

# Federal Way Link Extension

## Final Environmental Impact Statement

### EXECUTIVE SUMMARY







November 18, 2016

Dear Recipient:

The U.S. Department of Transportation Federal Transit Administration (FTA) and Sound Transit (the Central Puget Sound Regional Transit Authority) have prepared this Final Environmental Impact Statement (Final EIS) on the proposed Federal Way Link Extension. 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 Federal Way Link Extension in the cities of SeaTac, Kent, Des Moines, and Federal Way. The Final EIS examines the project alternatives, including the preferred alternative identified by the Sound Transit Board in July 2015.

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

The attached is a Summary of the Final EIS. The enclosed CD includes the Final EIS in its entirety, including appendices, technical reports, background materials, and responses to comments on the Draft EIS. Please see the Fact Sheet of this Final EIS regarding document availability, commenting on the document, and who to contact for further information about the Final EIS.

Sincerely,

Kent Hale  
Environmental Affairs and Sustainability

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**CHIEF EXECUTIVE OFFICER**

**Peter M. Rogoff**

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**FEDERAL WAY LINK EXTENSION  
KING COUNTY, WASHINGTON  
FINAL ENVIRONMENTAL IMPACT STATEMENT**

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

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

and

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

In cooperation with  
FEDERAL HIGHWAY ADMINISTRATION  
U.S. ARMY CORPS OF ENGINEERS  
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
CITY OF SEATAC  
CITY OF DES MOINES  
CITY OF KENT  
CITY OF FEDERAL WAY

26 October 2016

Date of Approval

Linda M. Gehrke

Linda Gehrke  
Regional Administrator  
NEPA Responsible Official  
For Federal Transit Administration, Region 10

10/26/2016

Date of Approval

Perry Weinberg

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

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# Fact Sheet

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## Proposed Action

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to expand the regional light rail system south from the city of SeaTac to Federal Way, Washington. The proposed light rail extension, called the Federal Way Link Extension (FWLE, and formerly known as the Federal Way Transit Extension), would be within the cities of SeaTac, Des Moines, Kent, and Federal Way in King County. The proposed project is part of the Sound Transit 2 (ST2) plan, funding for which was approved by voters in 2008. Currently, there is projected funding to construct from the Angle Lake Station in SeaTac to Kent/Des Moines in the vicinity of Highline College. In June 2016 the Sound Transit Board of Directors adopted the Sound Transit 3 (ST3) plan. If funding for ST3 is approved by the voters in November 2016, ST3 includes funds for construction to the Federal Way Transit Center.

The FWLE is part of the larger regional network of light rail proposed under the ST2 Plan. The 7.6-mile-long project corridor generally parallels State Route (SR) 99 and Interstate 5 (I-5), which are the major north-south routes through the FWLE corridor. It follows a topographic ridge between Puget Sound and the Green River Valley where the city limits of SeaTac, Des Moines, Kent, and Federal Way meet.

This Final Environmental Impact Statement (EIS) evaluates a Preferred Alternative, several other light rail alternatives, and a No Build Alternative. The No Build Alternative represents the transportation system and environment as they would exist if the proposed project were not built. It also provides a baseline against which to measure the impacts of the build alternatives. The light rail alternatives include at-grade, trench, and elevated light rail alignments with different station configurations.

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## **Project Proponent and State Environmental Policy Act (SEPA) Lead Agency**

Central Puget Sound Regional Transit Authority (Sound Transit)  
401 South Jackson Street  
Seattle, Washington 98104-2826  
[www.soundtransit.org](http://www.soundtransit.org)

## **Dates of Construction and Opening**

Sound Transit proposes to begin construction of the FWLE by 2019, and the light rail line is expected to open to Kent/Des Moines in 2023. If funding for the ST3 plan is approved by voters, FWLE stations at Kent/Des Moines, S 272nd Star Lake, and Federal Way Transit Center are expected to open in 2024.

## **National Environmental Policy Act (NEPA) Lead Agency**

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

## **NEPA Responsible Official**

Linda Gehrke, Regional Administrator for Region 10  
Federal Transit Administration  
915 Second Avenue, Suite 3142  
Seattle, Washington 98174-1002

## **SEPA Responsible Official**

Perry Weinberg, Director, Office of Environmental Affairs and Sustainability  
Sound Transit  
401 South Jackson Street  
Seattle, WA 98104-2826

## **Contacts for Additional Information**

### **Sound Transit**

Kent Hale, Senior Environmental Planner (206) 398-5103  
Erin Green, Associate Environmental Planner (206) 398-5464  
Zachary Eskenazi, Community Outreach Specialist (206) 903-7178  
Sound Transit  
401 South Jackson Street  
Seattle, WA 98104-2826



## Federal Transit Administration

Daniel Drais, Environmental Protection Specialist (206) 220-4465

Federal Transit Administration, Region 10

915 2nd Avenue, Suite 3142

Seattle, WA 98174-1002

## Potential Permits and Approvals

Federal Agencies	
Federal Highway Administration (FHWA)	<p>The following would be needed if the project to be built involved use of I-5 right-of-way:</p> <ul style="list-style-type: none"> <li>• Air Space Lease for Use of Interstate Right-of-Way</li> <li>• Limited Access Break</li> <li>• Operations and Maintenance Agreement</li> <li>• NEPA Record of Decision</li> <li>• Design Deviation Approval</li> <li>• I-5 Compatibility Report</li> </ul>
Federal Transit Administration (FTA)	<ul style="list-style-type: none"> <li>• NEPA Record of Decision</li> <li>• National Historic Preservation Act Section 106 Determination</li> <li>• US Department of Transportation Act Section 4(f) Determination</li> <li>• Endangered Species Act Determination</li> </ul>
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Clean Water Act, Section 404 Wetlands Approval</li> </ul>
U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Service	<ul style="list-style-type: none"> <li>• Federal Endangered Species Act Consultation</li> </ul>
State, County, and Regional Agencies	
Washington Department of Fish and Wildlife	<ul style="list-style-type: none"> <li>• Hydraulic Project Approval</li> </ul>
Washington State Department of Archaeology and Historic Preservation	<ul style="list-style-type: none"> <li>• National Historic Preservation Act Section 106 Consultation</li> </ul>
Washington State Department of Ecology	<ul style="list-style-type: none"> <li>• Coastal Zone Management Consistency Certification</li> <li>• National Pollutant Discharge Elimination System Stormwater Discharge Permit, Clean Water Act Section 402</li> <li>• Underground Storage Tank (UST) 30-Day Notice</li> <li>• Wastewater Discharge Permit</li> <li>• Water Quality Certification: Clean Water Act Section 401</li> </ul>
Washington State Department of Ecology and Puget Sound Clean Air Agency	<ul style="list-style-type: none"> <li>• Notice of Construction (Air Quality)</li> </ul>
Washington State Department of Transportation	<ul style="list-style-type: none"> <li>• Air Space Lease: State Transportation Routes and Interstate Right-of-Way (with FHWA)</li> <li>• Construction Oversight Agreement</li> <li>• Utility Franchise</li> <li>• Design Documentation Package</li> <li>• General Permits</li> <li>• Limited Access Break (with FHWA)</li> <li>• Operations and Maintenance Agreement (with FHWA)</li> <li>• Survey Permits</li> </ul>

Cities	
SeaTac, Des Moines, Kent and/or Federal Way	<ul style="list-style-type: none"> <li>• Administrative Conditional Use and/or Design Review Approvals, Binding Lot Adjustments, and Site Plan Approvals</li> <li>• Building Permits: Mechanical, Plumbing, Electrical, Signs, Fences, and Awnings</li> <li>• Development Code Consistency Review, Special Use Permits, and/or Zoning Revision Applications</li> <li>• Construction Permits: Clearing and Grading, Demolition, Drainage, Driveways, Haul Routes, Landscape and Irrigation, Parking, Sanitary Sewers, Side Sewers, Street Use, Tree Protection, Use of City Right-of-Way, and Walls</li> <li>• Conveyance (elevators and/or escalators)</li> <li>• Environmental Critical Areas/Sensitive Areas Review including Wetlands, Streams, Steep Slopes, Flood Zones, Critical Habitat, and Buffers</li> <li>• Fire Protection and Hydrant Use Permits</li> <li>• Inspection Record Approval and Occupancy Permits</li> <li>• Noise Variances</li> <li>• Reviews and Approvals: Planning, Design, and Arts Commissions</li> <li>• Right-of-Way Permit or Franchise (utilities)</li> <li>• Street and Alley Vacations</li> <li>• Permanent, Interim, or Temporary Street Use Permits</li> <li>• Access or Use Easements for City-owned Properties</li> <li>• Removal/Abandonment of Residential USTs or Underground Heating Oil Tanks</li> <li>• Traffic, Transportation, and Parking Approvals</li> <li>• Use of City Right-of-Way (for construction)</li> <li>• Water Meter and Water Main Permits and Approvals</li> <li>• Floodplain Development License</li> <li>• Master Use Permit</li> <li>• Master Development Plan Approval</li> </ul>
Other	
Utility Providers	<ul style="list-style-type: none"> <li>• Pipeline and Utility Crossing Permits</li> <li>• Easements and Use Agreements</li> </ul>

## Principal Contributors

This Final EIS was prepared by staff at FTA and Sound Transit and consultants at the following firms: CH2M HILL, HDR Inc., ATS, Entech Consulting Group, Michael Minor and Associates, BERK Associates, and PRR. See Appendix A2 for a detailed list of preparers and the nature of their contributions.

## Date of Issue of Final Environmental Impact Statement

November 18, 2016

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## Next Actions

Following publication of the Final EIS, FTA will accept comments on the Final EIS for 30 days. All comments on the Final EIS are due by close of business on December 19, 2016. Send written comments to the following address:

Federal Transit Administration, Region 10  
Attention: Federal Way Link Extension Final EIS Comments  
915 Second Avenue, Suite 3142  
Seattle, Washington 98174-1002

E-mail comments should be sent to [fta.tro10mail@dot.gov](mailto:fta.tro10mail@dot.gov). Written or e-mailed comments should include the commenter's name and return address.

Following publication of the Final EIS, the Sound Transit Board of Directors will select the FWLE alternative to build. After the Board's decision, FTA is expected to issue a Record of Decision. Substantive comments on the Final EIS will be included with responses in FTA's Record of Decision.

## Related Documents

- *Sound Transit 3: The Regional Transit System Plan for Central Puget Sound* (Sound Transit, 2016)
- *Draft Environmental Impact Statement, Federal Way Link Extension* (Sound Transit, 2015)
- *Final Supplemental Environmental Impact Statement, Long-Range Plan Update* (Sound Transit, 2014)
- *Federal Way Transit Extension Alternatives Analysis Level 1 Evaluation* (Sound Transit, 2013a)
- *Federal Way Transit Extension Alternatives Analysis Level 2 Evaluation* (Sound Transit, 2013b)
- *Final Environmental Impact Statement, Transportation 2040: Metropolitan Transportation Plan for the Central Puget Sound Region* (Puget Sound Regional Council [PSRC], 2010)
- *Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound* (Sound Transit, 2008)
- *Regional Transit Long-Range Plan Final Supplemental Environmental Impact Statement* (Sound Transit, 2005)

All the above Sound Transit documents are available on the Sound Transit Web site, [www.soundtransit.org](http://www.soundtransit.org).

## **Cost of Document and Availability for Review and/or Purchase**

This Final EIS is available for public review in a variety of formats and locations. It is available on the Sound Transit website (<http://www.soundtransit.org/Projects-and-Plans/Federal-Way-Link-Extension>) and on compact disk (CD) at no cost. Paper copies are available for the cost listed below, which does not exceed the cost of reproduction:

- Executive Summary – free
- Final EIS – \$25.00
- Technical Reports – \$15.00 each
- Conceptual Design Drawings (Appendix F) – \$25.00

Paper copies of these documents 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 Erin Green at (206) 398-5464. To review them, please call the Sound Transit librarian at (206) 398-5344 weekdays from 8:00 a.m. to 5:00 p.m. to arrange an appointment.

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

- King County Library System:
  - Des Moines Library, 21620 11th Ave S, Des Moines
  - Kent Library, 212 2nd Ave N, Kent
  - Woodmont Library, 26809 Pacific Highway S, Des Moines
  - Federal Way 320th Library, 848 S 320th Street, Federal Way
  - Federal Way Library, 34200 1st Way S, Federal Way
- Washington State Library: Point Plaza East, 6880 Capitol Boulevard SE, Tumwater

## **Appeals**

SEPA challenges to this Final EIS are governed by Sound Transit Resolution R7-1 and the SEPA rules and regulations (Chapter 43.21 Revised Code of Washington and Washington Administrative Code 197-11-680). Sound Transit Resolution R7-1 is available online at: <http://www.soundtransit.org/About-Sound-Transit/Board-of->

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Directors/Board-archives/Resolutions-archive/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 under SEPA. Letters of appeal should be addressed to Peter Rogoff, 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 December 2, 2016. Additional details about the appeals process and requirements are set out in Resolution R7-1 and in the SEPA rules and regulations.

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# EXECUTIVE

# SUMMARY

## ES.1 Introduction

The Central Puget Sound Regional Transit Authority (Sound Transit) proposes to build and operate the Federal Way Link Extension (FWLE), which would expand the regional light rail system from SeaTac to Federal Way, Washington (Exhibit ES-1). The FWLE would be in the cities of SeaTac, Des Moines, Kent, and Federal Way in King County. It is an element of *Sound Transit 2: a Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound (ST2)*, financing for which was approved by the voters in November 2008. ST2 funded construction and operation of the portion of the FWLE from SeaTac to Kent/Des Moines. *Sound Transit 3: The Regional Transit System Plan for Central Puget Sound (ST3)*, would fund the remainder of the project, if approved by the voters in November 2016.

The FWLE could be constructed in phases, with an interim terminus station at either Kent/Des Moines or S 272nd Street. This Final Environmental Impact Statement (EIS) evaluates alternatives for the whole FWLE corridor from SeaTac to Federal Way.

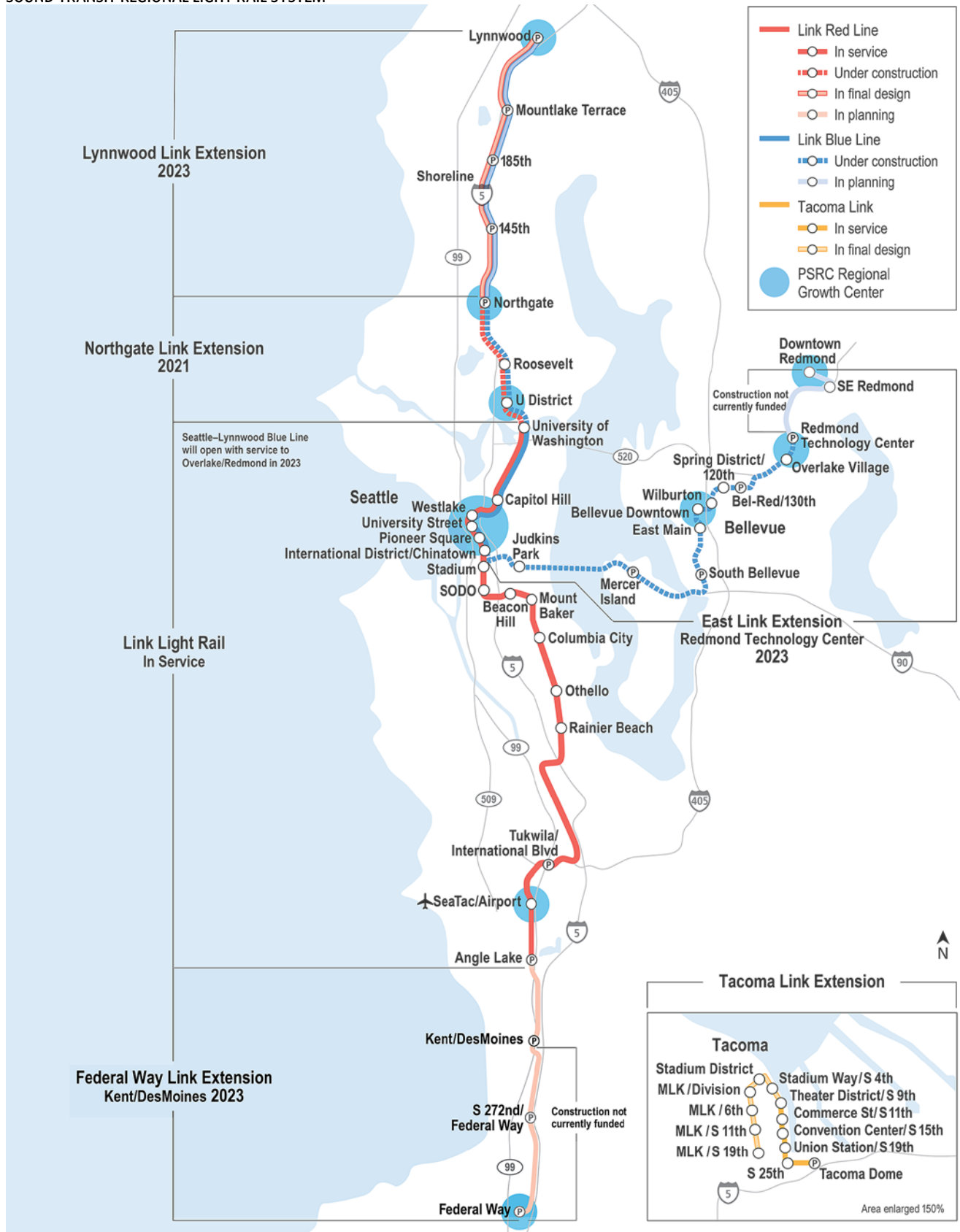
The FWLE will help implement Puget Sound Regional Council's (PSRC) *VISION 2040* (PSRC, 2009) and the updated Sound Transit *Regional Transit Long-Range Plan* (Long-Range Plan) (Sound Transit, 2014). Both of these plans call for the eventual extension of high-capacity transit service between SeaTac and Tacoma, known as the South Corridor.

