

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

| | |
|----------------------|---|
| AGENDA TITLE: | Discussion of Light Rail Draft Environmental Impact Statement with Sound Transit |
| DEPARTMENT: | Public Works |
| PRESENTED BY: | Kirk McKinley, Transportation Services Manager Alicia McIntire, Senior Transportation Planner |
| ACTION: | <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Motion <input checked="" type="checkbox"/> Discussion |

PROBLEM/ISSUE STATEMENT:

Sound Transit is currently in the process of planning and design of the Lynnwood Link light rail extension north of Northgate. The light rail line will travel along I-5 and include two stops in Shoreline. Light rail represents a significant change to transit service in Shoreline. The City has been extensively engaged in Sound Transit's planning, environmental and public outreach processes to determine the alignment and station locations.

Sound Transit has released the Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension. The [DEIS](#) identifies and evaluates the impacts of several different alignments for the project, including six possible options in King County. The alignment through Shoreline is along the east side of I-5 and includes elevated and at-grade options. Potential station locations in Shoreline include NE 145th Street, NE 155th Street and NE 185th Street. The DEIS examines the impacts associated with several topics including transportation, land use, noise, visual and acquisitions. Review of the DEIS will include a sixty (60) day public comment period. Sound Transit is requesting Council input on the DEIS, alignment options and station locations.

The DEIS does not include a recommended alternative for the project. The Sound Transit Board is scheduled to identify the Preferred Alternative for the project in October. The Preferred Alternative will be carried through the Final Environmental Impact Statement (FEIS). The FEIS will identify appropriate mitigation for the station areas. The FEIS is scheduled to be released in late 2014.

RESOURCE/FINANCIAL IMPACT:

There is no financial impact associated with tonight's discussion. There is no significant financial impact to the City associated with this process, as it is being managed and funded by Sound Transit. The City has been and will continue to participate throughout the EIS process by providing technical and policy direction. Staff has begun reviewing Sound Transit's DEIS and will participate in the development of the Final EIS (FEIS), including identification of appropriate mitigation for the station areas. This will require continued dedication of City staff resources. Upon completion of the EIS process and

determination of the final alignment and station locations in 2014/2015, the City, along with Sound Transit will need to engage the community in site specific planning for the selected station locations.

RECOMMENDATION

No action is required at this time. Sound Transit is requesting Council input on the DEIS, alignment options and station locations. The Sound Transit Board will use the information developed in the DEIS, Council's input, as well as feedback received from other jurisdictions and the public, to develop a Preferred Alternative that will be carried through the FEIS process. Staff will return to Council on August 12 to outline ST's findings from the DEIS and recommendations for comments, as well as a preliminary recommendation for the alignment and station options. Council is scheduled to finalize the recommendations to the Sound Transit Board on September 9.

Approved By: City Manager **JU** City Attorney **IS**

BACKGROUND

Sound Transit is currently in the process of planning and design of the Lynnwood Link light rail extension north of Northgate. The light rail line will travel along I-5 and include two stops in Shoreline. Light rail represents a significant change to transit service in Shoreline. The City has been extensively engaged in Sound Transit's planning, environmental and public outreach processes to determine the alignment and station locations.

Sound Transit is preparing to release the Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension. The DEIS identifies and evaluates the impacts of several different alignments for the project. The alignment through Shoreline is along the east side of I-5. There are six possible options under consideration for King County.

- NE 145th Street elevated and NE 185th Street at grade station
- NE 145th Street elevated and NE 185th elevated
- NE 130th Street at grade with 155th elevated and NE 185th at grade
- NE 130th Street elevated with 155th elevated and NE 185th elevated
- NE 130th Street at grade with NE 145th Street elevated and NE 185th at grade
- NE 130th Street elevated with NE 145th Street elevated and NE 185th elevated

Specific options for each station under consideration in Shoreline include:

NE 145th Street Station alternative

- Elevated station options northeast of I-5 and NE 145th interchange
- Possible relocation of the northbound I-5 on ramps
- 500 to 650 stall parking garage
- Additional bus service
- Pedestrian and bike improvements

NE 155th Street Station alternative

- Elevated station between I-5 and the fire station
- 500 stall parking garage east of the fire station
- Additional bus service
- Pedestrian and bike improvements

NE 185th Street Station alternative

- At grade and elevated station options east of I-5
- One at grade station alternative paired with rebuilding the NE 185th St bridge
- Surface parking and parking structure options (360 to 500 stalls) on the east and west sides of I-5
- Additional bus service
- Pedestrian and bike improvements

The NE 130th alternative includes at-grade and elevated station options, with 0 to 100 parking stalls. Reconfiguration of the interchange is included as an option as well.

The DEIS examines the impacts associated with the following topics:

- Transportation
- Acquisition, displacement, 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
- Hazardous Materials
- Electromagnetic fields
- Public Services
- Utilities
- Historic and archaeological resources
- Parkland and open space
- Cumulative Impacts
- Indirect Impacts

Review of the DEIS will include a sixty (60) day public comment period. Sound Transit will also host a series of public meetings, including one in Shoreline scheduled for August 22, to gather public input on the DEIS. Sound Transit is requesting Council input on the DEIS, alignment options and station locations. The comment period will end on September 23, 2013.

Attachment A is a summary chapter from the DEIS. It provides a description of the alternatives under consideration and a comparison of the impacts of the project for each. More detailed descriptions of each issue and the impacts associated with it are provided in the individual chapters of the DEIS.

The DEIS does not include a recommended alternative for the project. The Sound Transit Board is scheduled to identify the Preferred Alternative for the project in October. If NE 145th Street is selected as one of the stations, Council may consider directing staff to move forward the route development plan for this corridor. The Preferred Alternative will be carried through the Final Environmental Impact Statement (FEIS). The FEIS will identify appropriate mitigation for the station areas. The FEIS is scheduled to be released in late 2014.

DISCUSSION

During the scoping period, the City submitted a comment letter (Attachment B) to Sound Transit requesting that they consider the following issues in the DEIS process:

- Cost
- Travel Time
- Ridership
- Traffic Impacts
- Accessibility
- Social Equity
- Transit Feeder Service
- Land Uses
- Business Impacts
- Visual Impacts
- Noise
- Development Potential

As discussed at the June 17 council meeting, several of the issues the City asked Sound Transit to evaluate as part of the DEIS were considered, however, some were not. The primary issue discussed at the council meeting was access to the stations,

including consideration of whether parking should be provided at the stations, bicycle and pedestrian access, parking impacts to neighborhood streets, increased bus service and use by residents of other jurisdictions (Lake Forest Park, Kenmore, Bothell, north Seattle). Other outstanding scoping issues that will be addressed in the DEIS include:

Alignments: Elevated or at-grade line and stations; Parking on the west side of I-5 at NE 185th Street

Cost: Ensure that there are two light rail stations in Shoreline; Minimize costs associated with right-of-way acquisition, capital investments, ongoing operation and maintenance; Cost savings used for enhancements or mitigation to provide high quality transit service and amenities for north King County residents

Ridership: Impacts to ridership based upon origins, destinations, travel time/speed, population densities in the immediate vicinity of and farther from the stations and accessibility of the stations; Ridership differences as a result of features such as future population and employment densities within ¼ mile, ½ mile and 1 mile of the station locations (currently identified and potential densities should comprehensive plans be amended)

Transportation Impacts: Evaluation of measures designed to prevent or minimize cut-through traffic on local streets; Improvements to NE 145th Street for all modes; Redevelopment of the interchange and its impacts on vehicular, transit and pedestrian mobility; Reconstruction of NE 185th Street bridge; Reconstruction of the bicycle and pedestrian bridge at NE 195th Street

Visual Impacts: Evaluation of the visual impacts of each potential alignment and station locations; height and bulk of garages; identify mitigation

Noise: Evaluation of the different types of noise, volumes and duration, as well as mitigation for noise impacts (construction, operation, additional traffic).

STAKEHOLDER OUTREACH

Sound Transit has managed the public outreach EIS process. Three public meetings, as well as one agency meeting, were held in October 2011 for the EIS scoping process, including one at the Shoreline Conference Center which was attended by about 100 people.

As part of the scoping process, Sound Transit requested comments from the public and agencies identifying the issues they should address in the EIS process. The City of Shoreline submitted a scoping comment letter identifying several issues the City wanted to see addressed in the EIS.

Throughout October 2011, the City went through a process to develop guiding principles to assist Council in identifying a preferred light rail alignment (attached to scoping comment letter). Staff was present at the EIS scoping meeting in Shoreline as part of the public outreach associated with developing the guiding principles. These principles were approved by Council on October 24, 2011 and the I-5 alignment was identified as the City's preferred alignment on November 14, 2011. The Sound Transit Board identified I-5 as the light rail alignment in December.

As part of the screening process, Sound Transit staff held a series of "drop in" sessions in March 2012, including three in the City of Shoreline. These meetings provided the

public with an opportunity to learn where the light rail route could be located along I-5, see where stations are being considered and ask questions of project staff. Sound Transit staff provided Council with an update on the DEIS process on April 2, 2012. Council sent a letter to Sound Transit in April 2012 identifying NE 145th Street and NE 185th Street as the preferred station locations.

In an effort to further promote awareness of the Lynnwood Link Extension, Sound Transit, along with City staff, was present at several summer 2012 events in Shoreline including Swingin' Summer Eve, Celebrate Shoreline and a Farmers' Market. Sound Transit has given presentations to several neighborhood associations including Echo Lake, Meridian, North City, Briarcrest, Ridgecrest, Ballinger, Highland Terrace, Richmond Highlands and the Council of Neighborhoods and participated in the City's May 22, 2013 open house that kicked off station area planning efforts.

COUNCIL GOAL(S) ADDRESSED

This project addresses Council Goal 3: Prepare for Two Light Rail Stations.

RESOURCE/FINANCIAL IMPACT

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RECOMMENDATION

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ATTACHMENTS

Attachment A: Summary chapter from Lynnwood Link Extension DEIS
Attachment B: EIS Scoping comment letter



SUMMARY

S.1 LYNNWOOD LINK EXTENSION

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to build and operate the Lynnwood Link Extension, which would expand the regional light rail system from Seattle to Lynnwood, Washington. The proposed project would be in the cities of Seattle and Shoreline in King County and in Mountlake Terrace and Lynnwood in Snohomish County.

The Lynnwood Link Extension is a step in implementing the Puget Sound Regional Council's (PSRC) *VISION 2040* (PSRC 2009) and the Sound Transit 2005 *Regional Transit Long-Range Plan* (Sound Transit Long-Range Plan) (Sound Transit 2005a), both of which call for the eventual extension of mass transit service beyond Lynnwood to Everett.

Sound Transit and the Federal Transit Administration (FTA) are preparing this environmental impact statement (EIS) in compliance with the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). FTA is the federal lead agency under NEPA, and Sound Transit is the state lead agency under SEPA.

S.1.1 Project Area

The proposed Lynnwood Link Extension would begin at Northgate in north Seattle and end at the Lynnwood Transit Center (Figure S-1). The project would be about 8.5 miles long, generally following Interstate 5 (I-5), the major north-south route through the state. This corridor is in one of the most densely developed urban areas in

the Pacific Northwest and is part of a longer north-south commuter corridor connecting Tacoma, Seattle, and Everett. Roadways in this corridor are heavily congested during peak travel periods. Congestion is expected to worsen as the region accommodates 20 percent more people and nearly 40 percent more jobs through 2040.

The Lynnwood Link Extension would connect to Central Link, the spine of the regional light rail system. The initial sections of Central Link are already operating between downtown Seattle and Sea-Tac International Airport. Light rail sections from downtown Seattle to the north are under construction. University Link from downtown Seattle to the University of Washington is to open in 2016, and the extension to Northgate is to open in 2021. With the Lynnwood Link Extension and the other projects in the Sound Transit 2 (ST2) program approved by voters in 2008, Sound Transit is developing nearly 36 new miles of service to the north, south, and east, resulting in 55 miles of light rail. The ST2 program of projects included light rail from the Northgate Transit Center to the Lynnwood Transit Center, with intermediate stations serving north Seattle, Shoreline, and Mountlake Terrace.

S.2 PURPOSE AND NEED FOR THE LYNNWOOD LINK EXTENSION

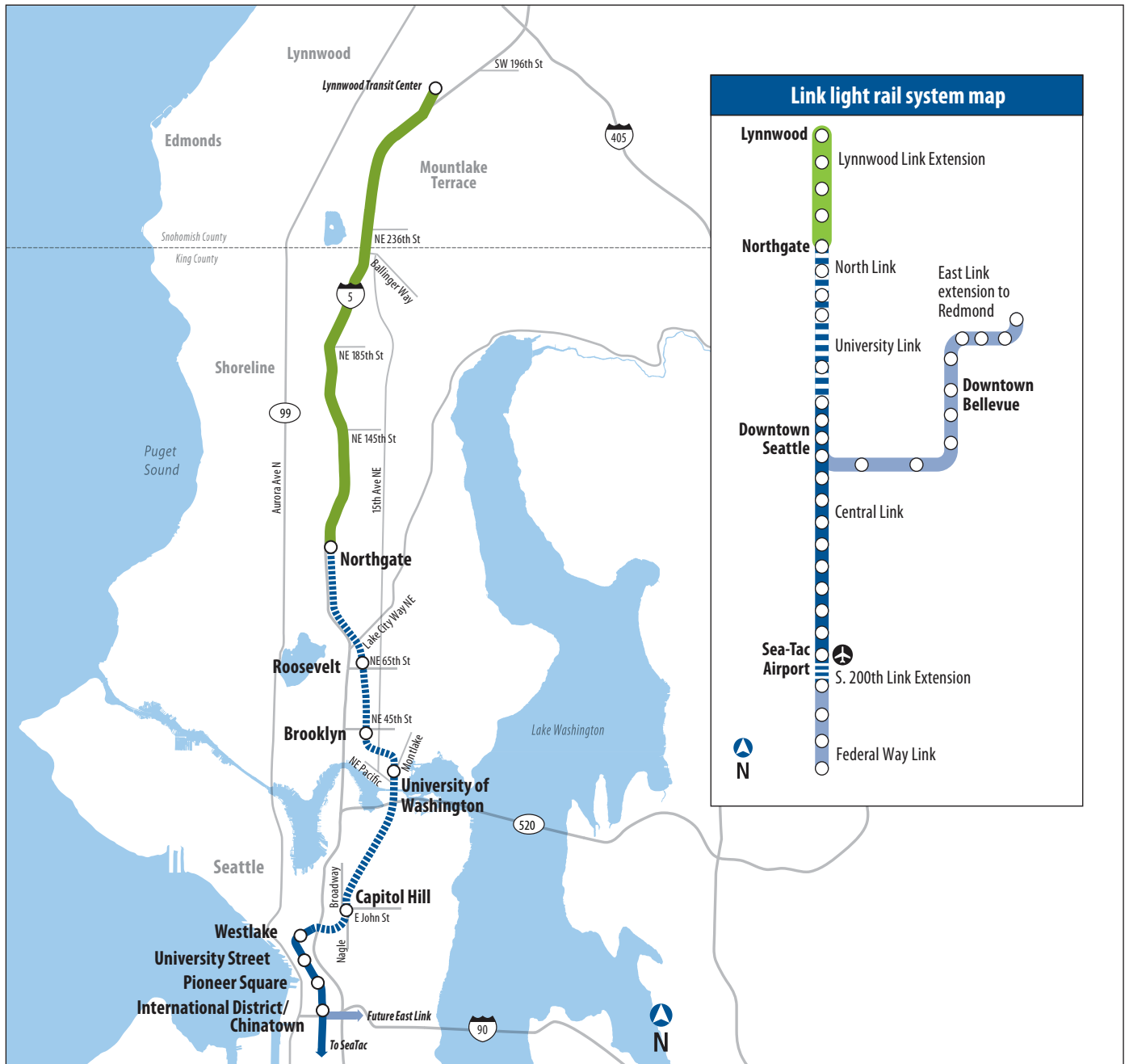
The purpose of the Lynnwood Link Extension is to expand the Sound Transit Link light rail system from Northgate in Seattle north into Shoreline, Mountlake Terrace, and Lynnwood in Snohomish County in order to:

- Provide reliable, rapid, and efficient peak and off-peak transit service of sufficient capacity to meet the existing and projected demand for travel to and from the corridor communities and other urban centers in the central Puget Sound area.
- Create an alternative to travel on congested roadways and improve regional multimodal transportation connections.

