

West Seattle and Ballard Link Extensions

JuNO March 25, 2019



ST3 Representative project

- Identifies mode, corridor, number of stations, general station locations
- Informs cost, schedule, operating needs

West Seattle project timeline



2017-2022

Alternatives development

Board identifies preferred

Draft Environmental Impact Statement

Final Environmental **Impact Statement**

Board selects project to be built

Federal Record of

PUBLIC INVOLVEMENT



DESIGN

2022-2025

Final route design

Final station designs

Procure and commission station and public art

Obtain land use and construction permits

Property acquisition/relocation

PUBLIC INVOLVEMENT



CONSTRUCTION

2025-2030

START OF **SERVICE**



2030

Safety education

Testing and pre-operations

PUBLIC INVOLVEMENT

VOTER APPROVAL

2016



PLANNING

DESIG

2017-2019

Alternatives development

Board identifies preferred alternative*

2019-2022

Draft Environmental Impact Statement

Final Environmental Impact Statement

Board selects project to be built

Federal Record of Decision

*The Sound Transit Board identifies preferred alternatives and other alternatives to study in the Environmental Impact Statement.

PUBLIC INVOLVEMENT

Alternatives development process

LEVEL 1

Alternatives developmen

Early-2018

Conduct early scoping

Study ST3 representative project and alternatives

Screen alternatives

PUBLIC INVOLVEMENT

LEVEL 2

Alternatives development

Mid-2018

Technical analysis

Refine and screen alternatives

PUBLIC INVOLVEMENT

LEVEL 3

Alternatives development

Late-2018 / Early-2019

Refine and screen alternatives

Conduct Environmental Impact Statement (EIS) scoping

PUBLIC INVOLVEMENT

PREFERRED ALTERNATIVE*

Early-2019

*The Sound Transit Board identifies preferred alternatives and other alternatives to study.

Community engagement and collaboration

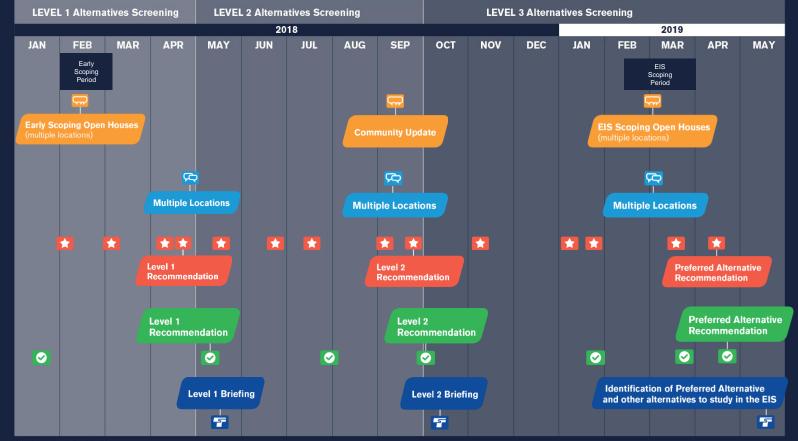












Meeting dates subject to change.

West Seattle Briefings and Events

- ✓ Early Scoping Open House (2/13/18)
 - 344 sign-ins
- ✓ Nucor (3/7/18)
- Junction Neighborhood Organization (4/2/18, 4/26/18, 7/26/18, 9/18/18, 11/19/18)
- ✓ Southwest District Council (4/4/18)
- ✓ West Seattle Transportation Coalition (4/26/18)
- ✓ Delridge/Avalon/Alaska Junction Neighborhood Forum (5/5/18)
 - 140 sign-ins

- ✓ Fauntleroy Business Association (5/24/18)
- ✓ Pigeon Point Neighborhood Council (6/11/18)
- ✓ Southwest Youth & Family Services (6/29/18)
- ✓ Neighborhood House at High Point (7/26/18)
- ✓ Drink & Link in Delridge (8/8/18)
- ✓ Delridge Day (8/11/18)
- ✓ West Seattle Open House (9/8/18)
 - 140 sign-ins

West Seattle Briefings and Events

- ✓ Online Open House (9/6 9/23/18)
 - 140 West Seattle surveys submitted
- ✓ West Seattle Transportation Coalition (9/27/18)
- ✓ DNDA (10/9/18, 10/24/18)
- ✓ Delridge Way SW Businesses (10/15/18)
- ✓ Feet First West Seattle Walk & Talk (10/16/18)
- ✓ Tiburon Condominiums (11/15/18)
- ✓ WestSide Baby (12/6/18)