This Final EIS evaluates a Preferred Alternative, three other light rail (build) alternatives, and a No Build Alternative. The No Build Alternative allows an analysis of the potential impacts of not building the FWLE, and provides a basis for comparing the build alternatives to a future baseline condition. The light rail alternatives include at-grade, elevated, and trench light rail profiles with different station configurations. The Preferred Alternative and three build alternatives each have between four and nine station or alignment options.

Exhibit ES-2 shows the anticipated schedule milestones for construction to Kent/Des Moines and start-up. The duration could change depending on available funds and construction costs.

**FWLE WOULD EXPAND THE REGIONAL LIGHT RAIL SYSTEM FROM SEATAC TO FEDERAL WAY.**

**EXHIBIT ES-1**  
**SOUND TRANSIT REGIONAL LIGHT RAIL SYSTEM**





**EXHIBIT ES-2**  
PROJECT MILESTONES



## ES.2 Purpose & Need

### ES.2.1 PURPOSE

The purpose of the FWLE is to expand the Sound Transit Link light rail system from the city of SeaTac to the cities of Des Moines, Kent, and Federal Way in King County in order to:

- Provide a rapid, reliable, accessible, and efficient alternative for travel to and from the corridor and other urban growth and activity centers in the region, with sufficient capacity to meet projected demand.
- Expand mobility by improving connections to the regional multimodal transportation system with peak and off-peak service.
- Provide the high-capacity transit (HCT) infrastructure and service to support the adopted regional and local land use, transportation, and economic development plans. Plans such as PSRC’s *VISION 2040* call for growth in designated urban centers connected to each other by HCT. Several individual cities have adopted land use plans to support this regional vision.
- Advance the Sound Transit’s Long-Range Plan vision, goals, and objectives for high-quality regional transit service connecting major activity centers in King, Pierce, and Snohomish counties.
- Implement a financially feasible HCT system to help preserve and promote a healthy environment.

**FWLE WILL DELIVER HIGH-CAPACITY TRANSIT TO URBAN CENTERS LOCATED THROUGHOUT THE FEDERAL WAY CORRIDOR.**

## ES.2.2 NEED

The following conditions within the project corridor demonstrate the need for the project:

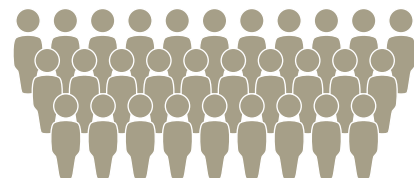
- Increasing congestion on I-5 and on the key arterials leading in and out of the study area will further degrade existing transit performance and reliability.
- North-south transit demand is expected to grow by up to 80 percent by 2035 as a result of residential and employment growth in the FWLE corridor. This growth will require additional and more reliable transportation options than currently exist.
- People in the FWLE corridor need reliable and efficient peak and off-peak transit service to connect with the region's growth centers.
- The corridor has a high concentration of transit-dependent populations who need efficient and reliable regional transit connectivity.
- Regional and local plans call for HCT in the corridor consistent with PSRC's VISION 2040 and Sound Transit's Long-Range Plan.
- Environmental and sustainability goals of the state and region include reducing vehicle miles traveled and greenhouse gas emissions.

## ES.3 FWLE Meets the Need

Reliability of bus service in 2035 is expected to degrade compared to existing conditions in the project corridor. Under the No Build Alternative, key transit facilities, such as the I-5 HOV lanes, are expected to have speeds decrease by up to 30 percent in the peak direction of travel during the afternoon-evening rush hour. The FWLE would be more reliable than bus transit because it would operate in an exclusive right-of-way and have no at-grade vehicle crossing conflicts. Without the FWLE, the 2035 transit hours of service to downtown Seattle would be more limited from the Federal Way Transit Center and the Redondo Heights/Star Lake service areas.

Bus service frequency in 2035 without the FWLE is expected to operate at the same level as existing conditions or better. Service frequency to other regional destinations besides Downtown Seattle would continue to be limited and generally only in the peak direction of travel. Adding the FWLE would improve service frequency between the FWLE corridor and many other Puget Sound regional destinations and growth centers, including Downtown

Seattle, the University of Washington, Northgate, Lynnwood, Bellevue, Overlake, and Redmond and provide continuous two-way service for 20 hours a day. Bus passenger loads would also increase beyond capacity without the FWLE as more pressure is put on the transit system. Several bus routes would exceed their seating capacity, while both bus and light rail would operate at acceptable levels of service with the FWLE, because some bus riders would transfer to light rail.



7,500-9,000 NEW RIDERS ARE EXPECTED

For people who live and work in the corridor, the project would create an additional and more efficient form of transit in the corridor and to other regional centers. It would complement other local and regional transit services. Of the projected 35,000 to 39,500 riders who would board light rail in the FWLE corridor each day, approximately 7,500 to 9,000 are expected to be new transit riders. Ridership forecasts for all alternatives are estimated to be similar as the station locations and travel times are similar.

Providing reliable, frequent service to multiple regional destinations would provide greater transit connectivity for transit-dependent populations than currently available or planned for under the No Build Alternative. Benefits for these populations would include improved access to more employment opportunities and better access to services in larger regional centers, such as Seattle or Bellevue. The FWLE would also reduce vehicle miles traveled by 160,000 miles and vehicle hours traveled by 10,000 hours each weekday. This would also reduce vehicle emissions in the corridor.

The FWLE would help fulfill plans for HCT in the South Corridor in place since the 1990s. The voter-approved funding package described in ST2 included the light rail extension to S 272nd Street. ST3 includes funding for construction from Kent-Des Moines to the Federal Way Transit Center.

## ES.4 Alternatives Considered

The Sound Transit Board of Directors (Board) defined four build alternatives for study in the EIS in 2013 after a wide range of alternatives was considered during early scoping, an alternatives analysis, National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) scoping, and public and agency input. The FWLE Draft EIS compared a No Build Alternative to the four build alternatives. After considering the Draft EIS and the public and agency comments, the Board passed Motion M2015-56 in July 2015 identifying the I-5 Alternative with the Kent/Des Moines SR 99 East Station Option as the Preferred Alternative.

This Final EIS compares the environmental effects of a No Build Alternative, the Preferred Alternative, and the three other build alternatives.

When it identified the Preferred Alternative, the Board directed Sound Transit staff to work with stakeholders to develop and evaluate potential improvements to it related to optimizing station locations, identifying ways to improve transit-oriented development (TOD) and access, and to accommodate a future light rail extension to the south on either I-5 or SR 99.

Sound Transit conducted stakeholder workshops for each station from fall 2015 to spring 2016. These workshops gained consensus on station locations and identified

access improvements to be included in the project or developed by others. Near-term and long-term development opportunities were also identified for the Kent/Des Moines Station.

In addition to these workshops, refinements to the Preferred Alternative were made since the Draft EIS was published to minimize impacts or address challenges identified during preliminary engineering. These include:

- Adding the S 272nd Elevated Star Lake Station Option and the S 317th Elevated Alignment Option, to address groundwater levels
- Shifting the alignment east approximately 15-feet to avoid impacts on the Puget Sound Energy Midway Substation
- Elevating the alignment entirely over Bingaman Creek and realigning the creek around the guideway columns, to not preclude fish passage improvements by others
- Extending the pocket track between S 304th Street and S 317th Street to accommodate overnight storage of two 4-car trains
- Refining the footprint to allow for landscaping around project elements as mitigation for visual impacts



Highline College

## RELATIONSHIP TO OTHER TRANSPORTATION AND TRANSIT PROJECTS

The FWLE would intersect with several existing and planned roadway and transit projects. Two that warrant special consideration are the RapidRide A Line operated by King County Metro and the SR 509 Extension Project planned by Washington State Department of Transportation (WSDOT).

With the FWLE, RapidRide A Line would continue to serve SR 99. It would provide local service between the stations and access to the Link and the regional transportation systems.

The SR 509 Extension Project would extend SR 509 from its current southern terminus at S 188th Street in SeaTac east to I-5 at the northern end of the FWLE

corridor. The FWLE alternatives have been designed to accommodate the SR 509 Extension approved in the 2003 Record of Decision (ROD). Appendix F, Conceptual Design Plans, shows the proposed SR 509 Extension in relation to the FWLE. The SR 509 Extension was funded in 2015 and is expected to begin construction during the FWLE construction period. It is included in the No Build Alternative, and impacts from concurrent construction periods are discussed in Chapter 6, Cumulative Impacts. WSDOT is currently reevaluating the design of the project. Sound Transit and WSDOT will continue to coordinate with each other as the design of the SR 509 Extension and FWLE advance.

### ES.4.1 NO BUILD ALTERNATIVE

The No Build Alternative would be the transportation system and environment as they would exist without the FWLE. It includes a variety of projects, funding packages, and proposals in the central Puget Sound region that are planned to occur with or without the FWLE. Improvements with the No Build Alternative primarily consist of funded or committed roadway and transit actions by state, regional, and local agencies, and other projects that are considered likely to be implemented based on approved and committed funding. PSRC population and employment growth projections for 2035 are the same for the No Build and build alternatives. With the No Build Alternative, Sound Transit would still build the Northgate Link Extension, the Lynnwood Link Extension, the East Link Extension, and the Operations and Maintenance Facility East. It would also purchase additional light rail vehicles to serve the expanded system and would provide service enhancements to the Sound Transit Regional Express bus and Sounder commuter rail systems. Minor local bus service additions by King County Metro are also expected; however, the overall bus network and its service levels were generally assumed to remain similar to today. The SR 509 Extension Project, planned by WSDOT, is included in this alternative.

### ES.4.2 BUILD ALTERNATIVES

This section summarizes the Preferred Alternative and three other build alternatives, the impacts associated with each alternative, and the various station and alignment options. The four build alternatives are shown in Exhibits ES-3A-3D. This section also summarizes potential additional stations that could be added to the project if additional funding were available. These potential additional stations were not included in ST2 or ST3 and further evaluation of their consistency with these plans would be required before they could be added to the FWLE. Table ES-1 provides an overview of these alternatives, options, and potential additional stations.

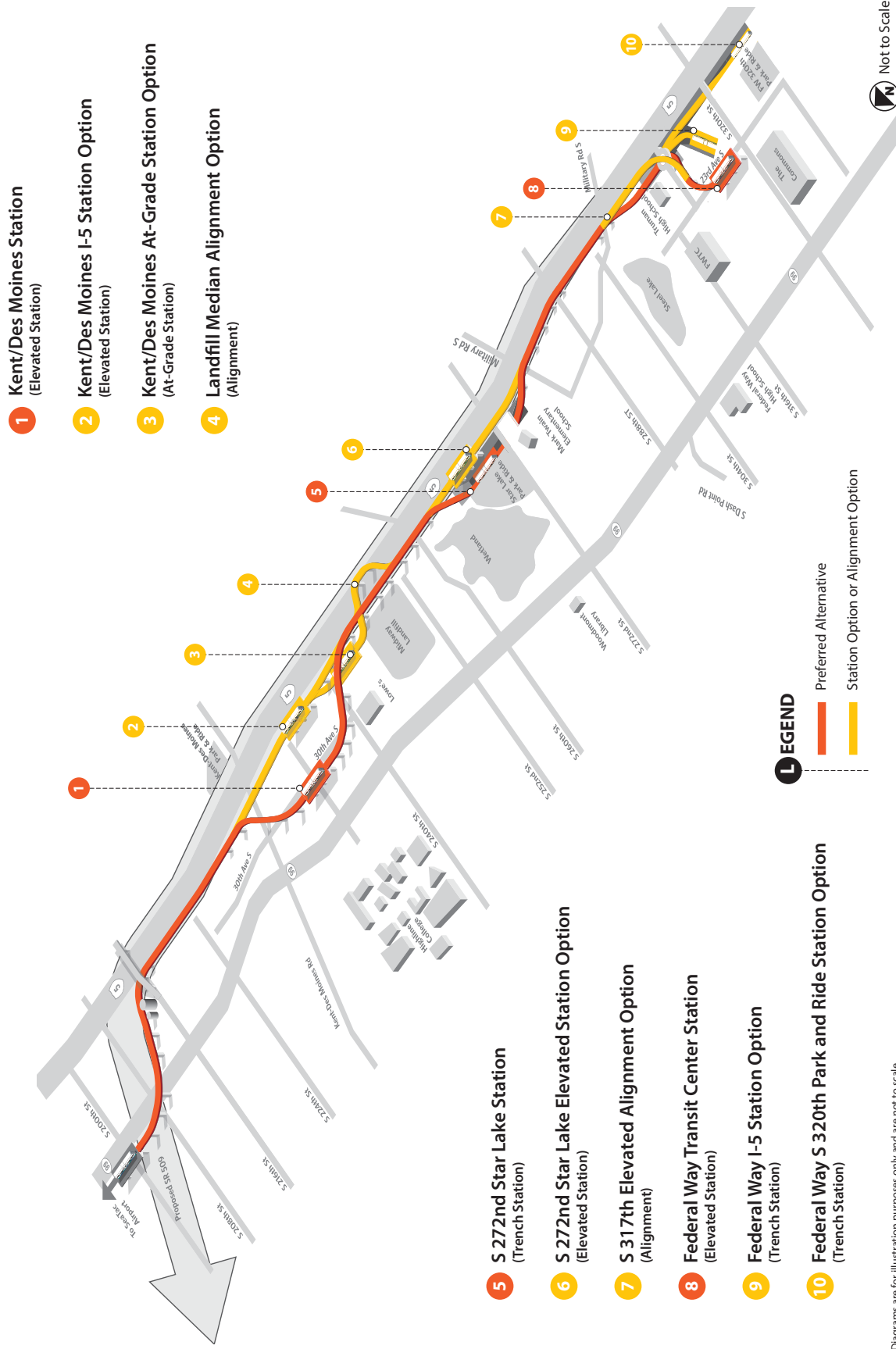
Parking would be provided at the Kent/Des Moines, S 272nd Street, and Federal Way City Center stations. All Kent/Des Moines stations would provide 1,000 spaces (500 in a garage, 500 surface) if the project is only initially built to Kent/Des Moines. The number of spaces could be reduced to 500 when the project is extended farther south. The S 272nd Redondo Station would have approximately 1,400 parking spaces that would be a combination of garage and surface. The S 272nd Star Lake Station would have up to 1,240 spaces in a parking garage. All Federal Way City Center stations would increase parking with a 400 space garage.