- Support the adopted land use, transportation, and economic development plans of the region and the corridor communities.
- Advance the long-range vision, goals, and objectives for transit service established by the Sound Transit Long-Range Plan for high-quality regional transit service connecting major activity centers in King, Pierce, and Snohomish counties.
- Implement a financially feasible system that seeks to preserve and promote a healthy environment.

The project is needed to:

- Address increasingly unreliable travel times for transit trips that now rely on the corridor's highly congested roadway and high-occupancy vehicle (HOV) lanes.
- Address overcrowding caused by insufficient transit capacity.
- Create a reliable alternative to automobile trips on I-5 and State Route (SR) 99, the two primary highways serving the project corridor, which are unreliable and over capacity throughout large portions of the day.
- Increase mobility, access, and transportation capacity for the 20 percent growth in population and 40 percent growth in employment projected in the regional growth and activity centers in the corridor and the region, consistent with PSRC's *VISION 2040* and *Transportation 2040*, as well as related county and city comprehensive plans.
- Create the transit infrastructure needed to support the development of Northgate and Lynnwood—the corridor's two designated regional growth centers.
- Advance the long-range vision of the Sound Transit Long-Range Plan for a future extension of mass transit north to Everett.



DATA SOURCES: (Sound Transit)

Legend

- █ Lynnwood Link Extension
- ▣ Under construction
- Link in service
- In planning

Figure S-1. Regional Setting

- Ensure long-term regional mobility, multimodal connectivity, and convenience for the corridor’s citizens and communities, which include travel-disadvantaged residents and low-income and minority populations.
- Help the state and region reduce transportation-related energy consumption and decrease harmful greenhouse gas emissions in the atmosphere, in accordance with the Revised Code of Washington (RCW) 47.01.440, and as outlined in Chapter 70.235 RCW (Limiting Green House Gas Emissions).

S.3 ALTERNATIVES CONSIDERED

This Draft EIS compares the environmental effects of a No Build Alternative and multiple light rail alternatives for the Lynnwood Link Extension. The alternatives were defined by the Sound Transit Board of Directors (Board) after previous planning and alternatives analysis considered other corridors and transit modes (as described in Section S.4), and environmental scoping.

S.3.1 No Build Alternative

The No Build Alternative represents the existing transportation system without the Lynnwood Link Extension. It includes other committed transportation projects identified in the *Metropolitan Transportation Plan* adopted by PSRC in 2010 (*Transportation 2040*). It also assumes growth in regional population and employment through 2035. Under the No Build Alternative, Sound Transit would still build and operate the Northgate Link, East Link, and South Link light rail extensions contained in the ST2 program.

S.3.2 Light Rail Alternatives

The light rail alternatives are grouped in three geographic segments—A, B, and C—as shown in Figure S-2. They generally follow the I-5 corridor from the Northgate Transit Center in Seattle to the Lynnwood Transit Center. The summaries below describe key features of the range of alternatives that Sound Transit is considering. These alternatives have some features, such as stations or parking facilities, which could work for other alternatives in a segment. Light rail trains would operate weekdays between 5:00 am and 1:00 am daily, running as often as every 4 minutes each way during peak periods, and every 7.5 minutes in the early morning or late at night.

The alternatives present a variety of ways Sound Transit could approach the design, construction, and operation of the proposed project. They show how light rail could be developed mostly adjacent to I-5 and how the profile for light rail might vary based on existing conditions, such as bridges, interchanges, and other infrastructure and environmental or community features. They reflect how topography and various station choices affect alignment decisions, and they illustrate different ways light rail could cross I-5 to ultimately reach the project’s terminus station in Lynnwood.



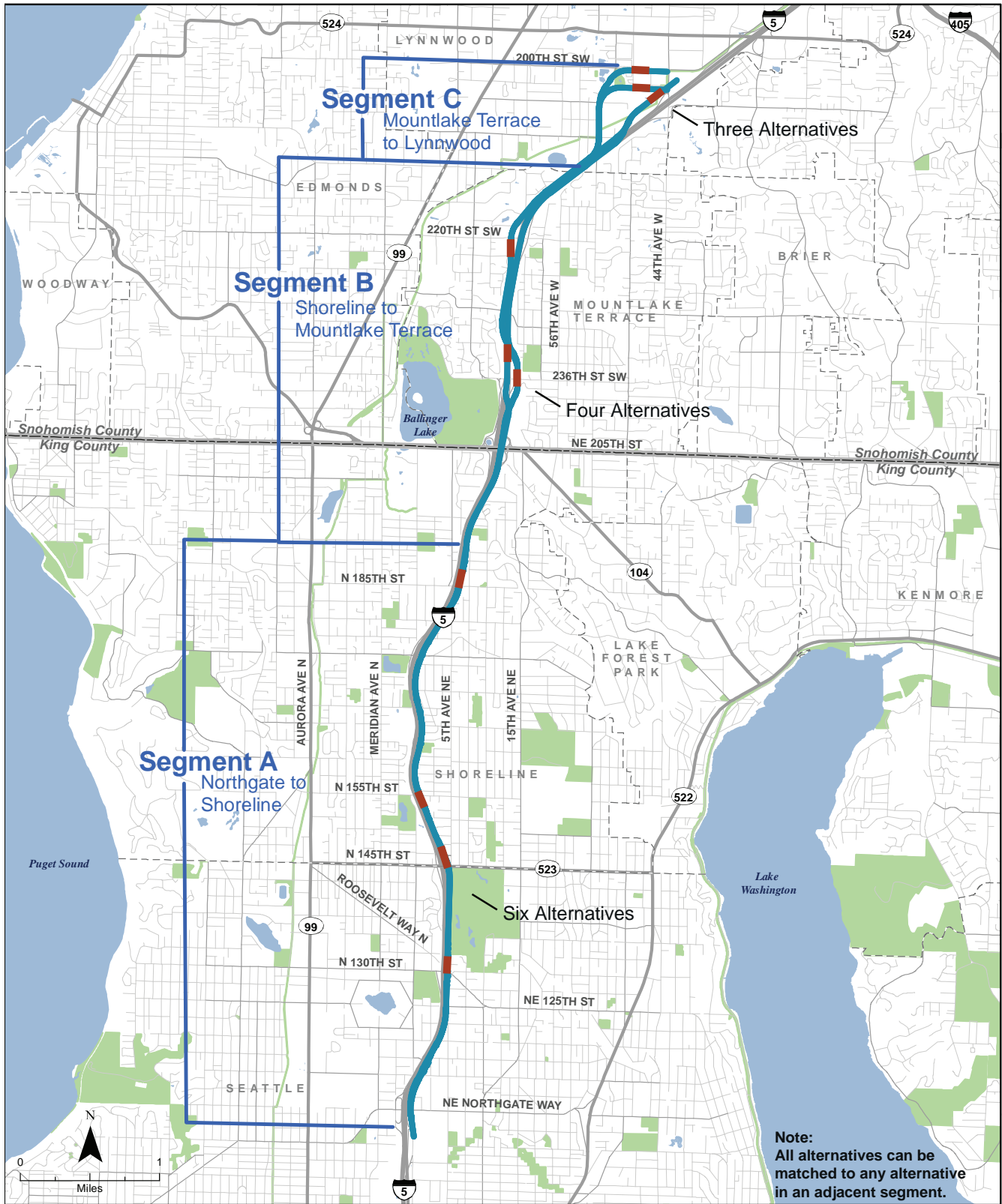


Figure S-2. Alternatives by Segments

At-grade or Elevated Profiles: While all of the alternatives would have light rail in an exclusive right-of-way (separated from other traffic), some are mostly at-grade and others are mostly elevated. These choices are largely related to existing transit facilities, topography, right-of-way, and freeway features such as interchanges and bridges. At-grade alternatives can have the advantage of lower construction and operating costs compared with elevated alternatives, but they can require rebuilding bridges, ramps, or interchanges, which can increase costs and impacts. At-grade alternatives can also result in some property or environmental impacts that could be reduced or avoided by an elevated alternative. However, elevated alternatives can cause more noise and visual impacts than at-grade alternatives.

Number and Location of Stations: For Segments A and B, the range of alternatives reflects questions about how many stations should be developed. The alternatives define where stations could be located; what type of profile is proposed (at grade or elevated); and the approach to other features such as access, parking, or other existing infrastructure, including transit centers. At-grade stations are generally less expensive to construct and operate, while elevated stations can have a smaller footprint and other elements beneath them.



At-grade Light Rail Train



Elevated Light Rail Train with Overhead Catenary Wires

In Segment A, the alternatives present choices about whether two or three stations should be built and where they should be located (NE 130th Street, NE 145th Street, NE 155th Street, or NE 185th Street). In Segment B, the alternatives feature a station at the Mountlake Terrace Transit Center or at the nearby freeway station, and one of the alternatives includes an additional station at 220th Street SW. In Segment C, all of the alternatives include a single elevated station in Lynnwood, but its location varies relative to the existing Lynnwood Transit Center or its park-and-ride lots. One alternative would locate the light rail station north of the existing transit center, another has the station just south of the transit center, and a third locates the light rail station on the parking lot south and east of the existing transit center.

Parking Facilities: The alternatives present several ways for the proposed project to address the need for parking. The approach varies by station location along the project's length, and the proposed capacity and location of parking facilities consider factors such as expected demand, street and freeway access, and urban setting and plans. Some alternatives feature several approaches to parking, such as garages and surface lots. In Segment A, most of the parking facilities would be on the east side of I-5 near the stations, but one alternative has a west side

garage at NE 185th Street. In Segments B and C, parking would be provided at stations west of I-5, except for the Mountlake Terrace Transit Center options.

SEGMENT A: SEATTLE TO SHORELINE

Segment A has six alternatives connecting Northgate in Seattle to NE 185th Street in Shoreline, all on the east side of I-5. These alternatives differ from each other in three key ways: the extent to which they are at-grade or elevated, the number of stations (two versus three), and the locations of stations. Some stations also feature park-and-rides with different parking options. Figures S-3, S-4, and S-5 show the potential Segment A station sites.

| Key Characteristics of the Segment A Alternatives | | | | | | |
|---|----|----|----|----|-----|-----|
| | A1 | A3 | A5 | A7 | A10 | A11 |
| Profile | | | | | | |
| Mostly At-grade | • | | • | | • | |
| Mostly Elevated | | • | | • | | • |
| Stations* | | | | | | |
| 130th | | | G | E | G | E |
| 145th | E | E | | | E | E |
| 155th | | | E | E | | |
| 185th | G | E | G | E | G | E |
| *E = Elevated; G = At-grade | | | | | | |

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations. Alternative A1 (Figure S-3) connects to the light rail guideway of the Northgate Link Extension near NE 104th Street. It is elevated from Northgate until about NE 117th Street, and then stays mostly at-grade except for sections between NE 130th Street through NE 145th Street, and at NE 155th Street and NE 175th Street. In addition to the stations shown on Figure S-3, key features include a replaced NE 117th Street bridge over I-5; a reconfigured NE 130th Street interchange; realignments for parts of 1st Avenue NE, 5th Avenue NE, and 7th Avenue NE in Shoreline; and a replaced NE 185th Street bridge over I-5.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations. Alternative A3 is similar to Alternative A1, but the alignment is mostly elevated, except from about NE 150th Street to about NE 173rd Street. This alternative features different station configurations at its NE 145th Street and NE 185th Street Stations (see Figure S-3). It avoids the NE 117th Street bridge by crossing over the road and to the east, and it modifies the ramps at the NE 145th Street interchange.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations. Alternative A5 is largely based on Alternative A1, except that it has stations at NE 130th and NE 155th Streets (instead of a station at NE 145th Street), and with a different option for a NE 185th Street Station (see Figure S-4). Other key elements include a shift east around the NE 117th Street bridge at I-5, changes at the NE 130th Street interchange, and realignments for parts of 1st Avenue NE and 7th Avenue NE in Shoreline.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations. Alternative A7 combines station choices similar to Alternative A5, with the mostly elevated guideway found with Alternative A3, including elevated sections over the NE 117th Street overpass, and the NE 130th Street off-ramp and bridge (see Figure S-4).

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations. Alternative A10 is based on Alternative A1 but with three stations, and different station configurations and parking options, as shown on Figure S-5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations. Alternative A11 is based on Alternative A3 but would add the NE 130th Street Station found with Alternative A7; see Figure S-5.