- ✓ Delridge Community Center (1/9/19)
- ✓ White Center Community Development Association (1/16/19)
- ✓ Community briefing at Youngstown Cultural Arts Center (1/16/19)
- ✓ West Seattle Open House (2/27/19)
 - 260 sign-ins
- ✓ West Seattle Democratic Women (2/28/19)
- ✓ Delridge Station Community Workshop (3/12/19)
 - 94 sign-ins

Level 3 alternatives screening

ELG Meeting #7	March 29	CID and Delridge station focus			
SAG Meeting #14	April 17	Level 3 recommendations			
ELG Meeting #8 April 26		Level 3 recommendations			
Sound Transit Board System Expansion Committee	May 9	Identify preferred alternative (and other EIS alternatives)			
Sound Transit Board Full Board	May 23	Identify preferred alternative (and other EIS alternatives)			





Level 1 alternatives development



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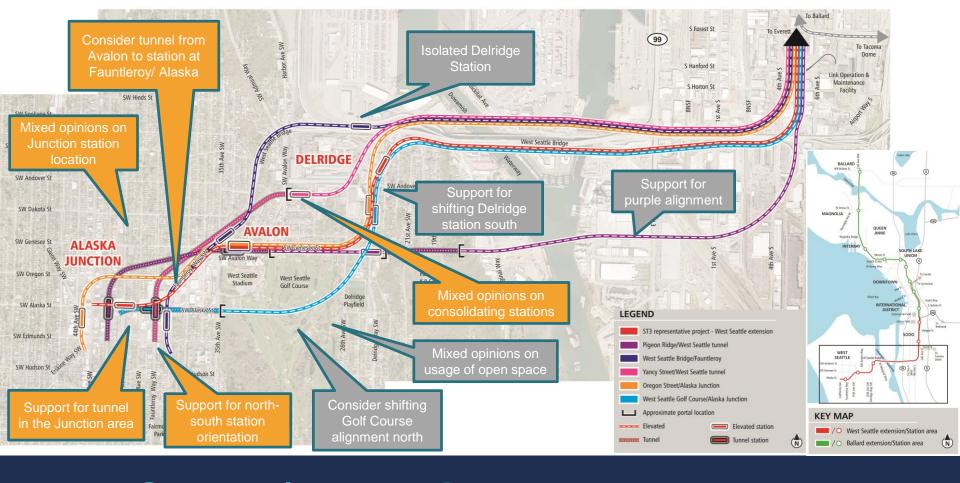
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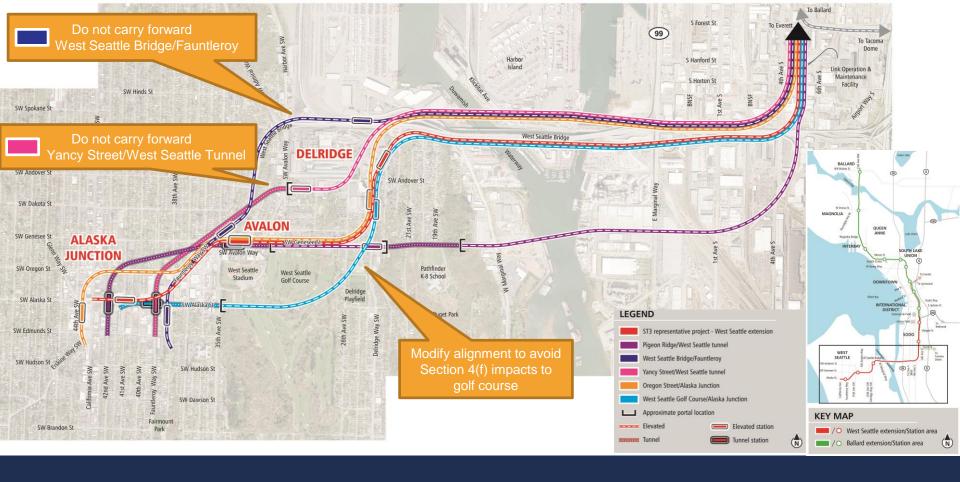


Early-2019



West Seattle/Duwamish Level 1 Alternatives





West Seattle/Duwamish Level 1 Recommendations

Level 2 alternatives development

LEVEL 1

Alternatives developmen

Early-2018

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Screen alternatives

PUBLIC INVOLVEMENT

LEVEL 2

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Refine and screen alternatives