**TABLE ES-1**  
SUMMARY OF ALTERNATIVES EVALUATED IN THE FINAL EIS

Alternative	Stations	Station Options	Potential Additional Stations (not funded in ST2 or ST3)	Alignment Options
<b>No Build</b>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Preferred</b>	<ul style="list-style-type: none"> <li>Kent/Des Moines</li> <li>S 272nd Star Lake</li> <li>Federal Way Transit Center</li> </ul>	<ul style="list-style-type: none"> <li>Kent/Des Moines At-Grade</li> <li>Kent/Des Moines I-5</li> <li>S 272nd Star Lake Elevated</li> <li>Federal Way I-5</li> <li>Federal Way S 320th Park-and-Ride</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Landfill Median</li> <li>S 317th Elevated</li> </ul>
<b>SR 99</b>	<ul style="list-style-type: none"> <li>Kent/Des Moines SR 99 West</li> <li>S 272nd Redondo</li> <li>Federal Way Transit Center</li> </ul>	<ul style="list-style-type: none"> <li>Kent/Des Moines Highline College (HC) Campus</li> <li>Kent/Des Moines SR 99 Median</li> <li>Kent/Des Moines SR 99 East</li> <li>S 272nd Redondo Trench</li> <li>Federal Way SR 99</li> </ul>	<ul style="list-style-type: none"> <li>S 216th West</li> <li>S 216th East</li> <li>S 260th West</li> <li>S 260th East</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>SR 99 to I-5</b>	<ul style="list-style-type: none"> <li>Kent/Des Moines 30th Avenue East</li> <li>S 272nd Star Lake</li> <li>Federal Way Transit Center</li> </ul>	<ul style="list-style-type: none"> <li>Federal Way I-5</li> <li>Federal Way S 320th Park-and-Ride</li> </ul>	<ul style="list-style-type: none"> <li>S 216th West</li> <li>S 216th East</li> </ul>	<ul style="list-style-type: none"> <li>Landfill Median</li> </ul>
<b>I-5 to SR 99</b>	<ul style="list-style-type: none"> <li>Kent/Des Moines 30th Avenue West</li> <li>S 272nd Redondo</li> <li>Federal Way Transit Center</li> </ul>	<ul style="list-style-type: none"> <li>S 272nd Redondo Trench</li> <li>Federal Way SR 99</li> </ul>	<ul style="list-style-type: none"> <li>S 260th West</li> <li>S 260th East</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

What are the Stations?	What are the Station Options?	What are the Potential Additional Stations?	What is an Alignment Option?
<p>There are three stations associated with each alternative: Kent/Des Moines, S 272nd (either Redondo or Star Lake) and Federal Way Transit Center.</p>	<p>Station Options are alternative locations for each station area: Kent/Des Moines, S 272nd Street, and Federal Way City Center. Options for a station generally have the same station characteristics and serve the same population.</p>	<p>The Alternative Analysis process for the FWLE identified additional station locations on SR 99. These stations could be added to the SR 99 alternatives but are not funded and would require additional approvals.</p>	<p>An alignment option is an alternative route along a portion of the alternative. An alignment option does not include station options.</p>

**EXHIBIT ES-3A**  
FWLE ALTERNATIVES

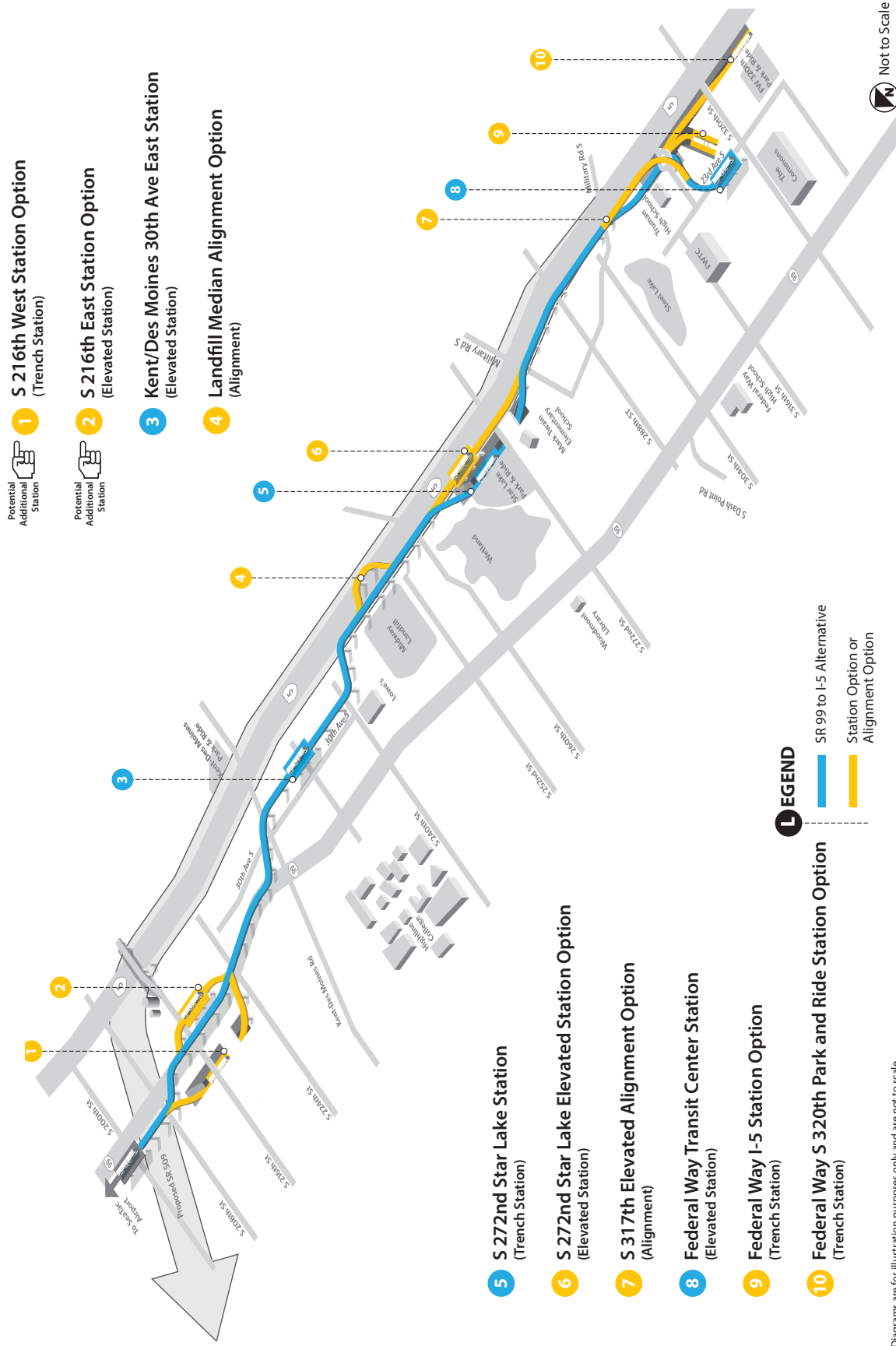


Diagrams are for illustration purposes only and are not to scale.

**EXHIBIT ES-3B**  
FWLE ALTERNATIVES



**EXHIBIT ES-3C**  
FWLE ALTERNATIVES







# Preferred Alternative

## COST

**\$ 1.54** Billion

## TRAVEL TIME

**12** Minutes

## DAILY RIDERSHIP

**36,500** Riders

## STATIONS

Kent/Des Moines Station

S 272nd Star Lake Station

Federal Way Transit Center Station

## DAILY BOARDINGS

**3,500** Riders

**3,000** Riders

**12,500** Riders

## TOD POTENTIAL

**Moderate**

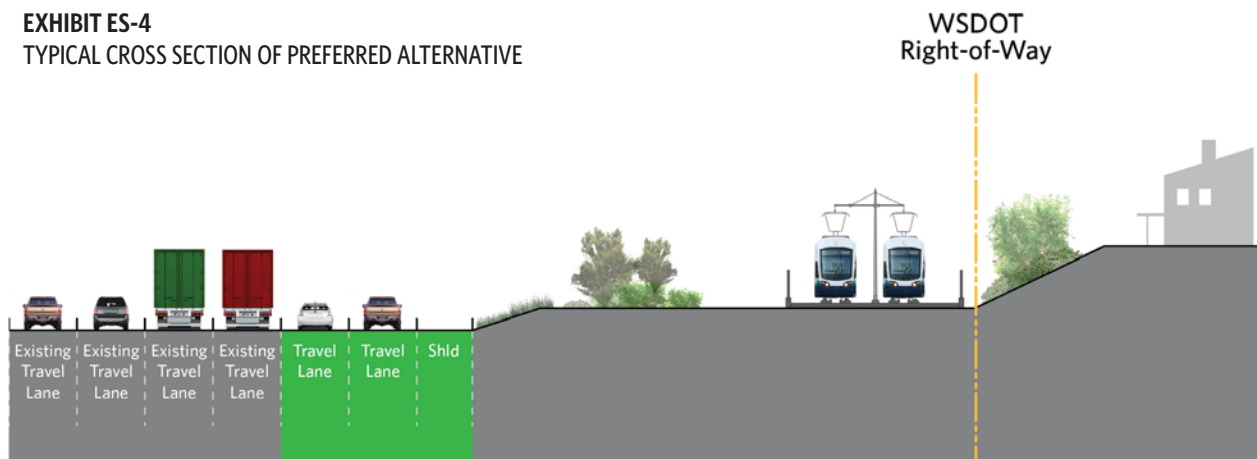
**Low**

**High**



### EXHIBIT ES-4

#### TYPICAL CROSS SECTION OF PREFERRED ALTERNATIVE



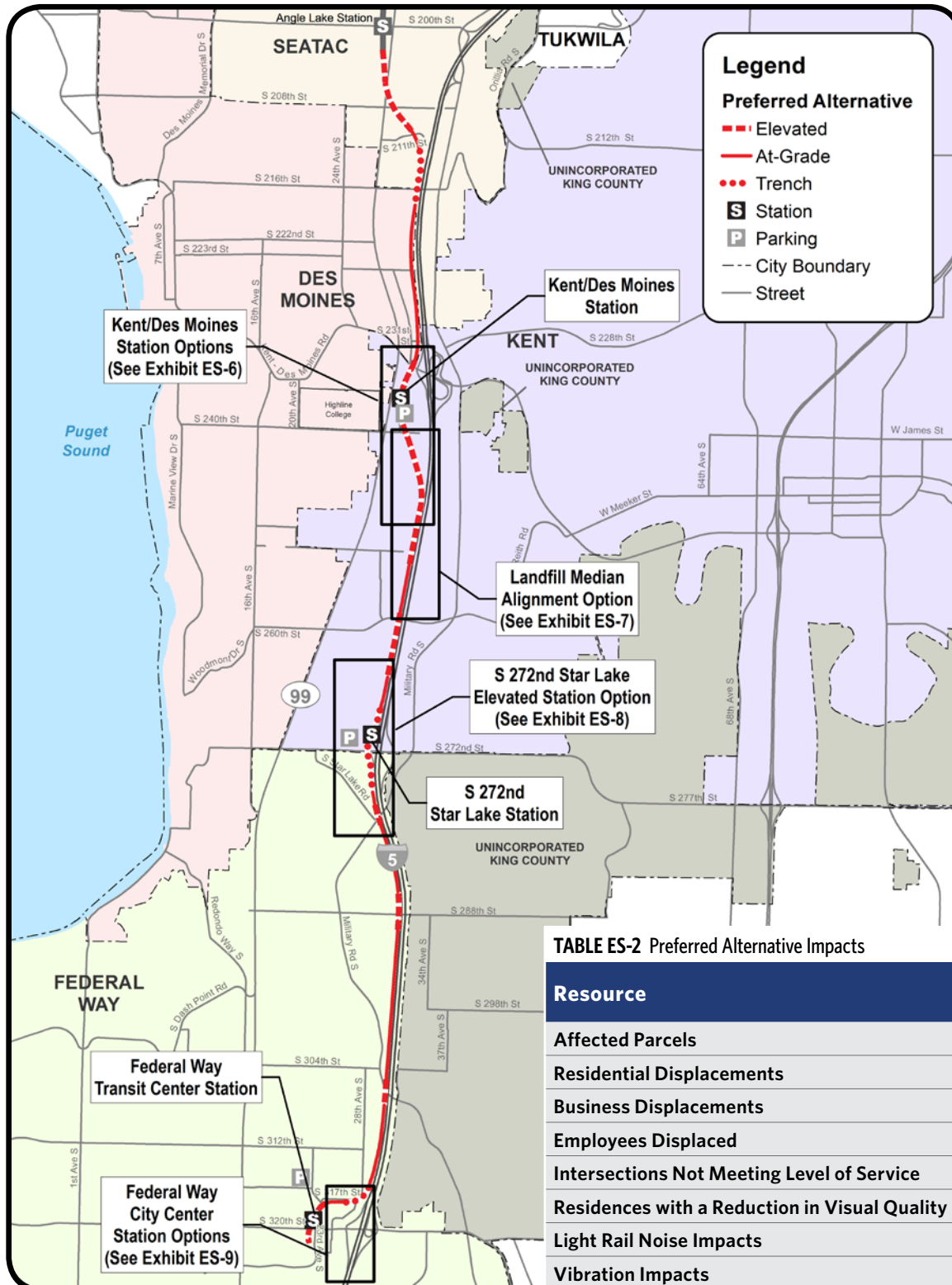
**SR 509 Extension Proposed Improvements from 2003 ROD**  
Proposed condition southbound (not to scale)

The Preferred Alternative was described as the I-5 Alternative in the Draft EIS. It would head south from the Angle Lake Station and cross to the east side of SR 99 in the vicinity of the proposed SR 509 Extension (Exhibits ES-4 and ES-5). It would be in or adjacent to the future SR 509 WSDOT right-of-way until S 231st Street, and would allow for the planned future build-out of I-5 in this area based on the 2003 design of the SR 509 Extension Project. Between approximately S 245th Street and S 317th Street, the alignment would be mostly in the I-5 right-of-way except to access stations, which would be outside of the right-of-way. The Preferred Alternative would be at-grade where existing topography allows and road crossings would be grade-separated.

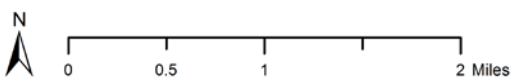
Table ES-2 summarizes key impacts of the Preferred Alternative. This alternative would have the second most residential displacements but the least business displacements. It would have the most impacts on wetlands, wetland buffers and upland habitat. It would also

realign approximately 1,015 feet of Bingaman Creek. Noise impacts would affect residences on the west side of I-5, and would require reconstructing an existing I-5 noise barrier near S 288th Street. The Preferred Alternative would have the least noise impacts but the second most vibration impacts. All noise impacts could be mitigated but there could be four residual vibration impacts. This alternative would have temporary construction impacts on the playfield at Mark Twain Elementary School, where a portion of the playfield would need to be closed for construction of a lidded trench for the guideway. Sound Transit would restore the playfield to existing conditions following construction. Removal of mature trees and vegetation from the west side of I-5 would reduce the visual quality from medium to low for many adjacent residences. The Preferred Alternative includes the station with the highest overall TOD potential, the Preferred Federal Way Transit Center Station, as well as the station with the lowest overall TOD potential, the S 272nd Star Lake Station. The Preferred Kent/Des Moines Station scores in the middle of all stations in that station area.

**EXHIBIT ES-5  
PREFERRED ALTERNATIVE**



Data Sources: King County, Cities of Des Moines, Federal Way, Kent, SeaTac (2015).