A1: AT-GRADE/ELEVATED TO NE 145th AND NE 185th STATIONS

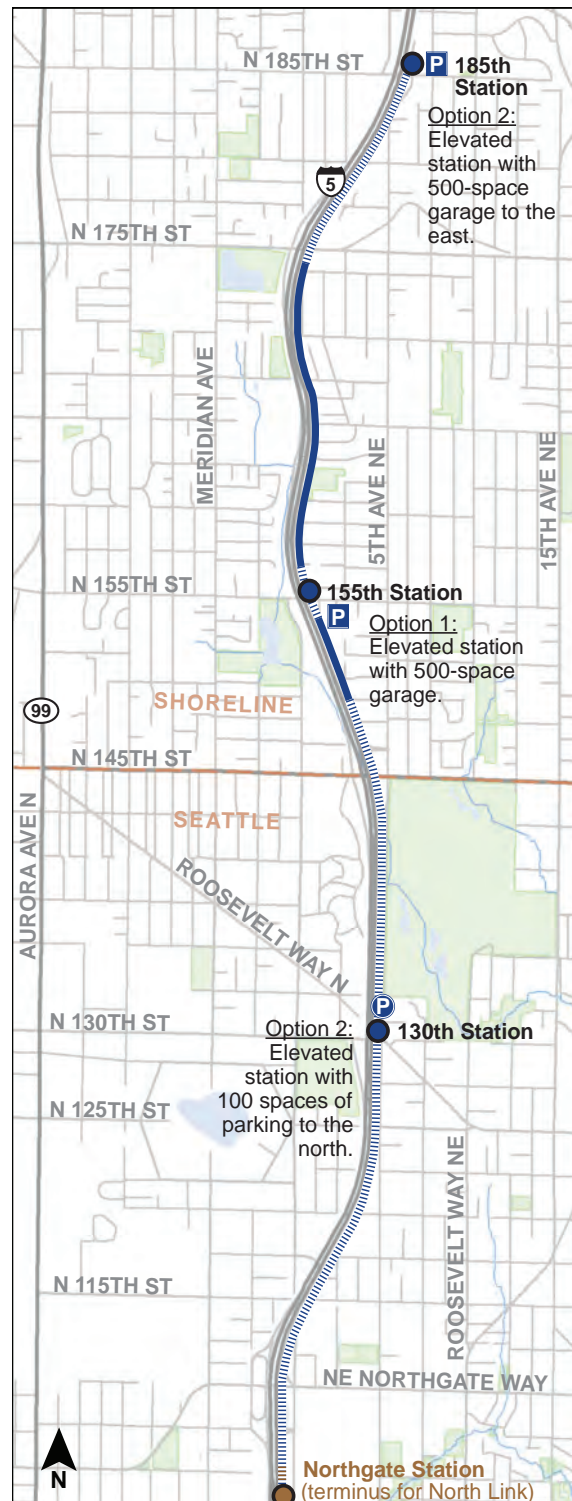


A3: MOSTLY ELEVATED TO NE 145th AND NE 185th STATIONS

Figure S-3. Alternatives A1 and A3



A5: AT-GRADE/ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS

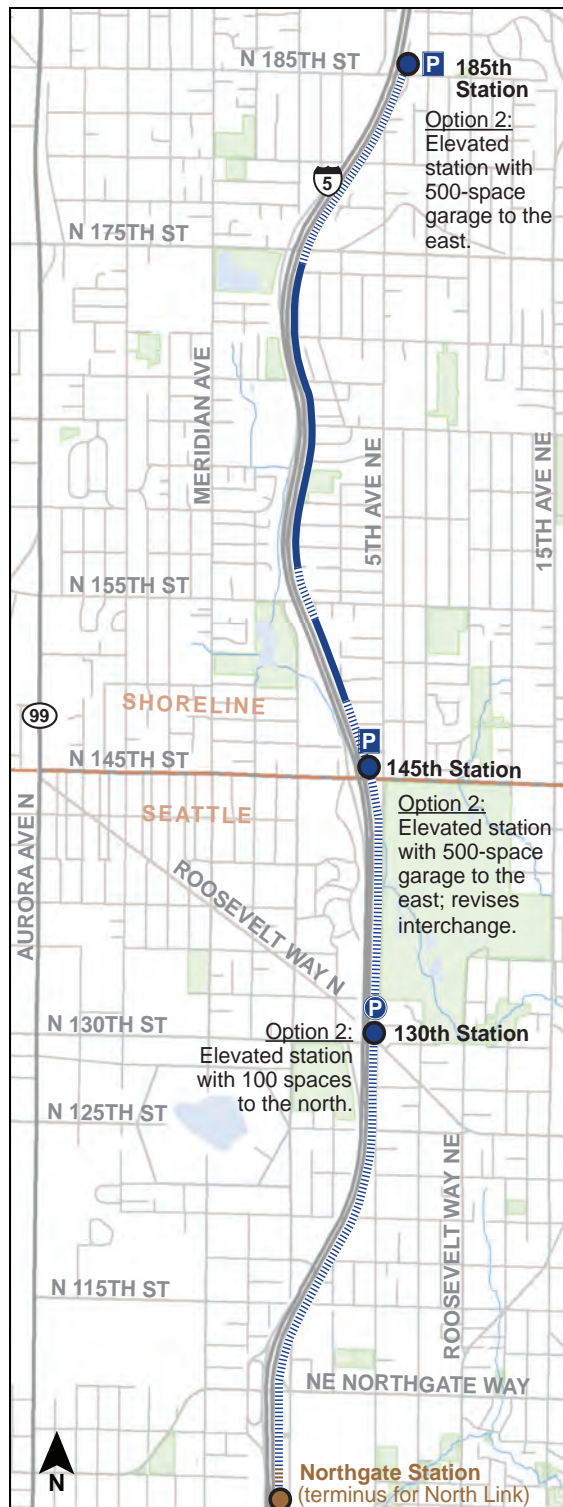


A7: MOSTLY ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS

Figure S-4. Alternatives A5 and A7



A10: AT-GRADE/ELEVATED WITH NE 130th, NE 145th AND NE 185th STATIONS



A11: MOSTLY ELEVATED WITH NE 130th, NE 145th AND NE 185th STATIONS

Figure S-5. Alternatives A10 and A11

SEGMENT B: SHORELINE TO MOUNTLAKE TERRACE

There are four alternatives proposed for Segment B from NE 185th Street in Shoreline to 212th Street SW in Mountlake Terrace. All alternatives begin on the east side of I-5 and end either in the I-5 median or on the west side of I-5. These alternatives have at-grade and elevated sections along their alignment, but all are elevated as they enter Mountlake Terrace. After that, the median alignments are generally at-grade while the west side alignments are both at-grade and elevated. Three of the alternatives feature a station at the existing Mountlake Terrace Transit Center and park-and-ride (NE 236th Street), while one places a station at the Mountlake Terrace Freeway Station in the I-5 median. One alternative also features an additional station at 220th Street SW. Figures S-6 to S-7 show the Segment B alternatives.

| Key Characteristics of the Segment B Alternatives | | | | |
|---|----|----|-----|----|
| | B1 | B2 | B2A | B4 |
| Mountlake Terrace Station | | | | |
| Transit Center | • | • | • | |
| Freeway Station | | | | • |
| Alignment North of Mountlake Terrace Station | | | | |
| Freeway Median | • | | | • |
| West side | | • | • | |
| Additional Station at 220th Street SW | | | • | |

Alternative B1: East Side to Mountlake Terrace Transit Center to Median. Alternative B1 begins north of the NE 185th Street Station and would be either in a retained cut or elevated guideway along the east side of I-5, depending on its Segment A connection (see Figure S-6). It crosses below a replaced NE 195th Street pedestrian bridge and then is largely elevated to a station on the east side of the Mountlake Terrace Transit Center. It then crosses over the northbound lanes of I-5, enters the freeway median, and drops to at-grade. The alignment continues at-grade in the median of I-5, generally at the level of the southbound I-5 lanes, north to approximately 212th Street SW.

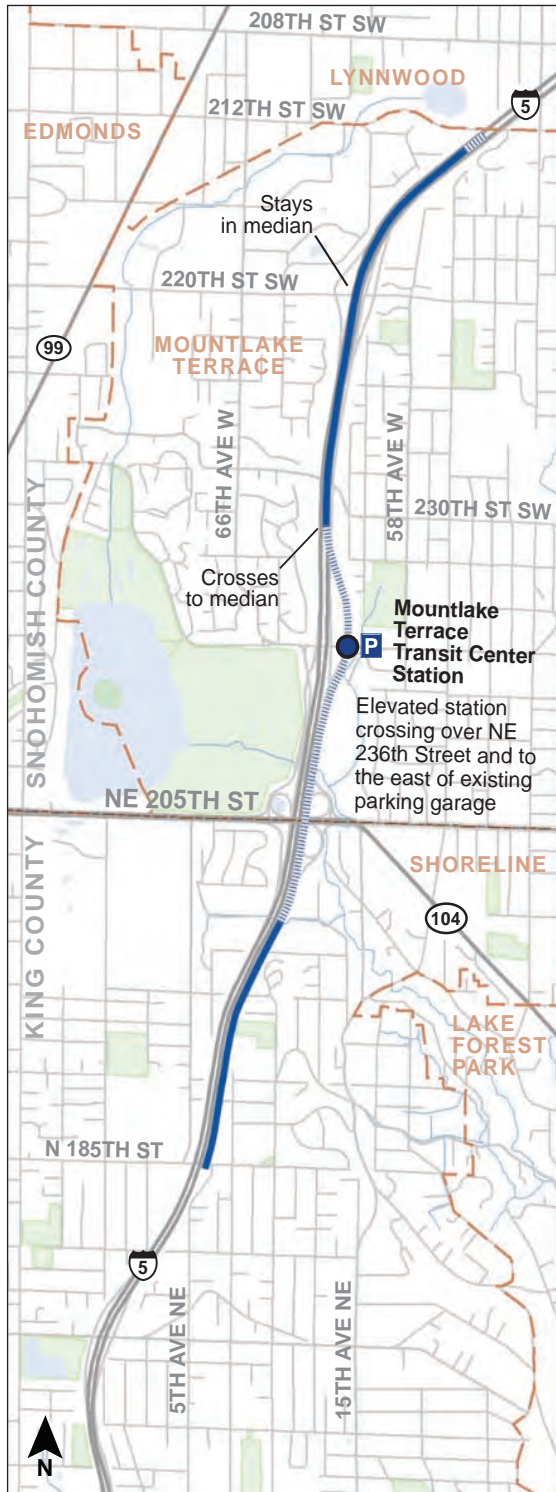
Alternative B2: East Side to Mountlake Terrace Transit Center to West Side. Alternative B2 is the same as Alternative B1 between NE 185th Street and the Mountlake Terrace Transit Center Station (see Figure S-6). North of the station it crosses over all I-5 lanes to align along the west side of I-5, where it continues north with ground-level sections until it crosses over 220th Street SW and the I-5 freeway ramps. Alternative B2 then descends to follow the east side of 60th Avenue West, and runs mostly at-grade along the west side of I-5 before finishing with an elevated guideway over 212th Street SW.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side with 220th Street SW Station. Alternative B2A is the same as Alternative B2, except it includes a station with a park-and-ride at 220th Street SW, as shown on Figure S-7.

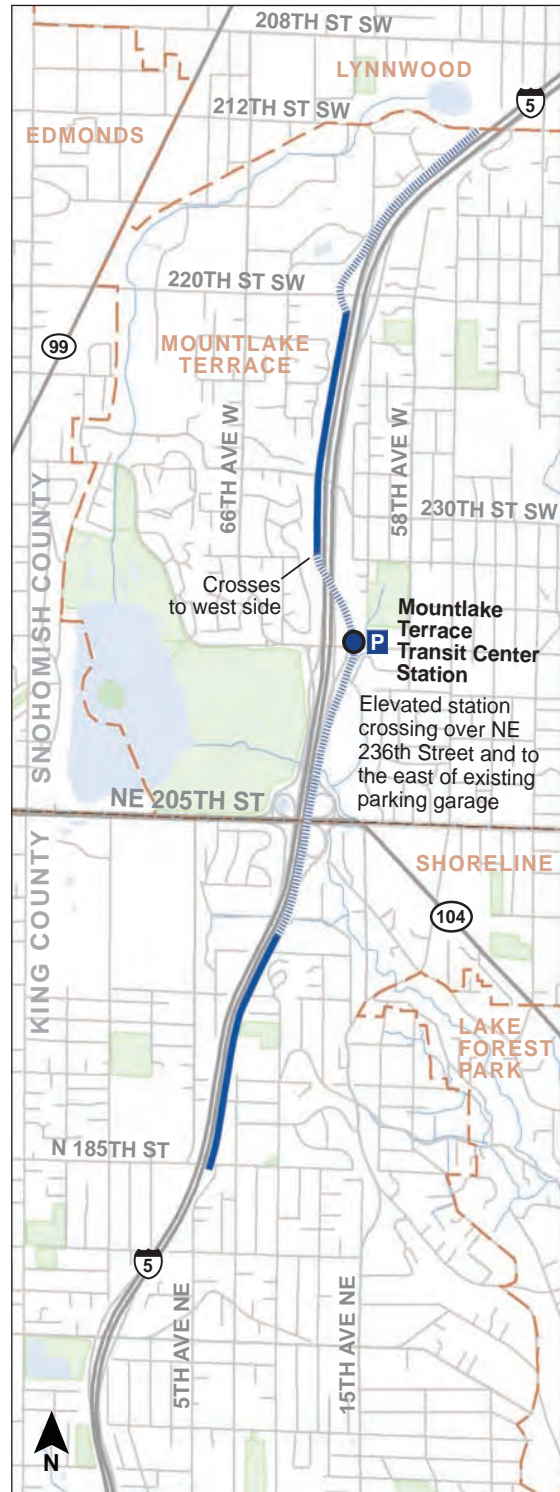
Alternative B4: East Side to Mountlake Terrace Freeway Station to Median. Alternative B4 (see Figure S-7) is the same as Alternative B1 from the NE 185th Street Station to about the Lake Ballinger Way/SR 104 interchange, where it crosses over to the I-5 median and under the 236th Street SW overpass to reach the Mountlake Terrace Freeway Station. North of the Mountlake Terrace Freeway Station, the Alternative B4 alignment is similar to Alternative B1.