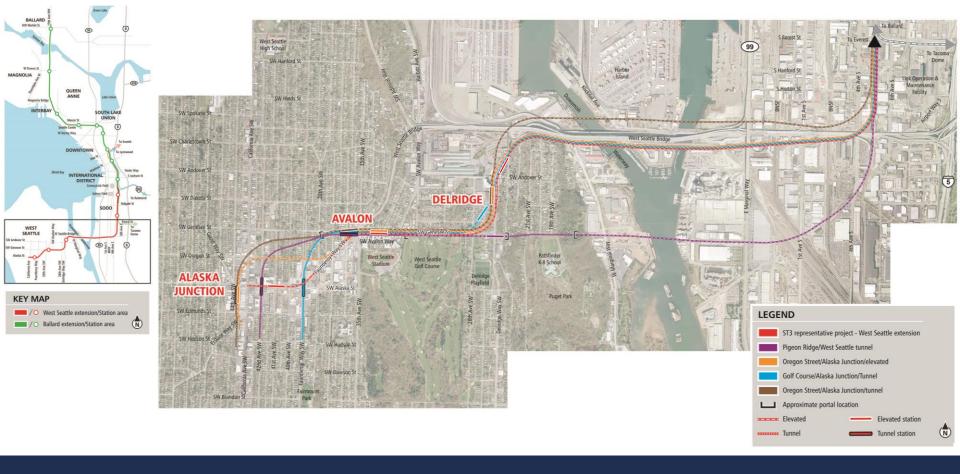
Conduct Environmental Impact Statement (EIS) scoping