**TABLE ES-2 Preferred Alternative Impacts**

Resource	Impact
Affected Parcels	211
Residential Displacements	196
Business Displacements	42
Employees Displaced	370
Intersections Not Meeting Level of Service	10
Residences with a Reduction in Visual Quality	290
Light Rail Noise Impacts	647
Vibration Impacts	193
Wetland Impacts (acres)	1.3
Upland Habitat Impacts (acres)	35

# Station Options

## KENT/DES MOINES

The Kent/Des Moines At-Grade Station Option (Exhibit ES-6) would cost \$110M less than the Preferred Alternative, and the Kent/Des Moines I-5 Station Option would cost \$20M more. The Kent/Des Moines At-Grade Station Option would reduce residential displacements. Both options would decrease business displacements and employee displacements (Table ES-3). Vibration impacts would decrease with both options because of differences in displacements; noise impacts would decrease with the I-5 Station Option. All noise and vibration impacts could be mitigated. The At-Grade Station Option would have traffic impacts at one additional intersection, which could be mitigated. Both options would decrease ridership.

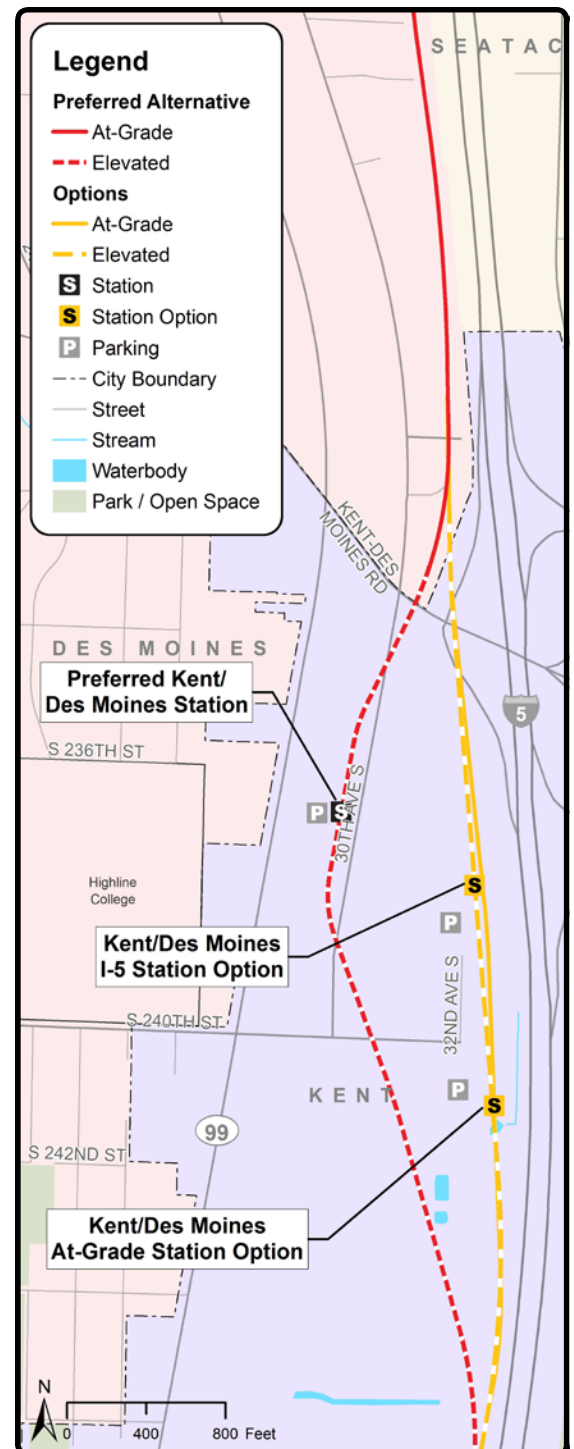
**TABLE ES-3**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO PREFERRED ALTERNATIVE

LEGEND	▲ Increase	▼ Decrease	Performance Measures	
			At-Grade Station Option	I-5 Station Option
Cost Difference			▼ \$110 million	▲ \$20 million
Change in Total FWLE Daily Boardings			▼ 500	▼ 500
Change in Travel Time (minutes)			No Change	No Change
TOD Potential within 1/4 mile (acres)			Lower	Lower

Resource	Impacts	
Affected Parcels	▼ 37	▼ 33
Residential Displacements	▼ 57	▲ 42
Business Displacements	▼ 16	▼ 12
Employees Displaced	▼ 100	▼ 50
Intersections Not Meeting Level of Service	No Change	No Change
Residences with a Reduction in Visual Quality	No Change	No Change
Light Rail Noise Impacts	▲ 14	▼ 29
Vibration Impacts	▼ 8	▼ 8
Wetland Impacts (acres)	▲ 0.6	▲ 0.6
Upland Habitat Impacts (acres)	▲ 1.5	▲ 2.9

**EXHIBIT ES-6**  
KENT / DES MOINES STATION OPTIONS



# Alignment Option

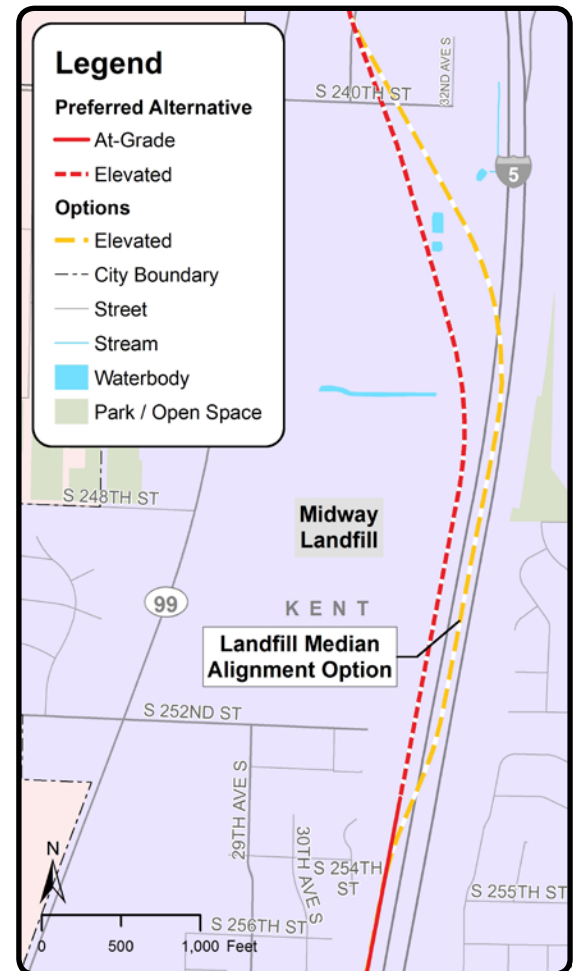
## LANDFILL MEDIAN ALIGNMENT OPTION

There would be minimal changes in impacts with this alignment option (Exhibit ES-7 and Table ES-4). It could decrease costs by up to \$10M when compared to the Preferred Alternative, by eliminating the removal of waste from the landfill. This option could also avoid the potential engineering and regulatory challenges associated with crossing the Midway Landfill. Use of the I-5 median for light rail for this option may conflict with WSDOT's long-term plans. This option would have additional noise impacts but would reduce upland habitat loss. Construction of the guideway in the median would require short-term, temporary narrowing of the inside shoulder between approximately S 240th Street and S 252nd Street for up to 6 months. This temporary shoulder closure could result in a short-term increase in crashes during construction.

**TABLE ES-4**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO PREFERRED ALTERNATIVE

LEGEND		Landfill Median Alignment Option
<span style="color: green;">▲</span> Increase <span style="color: red;">▼</span> Decrease		
Performance Measures		
Cost Difference		<span style="color: red;">▼</span> \$10 million
Change in Total FWLE Daily Boardings		Not Applicable
Change in Travel Time (minutes)		Not Applicable
TOD Potential within 1/4 mile (acres)		Not Applicable
Resource	Impacts	
Affected Parcels		<span style="color: red;">▼</span> 8
Residential Displacements		<span style="color: green;">▲</span> 1
Business Displacements		No Change
Employees Displaced		No Change
Intersections Not Meeting Level of Service		No Change
Residences with a Reduction in Visual Quality		No Change
Light Rail Noise Impacts		<span style="color: green;">▲</span> 41
Vibration Impacts		No Change
Wetland Impacts (acres)		No Change
Upland Habitat Impacts (acres)		<span style="color: red;">▼</span> 1.1

**EXHIBIT ES-7**  
LANDFILL MEDIAN ALIGNMENT OPTION



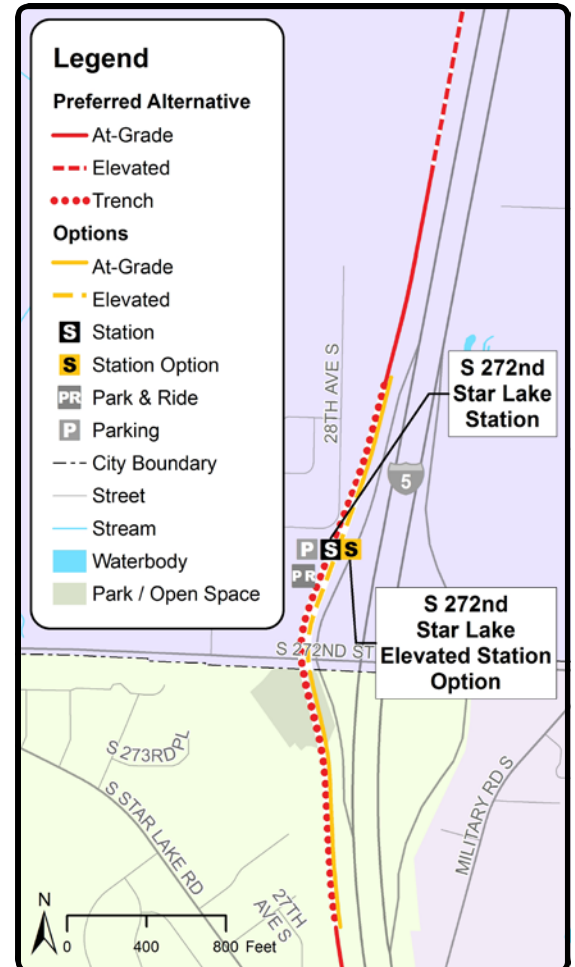
# Station Option S 272ND STAR LAKE ELEVATED

EXHIBIT ES-8  
S 272ND STAR LAKE ELEVATED STATION OPTION

The S 272nd Star Lake Elevated Station Option (Exhibit ES-8) would cost approximately \$30M less than the Preferred Alternative. This option would have minor or no changes in impacts for most resources other than noise (Table ES-5). Noise impacts would increase, but could be mitigated. While the elevated guideway (either on columns or retained fill) would be more visible from residences and Mark Twain Elementary School, it would reduce visual quality for the same number of sensitive viewers as the Preferred Alternative. The guideway would cross the eastern edge of the Mark Twain Elementary School playground on retained fill and would reduce the playfield size by 0.1 acre.

TABLE ES-5  
PERFORMANCE MEASURES & IMPACTS COMPARED TO PREFERRED ALTERNATIVE

LEGEND		↑ Increase	↓ Decrease	S 272nd Star Lake Elevated Station Option
<b>Performance Measures</b>				
Cost Difference				↓ \$30 million
Change in Total FWLE Daily Boardings				No Change
Change in Travel Time (minutes)				No Change
TOD Potential within 1/4 mile (acres)				No Change
<b>Resource</b>		<b>Impacts</b>		
<b>Affected Parcels</b>		↓ 3		
Residential Displacements				No Change
Business Displacements				No Change
Employees Displaced				No Change
Intersections Not Meeting Level of Service				No Change
Residences with a Reduction in Visual Quality				No Change
Light Rail Noise Impacts				↑ 64
Vibration Impacts				No Change
Wetland Impacts (acres)				No Change
Upland Habitat Impacts (acres)				↑ 0.6



# Alignment Option

## S 317TH ELEVATED ALIGNMENT OPTION

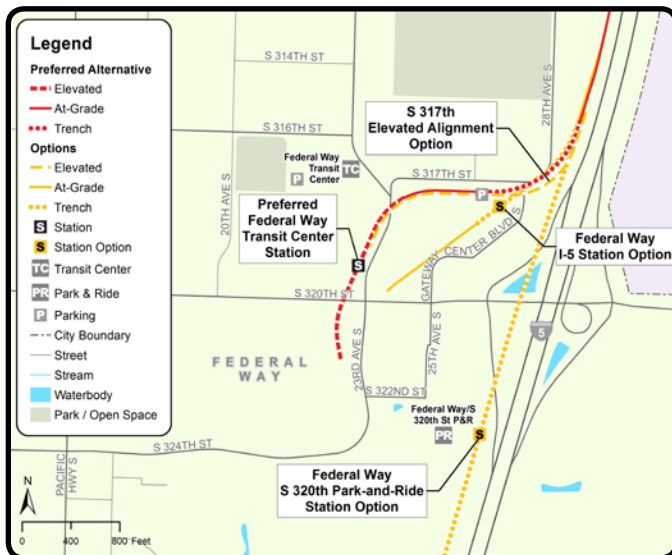
The S 317th Elevated Alignment Option (Exhibit ES-9) would cost approximately \$2M less than the Preferred Alternative. This option would have minor or no changes in impacts for most resources other than noise (Table ES-6). Noise impacts would increase, but could be mitigated. While the elevated guideway (either on columns or retained fill) would be more visible from residences, and Truman High School, it would reduce visual quality for the same number of sensitive viewers as the Preferred Alternative.

**TABLE ES-6**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO PREFERRED ALTERNATIVE

LEGEND		↑ Increase	↓ Decrease	S 317th Elevated Alignment Option
<b>Performance Measures</b>				
<b>Cost Difference</b>				↓ \$2 million
<b>Change in Total FWLE Daily Boardings</b>				Not Applicable
<b>Change in Travel Time (minutes)</b>				Not Applicable
<b>TOD Potential</b>				Not Applicable

Resource	Impacts
<b>Affected Parcels</b>	No Change
<b>Residential Displacements</b>	No Change
<b>Business Displacements</b>	No Change
<b>Employees Displaced</b>	No Change
<b>Intersections Not Meeting Level of Service</b>	No Change
<b>Residences with a Reduction in Visual Quality</b>	No Change
<b>Light Rail Noise Impacts</b>	↑ 112
<b>Vibration Impacts</b>	No Change
<b>Wetland Impacts (acres)</b>	No Change
<b>Upland Habitat Impacts (acres)</b>	No Change

**EXHIBIT ES-9**  
S 317TH ELEVATED ALIGNMENT OPTION AND  
FEDERAL WAY CITY CENTER OPTIONS



# Station Options

## FEDERAL WAY CITY CENTER

The Federal Way City Center station options (Exhibit ES-9) would be center-platform stations with a tail track after the station platform.

The Federal Way I-5 Station Option would cost \$40M less than the Preferred Federal Way Transit Center Station, while the Federal Way S 320th Park-and-Ride Station Option would cost \$130M more. Both options would decrease ridership and business displacements. Only the S 320th Park-and-Ride Station Option would increase residential displacements (Table ES-7). The I-5 Station Option would have less impact on upland habitat. The S 320th Park-and-Ride Station Option would have fewer noise impacts while the I-5 Station Option would have more. There would be no change in vibration impacts for either option. All noise and vibration impacts could be mitigated.