Mountlake Terrace Transit Center

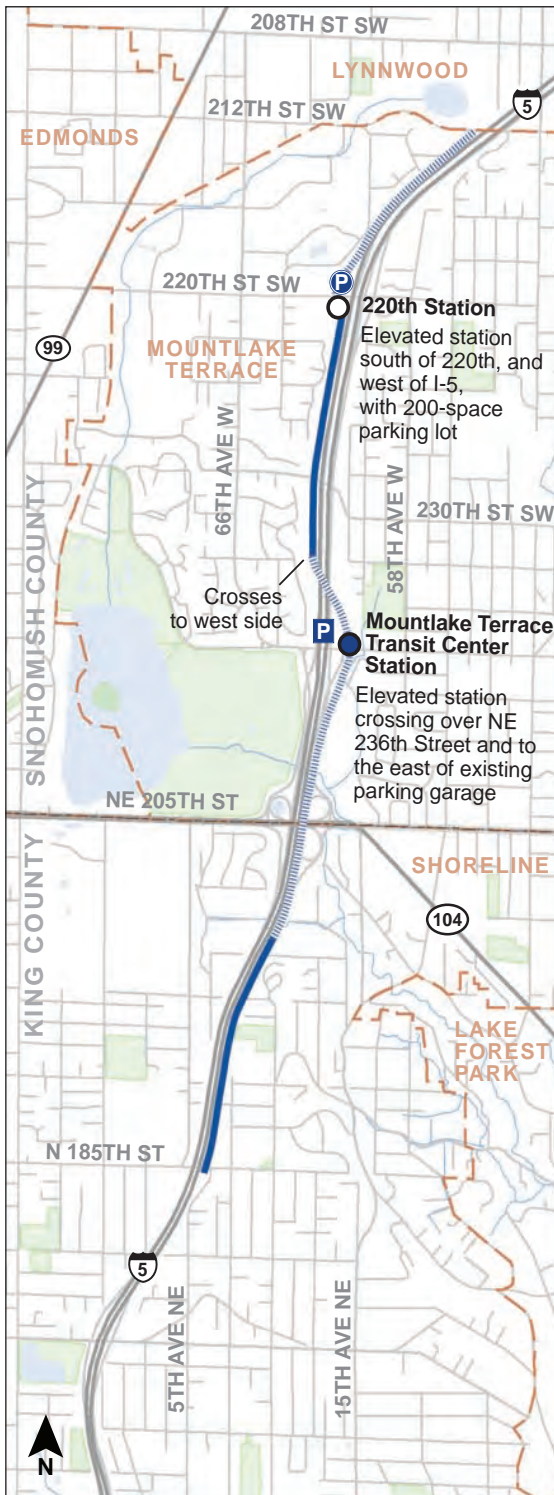


**B1: EAST SIDE TO MOUNTLAKE TERRACE
TRANSIT CENTER TO MEDIAN**



**B2: EAST SIDE TO MOUNTLAKE TERRACE
TRANSIT CENTER TO WEST SIDE**

Figure S-6. Alternatives B1 and B2



**B2A: EAST SIDE TO MOUNTLAKE TERRACE
TRANSIT CENTER TO WEST SIDE WITH
220TH ST SW STATION**



**B4: EAST SIDE TO MOUNTLAKE TERRACE
FWY STATION TO MEDIAN**

Figure S-7. Alternatives B2A and B4

SEGMENT C: MOUNTLAKE TERRACE TO LYNNWOOD

In Segment C, three alternatives depart from the I-5 median or west side of I-5 but use different alignments to reach the Lynnwood Transit Center, with different stations and park-and-ride options at the project’s north terminus. Figure S-8 shows the Segment C alternatives, which are all elevated.

| Key Characteristics of the Segment C Alternatives | | | |
|---|----|----|----|
| | C1 | C2 | C3 |
| Station Location | | | |
| 200th Street SW | • | | |
| Lynnwood Transit Center | | • | |
| Lynnwood Park-and-Ride | | | • |



Lynnwood Transit Center

Alternative C1: 52nd Avenue West to 200th Street SW. Alternative C1 (see Figure S-8) begins with two alignment options to connect with Segment B alternatives. Option 1 transitions from at-grade in the I-5 median (connecting to Alternative B1 or B4), and Option 2 continues elevated on the west side of I-5 (when connecting to Alternative B2). Both are elevated along the east side of 52nd Avenue West and Cedar Valley Road. Alternative C1 turns east over the corner of Scriber Creek Park and runs along the south side of 200th Street SW to its elevated 200th Street SW Station with tail tracks near 48th Avenue West.

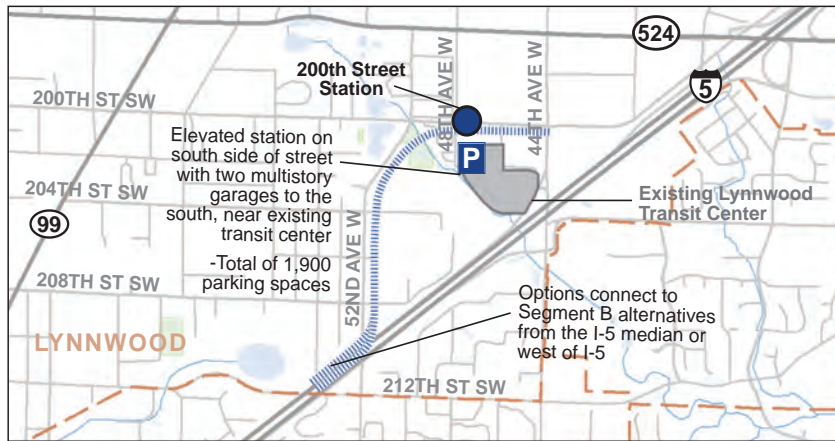
Alternative C2: 52nd Avenue West to Lynnwood Transit Center. Alternative C2 and its options from I-5 are the same as Alternative C1 to 52nd Avenue West, but it turns northeast to cross south of Scriber Creek Park to a station south of the existing Lynnwood Transit Center. Tail tracks would extend beyond the station. Figure S-8 shows the alignment, station, and the park-and-ride.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride. Alternative C3 also features two options for connections to Segment B alternatives. Option 1 transitions from the I-5 median and crosses over the southbound I-5 lanes to the west side of I-5; Option 2 is already on the west side of I-5. At 208th Street SW, Alternative C3 crosses the Interurban right-of-way and parallels I-5 to the Lynnwood Park-and-Ride Station south of 48th Avenue SW, east of the existing Lynnwood direct access ramp. Tail tracks would extend across 44th Avenue West. As shown in Figure S-8, the Lynnwood Park-and-Ride Station has two design options: one leaves the existing transit center as it is, and the other relocates it adjacent to the light rail station.

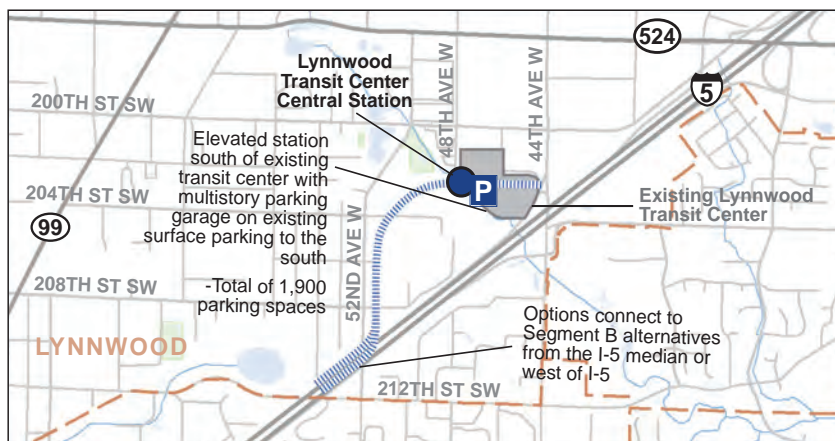
S.3.3 Construction

Sound Transit plans to start construction in 2018 and open the line for service by 2023. The light rail project would be built in sections, with major construction activities typically lasting approximately 2 years in any given area, although more complex elements such as stations, major structures, and systems would take longer. In addition to the right-of-way needed to build the alignments and stations, Sound Transit would also need areas to stage construction activities. Where possible, Sound Transit would locate most of its construction staging areas on available right-of-way or on properties it would need to acquire anyway for permanent facilities; however, other sites along the corridor could also be needed.

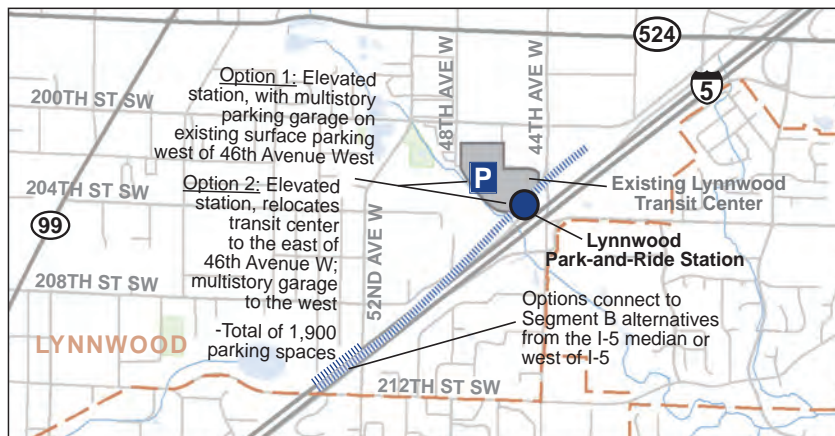
Elevated guideways, station areas, and retaining wall construction usually have the most intense construction activities because they are more complex and need greater volumes of materials,



C1: 52ND AVE W TO 200TH ST STATION



C2: 52ND AVE W TO LYNNWOOD TRANSIT CENTER STATION



C3: ALONG I-5 TO LYNNWOOD PARK-AND-RIDE STATION

Figure S-8. Alternatives C1, C2, and C3

equipment, and workers. Some streets would be partially or fully closed to through traffic, and I-5 lane closures would be needed; however, local access would be maintained. Trucks and heavy equipment would be used throughout much of the construction period.

In Segment A, the alternatives with a NE 130th Street Station (A5, A7, A10, and A11), or a NE 145th Street Station (A1, A3, A10, and A11) would have longer construction periods and more I-5 lane or street closures and detours. Alternative A1 would also reconstruct the NE 185th Street overpass, with potential I-5 lane closures. In Segment B, the alternatives all cross over part or all of I-5 but at different locations. Alternative B4 has a median station that would close the existing freeway transit station during construction, affecting express bus service at that location. In Segment C, all of the alternatives have an option to cross I-5 lanes from a median alignment, which would require I-5 lane closures.

S.4 ALTERNATIVES DEVELOPMENT

Sound Transit has built on several decades of previous planning and environmental review to define the alternatives for this Draft EIS. A light rail connection between King and Snohomish counties was part of the 1996 Regional Transit System Plan and EIS (Sound Transit 1996), which resulted in the Sound Move program. The Sound Transit Regional Transit Long-Range Plan (adopted July 7, 2005) and its Final Supplemental EIS on the Regional Transit Long-Range Plan (June 2005) formed the basis for the ST2 Plan. The ST2 Plan identified the project that is now the Lynnwood Link Extension (Sound Transit 2005a, 2005b, 2008).

In 2010, Sound Transit conducted early scoping and an Alternatives Analysis that considered a broad range of alternatives for the project, including light rail and bus rapid transit alignments along I-5, SR 99, and other arterials in the project area. The September 2011 *Alternatives Analysis Report and SEPA Addendum* identified the most promising alternatives for further study in this EIS.

Sound Transit and FTA conducted the environmental scoping process for the EIS from September 30, 2011, through October 31, 2011. In December 2011, the Sound Transit Board approved Motion M2011-87, which directed Sound Transit to study light rail alternatives along I-5. The motion also removed from further consideration previously studied alternatives such as bus rapid transit and light rail alignments along SR 99 and 15th Avenue NE.

In response to the Sound Transit Board's direction, Sound Transit performed additional planning and analysis on light rail alternatives that included station sites and alignments on the east and west sides of I-5. The Board then approved Motion M2012-17, which identified the alignment and station alternatives now considered in the Draft EIS. Chapter 2 of the Draft EIS provides more information about the alternatives development process, including the alternatives Sound Transit removed from further consideration.

S.5 TRANSPORTATION EFFECTS

This section summarizes conditions by 2035 with the light rail alternatives in place compared with the No Build Alternative. For context, the project corridor is already highly congested. Travel on I-5 through the corridor currently takes up to three times longer during peak hours than at some other times. Currently, average speeds during peak periods along I-5 range from 23 miles per hour (mph) to 40 mph, which makes travel times highly variable and unpredictable. Vehicles in the HOV lanes move somewhat better, but peak period travel times for HOVs are still more than double compared to free flow. By 2035, conditions on I-5 are expected to worsen as 4 to 12 percent more vehicles attempt to use the corridor during peak hours, which is already at 98 percent or more of its capacity today.

About 20,000 transit riders travel daily north and south on the I-5 corridor between Seattle and Lynnwood. Buses can use HOV lanes in some but not all sections. Travel times are not reliable, in part because of a reversible center roadway

between Northgate and Seattle. The lack of reliability is a major problem for both riders and transit operators.

TRANSIT RIDERSHIP, TRAVEL TIMES, AND SERVICE QUALITY

By 2035, between 60,000 and 70,000 transit trips are expected on the Lynnwood Link Extension each day, compared to about 34,000 trips using buses in the corridor north of Northgate for the No Build Alternative.

Transit travel times to regional destinations would be shorter and much more reliable with any of the light rail alternatives, with trips to Northgate from Lynnwood up to 12 minutes faster and trips to downtown Seattle from Lynnwood up to 16 minutes faster than with the No Build Alternative in the morning peak period. In addition, the light rail alternatives would provide more frequent service, more passenger capacity, and more reliable operations with light rail separated from traffic—all of which would markedly improve transit service quality.

The Lynnwood station would be the busiest of the new light rail line, with nearly 20,000 boardings daily. In general, the different alignments would have similar ridership, but some of the station options would have more riders than others; in particular, the station at the Mountlake Terrace Transit Center would have more riders than a station in the median of I-5. While the median station would serve the same area, it would require longer walks, creating a longer total travel time for riders compared to a station at the transit center and park-and-ride.