PUBLIC INVOLVEMENT

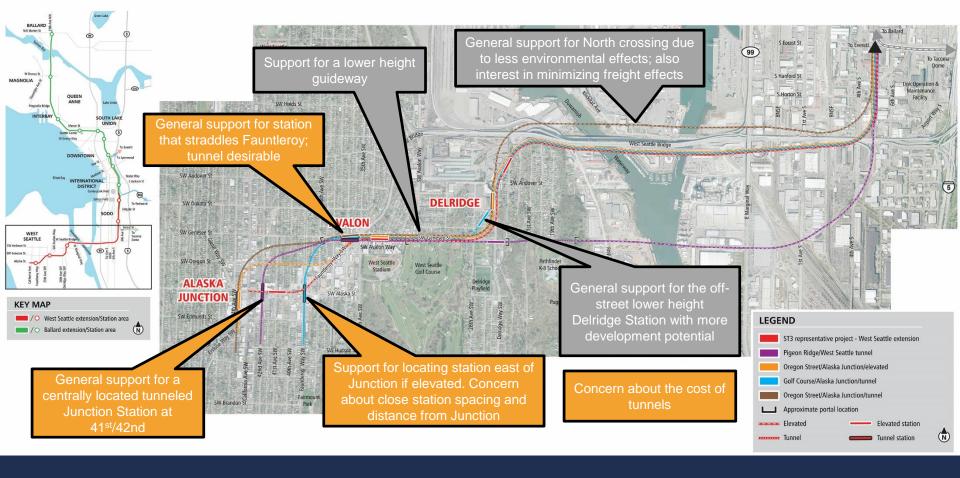
PREFERRED ALTERNATIVE*

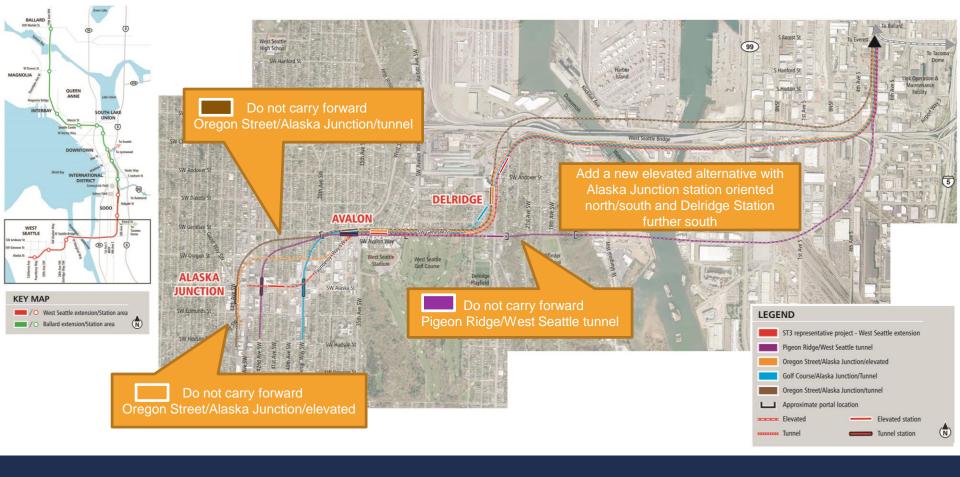
Early-2019





West Seattle/Duwamish Level 2 alternatives





West Seattle/Duwamish Level 2 alternatives

Level 3 alternatives development

LEVEL 1

Alternatives developmen

Early-2018

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Screen alternatives

PUBLIC INVOLVEMENT

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PREFERRED ALTERNATIVE*

* |

Early-2019

^{*}The Sound Transit Board identifies preferred alternatives and other alternatives to study in the Environmental Impact Statement (EIS).



Summary of Level 3 alternatives

- ST3 Representative Project
- West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated
 - C-ID station options: 5th Ave Cut-and-Cover and 5th Ave Mined
- West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel
 - Junction station options: 41st Ave, 42nd Ave and 44th Ave
 - C-ID station options: 4th Ave Cut-and-Cover and 4th Ave Mined
 - Ballard station options: 14th Ave and 15th Ave



Level 3 alternatives





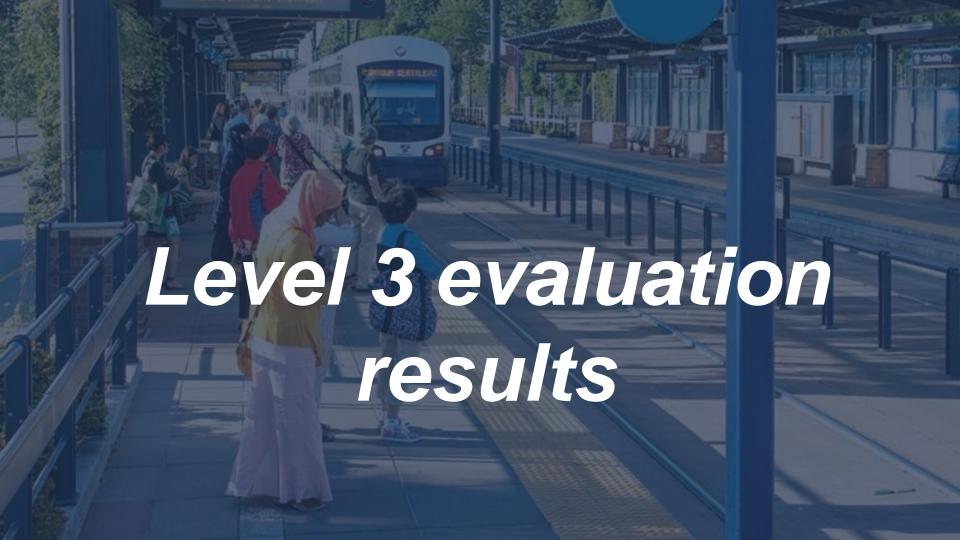
West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated West Seattle/Duwamish



West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel West Seattle/Duwamish



Level 3 Alternatives West Seattle/Duwamish



Purpose and need

-	
Purpose Statement	Symbol
Provide high quality rapid, reliable, and efficient peak and off-peak LRT service to communities in the project corridors as defined in ST3.	
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet the projected transit demand.	STATION
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan.	0
Implement a system that is consistent with the <i>ST3 Plan</i> that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.	0
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.	
Encourage equitable and sustainable urban growth in station areas through support of transit-oriented development, station access, and modal integration in a manner that is consistent with local land use plans and policies.	
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.	