**TABLE ES-7**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO PREFERRED ALTERNATIVE

LEGEND	↑ Increase	↓ Decrease	I-5 Station Option	S 320th P&R Station Option
<b>Performance Measures</b>				
<b>Cost Difference</b>			↓ \$40 million	↑ \$130 million
<b>Change in Total FWLE Daily Boardings</b>			↓ 2,500	↓ 1,500
<b>Change in Travel Time (minutes)</b>			No Change	No Change
<b>TOD Potential within 1/4 mile (acres)</b>			Lower	Lower
<b>Resource</b>				
			<b>Impacts</b>	
<b>Affected Parcels</b>			↓ 7	↓ 12
<b>Residential Displacements</b>			No Change	↑ 19
<b>Business Displacements</b>			↓ 4	↓ 19
<b>Employees Displaced</b>			↓ 40	↓ 260
<b>Intersections Not Meeting Level of Service</b>			No Change	No Change
<b>Residences with a Reduction in Visual Quality</b>			No Change	No Change
<b>Light Rail Noise Impacts</b>			↑ 45	↓ 3
<b>Vibration Impacts</b>			No Change	No Change
<b>Wetland Impacts (acres)</b>			No Change	↑ 0.1
<b>Upland Habitat Impacts (acres)</b>			↓ 0.3	↑ 0.4



# SR 99 Alternative

## COST

**\$ 1.89** Billion

## TRAVEL TIME

**12** Minutes

## DAILY RIDERSHIP

**36,500** Riders

## STATIONS

Kent/Des Moines Station

S 272nd Redondo Station

Federal Way Transit Center Station

## DAILY BOARDINGS

**3,500** Riders

**3,500** Riders

**12,500** Riders

## TOD POTENTIAL

**Moderate**

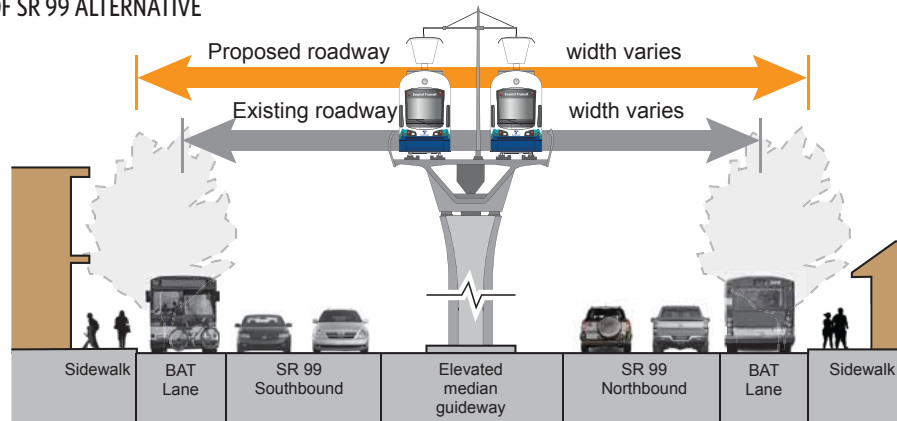
**Moderate**

**High**



### EXHIBIT ES-10

#### CROSS SECTION OF SR 99 ALTERNATIVE



Proposed condition looking north (not to scale)

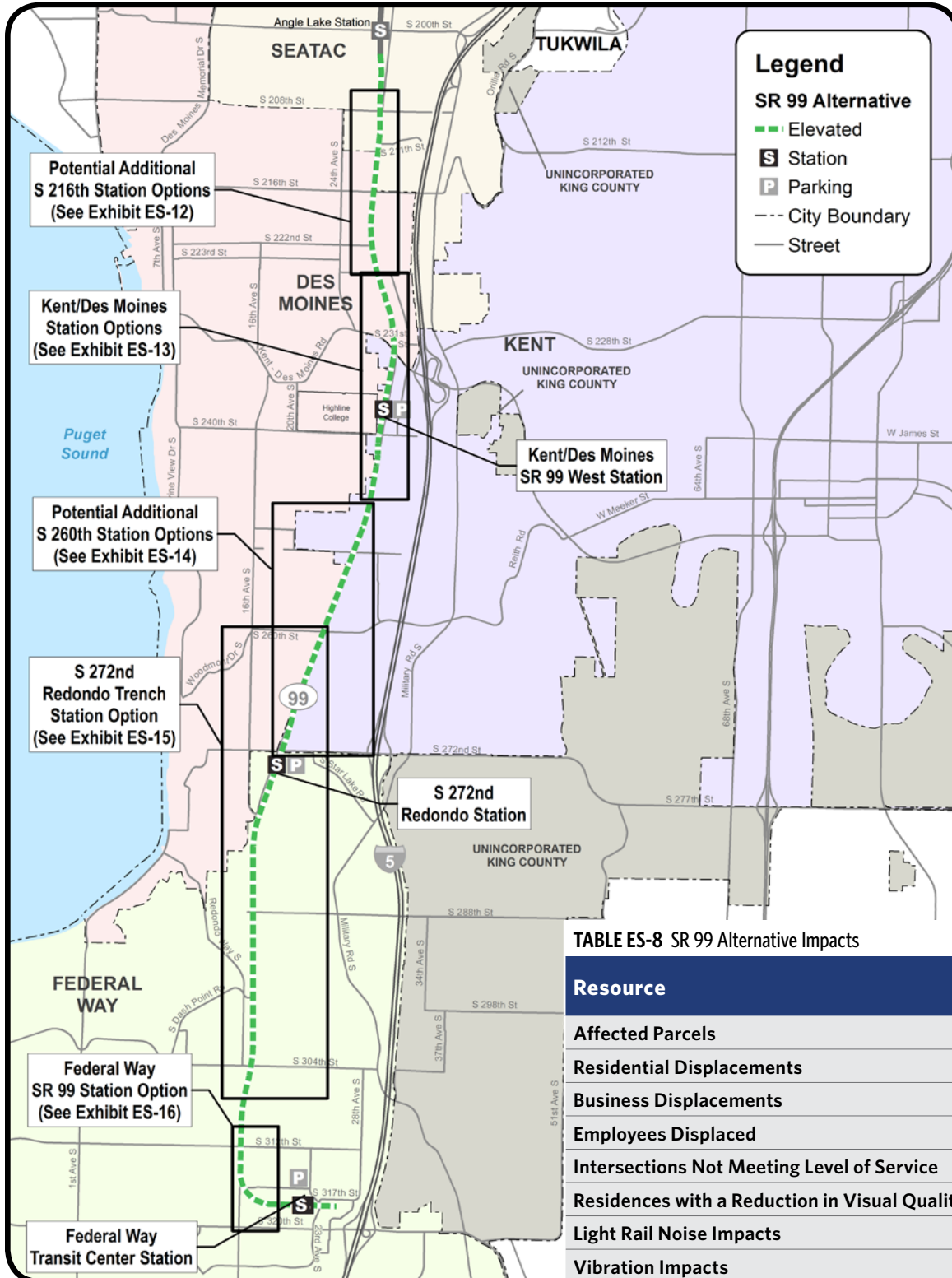
The SR 99 Alternative would generally follow SR 99, with stations at Kent/Des Moines, S 272nd Redondo, and the Federal Way Transit Center. It would remain in the median of SR 99 except at station areas and at crossings of Kent-Des Moines Road and S 272nd Street. The entire alignment and all stations would be elevated (Exhibit ES-10). This alternative has several station options and two potential additional stations not included in the ST2 or ST3 plans. These stations are shown on Exhibit ES-11 and described on the following pages. Exhibit ES-10 shows a typical cross-section of the alignment in the SR 99 median. Table ES-8 summarizes the impacts of the SR 99 Alternative.

The SR 99 Alternative is projected to have the same ridership and travel time as the Preferred Alternative and the least residential displacements. It would displace the most businesses and employees, and would create more disruption to local traffic and business access during construction than other alternatives. It would have minimal

impacts on ecosystems, and the least amount of new impervious area.

The SR 99 Alternative would have the most noise impacts, but the second least vibration impacts. It would also have a potential groundborne noise impact at the new Federal Way High School Auditorium. All noise and vibration impacts could be mitigated. Traffic impacts near the Kent/Des Moines Station and S 272nd Redondo Station would be similar to other alternatives, and could be mitigated. This alternative would have visual impacts near S 216th Street and S 288th Street where residences along SR 99 could have views of Puget Sound and the Olympic Mountains partially blocked. The SR 99 Alternative would have similar TOD potential as the Preferred Alternative at the Kent/Des Moines and Federal Way Transit Center station areas, and greater potential at the S 272nd station area.

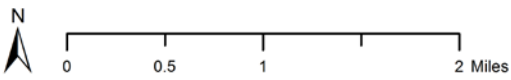
**EXHIBIT ES-11**  
**SR 99 ALTERNATIVE**



Data Sources: King County, Cities of Des Moines, Federal Way, Kent, SeaTac (2015).

**TABLE ES-8 SR 99 Alternative Impacts**

Resource	Impact
Affected Parcels	292
Residential Displacements	36
Business Displacements	101
Employees Displaced	580
Intersections Not Meeting Level of Service	10
Residences with a Reduction in Visual Quality	260
Light Rail Noise Impacts	2,266
Vibration Impacts	50
Wetland Impacts (acres)	<0.1
Upland Habitat Impacts (acres)	2.9



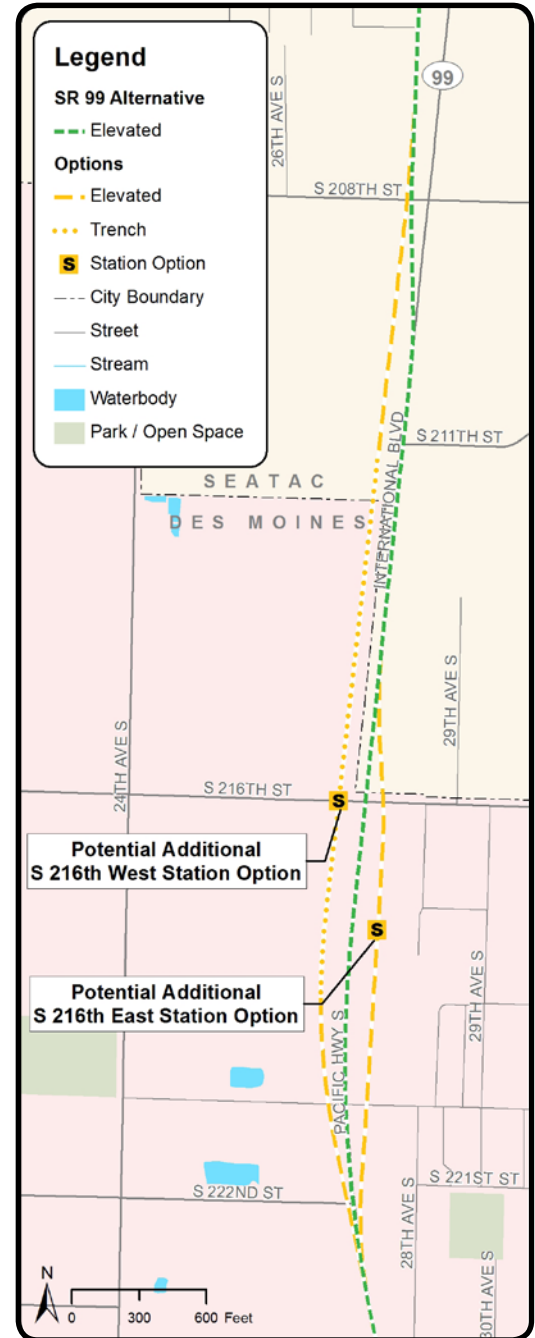
# Potential Additional Station Options S 216TH STREET

Two options were evaluated for the potential additional station at S 216th Street (Exhibit ES-12). The S 216th West Station Option would travel in a trench under S 216th Street west of SR 99 and would add \$90M to the cost of the SR 99 Alternative. The S 216th East Station Option would be elevated on the east side of SR 99 and would add \$80M. The east station option would displace more residents than the west station option, but the west station option would displace more businesses and employees (Table ES-9). Both would reduce noise impacts. The west option would reduce vibration impacts while the east option would increase them. All noise and vibration impacts could be mitigated. There would be no additional traffic impacts or impacts on wetlands with either option. The S 216th West Station Option would reduce visual impacts by being in a trench on the west side of SR 99. Both station options would increase ridership and TOD potential relative to the SR 99 Alternative. Both options would increase travel time by less than one minute.

**TABLE ES-9**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO SR 99 ALTERNATIVE

LEGEND	▲ Increase	▼ Decrease	S 216th West Station Option	S 216th East Station Option
<b>Performance Measures</b>				
Cost Difference	▲ \$90 million		▲ \$80 million	
Change in Total FWLE Daily Boardings	▲ 1,500		▲ 1,500	
Change in Travel Time (minutes)	▲ <1		▲ <1	
TOD Potential within 1/4 mile (acres)	Higher		Higher	
<b>Resource</b>				
		<b>Impacts</b>		
Affected Parcels	▲ 6		▲ 5	
Residential Displacements	No Change		▲ 26	
Business Displacements	▲ 13		▲ 5	
Employees Displaced	▲ 60		▲ 10	
Intersections Not Meeting Level of Service	No Change		No Change	
Residences with a Reduction in Visual Quality	▼ 15		No Change	
Light Rail Noise Impacts	▼ 201		▼ 4	
Vibration Impacts	▼ 50		▲ 16	
Wetland Impacts (acres)	No Change		No Change	
Upland Habitat Impacts (acres)	▲ 0.5		No Change	

**EXHIBIT ES-12**  
S 216TH STATION OPTIONS



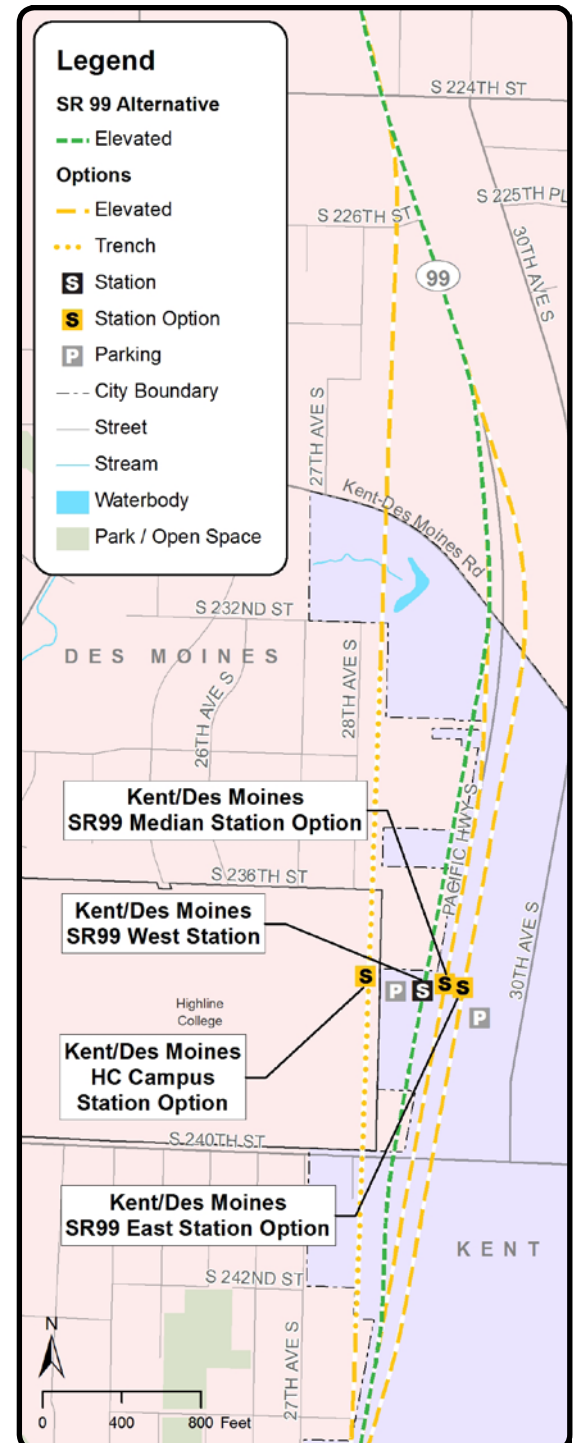
# Station Options KENT/DES MOINES

The Kent/Des Moines SR 99 Median Station and East Station options (Exhibit ES-13) would increase the project cost and the HC Campus Station Option would reduce it. All options would increase residential displacements (Table ES-10). The SR 99 East Station Option would have the greatest increase in businesses displaced, while the HC Campus Station Option would have the greatest increase in employees displaced. The Kent/Des Moines SR 99 East Station Option would reduce noise impacts and the Kent/Des Moines HC Campus Station Option would increase noise and vibration impacts. All noise and vibration impacts could be mitigated. The HC Campus Station Option would also increase wetland impacts by crossing over Massey Creek.