REGIONAL TRAVEL

By 2035, ridership on any of the light rail alternatives would help reduce travel in the region by more than 300,000 miles per day, compared with the No Build Alternative, and riders would save about 30,000 hours in travel time daily.

AUTOMOBILE TRAVEL THROUGH THE PROJECT CORRIDOR

During the morning and evening peak hours, freeway travel times with the light rail alternatives would be similar to or slightly better than with the No Build Alternative in most locations. Freeway congestion and unreliable travel times would still occur, but there would be an alternative to using the freeway or other street routes.

FREEWAY OPERATIONS

By 2035 with the No Build Alternative, freeway operations would worsen over today's already congested conditions. Depending on the location, traffic volumes would increase 4 percent to 12 percent during the peak periods, and average speeds would drop to about 25 mph. The freeway would be at or over capacity during the heaviest travel times.

The light rail alternatives would result in similar conditions in most locations, and congested conditions would still remain.

The Segment A light rail alternatives with a station at NE 145th Street (A1, A3, A10, and A11) would slightly increase traffic and congestion in that interchange area, compared to the No Build Alternative. The Segment A alternatives that would modify the NE 130th Street interchange without a station would improve traffic flow in that area (A1 and A10), while the elevated alternatives with a station at NE 130th Street (A7 and A11) but with no changes to the interchange could result in slightly slower I-5 traffic near NE 130th Street.

Other interchanges or freeway conditions north of NE 145th Street to Lynnwood would likely not be appreciably affected by the light rail alternatives compared to the No Build Alternative.

ARTERIALS AND LOCAL STREETS

With the No Build Alternative in 2035, traffic volumes would increase by about 0.6 percent to 1.3 percent per year, which would cause delays at more of the intersections in the study area than compared to today. The light rail alternative would draw more trips to station areas, which

could increase intersection delays in some locations. However, the alternatives could mitigate the impacts by adding turn lanes or modifying intersections.

In Segment A, all of the light rail alternatives would require mitigation to address congestion at five to eleven intersections. The alternatives with three stations (A5, A7, A10 and A11) have the highest numbers of affected intersections.

In Segment B, one intersection would be below standard with the No Build Alternative and with all the light rail alternatives. Since this intersection would operate the same in 2035 with or without the project, no mitigation is proposed.

In Segment C, five intersections would operate below service standards with the No Build Alternative. Two additional intersections would have worsened operations with all the light rail alternatives. Mitigation measures would address these impacts.

OTHER TRANSPORTATION EFFECTS

Sound Transit also examined potential impacts on property access and circulation, nonmotorized facilities, parking, freight, and safety and found there would be no substantial impacts from the Lynnwood Link Extension. However, where interchange modifications are being considered, potentially at NE 130th Street and NE 145th Street, the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) could consider modifying local street access, which could include restricted turn movements, driveway consolidation, alternative access for some properties or property acquisitions.

CONSTRUCTION IMPACTS

Project construction could increase congestion and delays for travel on I-5 and local streets, resulting in slower trips for vehicles and transit. Sound Transit would typically have construction sites within the WSDOT right-of-way on I-5 and from local streets or acquired properties adjacent to the project corridor; trucks and equipment would need

access to the construction areas. All the light rail alternatives would generate truck trips throughout much of the construction period to haul debris and deliver materials and equipment.

Construction could cause short-term lane closures or restrictions on I-5, particularly when light rail structures are being built over travel lanes or interchanges, or when ramps are being modified; some of the closures, while short term, could increase congestion and delays. For the alternatives that would rebuild I-5 overcrossings, closures of the crossing streets during construction would also require detours. Alternatives that realign or reconstruct local streets would require closures and detours, some of which could last for several months. For light rail structures above local streets, Sound Transit would also need to implement short-term closures and detours.

The alternatives that would place light rail stations or facilities at existing transit centers or park-and-rides could temporarily reduce parking supply and alter access or transit service. This would be expected at the NE 130th Street and NE 145th Street Stations in Segment A. In Segment B, Alternatives B1, B2, and B2A would temporarily reduce surface parking east of the existing garage at the Mountlake Terrace Transit Center. Alternative B4 would close the Mountlake Terrace Freeway Station, which would affect transit service to the transit center and park-and-ride. In Segment C, all the alternatives would temporarily reduce transit parking, but the Lynnwood Transit Center and most of the park-and-ride would still operate throughout project construction.

S.6 ENVIRONMENTAL EFFECTS

The Draft EIS discusses the project's impacts at two levels: the full project from Northgate to Lynnwood, and then by segment, where there would be some localized differences in impacts. Table S-1 compares the overall environmental effects of the No Build Alternative against the full project, while Tables S-2 to S-4 provides measures of impacts by individual alternative in each segment, showing primary differences

in environmental impacts. The sections below briefly summarize the primary types of impacts by environmental topic and note where some alternatives would have different impacts compared with others.

Acquisition, Displacement, and Relocations.

While the alternatives are designed to use I-5 and other public rights-of-way as much as possible, acquisitions would be required along sections of the entire project corridor. Between 66 and 166 properties could be fully acquired, depending on the alternative choices, and between 60 and 85 additional properties could be partly acquired. Property impacts would be greatest in Segment A, where the I-5 right-of-way is the narrowest. Most of the acquisitions would be residential properties, but a church would also be affected by the Segment A at-grade alternatives. In Segment B, considerably fewer parcels would be affected, and the Segment B alternatives would largely avoid displacements. Segment C would require acquisitions of commercial and residential parcels, and Alternative C1 would have notably more acquisitions and displacements than the other alternatives. Sound Transit will compensate owners for acquired properties and will offer relocation assistance to the displaced users, consistent with the agency's acquisition and relocation policies and federal requirements.

Land Use. Land use would not be adversely affected as a result of the Lynnwood Link Extension. Acquisitions, both full and partial, in all segments would represent only a small portion of the land available. All alternatives would be generally consistent with regional and local plans and policies. Indirectly, land use changes could occur in station areas, such as at the Mountlake Terrace Transit Center or its freeway station, at NE 145th Street or NE 185th Street, at 220th Street SW, or at the Lynnwood station, where local plans or policies allow redevelopment with mixed-use, higher-density, transit-oriented development.

Economics. Property acquisition would displace some businesses in Segment C and employees

could be affected by business disruptions or relocations. Local jurisdictions would have a slight initial reduction in property tax revenue as land is converted to a transportation use. The project could provide economic benefits to local economies due to increased activity in station areas. Construction could also temporarily improve economic activity through construction employment as well as the purchase of materials, although the beneficial effects could extend for many years. However, construction activities could also temporarily affect the visibility and patronage of some businesses nearest to the light rail route, primarily in Segment C.

Neighborhoods. The proposed project would be on the borders of existing neighborhoods and would have minor effects on community facilities or services. In Segment A, an ethnic Latvian Evangelical Lutheran Church could be displaced by Alternatives A1, A5, or A10, although this impact could be avoided by redesigning the church's access. Alternative B2A would displace five residences. Alternative C1 would displace a condominium complex and over 30 businesses. Temporary construction impacts, including dust, noise, and traffic congestion, would affect the edges of neighborhoods adjacent to the alternative alignments in all segments.

Visual and Aesthetic Resources. Visual impacts would be caused by removing mature trees and dense vegetation that currently screen parts of I-5. Some of the alternatives would have light rail guideways or stations that would be prominent in views by residents, park users, or travelers, particularly when the alternatives are elevated near neighborhoods or public areas with established views. This scenario occurs for all alternatives in Segment A, for Alternatives B2 and B2A in Segment B, and for Alternatives C1 and C2 in Segment C. Much of the southern end of the project corridor has noise walls along the east side of I-5 and most would need to be relocated, which could require new or taller noise walls. During construction, views would also be affected

as Sound Transit clears the right-of-way and constructs the new facilities.



Simulated View of Light Rail near NE 143rd Street

Air Quality and Greenhouse Gas Emissions.

The light rail alternatives would decrease pollutants and greenhouse gases from vehicle emissions on the regional level compared with the No Build Alternative. The project would be consistent with federal air quality standards at local and regional levels. During construction, there would be increased emissions from construction equipment and trucks, as well as more fugitive dust and particulates associated with grading and excavation.

Noise and Vibration. There are residences and other noise- and vibration-sensitive properties along the entire project corridor. Most of the properties that would need mitigation from noise impacts are in Segment A, but some noise impacts needing mitigation are projected along Segments B and C. Mitigation for long-term vibration impacts would also be needed in Segment A. With potential mitigation measures that would include noise walls beside the light rail alignment, noise barriers along elevated guideways, residential sound insulation, and vibration-dampening design measures, there would be no remaining long-term impacts. Construction-related noise and vibration would be produced by heavy equipment and construction tools, and most noise would be generated during the early phases of construction.

Ecosystem Resources. There would be no adverse impacts on threatened or endangered species. The light rail alternatives would cross several streams and tributaries in the project corridor, including Thornton Creek, McAleer

Creek, and Scriber Creek, and would affect aquatic resources, vegetation, habitat, streams, wetlands, and buffers. The range of impacts among the light rail alternatives would be similar, and in most locations the impacts could be avoided or reduced through further design measures. In Segment B, Alternative B2A would have more potential impacts to a wetland area, and in Segment C, Alternative C2 would have more potential impacts on Scriber Creek and its wetlands than the other alternatives.



Wetland Near Scriber Creek in Lynnwood

Water Resources. There would be no water quality impacts resulting from stormwater because Sound Transit would comply with local government stormwater management requirements. However, the project would increase the amount of existing impervious surface areas. The Segment C alternatives could place structures in the Scriber Creek floodplain, but Sound Transit would provide compensatory floodplain storage. Construction impacts would be controlled by permit requirements and best management practices.

Energy Impacts. There would be no long-term energy impacts compared with the No Build Alternative because the light rail alternatives would result in lower energy consumption regionally. Construction would temporarily increase energy consumption but would not notably alter regional energy supply or demand.

Geology and Soils. The project is in a seismically active area; therefore, localized geologic hazards and risks are possible. However, the use of engineering measures would reduce the risk of harm from seismic events.

Hazardous Materials. Contaminated soil or groundwater is anticipated on several sites that could be acquired, but these sites would be remediated before or during light rail construction, which would be a beneficial effect. Segment C alternatives would require the acquisition of several sites with known or likely contamination.

Cultural, Archaeological, and Historic Resources. Five historic resources in the Area of Potential Effects are eligible for listing on the National Register of Historic Places, including Northgate Elementary, the Northgate Plaza Apartments, a former parsonage in Seattle, a residence in Shoreline, and a former school in Mountlake Terrace. None of the light rail alternatives would physically alter any of the historic structures or acquire historic property; no adverse impacts would occur. There would be no adverse impacts on known archaeological sites, and no traditional cultural properties have been identified in the project corridor.

Parks and Recreational Resources. There are numerous parks and recreational resources near the light rail alternative routes. In Segment A, Jackson Park Golf Course would be affected by changed views, mostly with the elevated alternatives, but there would be no direct physical impacts on the park. All Segment A alternatives would place light rail along the western edge of Ridgecrest Park, which would change views and remove mature trees. Alternative A1 would require a corner of a parcel containing the Shoreline Stadium. In Segment B, North City Park would have partially changed views but no direct physical impacts. In Segment C, elevated guideways with all the light rail alternatives would cross the Interurban Trail. Alternative C1 would cross over a corner of Scriber Creek Park, and Alternative C2 would cross near the park; both would have visual impacts.



Simulation of Jackson Park Golf Course with Elevated Alternatives

Other Environmental Impacts. There would be no adverse impacts from electromagnetic fields or to public services, safety and security, or utilities.

5.6.1 Potential Mitigation Measures

Sound Transit is committed to meeting the federal, state, and local environmental regulations and permit requirements that would apply to the project. The project would include reasonable mitigation measures to avoid significant adverse impacts where possible. The Draft EIS identifies potential mitigation measures that Sound Transit could apply to avoid or reduce the impacts identified for the project alternatives. The Record of Decision will explicitly make mitigation measures a condition of any federal approval the project receives. A number of the mitigation measures would also be further detailed through final design and permitting. Several environmental elements analyzed in the EIS would have no adverse impacts requiring mitigation after standard project measures are applied, including cultural, archaeological, and historic resources; electromagnetic fields; geology and soils; energy; and water resources. The following discussion summarizes key areas where mitigation measures are expected to be needed.

Transportation. Where alternatives would worsen highly congested intersections that do not meet the standards of local jurisdictions, Sound Transit would work with local jurisdictions to develop mitigation measures such as added turn lanes, intersection/signalization improvements, traffic management, or other strategies.