Evaluation criteria

> 17 criteria consistent in all levels of evaluation

- Reliable service
- Travel times
- Regional connectivity
- Transit capacity
- Projected transit demand
- Regional centers served
- ST Long-Range Plan consistency
- ST3 consistency
- Technical feasibility

- Financial sustainability
- Historically underserved populations
- Station area land use plan consistency
- Modal integration
- Station area development opportunities
- Environmental effects
- Traffic operations
- Economic effects

Evaluation measures

- > 50+ quantitative and/or qualitative measures
- Ratings for Lower, Medium and Higher performing
- Key differentiators and considerations among alternatives

Lower Performing

Medium Performing

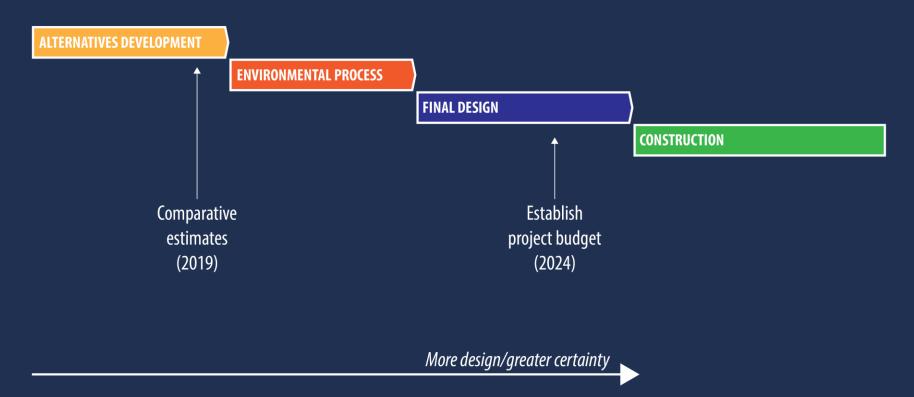
Higher Performing

Comparative estimates

> Purpose: To *inform comparison* of Level 3 alternatives

- **Comparative estimates** for end-to-end alternatives
 - Consistent methodology (2018\$; construction, real estate, etc.)
 - Based on limited conceptual design (less than 5% design)
 - Does not establish project budget
- Project budget established during final design (~ 2024)

Project budget



	ST3 Representative	West Seattle Elevated/C-II Ave/Ballare		West Seattle Tunnel/C-ID 4th Ave/Downtown 5th Ave/Ballard Tunnel					
Evaluation Measures	Project	5th Ave Cut-and-Cover International District/ Chinatown Station	5th Ave Mined International District/ Chinatown Station	41st Ave Alaska Junction/4th Ave Cut-and- Cover/14th Ave Ballard	42nd Ave Alaska Junction Station	44th Ave Alaska Junction Station	4th Ave Mined International District/ Chinatown Station	15th Ave Ballard Station	
Provide high quality rapid, reliable, and efficient	ent peak and off-peak	light rail transit service to c	ommunities in the project	t corridors defined in ST3.					
At-grade crossings	3	1				1			
Potential service interruptions/recoverability	Lower	Med	ium	Medium			Lower	Medium	
LRT travel times (minutes)	6 to 7 / 13 to 14	6 to 7 / 2	l3 to 14	6 to 7 / 13 to 14					
Transit travel time savings (minutes)	12 to 20	12 to	20	12 to 20					
Improve regional mobility by increasing conn	ectivity and capacity tl	hrough downtown Seattle t	o meet projected transit d	emand.					
Network integration	Lower	Med	ium		Higher		Medium	Higher	
Passenger carrying capacity	Medium	Med	ium	Medium					
Average weekday trips on West Seattle/	35,000 to 40,000 /	35,000 to				35,000 to 41,000 /			
Ballard extensions (2042)	123,000 to 163,000	120,000 to			125,000 to 165,000				
	oted regional and loca	l land use, transportation, a	, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan.						
PSRC growth centers served	5	5				5			
Pop/job densities served (2040)	38 / 39	39 /		37 / 38 t		37 / 38 to 39			
Accommodates future LRT extension	Lower	Medium		Higher Medium Higher			er		
Implement a system that is consistent with th	ne ST3 Plan that establ	ished transit mode, corrido	r, and station locations an	d that is technically feasible	and financially sustainab	le to build, operate, and mo	aintain.		
Mode, route and stations per ST3	Higher	Hig	ner			Higher			
Potential ST3 schedule effects	Higher	Higher	Medium			Lower			
Potential ST3 operating plan effects	Lower	Higl	Higher Higher		Higher		Medium	Higher	
Engineering constraints	Lower	Med	ium	Lower					
Constructability issues	Lower	Medium		Lower					
Operational constraints	Lower	Medium	Lower	Higher		Lower	Higher		
Capital costs (2018\$)	-	+\$400M	+\$500M	+\$1,900M		+\$2,100M	+\$1,900M		
Annual O&M costs on West Seattle/	\$25 to \$30 /	\$25 to	\$30 /	\$25 to \$30 /					
Ballard extensions (2018\$ in millions)	\$55 to \$60	\$55 to				\$55 to \$60			
Expand mobility for the corridor and region's		de transit dependent, low in	come, and minority popul	ations.					
Low-income/minority opportunities	Medium	Med		Medium					
(activity nodes/rental units) (1)	23%	22	%	23%					
Low-income population (1/2)	32% / 32%	32% / 32%		32% / 31%					
Minority population (1/2)	34% / 34%	34% / 35%		34% / 34 to 35%					
Youth population (1/2)	7% / 10%	7% / 9%		7% / 9 to 10%					
Elderly population (1/2)	14% / 11%	14% /	12%	14% / 11 to 12%					
Limited English Proficiency population (1/2)	7% / 8%	7% /	8%	7% / 7 to 8%					
Disabled population (1/2)	12% / 11%	12% /	11%	12% / 11%					
(1) Within station walksheds: (2) Within 15 mir	nute ride on connecting					,			
Loval 2		Just	ion			Lower Performing	Medium Performing	Higher Performing	