**TABLE ES-10**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO SR 99 ALTERNATIVE

LEGEND	↑ Increase	HC Campus Station Option	SR 99 Median Station Option	SR 99 East Station Option
	↓ Decrease			
<b>Performance Measures</b>				
Cost Difference		↓ \$20 million	↑ \$20 million	↑ \$10 million
Change in Total FWLE Daily Boardings		No Change	No Change	No Change
Change in Travel Time (minutes)		No Change	No Change	No Change
TOD Potential within 1/4 mile (acres)		No Change	No Change	No Change
<b>Resource</b>				
<b>Impacts</b>				
Affected Parcels		↑ 19	↑ 1	↓ 9
Residential Displacements		↑ 39	↑ 14	↑ 34
Business Displacements		↓ 7	↑ 2	↑ 8
Employees Displaced		↑ 40	↓ 10	↓ 80
Intersections Not Meeting Level of Service		No Change	No Change	No Change
Residences with a Reduction in Visual Quality		↑ 15	No Change	No Change
Light Rail Noise Impacts		↑ 161	↑ 36	↓ 40
Vibration Impacts		↑ 12	No Change	No Change
Wetland Impacts (acres)		↑ 0.2	No Change	No Change
Upland Habitat Impacts (acres)		↓ 0.2	↓ 0.9	↓ 1.0

**EXHIBIT ES-13**  
KENT/DES MOINES STATION OPTIONS



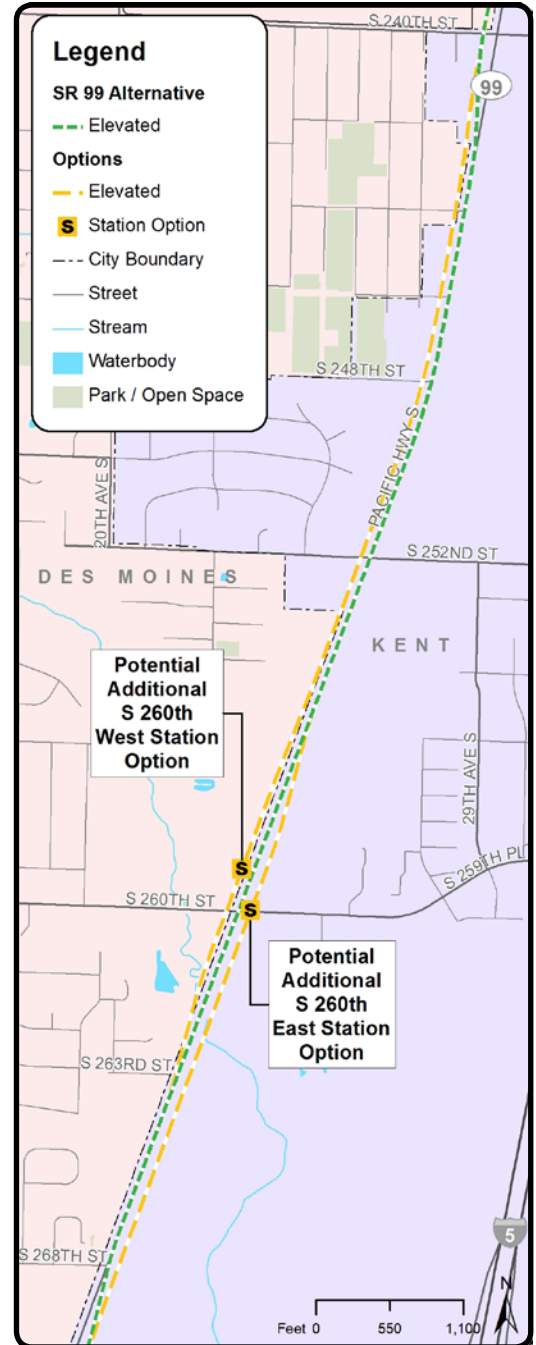
# Potential Additional Station Options S 260TH STREET

The potential additional station at S 260th Street (Exhibit ES-14) would add between \$70M and \$90M to the cost of the SR 99 Alternative. Both S 260th potential additional station options would increase business and employee displacements, while only the east station option would increase residential displacements (Table ES-9). Both options would increase vibration impacts but would decrease noise impacts. All noise and vibration impacts could be mitigated. Both station options would cross McSorley Creek and the S 260th East Station Option would have greater impacts on the McSorley Creek Wetlands and forested areas. Both Station Options would increase ridership and TOD potential relative to the SR 99 Alternative. Both options would increase travel time by less than one minute.

**TABLE ES-11**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO SR 99 ALTERNATIVE

LEGEND	▲ Increase	▼ Decrease	S 260th West Station Option	S 260th East Station Option
<b>Performance Measures</b>				
Cost Difference	▲		\$70 million	\$90 million
Change in Total FWLE Daily Boardings	▲		1,000	1,000
Change in Travel Time (minutes)	▲		<1	<1
TOD Potential within 1/4 mile (acres)			Higher	Higher
<b>Resource</b>				
			<b>Impacts</b>	
Affected Parcels	▼		15	6
Residential Displacements			No Change	▲ 3
Business Displacements	▲		18	18
Employees Displaced	▲		140	80
Intersections Not Meeting Level of Service			No Change	No Change
Residences with a Reduction in Visual Quality			No Change	No Change
Light Rail Noise Impacts	▼		88	36
Vibration Impacts	▲		12	2
Wetland Impacts (acres)	▲		0.1	0.4
Upland Habitat Impacts (acres)	▲		0.5	0.2

**EXHIBIT ES-14**  
S 260TH STATION OPTIONS





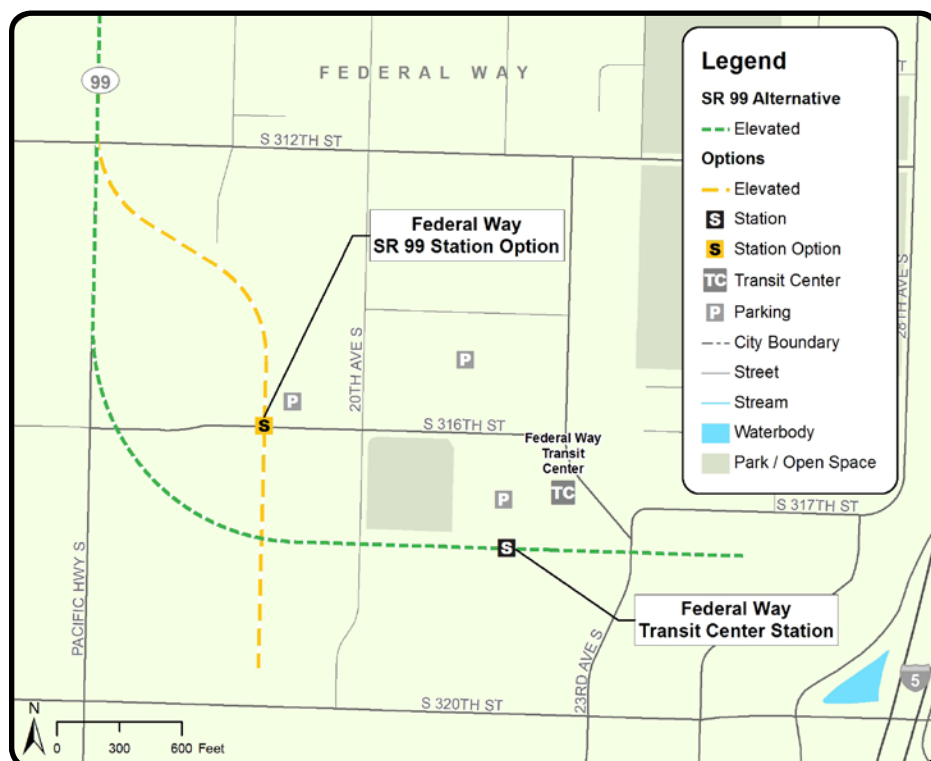
# Station Option FEDERAL WAY SR 99

The Federal Way SR 99 Station Option (Exhibit ES-16) would be closer to SR 99, reducing the overall length, reducing the cost by \$60M, and reducing business displacements (Table ES-13). There would be greater noise impacts, but all noise impacts could be mitigated. This option would impact 0.7 acre of the Federal Way Town Square Park that is currently used for parking, a retention pond, a small portion of a path and open lawn, and landscaping. The loss of parking could be mitigated and the path could be relocated. This station option would decrease ridership.

**TABLE ES-13**  
PERFORMANCE MEASURES & IMPACTS COMPARED TO SR 99 ALTERNATIVE

LEGEND	<span style="color: green;">▲</span> Increase <span style="color: red;">▼</span> Decrease	FW SR 99 Station Option
		Performance Measures
Cost Difference		<span style="color: red;">▼</span> \$60 million
Change in Total FWLE Daily Boardings		<span style="color: red;">▼</span> 2,500
Change in Travel Time (minutes)		<span style="color: red;">▼</span> <1
TOD Potential within 1/4 mile (acres)		No Change
Resource		Impacts
Affected Parcels		<span style="color: red;">▼</span> 7
Residential Displacements		No Change
Business Displacements		<span style="color: red;">▼</span> 13
Employees Displaced		<span style="color: red;">▼</span> 20
Intersections Not Meeting Level of Service		No Change
Residences with a Reduction in Visual Quality		No Change
Light Rail Noise Impacts		<span style="color: green;">▲</span> 47
Vibration Impacts		No Change
Wetland Impacts (acres)		No Change
Upland Habitat Impacts (acres)		No Change

**EXHIBIT ES-16**  
FEDERAL WAY SR 99 STATION OPTION



# SR 99 to I-5 Alternative

## COST

 **1.59** Billion

## TRAVEL TIME

 **13** Minutes

## DAILY RIDERSHIP

 **35,000** Riders

## STATIONS

Kent/Des Moines Station

S 272nd Star Lake Station

Federal Way Transit Center Station

## DAILY BOARDINGS

 **3,000** Riders

 **3,000** Riders

 **12,000** Riders

## TOD POTENTIAL

**Moderate**

**Low**

**High**



### OPTIONS FOR THE SR 99 TO I-5 ALTERNATIVE

This alternative could have the following station or alignment options that are associated with the SR 99 Alternative north of Kent-Des Moines Road and with the I-5 Alternative south of Kent-Des Moines Road:

- Potential additional station at S 216th (West and East options)
- Landfill Median Alignment Option
- Federal Way I-5 S 320th Station Option
- Federal Way I-5 Station Option

These options would have the same impacts as identified for these options on the previous pages.

The SR 99 to I-5 Alternative (Exhibit ES-17) would have the same alignment as the SR 99 Alternative from the Angle Lake Station to just north of Kent-Des Moines Road, where it would transition to 30th Avenue S with a station north of S 240th Street and then would transition to the I-5 right-of-way and be similar to the Preferred Alternative to the Federal Way Transit Center. Stations at S 272nd Street and the Federal Way Transit Center would be the same as the Preferred Alternative. Table ES-14 summarizes the impacts of the SR 99 to I-5 Alternative.

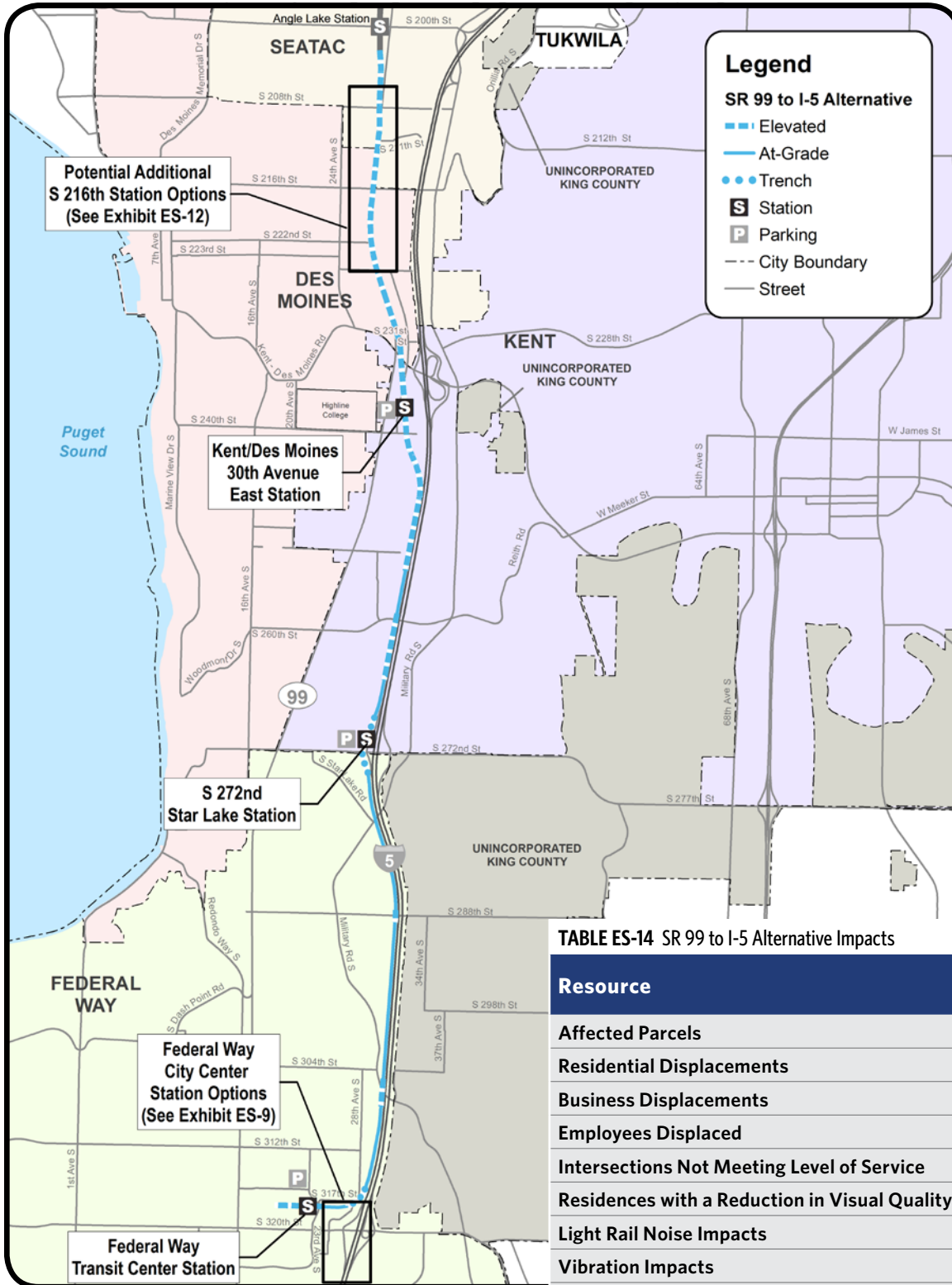
The SR 99 to I-5 Alternative would have the lowest ridership and would have a minute longer travel time than the Preferred Alternative or the SR 99 Alternative. It would cost more than the Preferred Alternative but less than the SR 99 or I-5 to SR 99 alternatives.

The SR 99 to I-5 Alternative would have the least parcels affected. It would avoid many of the business displacements

associated with the SR 99 Alternative and many of the residential displacements associated with the Preferred Alternative. It would have fewer impacts on wetlands and upland habitat along I-5 than the Preferred Alternative, but would have greater impacts on Bingaman Creek, which would be piped south of S 288th Street. However, if this alternative were selected as the project to be built, it could be redesigned to reduce impacts on this stream. Also, similar to the Preferred Alternative, this alternative would have temporary impacts on the playfield at Mark Twain Elementary. The playfield would need to be closed while a lidded trenched guideway is constructed through it. The playfield would be restored to existing conditions following construction. Noise impacts would be less than the SR 99 Alternative and I-5 to SR 99 Alternative, but greater than the Preferred Alternative. It would have the greatest vibration impacts. All noise and vibration impacts could be mitigated.



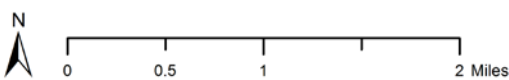
**EXHIBIT ES-17**  
**SR 99 TO I-5 ALTERNATIVE**



Data Sources: King County, Cities of Des Moines, Federal Way, Kent, SeaTac (2015).