Table S-1. Summary of Environmental Effects of No Build versus Light Rail Alternatives (All Segments)

| Project Resource | Comparison Factor | No Build Alternative | Light Rail Alternatives |
|--|--|---|---|
| Transportation | Daily corridor ridership for 2035 | 33,800 riders on buses | 60,000 to 70,000 riders on light rail |
| | Vehicle Miles of Travel (VMT) for 2035 | 98,870,000 | 98,550,000 to 98,560,000 |
| | AM peak travel time for 2035 – Lynnwood to Downtown Seattle | 43 minutes | 27–29 minutes |
| | Transit travel time savings at AM peak | 0 | 14–16 minutes |
| Acquisitions, Displacements, and Relocations | Total property acquisitions (full or partial) | 0 | 126–251 |
| Land Use | Consistency with Regional and Local Growth Management Plans | Low | High |
| Water Resources | Change in impervious surfaces | No direct change | 41 to 54 acres, mostly non-pollutant generating surfaces |
| Ecosystem Resources | Total acres of ecosystem resources affected | 0 | 9.6–24 |
| Air Quality and Greenhouse Gases | Annual carbon dioxide equivalent reduction (2035) | No reduction | 71,905 metric tons |
| Energy | Regional transportation energy consumption 2035 (per thousand British thermal units) | 500,802 | 498,353 |
| Electromagnetic Fields (EMF) | Potential for EMF exposure impacts | No new sources | No impacts |
| Geology and Soils | Risk of worsening geologic and soils conditions | None | None to low |
| Public Services and Utilities | Demand for services | Population growth and development could increase demand | Development could increase demand for services; all alternatives would be similar |
| | Potential for service disruption during light rail operation | Not applicable | Unlikely |

Table S-2. Comparison of Segment A Alternatives

| Alternative | | A1 | A3 | A5 | A7 | A10 | A11 |
|---|---|---|---|---|---|---|---|
| Stations | | Two: NE 145th and NE 185th Streets | Two: NE 145th and NE 185th Streets | Three: NE 130th, NE 155th, and NE 185th Streets | Three: NE 130th, NE 155th, and NE 185th Streets | Three: NE 130th, NE 145th, and NE 185th Streets | Three: NE 130th, NE 145th, and NE 185th Streets |
| Alignment | | Mixed At-Grade and Elevated | Mostly Elevated | Mixed At-Grade and Elevated | Mostly Elevated | Mixed At-Grade and Elevated | Mostly Elevated |
| Category ^a | Measure | | | | | | |
| Capital Cost Range ^b | 2012 dollars (in millions) | \$670 to \$770 | \$700 to \$810 | \$650 to \$750 | \$740 to \$850 | \$660 to \$750 | \$750 to \$870 |
| Ridership | 2035 daily boardings (net) ^c | 10,600 | 10,600 | 11,000 | 11,000 | 11,000 | 11,000 |
| Station Area Transit-Oriented Development | Qualitative rating of potential under existing conditions (limited-moderate-strong) | NE 145th Street: limited NE 185th Street: limited-moderate | NE 145th Street: limited NE 185th Street: limited-moderate | NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate | NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate | NE 130th Street: limited NE 145th Street: limited NE 185th Street: limited-moderate | NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate |
| Transportation | Number of intersections requiring mitigation | 5 | 7 | 11 | 9 | 10 | 8 |
| | I-5 bridges rebuilt | NE 117th, NE 130th, and NE 185th Streets | --- | NE 130th Street | --- | NE 130th Street | --- |
| | I-5 ramps relocated | NE 130th Street north off-ramp | NE 145th Street north on-ramp | NE 130th Street north off-ramp | --- | NE 130th Street north off-ramp | NE 145th Street north on-ramp |
| | Realigned streets | 1st Avenue NE 5th Avenue NE 7th Avenue NE | 1st Avenue NE | 1st Avenue NE 7th Avenue NE | 1st Avenue NE | 1st Avenue NE 7th Avenue NE | 1st Avenue NE |
| | Number of parking spaces removed ^d | 29 | 73 | 89 | 77 | 96 | 84 |
| Property | Number of parcels affected | 114 | 106 | 127 | 116 | 121 | 106 |
| | Number of residences displaced | 111 | 107 | 122 | 115 | 118 | 107 |
| | Businesses and institutions potentially displaced | 1 | 0 | 1 | 0 | 1 | 0 |
| | Estimated WSDOT right-of-way needed (acres) | 26 | 20 | 20 | 19 | 25 | 20 |

| Alternative | | A1 | A3 | A5 | A7 | A10 | A11 |
|----------------------------------|--|------------------------------------|------------------------------------|---|---|---|---|
| Stations | | Two: NE 145th and NE 185th Streets | Two: NE 145th and NE 185th Streets | Three: NE 130th, NE 155th, and NE 185th Streets | Three: NE 130th, NE 155th, and NE 185th Streets | Three: NE 130th, NE 145th, and NE 185th Streets | Three: NE 130th, NE 145th, and NE 185th Streets |
| Alignment | | Mixed At-Grade and Elevated | Mostly Elevated | Mixed At-Grade and Elevated | Mostly Elevated | Mixed At-Grade and Elevated | Mostly Elevated |
| Category ^a | Measure | | | | | | |
| Visual and Aesthetic Resources | Low-medium-high impact | Medium | High | Medium | High | Medium | High |
| Ecosystem Resources | Wetland / buffer acres affected | 0.7 / 0.8 | 0.7 / 0.7 | 0.7 / 1.2 | 0.7 / 1.2 | 0.7 / 0.7 | 0.7 / 0.7 |
| | Acres of vegetation removed | 2 | 1 | 2 | 1 | 2 | 2 |
| Noise | Number of properties affected before mitigation ^e | 198 | 366 | 244 | 382 | 231 | 361 |
| | Number of properties affected after mitigation | 0 | 0 | 0 | 0 | 0 | 0 |
| Vibration | Number of properties affected before/after mitigation | 8 / 0 | 2 / 0 | 14 / 0 | 3 / 0 | 13 / 0 | 2 / 0 |
| Parks and Recreational Resources | Resources directly affected | Ridgecrest Park, Shoreline Stadium | Ridgecrest Park | Ridgecrest Park | Ridgecrest Park | Ridgecrest Park | Ridgecrest Park |

a Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include the full results for all environmental topics.

b Range reflects contingencies for a conceptual level design. Figures rounded to the nearest \$10 million.

c The net boardings reflect ridership at all the segment stations, less the drop in ridership that would occur at the Northgate Station; the more sizeable drop is with a station located at NE 130th Street, which overlaps more with the Northgate

Station ridership area than a station at NE 145th Street. All Segment A alternatives with three stations have a lower net ridership than the two station alternatives.

d Includes on-street and off-street parking. Does not include park-and-ride spaces.

e Includes park-and-ride noise impacts.

Table S-3. Comparison of Segment B Alternatives

| Alternative | | B1 | B2 | B2A | B4 |
|---|---|---|---|--|---|
| Stations | | One: Mountlake Terrace Transit Center | One: Mountlake Terrace Transit Center | Two: Mountlake Terrace Transit Center and 220th Street SW | One: Mountlake Terrace Freeway Station |
| Alignment | | I-5 East Side to I-5 Median | I-5 East Side to I-5 West Side | I-5 East Side to I-5 West Side | I-5 East Side to I-5 Median |
| Category ^a | Measure | | | | |
| Capital Cost ^b | 2012 dollars (in millions) | \$340 to \$390 | \$390 to \$450 | \$450 to \$520 | \$310 to \$360 |
| Ridership | 2035 daily boardings (net) ^c | 4,600 | 4,600 | 4,800 | 3,600 |
| Station Area Transit-Oriented Development | Qualitative rating of potential under existing conditions (limited-moderate-strong) | Mountlake Terrace Transit Center: moderate-strong | Mountlake Terrace Transit Center: moderate-strong | Mountlake Terrace Transit Center: moderate-strong 220th Street SW: moderate | Mountlake Terrace Freeway Station: moderate |
| Property | Number of parcels affected | 5 | 18 | 18 | 6 |
| | Number of residences displaced | 0 | 5 | 5 | 0 |
| | Estimated WSDOT right-of-way needed (acres) | 14 | 15 | 16 | 15 |
| Transportation | Number of parking spaces removed ^d | 0 | 7 | 11 | 0 |
| Ecosystem Resources | Wetland / buffer acres affected | Less than 0.1 / 0.6 | 0.5 / 1.3 | 1.7 / 0.9 | 0.1 / 0.7 |
| | Acres of vegetation removed | 5 | 11 | 11 | 3 |
| Visual and Aesthetic Resources | Qualitative rating (low-medium-high impact) | Low | High | High | Low |
| Noise | Number of properties affected before mitigation ^d | 135 | 177 | 175 | 129 |
| | Number of properties affected after mitigation | 0 | 0 | 0 | 0 |

a Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.

b Range reflects contingencies for a conceptual level design. Figures rounded to the nearest \$10 million.

c Net boardings within the segment, less any reduction in ridership that could occur in other segments with an additional station. Adding station at 220th Street SW reduces ridership at Lynnwood by 200 daily boardings.

d Includes park-and-ride noise impacts.

Table S-4. Comparison of Segment C Alternatives

| Alternative | | C1 | C2 | C3 |
|---|---|---|--|---|
| Stations | | 200th Street SW | At transit center | At park-and-ride |
| Category ^a | Measure | | | |
| Capital Cost ^b | 2012 dollars (in millions) | \$300 to \$350 | \$270 to \$310 | \$270 to \$340 |
| Ridership | 2035 daily boardings (net) ^c | 19,400 to 19,800 | 19,400 to 19,800 | 19,400 to 19,800 |
| Station Area Transit-Oriented Development | Qualitative rating of potential under existing conditions (limited-moderate-strong) | 200th Street SW Station: moderate-strong | Lynnwood Transit Center: moderate-strong | Lynnwood Park-and-Ride: moderate-strong |
| Property | Number of parcels affected | 106 | 29 | 15 |
| | Number of residences displaced | 77 | 1 | 0 |
| | Businesses and institutions displaced | 31 | 3 | 1 |
| | Estimated WSDOT right-of-way needed (acres) | 1 | 1 | 3 |
| Transportation | Realigned streets | --- | --- | 208th Street SW |
| | Number of parking spaces removed | 8 | 4 | 0 |
| Ecosystem Resources | Wetland / buffer acres affected | Less than 0.1 / 0.5 - 0.9 | 0.9-1.0 / 0.5 - 0.9 | 0.2 / 0.5 - 1.0 |
| | Acres of vegetation removed | 1 | 1 | 1-2 |
| Visual and Aesthetic Resources | Qualitative rating (low-medium-high impact) | High | High | Medium |
| Noise | Number of properties affected before mitigation ^d | 286-293 | 109-116 | 6-20 |
| | Number of properties affected after mitigation | 0 | 0 | 0 |
| Parks and Recreational Resources | Resources directly affected | Interurban Trail, Scriber Creek Park, Scriber Creek Trail | Interurban Trail, Scriber Creek Trail | Interurban Trail, Scriber Creek Trail |

a Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.

b Range reflects contingencies for a conceptual level design. Figures rounded to the nearest \$10 million.

c Ridership range reflects total boardings at this station, but adjusted to reflect ridership changes caused by additional station(s) in Segment A or B and their effect on ridership in this segment.

d Includes park-and-ride noise impacts.

Acquisitions, Displacements, and Relocations.

Sound Transit would provide compensation and relocation assistance to parties affected by property acquisitions, consistent with Sound Transit policy and applicable federal regulations.

Noise and Vibration. Noise and vibration impacts would be mitigated by installing vibration reduction measures, such as special track work, noise walls (either at-grade or as part of elevated guideways), building insulation, or other measures.

Visual Quality. For areas where high impacts are anticipated, Sound Transit would apply design or aesthetic treatments to reduce the impacts of the project facilities, and provide landscaping and other screening features.

Ecosystem Resources. During conceptual design, final design, and permitting, Sound Transit will first strive to avoid and minimize ecosystem impacts. If impacts are unavoidable, Sound Transit would mitigate impacts in accordance with applicable federal regulations and local critical area ordinances and their permit requirements. For example, Sound Transit is committed to no net loss of wetland functions and wetland areas on a project-wide basis.

Parks and Recreational Facilities. Mitigation measures could be compensation or replacement for directly affected properties, restoration or enhancement for any affected features or facilities, or landscaping. For parks or trails affected during construction, signage, detours, and other measures would help avoid temporary closures of the properties.

Hazardous Materials. Any hazardous materials sites in the construction area would be investigated and addressed to avoid the potential for exposure or spread of hazardous materials during construction.

Construction. Detailed construction mitigation would help minimize or avoid construction impacts for each area of the environment. This includes transportation mitigation to reduce the

potential for delays due to truck traffic, detours, and lane or street closures. To minimize impacts on communities, businesses, and public services, Sound Transit's would have a 24-hour construction hotline for the project. Construction period outreach and communication would include notices of key construction activities, such as changes to transportation facilities or routes. Best management practices for construction would be applied to reduce impacts on air quality and water quality, and from noise and vibration or hazardous materials.

S.6.2 Section 4(f)

Section 4(f) refers to a U.S. Department of Transportation (USDOT) statute that restricts FTA's ability to approve a project that adversely affects significant parks, recreation resources, fish and wildlife refuges, and historic properties. Table S-5 lists the Section 4(f) properties that the project may potentially impact or "use." If the impact would be minor and not alter the resource's functions and characteristics, Section 4(f) procedures allow *de minimis* impact findings, with concurrence from the official with jurisdiction over the Section 4(f) resource; otherwise, the project must consider avoidance alternatives.

S.6.3 Environmental Justice

The Lynnwood Link Extension would be in or near some neighborhoods with minority and low-income populations. Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations, and USDOT Order 5610.2 direct Sound Transit and FTA to identify and meaningfully engage low-income and minority populations, and to consider environmental effects that could fall predominantly on those populations.

The environmental justice analysis indicates the proposed project would not result in disproportionately high and adverse effects on minority and low-income populations after all mitigation, enhancements, and offsetting benefits are considered. Construction and operation impacts could affect areas with minority or low-income populations, but planning and

Table S-5. Potential Section 4(f) Impacts

| Section 4(f) Resource | Alternatives | Potential Use |
|--|----------------------------|--|
| Ridgecrest Park, City of Shoreline | All Segment A Alternatives | Anticipated <i>de minimis</i> . Preliminary concurrence on <i>de minimis</i> received from City of Shoreline. Light rail facility would be located on western part of the park, removing trees that provide an existing visual buffer. Park would experience property and visual impacts but this would not impair park functions. |
| Shoreline Stadium, Shoreline Public Schools | Alternative A1 | Anticipated <i>de minimis</i> . Preliminary concurrence on <i>de minimis</i> received from Shoreline School District. Minor right-of-way acquisition would affect a parcel and parking near the stadium. |
| Interurban Trail, Snohomish County Public Utility District, City of Lynnwood | All Segment C Alternatives | Temporary occupancy. Elevated guideway over trail, with temporary trail closures. Visual impacts, but the trail's primary functions, features, and attributes would be retained. |
| Scriber Creek Trail, City of Lynnwood | Alternatives C2 and C3 | Temporary occupancy. Elevated guideway over trail, with temporary trail closures. Visual impacts, but the trail's functions, features, or attributes would be retained. |
| Scriber Creek Park, City of Lynnwood | Alternative C1 | Potential <i>de minimis</i> with Alternative C1 after applying mitigation. Guideway and structures would cross a corner of the park, removing trees and vegetation, and creating visual impacts. Coordination continuing with City of Lynnwood. |

outreach, proposed design measures, mitigation measures, and best management practices would reduce or minimize environmental impacts, avoiding high and adverse environmental impacts.

Proposed mitigation and enhancement measures would be applied across all neighborhoods. In addition, the populations that could be affected by construction and operation of the Lynnwood Link Extension are in areas that would benefit from improved access to transit, improved transit reliability, reduced travel time, and increased regional access.

S.6.4 Ability of Alternatives to Meet the Purpose and Need

The project's Purpose and Need, detailed in Chapter 1 of the Draft EIS, is summarized in Table S-6, to show how effective the light rail alternatives would be in meeting the purpose and need of the project.