Level 3 evaluation - Part 1 of 2

1									
	ST3 Representative	West Seattle Elevated/C-ID 5th Ave/Downtown 6th Ave/Ballard Elevated		West Seattle Tunnel/C-ID 4th Ave/Downtown 5th Ave/Ballard Tunnel					
Evaluation Measures	Project	5th Ave Cut-and-Cover International District/ Chinatown Station	Chinatown Station	41st Ave Alaska Junction/4th Ave Cut-and- Cover/14th Ave Ballard	42nd Ave Alaska Junction Station	44th Ave Alaska Junction Station	International District/ Chinatown Station	15th Ave Ballard Station	
Encourage equitable and sustainable urban g				ation access, and modal integ	ration in a manner the		d use plans and policies.		
Compatibility with Urban Centers/Villages (1)	58%	569				55 to 58%			
Station land use plan consistency	Higher	High		Higher					
Activity nodes served (1)	302	298				300 to 303			
Passenger transfers	Higher	Higher	Medium		Higher		Medium	Higher	
Bus/rail and rail/rail integration (1)	Medium	Medi	ium			Medium			
Bicycle infrastructure and accessibility (1)	19%	19'	19%		18 to 19%				
Pedestrian/limited mobility accessibility	Higher	High		Higher					
Development potential ⁽¹⁾	14%	149	%	13 to 14%					
Equitable development opportunities	Lower	Medi		Higher					
Preserve and promote a healthy environment	and economy by min	imizing adverse impacts on t	the natural, built and soci	ial environments through sust	ainable practices.				
Historic properties/Landmarks (2)	40	20	J	40					
Potential archaeological resource effects (1)	Lower	Low	ver			Lower			
Parks/recreational resource effects (acres)	1.4	5.3				5.7			
Water resource effects (acres)	0.8	0.5	.5		<0.1				
Fish and wildlife habitat effects (acres)	15.0	6.0	.0			15.0			
Hazardous materials sites (2)	50	60	J			40			
Visual effects to sensitive viewers (miles)	2.5	1.7	7			1.2			
Noise/vibration sensitive receivers (1)	Medium	Medi	ium			Medium			
Potentially affected properties	Medium	Low	ver			Higher			
Residential unit displacements	Medium	Low	ver		Higher				
Business displacements (square feet)	Higher	Low	ver		Higher				
Construction impacts	Lower	Lower	Medium		Medium		Lower	Medium	
Burden on minority/low-income	Lower	Medi	ium			Lower			
Traffic circulation and access effects	Lower	Medi	ium			Higher			
Effects on transportation facilities	Lower	Medi	ium		Medium				
Effects on freight movement	Lower	Medi	ium	Medium					
Business and commerce effects	Medium	Medi	ium	Medium					

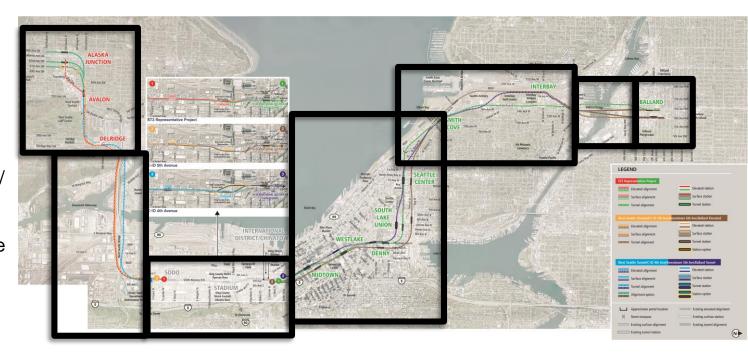
⁽¹⁾ Within station walksheds and/or defined buffer of alignment; (2) On properties that overlap with the project footprint