**TABLE ES-14 SR 99 to I-5 Alternative Impacts**

Resource	Impact
Affected Parcels	119
Residential Displacements	108
Business Displacements	46
Employees Displaced	420
Intersections Not Meeting Level of Service	8
Residences with a Reduction in Visual Quality	175
Light Rail Noise Impacts	1,200
Vibration Impacts	209
Wetland Impacts (acres)	0.7
Upland Habitat Impacts (acres)	21.7



# I-5 to SR 99 Alternative

## COST

 **1.84** Billion

## TRAVEL TIME

 **13** Minutes

## DAILY RIDERSHIP

 **35,500** Riders

## STATIONS

Kent/Des Moines Station

S 272nd Redondo Station

Federal Way Transit Center Station

## DAILY BOARDINGS

 **3,000** Riders

 **3,500** Riders

 **12,000** Riders

## TOD POTENTIAL

**Moderate**

**Moderate**

**High**



### OPTIONS FOR THE I-5 TO SR 99 ALTERNATIVE

This alternative could have the following station or alignment options that are associated with the I-5 Alternative north of Kent-Des Moines Road and with the SR 99 Alternative south of Kent-Des Moines Road:

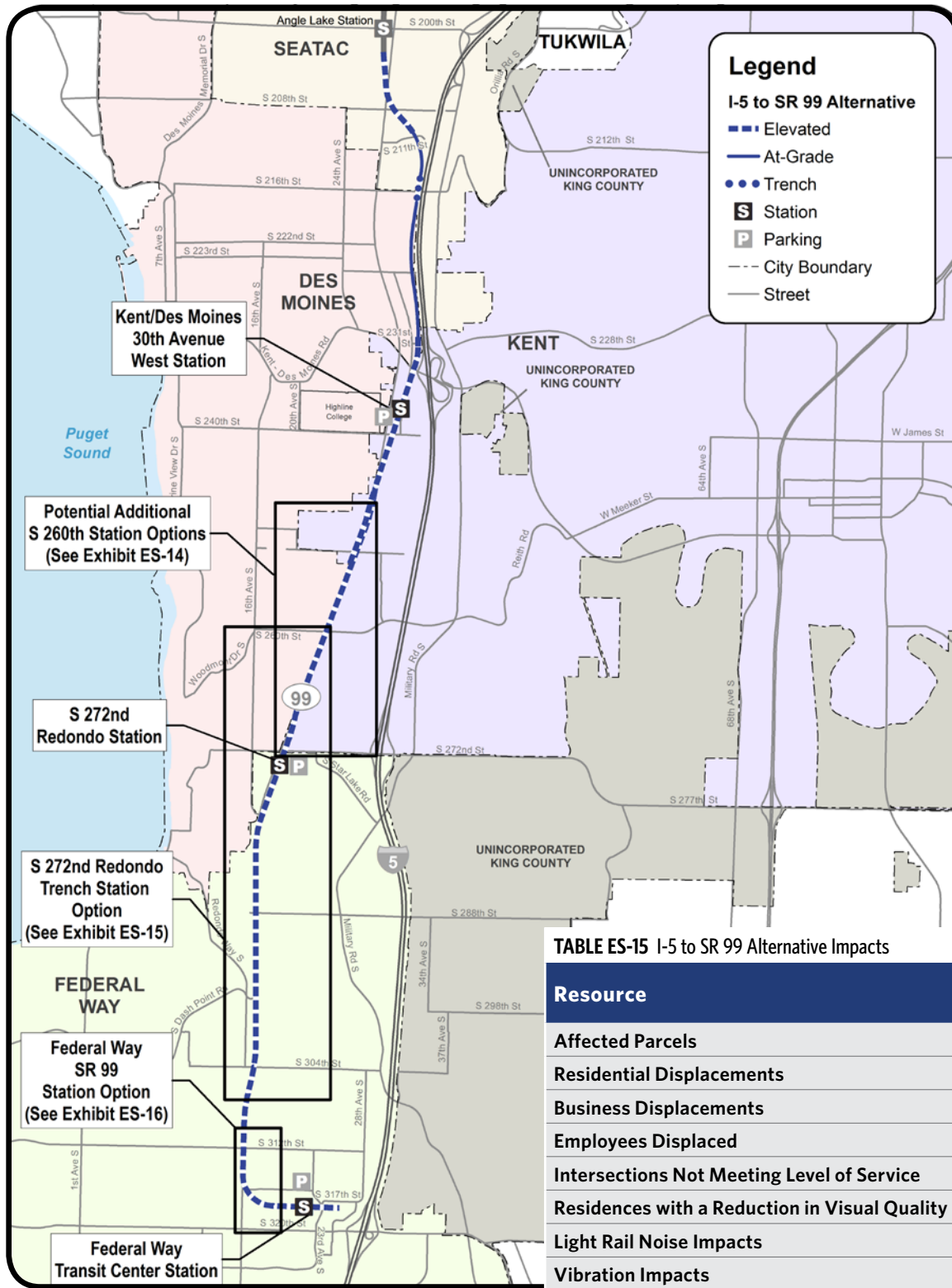
- Potential additional station at S 260th (West & East options)
- 272nd Redondo Trench Station Option
- Federal Way SR 99 Station Option

These options would have the same impacts as identified for these options on the previous pages.

The I-5 to SR 99 Alternative (Exhibit ES-18) would have the same alignment as the Preferred Alternative from the Angle Lake Station to just north of Kent-Des Moines Road. It would then transition to 30th Avenue S with a station north of S 240th Street. After leaving this station, the alignment would transition to the SR 99 median and be the same as the SR 99 Alternative to the Federal Way Transit Center. Stations at S 272nd Street and the Federal Way Transit Center would be the same as the SR 99 Alternative. This alternative would be elevated except from S 211th Street to S 216th Street, and from S 218th Street to S 231st Street, where it would be at-grade next to the I-5 right-of-way. Table ES-15 summarizes the key impacts of the I-5 to SR 99 Alternative.

The I-5 to SR 99 Alternative would have slightly higher ridership than the SR 99 to I-5 Alternative, and lower ridership than the Preferred or SR 99 alternatives. Travel time would be a minute longer than the Preferred or SR 99 alternatives, but the same as the SR 99 to I-5 Alternative. This alternative would cost more than the Preferred and the SR 99 to I-5 alternatives, but slightly less than the SR 99 Alternative. It would displace the most residents, slightly higher than the Preferred Alternative, but would displace slightly fewer businesses than the SR 99 Alternative. Similar to the SR 99 Alternative, it would have minimal impacts on ecosystems, with elevated crossings of all streams and minor wetland and upland habitat impacts along SR 99. This alternative would have the second most noise impacts, but the least vibration impacts. Visual quality impacts would be slightly less than the SR 99 Alternative.

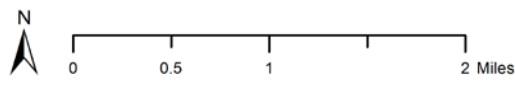
**EXHIBIT ES-18**  
**I-5 TO SR 99 ALTERNATIVE**



Data Sources: King County, Cities of Des Moines, Federal Way, Kent, SeaTac (2015).

**TABLE ES-15 I-5 to SR 99 Alternative Impacts**

Resource	Impact
Affected Parcels	339
Residential Displacements	203
Business Displacements	96
Employees Displaced	500
Intersections Not Meeting Level of Service	9
Residences with a Reduction in Visual Quality	375
Light Rail Noise Impacts	1,860
Vibration Impacts	45
Wetland Impacts (acres)	<0.1
Upland Habitat Impacts (acres)	3.5



## ES.5 Comparison of Alternatives

This section summarizes key performance measures and impacts for all alternatives. Table ES-16 shows these measures and impacts for each alternative with the range of impacts for the options associated with each alternative in parentheses afterwards. As shown in Table ES-16, ridership and travel time would be similar for all alternatives.

Residential displacements would be higher for the alternatives that travel along I-5, while business displacements would be higher for the SR 99 alternatives. The Preferred and SR 99 to I-5 alternatives would have the greatest impacts on wetlands, wetland buffers, streams, and forested areas, while the SR 99 Alternative would avoid impacts on most wetlands and streams.

**TABLE ES-16**  
FWLE ALTERNATIVE CHARACTERISTICS AND IMPACTS

	Alternative (Range of Impacts with Options)			
	Preferred	SR 99	SR 99 to I-5	I-5 to SR 99
<b>Performance Measures</b>				
Cost (2016 Dollars in billions)	\$1.54	\$1.89	\$1.59	\$1.84
Daily Projected Riders	36,500 (31,000- 36,500)	36,500 (21,500- 39,500)	35,000	35,500
Travel Time in minutes	12(12)	12(12-14)	13(12-13)	13(12-13)
<b>Resource Impacts</b>				
Parcels Affected	211 (151- 211)	292 (239-321)	119 (110-126)	339 (296-339)
Residential Displacements	196 (139-258)	36 (36-108)	108 (108-154)	203 (203-210)
Business Displacements	42 (7-42)	101 (80-146)	46 (21-53)	96 (82-114)
Employees Displaced	370 (10-370)	580 (480-1,040)	420 (210-490)	500 (480-640)
Intersections Not Meeting Level of Service [All impacts can be mitigated]	10(10-10)	10(10-10)	8 (8-8)	9 (9-9)
Acres of Land Converted to Transportation Use	47.7(36.2-56.2)	40.6 (38.5-79.0)	35.2(26.2-49.6)	44.1(44.1-60.6)
Residences with a Reduction in Visual Quality	290 (290-290)	260 (245-315)	175(160-175)	375 (375-415)
Number of Light Rail Noise Impacts Before Mitigation [All impacts can be mitigated]	647 (615-864)	2,266 (1,664-2,474)	1,200 (999-1,288)	1,860 (1,385-1,907)
Number of Vibration/ Ground Borne Noise Impacts [All impacts can be mitigated <sup>a</sup> ]	193 (185-193)/ 0 (0-0)	50 (0-271)/ 1(1-1)	209 (159-225)/ 0 (0-0)	45 (45-238)/ 1(1-1)
Acres of Wetland/ Wetland Buffer Impacted	1.3(1.3-2.0)/ 6.6(6.4-8.1)	< 0.1 (<0.1-0.7)/ 0.2 (0.2-0.7)	0.7 (0.7-0.8)/ 4.1 (3.8-4.3)	< 0.1 (<0.1-0.4)/ 0.4 (0.5-0.9)
Length of Stream Impacts in Feet / Acres of Stream Buffers Impacted	1,015 (1,015-1,015)/ 2.5 (2.5-2.5)	0 (0-0)/ < 0.1 (<0.1-0.6)	1,015 (1,015-1,015)/ 1.4 (1.4-1.9)	0 (0-0)/ < 0.1 (<0.1-0.6)
Acres Upland Habitat Impacts	35.0 (33.6-38.9)	2.9 (1.9-8.0)	21.7 (21.6-22.8)	3.5(3.5-7.9)
Number of Historic Properties Impacted	0 (0-0)	1 (1-2)	0 (0-0)	1 (1-1)
Number of Section 4(f) Resources Impacted	0 (0-0)	1 (1-3)	0 (0-0)	1(1-2)

<sup>a</sup> The Preferred Alternative would have 4 residual impacts.

Construction for alternatives along SR 99 would be more disruptive to the community due to lane closures adjacent to the construction area. Construction for alternatives along I-5 would not affect traffic on I-5 except for potential lane closures at S 216th Street, for tree removal along the alignment, and transmission line relocations over I-5 and for the Landfill Median Alignment Option. Cross streets over or under I-5 would be partially closed for construction. The Preferred and SR 99 to I-5 alternatives would have temporary construction impacts on the playfield at Mark Twain Elementary, while the Federal Way SR 99 Station Option for the SR 99 and I-5 to SR 99 alternatives would have permanent and temporary construction impacts on the Federal Way Town Square Park. The S 272nd Star Lake Elevated Station Option would have permanent impacts on the Mark Twain Elementary playfield.



Existing sound wall along a portion of an elevated guideway.

## ES.6 Transit Oriented Development (TOD) Potential

As part of its TOD program, Sound Transit would evaluate development opportunities at specific locations as part of the station area planning efforts during final design. Sound Transit has evaluated the relative degree to which the FWLE station locations could support TOD using four factors: access, land use plans and policies, market support, and development potential. This analysis is documented in the *Federal Way Link Extension Transit Oriented Development Study* (Sound Transit, 2015) and the *Federal Way Link Extension Transit Oriented Development Study Addendum* (Sound Transit, 2016a).

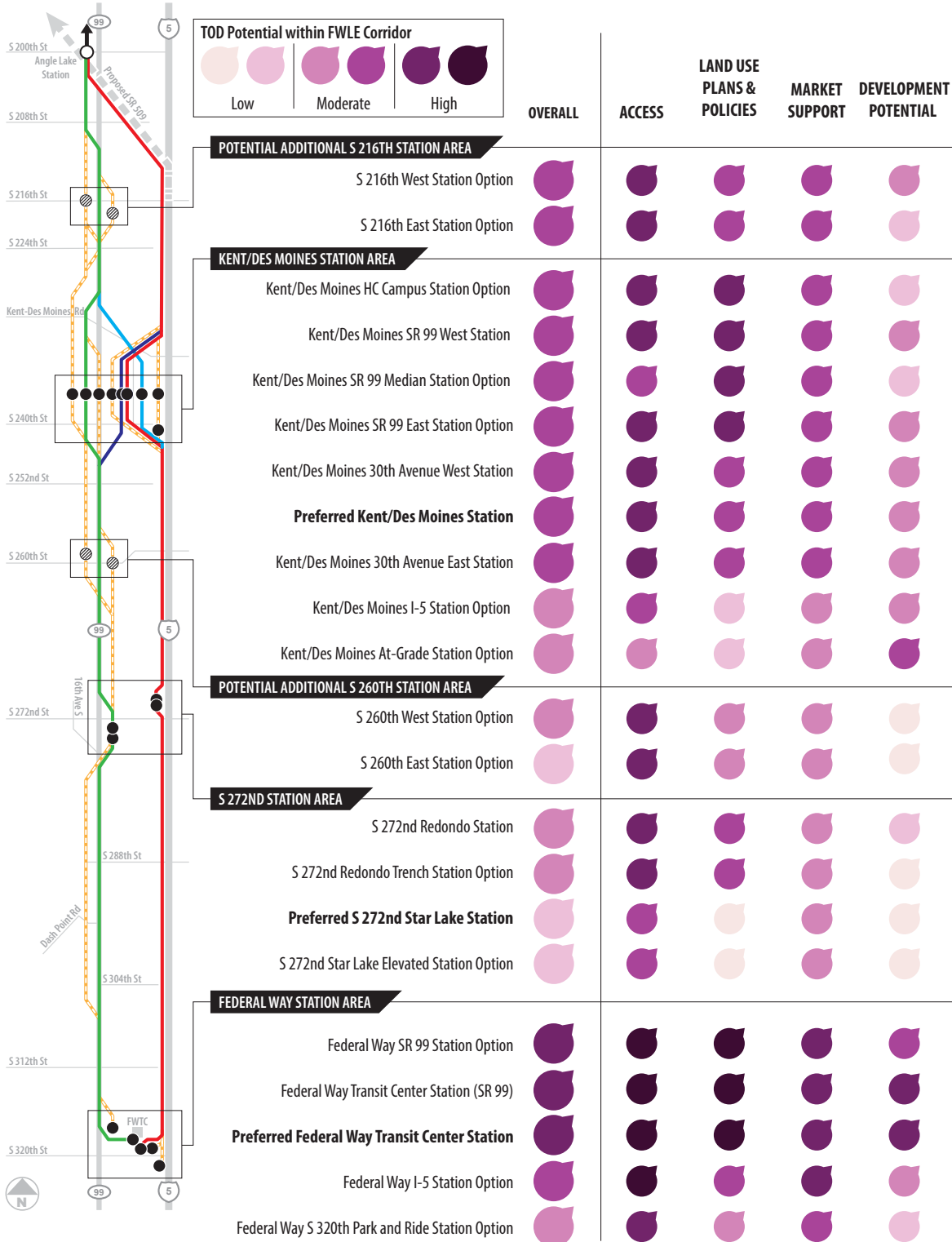
In general, all stations within the same station area have similar **market support** scores. **Land use** scores for stations associated with SR 99 alignments are generally higher than stations associated with I-5 alignments. **Access** scores begin to differentiate station options, and **development potential** scores vary the most within general station areas.

