can be granted.
- **Final Design, Construction, and Operation:** After the ROD has been issued, the project would complete final design and is expected to start construction in 2015. The project is scheduled to begin service in 2022 or 2023.
- **Maintenance Facility:** A second light rail storage and light maintenance facility was funded as part of ST2 to support systemwide expansion, including East Link. The location of this facility will be determined through operations analysis and future site planning which will consider locations throughout the Sound Transit service area. This future analysis would also include additional environmental review of the potential maintenance facility whether located at one of the sites evaluated in the East Link Project Final EIS or in another part of the service area.

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