Level 3 evaluation - Part 2 of 2

Lower Performing Medium Performing Higher Performing

Key considerations

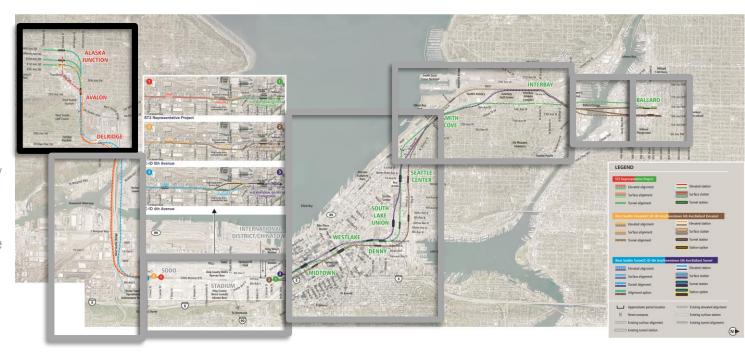
- West Seattle stations and guideway
- Duwamish Waterway crossing
- SODO and Chinatown/ Int'l District
- Downtown tunnel route
- > Smith Cove-Interbay
- > Salmon Bay crossing
- Ballard terminus station



Key considerations

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- West Seattle stations and guideway
- Duwamish Waterway crossing
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Key considerations

ST3 Representative Project

- East-west oriented elevated Alaska Junction Station complicates future LRT extension: constrained terminal station on SW Alaska Street
- High guideway on SW Genesee Street
- Park effects may require 4(f) avoidance alternative
- Delridge Station problematic proximity to freeway/Nucor

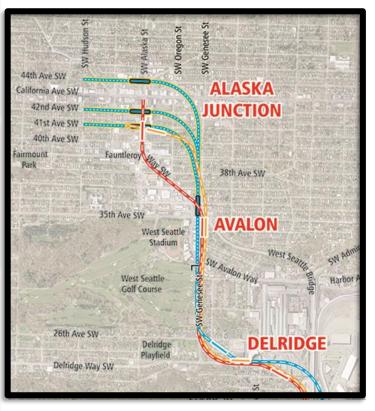
West Seattle Elevated

- More displacements between Alaska Junction and Avalon stations; similar number of displacements in Delridge
- · Greatest disruption to neighborhood around Alaska Junction Station
- High guideway on SW Genesee Street
- Park effects may require 4(f) avoidance alternative

West Seattle Tunnel

- Fewer displacements w/ tunnel Alaska Junction Station; similar number of displacements in Delridge; Lower Delridge Station in neighborhood
- Tunnel facilitates lower guideway on SW Genesee St, but could increase implementation schedule and require 3rd Party funding
- Park effects may require 4(f) avoidance alternative

West Seattle Stations



Key considerations

West Seattle Stations and Guideway



West Seattle:

Key differentiators

- Station location
- Potential property effects
- Guideway height in Delridge
- Comparative Estimate



West Seattle Key Differentiators

Differentiators	Alaskar-Tst	Alaska	71 /Alaska
Station location (Alaska Junction)	Farther away from bus routes on California Ave	Farther away from bus routes on California Ave	Farther away from bus routes on California Ave
Property effects * (Residential units potentially displaced)	Avalon/Junction 60 to 90 Delridge Less than 40	Avalon/Junction 90 to 120 Delridge Less than 40	Avalon/Junction Less than 30 Delridge Less than 40
Property effects * (Sq. ft. of businesses potentially displaced)	Avalon/Junction 25,000 to 35,000 Delridge See Duwamish Crossing	Avalon/Junction 15,000 to 25,000 Delridge See Duwamish Crossing	Avalon/Junction 5,000 to 15,000 Delridge See Duwamish Crossing
Guideway height in Delridge	Higher	Higher	Lower
Comparative Estimate (2018\$)**		-	+ \$700M
West Seattle Comparison Summary			