Overall, the Federal Way Transit Center Station and Federal Way SR 99 Station Option would have the greatest development potential, followed by the Kent/Des Moines At-Grade and I-5 station options.

The TOD potential for alternatives is primarily a reflection of the station area scores (see Exhibit ES-19). For example, any I-5 alignment must connect to the S 272nd Star Lake Station, which is the lowest-performing station overall in terms of TOD potential. This station lowers the TOD potential score for that alternative.

The S 216th Street and S 260th Street potential additional stations would increase the TOD potential for alternatives that could include these stations.

**EXHIBIT ES-19**  
**SUMMARY OF TOD POTENTIAL WITHIN FWLE CORRIDOR BY STATION OPTION**



**NOTE:**

- Stations listed west to east within each station area.
- These results are relative rankings for the FWLE corridor and represent whether a station is more or less supportive of TOD within this corridor.

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

Sound Transit will comply with applicable federal, state, and local environmental regulations and apply reasonable mitigation measures to reduce significant adverse impacts. The Final EIS identifies potential measures to mitigate adverse impacts of the project alternatives as well as avoidance and minimization measures that would be part of the project. These measures would be refined through final design and permitting. The Federal Transit Administration (FTA) will issue the NEPA ROD after the Final EIS that will include a list of all committed mitigation measures for the project to be built.

The following is a summary of key areas where mitigation measures are necessary:

**Transportation:** Mitigation would be needed at nine or ten intersections, depending on the alternative selected, and could include restriping, adding right- or left-turn pockets, allowing U-turn movements at intersections, and adding or optimizing traffic signals.

**Visual:** Sound Transit would use a variety of measures at different locations to mitigate adverse visual impacts: landscaping buffers, plantings between guideway columns and in front of retaining or sound walls, aesthetic treatment of walls, and context-sensitive design at stations and park-and-rides. It would mitigate tree removal along the I-5 corridor according to the WSDOT Roadside Policy Manual, and trees removed outside of WSDOT right-of-way would be mitigated per the local jurisdiction requirements.

**Noise:** Sound Transit would use sound walls and other design measures to mitigate noise impacts. The need for building insulation will be investigated where necessary.

**Vibration:** Sound Transit would install ballast mats, resilient rail fasteners, or other specialized track work to reduce groundborne vibration where necessary.

**Ecosystems:** During final design and permitting, Sound Transit will first try to avoid and minimize impacts on wetlands and streams through design measures and best management practices. Where impacts are unavoidable, Sound Transit will mitigate them in accordance with applicable federal regulations, local critical area ordinances, and permit requirements. Sound Transit is committed to no net loss of wetland functions and wetland areas for the FWLE.

**Parks:** Mitigation measures for impacts on Federal Way Town Square Park would include purchase of replacement land, enhancement or restoration of the existing park, or financial compensation.

## ES.8 Significant and Unavoidable Adverse Impacts

With the avoidance, minimization, and potential mitigation measures described in Chapter 3 (Transportation Environment and Consequences), Chapter 4 (Affected Environment and Environmental Consequences), and Chapter 5 (Construction), significant adverse impacts would be avoided for most alternatives. Operational impacts that might not be fully mitigated include the following:

- Removal of mature trees and upland habitat along I-5, along with other project components such as retaining walls or an elevated guideway, would have visual impacts for some residences adjacent to the I-5 right-of-way with the Preferred Alternative, SR 99 to I-5 Alternative, and I-5 to SR 99 Alternative.
- The elevated guideway associated with the SR 99 and I-5 to SR 99 alternatives would have visual impacts on multi-family residences on the east side of SR 99 near S 288th Street, where many residences have views of Puget Sound and the Olympic Mountains. The S 272nd Redondo Trench Station Option would avoid the impacts on these residences, but would have visual impacts on residences on the west side of SR 99.

**25,000 RESIDENTS AND BUSINESSES  
RECEIVED A MAILER ANNOUNCING THE  
AVAILABILITY OF THE DRAFT EIS, HOW TO  
COMMENT, AND INFORMATION ABOUT  
THE DRAFT EIS ALTERNATIVES.  
640 COMMENT SUBMITTALS ON THE  
DRAFT EIS WERE RECEIVED.**

Some temporary impacts during construction would not be avoidable and could be significant and adverse in some locations. These impacts would include temporary but long-term lane or roadway closures, loss of parking, and noise and vibration. Detour routes would reduce the impact of roadway closures, although delays, congestion, and inconvenience would still occur. There could be adverse impacts on businesses adjacent to SR 99 from alternatives that travel on or adjacent to this corridor, especially for businesses that depend on drive-by traffic.

## ES.9 Public and Agency Involvement

Sound Transit and the FTA have been engaging the public and agencies since the start of early scoping in 2012. The 30-day early scoping period included two public meetings and one agency meeting. Comments were accepted at these meetings and via mail and email. An online survey was also conducted during this period.

Sound Transit initiated the Draft EIS process with formal public environmental scoping in June and July 2013, which included meetings with the public and agencies, a comment period, and public notices and advertisements. Sound Transit also hosted public events and meetings with agencies and interested groups as the Draft EIS was being prepared in 2013 and 2014. The release of the Draft EIS in April 2015 included a formal review and comment period with two public meetings with hearings.

After review and consideration of the Draft EIS findings and comments from the public and agencies, the Sound Transit Board identified a Preferred Alternative for evaluation in the Final EIS. Sound Transit notified the public of the Preferred Alternative through listserv emails, website updates, circulation of a press release, and attendance at community events and neighborhood meetings from August 2015 to October 2016. A Notice of Availability for this Final EIS was posted in the Federal Register and the



SEPA Register on November 18, 2016, along with notices in local newspapers and on the Sound Transit website. Notification of the Final EIS was sent to the project's distribution list of interested parties and agencies, Sound Transit's mailing lists, those who commented on the Draft EIS, and addresses within a half mile of the project.

Once the Sound Transit Board selects an alternative to build, Sound Transit will continue to coordinate throughout final design and construction with affected agencies and local communities. Appendix B of the Final EIS has additional details about the project's public involvement and agency coordination plan, including how Sound Transit and FTA are reaching out to low-income and minority populations in the project area.

## ES.10 Other Environmental Considerations

### ES.10.1 SECTION 4(F) RESOURCES

Section 4(f) is a U.S. Department of Transportation statute that protects significant historic properties, publicly owned parks, publicly owned recreation areas, and fish and wildlife refuges. It prevents FTA from approving a project that adversely affects these properties unless (1) there is no feasible and prudent alternative, and (2) the project minimizes the impacts as much as possible. When FTA determines that the use of a Section 4(f) property has only a de minimis impact, the Section 4(f) restrictions do not apply.

The Federal Way SR 99 Station Option for the SR 99 Alternative and the I-5 to SR 99 Alternative would directly impact 0.7 acre of the Federal Way Town Square Park. The impacted area is used for parking, landscaping, part of the loop pathway, and a bioretention pond. If this station option is selected as part of the project to build, it would be designed to minimize the impact on the park as described in Appendix E, Section 4(f) and Section 6(f) Evaluation, of





the Final EIS. By implementing measures to minimize harm such as realigning the loop path and replacing the bioretention facility, the station option would not have an adverse effect on any of the park's recreational activities, features, or attributes. If the station option is advanced, FTA's preliminary determination is that the impact to Town Square Park would be de minimis. FTA would coordinate with the City of Federal Way to obtain its concurrence on the de minimis determination.

The project's potential Section 4(f) use of historic properties is limited to partial acquisition of two parcels containing buildings eligible for the National Register. One parcel contains most of Highline College, including several historic buildings and associated parking lots. The Kent/Des Moines HC Campus Station Option associated with the SR 99 Alternative would use an edge of the east parking lot. The other parcel is on SR 99 in Federal Way and includes the eligible US Bank building and parking. The SR 99 and the I 5 to SR 99 alternatives would acquire a narrow strip of the parking lot on this parcel. The acquisition and use of land under either of these scenarios would not affect the physical integrity of the eligible buildings and would have only a slight effect on the buildings' setting. FTA's preliminary determination is that these would be de minimis uses if these alternatives or options were selected as the project to be built.

**See Appendix E for more information about Section 4(f).**

## ES.10.2 ENVIRONMENTAL JUSTICE

Chapter 7 of the EIS assesses whether the FWLE alternatives would result in disproportionately high and adverse effects on minority and/or low-income populations. It also describes engagement with minority and low-income populations and discusses the benefits of the FWLE to these populations.

After considering the project's potential effects, taking into account mitigation and avoidance measures as well as anticipated benefits to minority and low-income populations, FTA has determined that the FWLE would not have disproportionately high and adverse impacts on minority and low-income populations. In addition, the project would provide benefits to minority and low-income residents, including improved access to all transit modes; a 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.



## ES.11 Areas of Controversy and Issues to Be Resolved

Areas of controversy and issues to resolve include:

- **Funding:** Funding from ST2 tax revenue is projected to be available to construct the FWLE from Angle Lake Station to the Kent/Des Moines Station. ST3, on the November 2016 ballot, would authorize and fund the project to the Federal Way Transit Center.
- **Location of Preferred Alternative in WSDOT right-of-way and use of WSDOT right-of-way:** Sound Transit must secure agreements and approvals from WSDOT and the Federal Highway Administration (FHWA) for the following:
  - Use of portions of the I-5 right-of-way
  - Modifications to other parts of the freeway, such as shoulders or existing noise walls
  - Construction staging and access
  - Lane closures affecting the interstate highway
  - Any modifications that could affect highway operations or safety

Most of these approvals would occur during final design. Sound Transit has coordinated with FHWA and WSDOT to develop conceptual engineering definitions for the alternatives, but as final design progresses, FHWA or WSDOT could request modifications or place other restrictions on the project. Sound Transit has worked successfully with WSDOT and FHWA to obtain approvals for right-of-way use for other Sound Transit projects, but it would affect the project cost, construction impacts, and schedule if Sound Transit is not able to use the right-of-way as anticipated in the current design of the alternatives. In addition, the Preferred Alternative alignment could be shifted east within the WSDOT right-of-way to minimize some visual, noise, vibration, and ecosystem impacts based on further coordination with FHWA and WSDOT. Such a shift might require additional guardrail or other highway design features to maintain highway safety.

- **Midway Landfill:** Sound Transit will need to continue coordination with the US Environmental Protection Agency (EPA) and the Washington State Department of Ecology because Midway Landfill is a Superfund site. Prior to building the FWLE at the Midway Landfill, EPA will need to evaluate Sound Transit's design and construction plans to determine whether the FWLE is consistent with the remedial action that has been implemented at the Midway Landfill and what documentation is needed related to the remedy as described in the Midway Landfill Record of Decision under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (EPA, 2000).
- **Mark Twain Elementary School:** Sound Transit has continued its coordination with Federal Way Public Schools regarding design of the Preferred Alternative and its effects on school district property. The Preferred Alternative studied in the Final EIS includes a trench profile underneath a portion of the school ballfield. The S 272nd Star Lake Elevated Station Option includes an elevated profile design that would be above ground on the same portion of the ballfield. When the Sound Transit Board selects the alternative to be built, the profile of the guideway in this location will be resolved. Under either scenario, Sound Transit expects ongoing coordination with the school district related to construction period effects, final design of the light rail guideway, and appropriate mitigation measures for project impacts.
- **Potential additional stations:** Stations at S 216th Street and S 260th Street were not included in the ST2 or ST3 plans. Further evaluation of consistency with these plans would be required before they could be added to the FWLE. The Preferred Alternative does not include any potential additional stations.

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

## ES.12 Next Steps

Following publication of the Final EIS, FTA will accept comments on the Final EIS for 30 days.

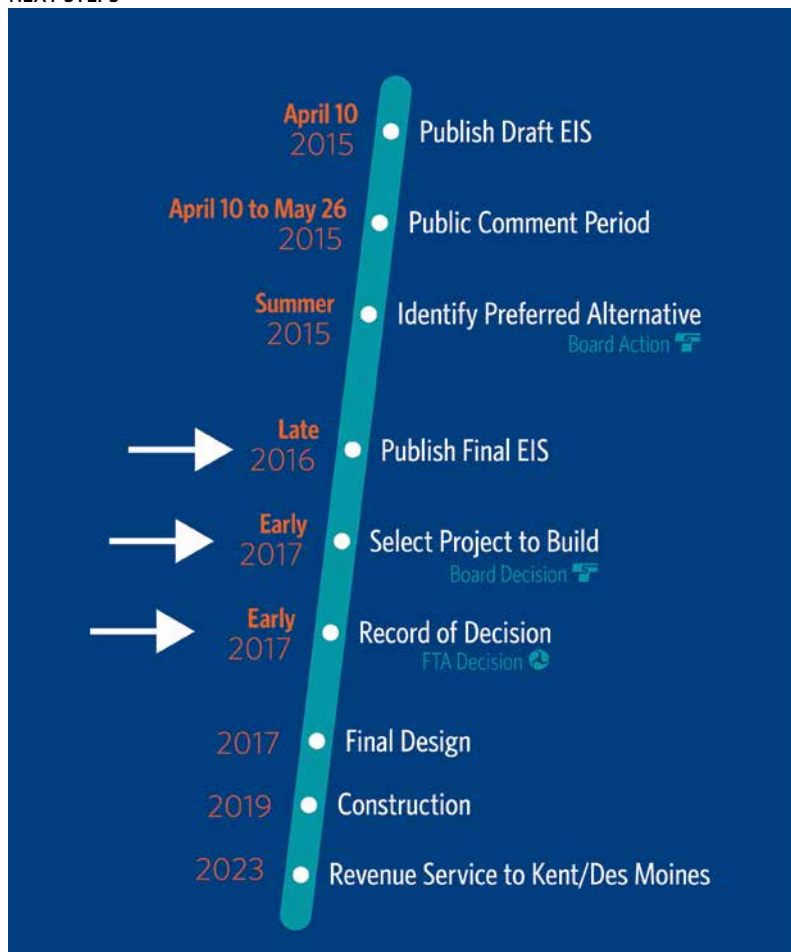
After considering the analysis in the Final EIS, including public and agency comments, the Sound Transit Board will select the project alternative to be built. FTA is then expected to publish a ROD for the project that will document that the project has met the requirements of NEPA and related environmental regulations. The ROD will describe FTA's environmental determination on the project, the alternatives considered, the basis for the decision to approve the project, and the required mitigation measures. Issuance of the ROD completes FTA's NEPA process and is a prerequisite for federal funding or approvals.

In general, FTA must combine the Final EIS and ROD into a single document. However, that requirement does not apply when FTA finds that it is not practical to combine the documents, such as when a Draft EIS does not identify a

Preferred Alternative, or when timing requirements make a joint Final EIS/ROD impractical (e.g., if state law bars a final project decision until the Final EIS has issued). Both of those circumstances exist in this case. Because FTA has determined it is not practical to issue a combined Final EIS and ROD, it is publishing these documents separately.

After the Sound Transit Board selects the project to be built and FTA issues a ROD, Sound Transit will initiate final design, begin property acquisition, plan construction, and apply for other permits and approvals needed to construct and operate the light rail project. If the selected project is within I-5 right-of-way, FHWA is expected to issue a combined ROD with FTA or its own ROD for the project and can use this Final EIS to meet its NEPA and other applicable decision requirements. Similarly, local jurisdictions issuing permits for the project may rely on the Final EIS to satisfy their SEPA requirements. Final design, permitting, and right-of-way acquisition are scheduled for 2017 and 2018.

### EXHIBIT ES-20 NEXT STEPS





## References

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