S.6.5 Estimated Project Costs

With six alternatives in Segment A, four in Segment B, and three in Segment C, there are 72 possible segment combinations that could be linked to create the full 8.5-mile extension from Northgate to Lynnwood, with total capital costs ranging from \$1.2 billion to \$1.7 billion, depending on the choice of alternatives. The

Table S-6. Consistency with Project Purpose and Need

| Purpose and Need | No Build Alternative | All Light Rail Alternatives |
|--|----------------------|-----------------------------|
| Provide reliable, rapid, and efficient transit service with sufficient capacity to meet current and projected demand | No | Yes |
| Forecast year 2035 transit travel times from Lynnwood to Northgate (AM peak period) | 26 minutes | 14 to 16 minutes |
| Forecast year 2035 transit travel times from Northgate to Lynnwood (PM peak period) | 24 minutes | 14 to 16 minutes |
| Provide a mobility alternative to travel on congested roadways | No | Yes |
| Support the region's adopted land use, transportation, and economic development plans | No | Yes |
| Extend the regional light rail system in support of the Sound Transit Long-Range Plan | No | Yes |
| Implement a financially feasible system that seeks to preserve and promote a healthy environment | No | Yes |

estimated capital cost of each light rail alternative is presented in Tables S-2, S-3, and S-4. All of the light rail alternatives are estimated to cost about \$15 million per year to operate and maintain, but their costs would vary by several hundred thousand dollars annually, depending on how many stations are included. Chapter 5 provides additional details.

S.7 COMPARISON OF ALTERNATIVES

This section summarizes the primary differences in ridership, environmental impacts, and benefits among the light rail alternatives.

S.7.1 Segment A: Seattle to Shoreline

All Segment A alternatives would displace a similar number of residences through acquisitions. The primary differences in property impacts are at the stations, although the elevated alternatives would be better able to avoid impacts in some areas.

All Segment A alternatives would replace existing noise walls and install new noise walls, barriers, and other mitigation for noise impacts. The mostly

elevated alternatives (A3, A7, and A11) would have the most noise impacts. Impacts with the elevated alternatives would require mitigation on the structure. All alternatives also replace existing noise walls in some locations.

All alternatives would acquire an edge of Ridgecrest Park in Shoreline. The mostly elevated alternatives (A3, A7, and A11) would have more impacts on views from the Jackson Park Golf Course. Alternative A1 has a roadway realignment that would affect part of the Shoreline Stadium parking lot.

Alternatives featuring three (A5, A7, A10, and A11) stations rather than two (A1 and A3) would have higher costs. While three stations would slightly increase ridership in Segment A, the extra station would slightly lengthen travel times.

The NE 145th Street Station alternatives (A3, A7, and A11) would displace residential properties, require street or interchange modifications, and place a multistory parking garage near residences. However, it would serve several populous

neighborhoods in Seattle and Shoreline, and it would have direct I-5 access. The NE 155th Street Station (A5 and A7) would also displace residences and add a multistory garage in a mostly residential area, but it would not have direct I-5 access.

The NE 130th Street Station (A3, A7, and A11) would increase costs, but it could be paired with either a NE 145th Street or NE 155th Street Station with little difference in other environmental effects. It would slightly increase boardings in Segment A but it would not notably increase system ridership because it would cause riders to shift from Northgate Station.

The NE 185th Street Station would have similar ridership for all options. At-grade alternatives (A1, A5, and A10) would have more street and/or bridge reconstruction, while the elevated alternatives would have more visually prominent guideways and an elevated station. While all of the alternatives would displace residential properties, the alternatives with parking to the east of I-5 (A3, A5, A7, A10, and A11) would displace more residences.

5.7.2 Segment B: Shoreline to Mountlake Terrace

The Segment B alternatives vary in their station location at the Mountlake Terrace Transit Center, whether they continue north in the I-5 median or cross to the west side of I-5, or whether they offer a station at 220th Street SW. Alternatives B2 and B2A would cross to the west of the freeway, while Alternatives B1 and B4 would stay in the median.

Alternatives B2 and B2A would have higher visual impacts as a result of the elevated guideway crossing over I-5 and their proximity to residences from 233rd Street SW to 220th Street SW. Existing dense vegetation would be cleared on the west side of I-5. Alternatives B1 and B4 would have lower visual impacts because more of their alignments would be in the I-5 median, although Alternative B4 would have a prominent pedestrian bridge over I-5.

Alternative B2 and B2A alignments along the hillside west of I-5 would remove about 11 acres of forest cover compared with 5 acres with Alternative B1 and 3 acres with Alternative B4. Alternatives B2 and B2A would affect the most wetlands and wetland buffer because they would cross a large portion of the second largest wetland in the study area. Alternative B2A would create the most impervious surface and require more mitigation measures to protect water resources.

During construction, Alternative B4 would need to close the bus ramps at the current freeway transit stop for the Mountlake Terrace Transit Center. This would affect transit service to the transit center for several years.

The Segment B alternatives would have different ridership, depending on whether a station is sited at the Mountlake Terrace Transit Center (Alternatives B1, B2, and B2A) or its nearby freeway transit stop (Alternative B4); a freeway station would take longer for riders to access, which would comparatively reduce ridership. Alternative B2A would provide an additional station at 220th Street SW, but the project's overall ridership would not notably increase. The added station would attract riders, but there would then be fewer riders boarding at the Mountlake Terrace Transit Center and Lynnwood.

Alternatives B1, B2, and B2A would best support potential transit-oriented developments in Mountlake Terrace's planned town center because their station would be east of I-5, at the existing park-and-ride, with an entrance south of 236th Street SW. This would be closer to the planned town center than the Alternative B4 freeway station.

5.7.3 Segment C: Mountlake Terrace to Lynnwood

Alternative C1 would displace a condominium complex and two business parks, displacing up to 77 residences and 31 businesses. In contrast, Alternative C3 would displace one business, and Alternative C2 would displace three businesses, with no residential impacts.

Alternatives C1 and C2 would have higher visual impacts because of the elevated guideway near residential properties and Scriber Creek Park.

Alternative C2 would cross the Scriber Creek wetland complex and affect the largest amount of stream and wetland buffer area. Alternative C1 would cross north of the wetlands. Alternative C3 would cross near the southern end of the Scriber Creek wetland complex.

As for Scriber Creek Park, Alternative C1 would have columns and a section of the elevated guideway within the park along Cedar Valley Road, which would alter this corner of the park. Alternative C2 would not be in the park but would have visual impacts, primarily along the Scriber Creek Trail. Alternative C3 would not affect the park.

All of the Segment C alternatives would serve the same area and have similar opportunities to support transit-oriented developments, but the station site choices would offer different opportunities for developing the area over time. The Alternative C1 station at 200th Street SW would be closer to the designated town center for Lynnwood. This alternative would have few impacts on the existing transit center and park-and-ride during construction, but it would displace more existing uses than the other two alternatives. Alternatives C2 and C3 would temporarily reduce the current parking capacity at the Lynnwood Transit Center for the construction of a park-and-ride garage. Alternative C3 also has the option to relocate the existing transit center at the same time as light rail is built, or the transit center could be relocated later, potentially as part of future transit-oriented development plans. However, Alternative C3's tail track would transect a large parcel that would otherwise have more area available for future transit-oriented development.

In other respects, including transportation performance, accessibility, and overall transit-oriented development, the Segment C alternatives would have similar effects.

5.8 PUBLIC AND AGENCY INVOLVEMENT

Sound Transit and FTA have been engaging the public and agencies since the start of early scoping for the project's alternatives analysis in 2010. They initiated the Draft EIS with formal public environmental scoping in September and October of 2011, which included meetings with the public and agencies as well as an open comment period and public notices and advertisements. Sound Transit continued to host public events and meet with agencies and interested groups as the Draft EIS was being prepared in 2012 and early 2013. The release of the Draft EIS comes with a formal public review and comment period, including meetings and hearings, as described in Section S.11, Next Steps. Chapter 6 of the Draft EIS has additional details about the project's public involvement and agency coordination plan, including how Sound Transit and FTA are engaging low-income and minority populations in the project.

5.9 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Public and agency comments suggest limited project-related controversy. In Segment A, two of the alternatives (A5 and A7) feature a station at NE 155th Street, which the City of Shoreline opposed in a comment letter during environmental scoping. In Segment C, the Edmonds School District has concerns about potential use of its property by Segment C alternatives. The City of Lynnwood and the Edmonds School District have expressed concerns about the Lynnwood site alternative for Sound Transit's Link Operations and Maintenance Satellite Facility, a separate project that would support the operations of the Lynnwood Link Extension and planned systemwide service for ST2. Site alternatives for the maintenance facility are also being considered in Bellevue. Additional areas of controversy might be identified during the Draft EIS comment period.

Issues yet to be resolved relate to agreements that Sound Transit must secure to be able to use parts

of the I-5 right-of-way for the project, to modify any I-5 interchanges, or to modify other parts of the freeway, such as shoulders. These approvals would be made by WSDOT and FHWA during final design, and these agencies could request modifications or place other conditions on the project. If Sound Transit is not able to use the right-of-way as anticipated in the current design of the alternatives, this could affect the project's costs and impacts. However, Sound Transit has worked successfully with WSDOT and FHWA to obtain approvals for right-of-way use for other Sound Transit projects.

Project funding also remains an issue to be resolved. Sound Transit is proposing the project as a candidate for FTA's New Starts grants program. Recent legislation has changed some of the requirements for the program, and its longer-term funding levels are not known.

Potential stations at NE 130th Street, NE 155th Street, and 220th Street SW were not evaluated in the ST2 planning process, which analyzed ridership and cost for each station, and are not currently included in the ST2 Plan. Further evaluation of consistency with the ST2 Plan would be required before any of these stations could be added to the Lynnwood Link Extension, or before the NE 145th Street Station could be replaced or eliminated.

S.10 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

With the avoidance, mitigation, and minimization measures detailed in Chapter 3, Transportation Impacts and Mitigation, and Chapter 4, Environmental Impacts and Mitigation, significant adverse impacts would be avoided for most alternatives. However, some impacts might not be mitigated. Mature vegetation would be removed for all alternatives and replaced by light rail facilities, and there would be related loss of habitat. This would also result in longer-term visual impacts that would not be immediately mitigated by replacement vegetation or landscaping. Temporary construction impacts, such as freeway

lane closures, street closures, or truck traffic, could cause congestion and inconveniences in some locations, and these impacts could be significant.

S.11 NEXT STEPS

The next steps for the Lynnwood Link Extension are described in the following paragraphs. Figure S-9 presents a project schedule summary.

DRAFT EIS

The Draft EIS will be available for an extended comment period of 60 days (45 days are required) that includes a public hearing and other opportunities for the public and agencies to comment in person or in writing. The comment period will begin on July 26, 2013 and end on September 23, 2013. The Draft EIS Fact Sheet provides further details on how to comment, and the times and locations for the public hearings.

After the close of the Draft EIS comment period, the Sound Transit Board will consider public and agency comments received as well as the information in the Draft EIS. The Board will then identify a Preferred Alternative for the Final EIS, which will be evaluated along with the other alternatives. The final decision on the project alternative to be built will not be made until after the Final EIS is issued.

FINAL EIS

The Final EIS will analyze the Preferred Alternative along with the other proposed light rail alternatives and No Build Alternative, and it will respond to the comments received on the Draft EIS. Work on the Final EIS is anticipated to begin in the latter part of 2013, with publication in 2014.

SOUND TRANSIT DECISION

Following review of the Final EIS, the Board will select the project alternative to be built.

RECORD OF DECISION

FTA will issue the Final EIS and publish its Record of Decision (ROD) for the project. The ROD is expected to document findings by FTA that the project has met the requirements of

NEPA and related environmental regulations. It will describe FTA’s decision on the project, alternatives considered, the public opportunity to comment, the public and agency comments and responses, the basis for the decision to approve the project, and the mitigation measures required. Other federal agencies responsible for issuing permits or approvals for the project also have NEPA responsibilities and may issue their own environmental determinations. These determinations are expected to occur later, following the Final EIS and FTA ROD.

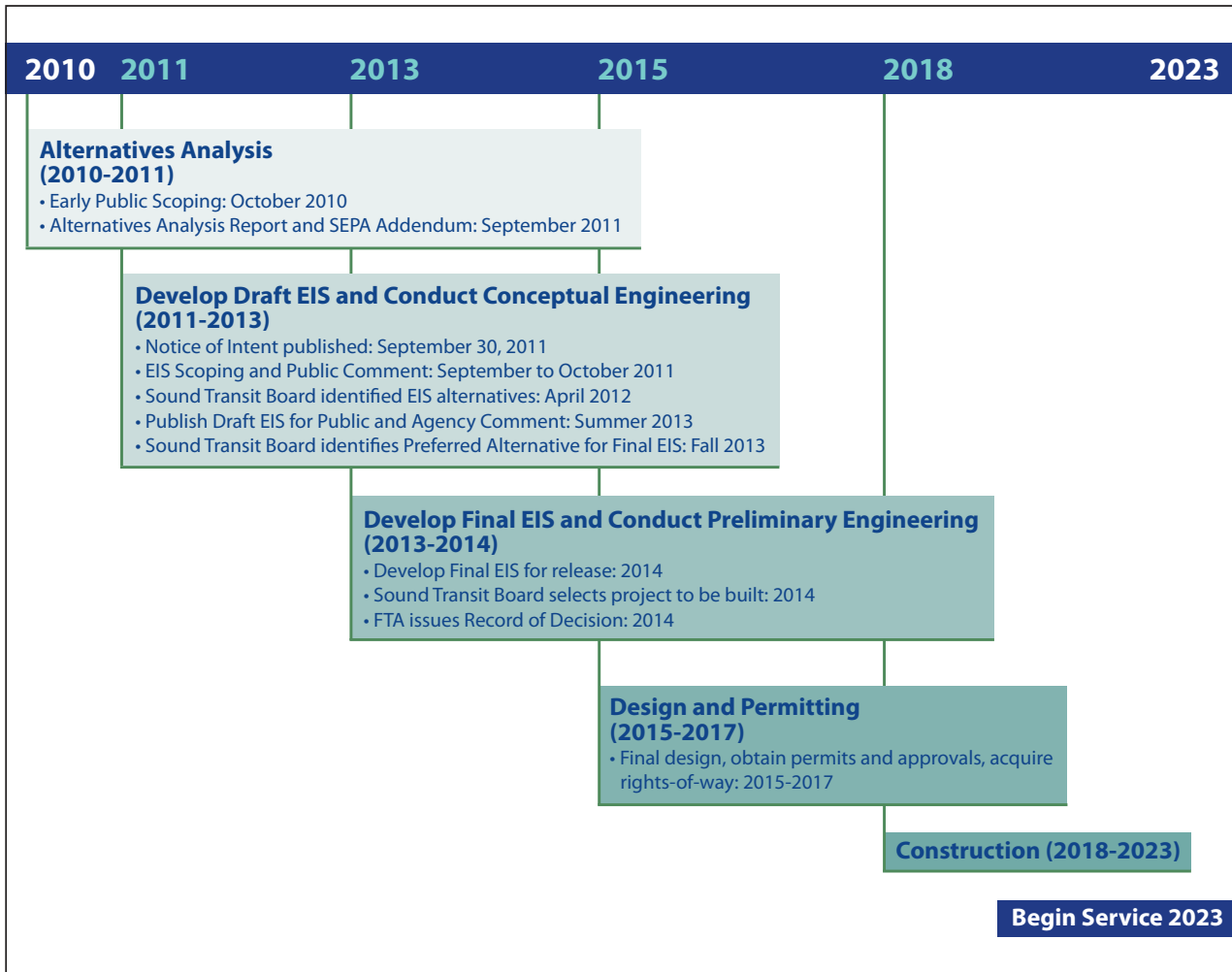


Figure S-9. Project Schedule

SHORELINE
CITY COUNCILKeith A. McGlashan
MayorWill Hall
Deputy Mayor

Chris Eggen

Doris McConnell

Christopher Roberts

Terry Scott

Shari Winstead

October 25, 2011

North Corridor Transit Project Scoping
Attn: Lauren Swift
Sound Transit
401 S. Jackson Street
Seattle, WA 98104

Dear Ms. Swift:

The City of Shoreline would like to take this opportunity to provide Sound Transit with our scoping comments for the North Corridor High Capacity Transit Projects Environmental Impact Statement. The City has appreciated the opportunity to participate in Sound Transit's Alternative Analysis process to date.