Elevated

Alaska/41st

Elevated

41st South of

Tunnel

41st/Alaska

Tunnel

42nd/Alaska

Closer to bus

routes on

California Ave

than 41st

Avalon/Junction

Less than 30

Delridge

Less than 40

Avalon/Junction

5.000 to 15.000

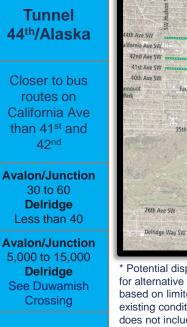
Delridge

See Duwamish

Crossing

Lower

+ \$700M



42nd

Lower

+ \$700M

* Potential displacement numbers are for alternative comparison only and is based on limited engineering and existing conditions. The assessment does not include potential permanent or temporary easements or area for construction staging, traction power substations (TPSS) or underground station entrances.

Fauntleroy

35th Ave SW

26th Ave SW

West Seattle

West Seattle

Golf Course

Delridge Playfield

** Compared to ST3 Representative Project

Gumpansun summary

Key

Differentiators

ALASKA

JUNCTION

38th Ave SW

AVALON

DEI





PLANNING

2017-2019

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Board identifies preferred alternative*

2019-2022

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Final Environmental Impact Statement

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PUBLIC INVOLVEMENT

*The Sound Transit Board identifies preferred alternatives and other alternatives to study in the **Environmental Impact** Statement.

What is an Environmental Impact Statement?

- Starts with scoping
- Evaluates reasonable range of alternatives
- Identifies potential impacts
- Identifies potential mitigation

What is EIS Scoping?

- Part of the federal and state environmental review process
- Public comment period until April 2
- Seeking public feedback on scope of EIS
 - Range of alternatives
 - Topics to study
 - Purpose and need
- Helps inform Board decision on what to study in EIS*

^{*} Scope of EIS also subject to Federal Transit Administration (FTA) oversight

What is typically studied in an



What is typically studied in an



- Ridership
- Transit
- Regional and local traffic
- Non-motorized facilities and modes
- Freight movement
- Marine navigation
- Aviation
- Construction traffic

What is typically studied in an

Transportation



- Ridership
- Transit
- Regional and local traffic
- Non-motorized facilities and modes
- Freight movement
- Marine navigation
- Aviation
- Construction traffic



Natural Environment

- Air quality and greenhouse gas emissions
- Ecosystems and fish and wildlife habitat
- Water resources
- Geology and soils

What is typically studied in an

Transportation

EIS?



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Environment

Built

- Ridership
- Transit
- Regional and local traffic
- Non-motorized facilities and modes
- Freight movement
- Marine navigation
- Aviation
- Construction traffic

Natural Environment

- Air quality and greenhouse gas emissions
- Ecosystems and fish and wildlife habitat
- Water resources
- Geology and soils

- Noise and vibration
- Economic effects
- Visual resources
- Parks resources
- Land use
- Acquisitions, displacements and relocations
- Energy use
- Hazardous materials
- Public services and utilities
- Impacts on low income and minority populations
- Cultural, historic and archaeological resources
- Construction impacts

VOTER APPROVAL

2016



PLANNING

DE. DE

2019–2022

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Anticipated publication date:

Late 2020

2017-2019

Alternatives development

Board identifies preferred alternative*

*The Sound Transit Board identifies a preferred alternative(s) and other alternatives to study in the Environmental Impact Statement.

PUBLIC INVOLVEMENT

Acquisition/relocation process



Before DEIS publication (mid 2020)

Sound Transit contacts potentially affected property owners



During final design (2022-2026)*

- Sound Transit identifies full / partial acquisitions
- Sound Transit Board authorizes property purchases



After DEIS publication (late 2020)

Sound Transit Board confirms or modifies preferred alternative



After FEIS publication (2022)

Sound Transit Board selects project to be built

- Sound Transit will prepare an appraisal to determine fair market value of property needed for the project
- Sound Transit will provide full relocation services to people and businesses displaced by the project, including referrals to comparable properties and payment of moving costs
- Sound Transit staff are available to support property owners and tenants through this process

How to provide scoping comments

- Comment online: wsblink.participate.online
- Email us: wsbscopingcomments@soundtransit.org
- Leave a voicemail: 833-972-2666
- Mail us:
 - West Seattle and Ballard Link Extensions, c/o Lauren Swift, Sound Transit, 401 S. Jackson St., Seattle, WA 98104