The City of Shoreline is excited about the extension of light rail to Shoreline in the near future. It is our City's belief that effective, fast and reliable transit service benefits our residents and the region as a whole in a variety of ways. Expanded mobility options, reduced congestion and minimizing our contribution to climate change are just a few of the benefits of a robust transit system that also mirror the goals of our Council.

Attached is a list of issues the City would like Sound Transit to address as the Environmental Impact Statement is prepared. These issues are consistent with past comments submitted by the City of Shoreline and have been clarified in some cases to address the two remaining alignments under consideration.

At this time, the City is not endorsing or supporting a specific alignment and the comments apply to all alignments that will be evaluated. However, the City anticipates making a recommendation on a preferred alignment to Sound Transit in November. Over the past month, the Shoreline City Council has reviewed a set of Guiding Principles to assist them with their recommendation decision. Public input was sought and the Principles were approved on October 24, 2011. The City Council anticipates making a decision regarding a preferred alignment at their November 14 meeting. This decision will be forwarded to you very soon thereafter. Attached is a copy of the adopted Guiding Principles that will be used by Council to select a recommended alignment.

Thank you for your consideration of our scoping comments. We look forward to continuing to work with Sound Transit on this important project. If you have any questions or need additional information, feel free to contact me at 206.801.2501.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Tovar', with a long horizontal flourish extending to the right.

Joseph W. Tovar, FAICP
Planning and Community Services Director

**CITY OF SHORELINE SCOPING COMMENTS FOR EVALUATION BY
SOUND TRANSIT REGARDING NORTH CORRIDOR HIGH CAPACITY
TRANSIT EXTENSION**

- A. Alignments:** The EIS should examine a variety of station locations associated with each alignment. This includes stations on both the east and west side of the alignment. Specifically, as part of the I-5 alignment option, Sound Transit should evaluate the potential to locate the station on the west side of the freeway at NE 185th Street. Additionally, the I-5 alignment analysis should examine measures to avoid or upgrade the bicycle and pedestrian bridge crossing the freeway at NE 195th Street.
- B. Cost:** As Sound Transit has shown in through the Alternatives Analysis process, the SR 99 and I-5 alignments have significantly different costs. When costs are considered, the City wants to ensure that two light rail stations remain in Shoreline. Costs associated with right-of-way acquisition and capital investments, as well as ongoing operation and maintenance, should be minimized. If cost savings are realized through selection of the less expensive alternative, they should be used for enhancements or mitigations to provide high quality transit service and amenities for North King County residents.

The EIS should also discuss the long term financial implications of each alignment with respect to how the presence of light rail affects future development potential of the neighboring properties and any potential loss of tax base associated with right-of-way acquisition and/or relocation of businesses.

- C. Travel Time:** Travel time for any either alternative will be impacted by the length of the route and type of construction (aerial or surface). The travel time should be calculated for each alignment and its impacts on ridership identified.
- D. Ridership:** Ridership on either alignment is going to be impacted by a variety of features of light rail, such as origins, destinations, travel time/speed, population densities in the immediate vicinity of and farther from the stations and accessibility of the stations. The EIS should state the ridership differences for each alignment as a result of the differing features, including an examination of the future population and employment densities within ¼ mile, ½ mile and 1 mile of the station locations. These densities should include those currently identified in individual jurisdictions' comprehensive plans, as well as the potential densities should comprehensive plans be amended to allow for increased population and employment densities within station areas.

In addition to ridership on light rail, the EIS should discuss the impacts to bus rapid transit ridership for each alignment, such as how many riders will discontinue use of bus rapid transit in order to utilize light rail.

E. Traffic Impacts: It is possible that the two stations in Shoreline, regardless of the alignment decision, will include some level of parking facilities. Even if non-motorized and transit alternatives are available to provide transportation options to the stations, some riders will want to drive to the stations. Impacts to the arterial and local streets in the neighborhoods surrounding the stations are inevitable and must be mitigated. The alternatives analysis should evaluate the following impacts for scenarios where free parking is available, paid parking is available and no parking is made available:

- Evaluation of measures designed to prevent or minimize cut-through traffic on local streets.
- Evaluation of improvement options for arterials serving the stations that ensure safety for all users (drivers, pedestrians, cyclists) and minimize traffic congestion.
- Should a station be located at NE 145th Street either on I-5 or Aurora, work with the Cities of Shoreline and Seattle, the Washington State Department of Transportation and Metro Transit to improve NE 145th Street from Lake City Way NE to Greenwood Avenue N in order to provide better east-west bicycle, pedestrian and bus connections to the Aurora BRT line, the light rail station at NE 145th Street and the express bus/future BRT line on Lake City Way NE and specifically to improve the automobile backups at the I-5 overpass going West on NE 145th St.
- Evaluation of the impacts to neighborhood streets if parking is unavailable or requires payment. (Riders may choose to “hide and ride” in these scenarios.)

F. Accessibility: The ability of riders to access the light rail stations will vary depending upon the station locations. Transit service may be able to more easily access some stations over others. The existence of sidewalks and bicycle facilities has the potential to make non-motorized options safer and more appealing to light rail users. The EIS should evaluate how accessible the proposed stations are to a variety of modes of travel. The EIS should also describe mechanisms or projects that are available to improve accessibility.

G. Social Equity: Transit needs to serve a variety of purposes and segments of the population. It is a transportation option for persons who are unable to drive due to age, disability or other challenges, or because they cannot afford a car. It provides commuters that might otherwise drive with the choice of leaving their cars at home or at a park and ride. The EIS should outline how the location, alignment and operation of light rail achieve these social equity aims.

Roadways and cities are less congested when fewer cars are on the road and fewer greenhouse gases are emitted into the air when people choose transit over cars. The EIS should outline how the location, alignment and operation of light rail achieve these environmental aims.

H. Transit Feeder Service: Regardless of the alignment and station locations, one of the primary factors that will contribute to the success of light rail service will be bus service that serves outlying areas of the City and feeds into the light rail stations. The City of Shoreline

and Sound Transit must work with Metro Transit and Community Transit to develop a plan and implementation strategy to orient bus service to feed light rail stations. This includes:

- Redirecting commuter routes that travel to downtown Seattle via I-5 to light rail. Reallocate those hours to feeder routes that will bring commuters from Park and Ride lots or unserved areas of the City to light rail.
- Creating feeder routes from all areas of the City and neighboring jurisdictions to the Shoreline light rail stations throughout the entire day and on weekends, with additional frequency during the peak periods.

- I. Land Use Transitions:** Shoreline is a predominantly single-family residential community, with a strong concentration of business and retail activity located adjacent to Aurora Avenue N. Adjacent to the I-5 corridor, the predominant land use pattern is almost exclusively single-family or institutional uses. The alternatives analysis should describe examples of short-term, medium-term, and long-term land use changes that have occurred near light rail alignments in similarly situated contexts.
- J. Supportive Land Uses:** Because of Shoreline's historic development patterns, either alignment alternative is likely to impact single-family neighborhoods, either through the direct placement of the stations and railway or due to the increased traffic travelling to and from stations. Evaluation of each alternative should include a description of how the planned land uses in the corridor are or could be supportive of light rail development. This evaluation should explore the potential for land uses that support a light rail station and could be reasonably permitted or encouraged through modification of the existing Comprehensive Plan. The availability of large parcels for significant transit oriented development located within ½ mile of a potential station should be identified, together with a description of what form and density might look like. Sound Transit should work with the affected jurisdictions to identify these potential projects or opportunity areas.
- K. Visual Impacts:** The location of a given alignment and the stations, as well as their design, will undoubtedly have a visual impact on the surrounding properties. An aerial or surface alignment and the type of neighborhoods the route traverses will experience greatly different visual impacts and will have different tolerances for them. The visual impacts of each potential alignment and station locations should be evaluated, as well as proposed measures to minimize these impacts.
- L. Noise:** As with visual impacts, different land uses will have varying levels of tolerance for the noise generated by the operation of light rail, as well as the traffic and buses travelling to the stations. The different types of noise, volumes and duration, as well as mitigation for noise impacts, must all be examined as part of the EIS. Mitigation should address options for facility design that minimize noise.
- M. Destinations and Origins:** The alignment options will serve different neighborhoods and, as a result, have differing destinations and origins for riders. Each alignment must be evaluated to determine what these destinations and origins will be and how they will impact ridership

and traffic. Additionally, the alignment evaluations should examine how these destinations and origins connect and relate to each other. For example, an alignment that runs along I-5 and serves the Mountlake Terrace Transit Center and the Shoreline Center at NE 185th Street in Shoreline would pass through and adjacent to Mountlake Terrace's Town Center, and the Ballinger and North City neighborhoods of Shoreline. How feeder service is provided through these areas and the stations themselves must be a consideration.

- N. Mitigation Strategy:** If I-5 is not selected as the alignment for light rail, bus service on I-5 through Shoreline needs to be improved. Currently, Sound Transit Express buses travelling through Shoreline on I-5 do not serve the NE 145th Street freeway stops during the peak period in the peak direction. Sound Transit has consistently stated the reason the buses bypass Shoreline is the ramps are on the opposite side of the freeway from the express lanes in which the buses travel. In order for buses to serve these stops, they must leave the express lanes, cut across several lanes of general purpose traffic to the freeway ramps and then return to the express lanes. This causes significant delay for the buses when I-5 is congested. Similarly, none of the over 300 Community Transit buses travelling through Shoreline on I-5 serve this freeway stop. If I-5 is not chosen for the light rail alignment, improvements to this freeway stop, such as relocation of the freeway stop to the center to facilitate better service from the express lanes, should be constructed as a mitigation measure to improve transit service along this vital transportation corridor. Similar improvements should be made at NE 185th Street to facilitate improved transit service in Shoreline along I-5.

NORTH CORRIDOR PROJECT LIGHT RAIL GUIDING PRINCIPLES FOR SHORELINE

The City of Shoreline looks forward to Sound Transit delivering light rail service that is part of an integrated transit system and that serves our community and region. The principles that will guide our future discussions and input to Sound Transit regarding the planning, construction, operation of light rail to directly serve Shoreline residents are as follows:

PERFORMANCE

TRAVEL TIME

We support a light rail system that provides the shortest travel times for riders traveling to and from Shoreline.

We support development of a complete light rail system that serves the Puget Sound region efficiently and minimizes travel times to destinations.

RIDERSHIP

We support the development of a light rail system that will serve the greatest number of riders traveling to and from Shoreline.

ACCESSIBILITY

We support the development of light rail stations that are easily accessed by foot, bike, bus or car. The stations should expand opportunities for convenient access to other forms of transit, such as Bus Rapid Transit and local bus service. Traffic impacts should also be minimized and mitigated in station areas.

MAXIMIZING FUNDS

COST

We want to ensure that as decisions are made, funding remains in the project budget to fund two light rail stations in Shoreline.

We support minimizing costs associated with right of way acquisition and capital investments as well as ongoing operation and maintenance costs while maximizing performance of the light rail system.

We support extension of a light rail system through Shoreline and Seattle that maximizes the available funding in the North King County subarea. In accordance with

Sound Transit's subarea equity policy, funds generated in this subarea should be spent only in this subarea and be used to provide high quality transit service and amenities for North King County residents.

LOCAL OPPORTUNITIES AND IMPACTS

SOCIAL EQUITY

We support the location, alignment and operation of light rail that provides access to a socially, economically and geographically diverse ridership.

We believe Shoreline residents are best served by various modes of transit on multiple corridors within and through Shoreline.

LAND USES AND REDEVELOPMENT

We are concerned about the future of properties adjacent to prospective light rail stations. It is important to remember that station areas may take decades to transition from its present day use to a future use and plans should be made for how that transition can be accomplished.

We believe land uses around light rail stations should support a transition to transit-oriented communities over time and in partnership with the local neighborhood.

We are committed to a robust community involvement process that develops tools and plans to create and enhance vibrant, livable and sustainable transit-oriented station areas.

We want to ensure impacts on residents and businesses are managed and individual property rights are protected; provide timely information so residents can plan for and respond to changes.

ECONOMIC DEVELOPMENT

We support a light rail system that will foster economic prosperity in Shoreline by encouraging existing businesses, enhancing property values, creating family-wage jobs, building sustainable housing stock, and attracting investment.

NOISE AND VISUAL IMPACTS

We support the development of a light rail system that minimizes noise and visual impacts to Shoreline residents and businesses.