SoundTransit

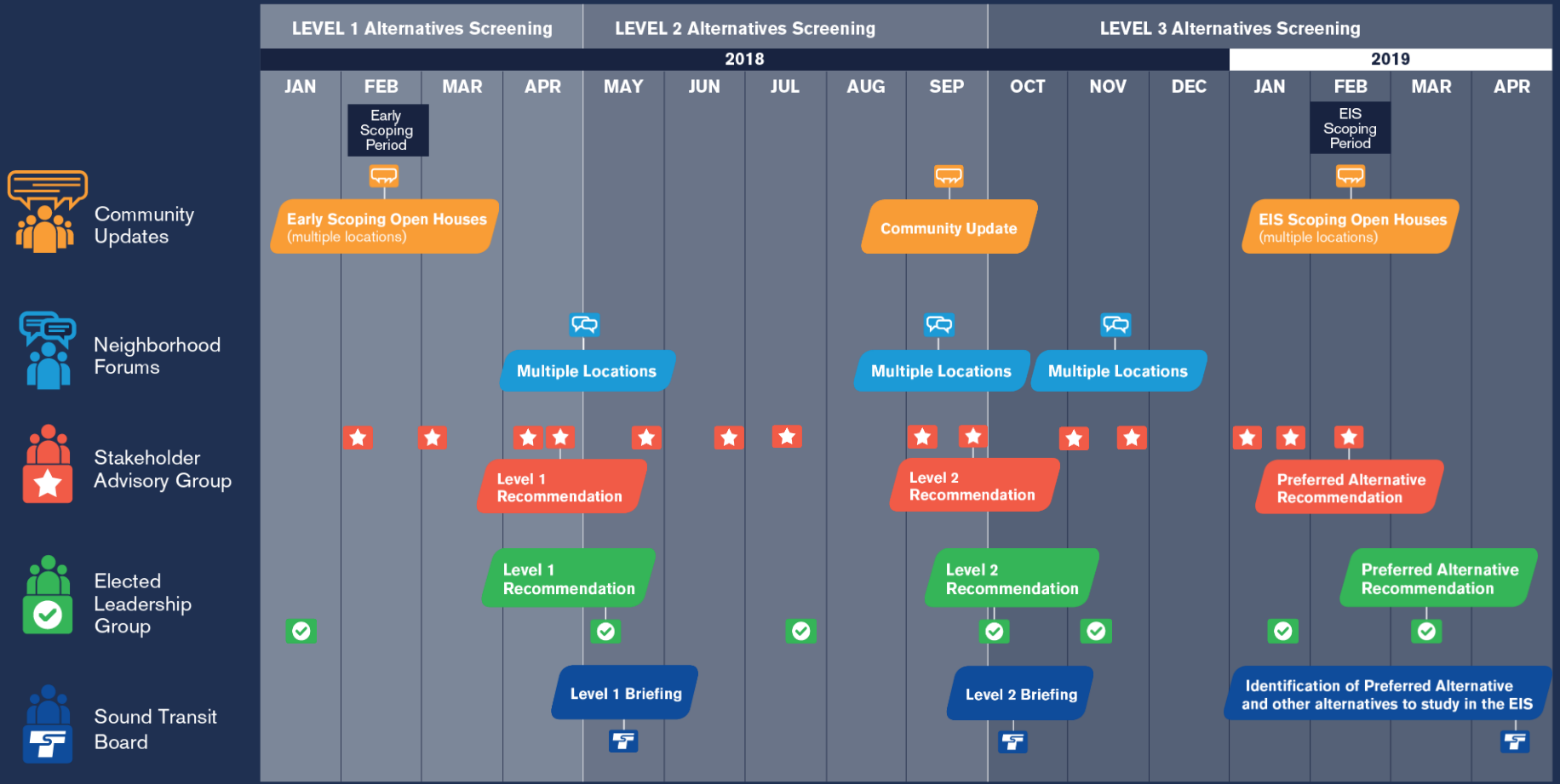
West Seattle and Ballard Link Extensions

Level 2 Evaluation Results | September 2018

Agenda

- *Introductions and purpose*
- *Community engagement update*
- *Alternatives development overview*
- *Level 2 alternatives evaluation*
- *Next steps*

Community engagement and collaboration



Meeting dates subject to change.

SAG and ELG meetings

SAG Meeting #8 Sept. 5, 2018	• Community engagement and collaboration • Level 2 evaluation results
SAG Meeting #9 Sept 26, 2018	• Community engagement and collaboration • Level 2 recommendations
ELG Meeting Oct. 5, 2018	• Community engagement and collaboration • Level 2 recommendations

Community Engagement Update

External Engagement Report: Jun-Aug 2018

17 comments and questions

6 email updates engaging more than **4,000** subscribers

4 Tweets engaging more than **82,000** users

5 posts engaging more than **30,000** users

8 festivals engaging more than **3,300** community members

49 community briefings

2 Stakeholder Advisory Group meetings

1 Elected Leadership Group meeting

June briefings snapshot

- ✓ Chinatown-International District BIA (6/7)
- ✓ Seattle Design Commission (6/7)
- ✓ Pigeon Point Neighborhood Council (6/11)
- ✓ South downtown stakeholders (6/12)
- ✓ Seattle Planning Commission (6/14)
- ✓ Neighborcare Health Ballard (6/18)
- ✓ SODO BIA Transportation Committee (6/19)
- ✓ Ballard Food Bank (6/20)
- ✓ Sound Transit Citizen Oversight Panel (6/21)
- ✓ CID Framework Capital Projects Coordination Workgroup (6/22)
- ✓ UW Medicine (6/25)
- ✓ NSIA (6/26)
- ✓ Ethiopian Community in Seattle (6/26)
- ✓ West Seattle Food Bank (6/28)
- ✓ Southwest Youth & Family Services (6/29)

July briefings snapshot

- ✓ WSB Station Access Discussion (7/6)
- ✓ Mary's Place (7/10)
- ✓ Central Ballard Residents Association (7/12)
- ✓ South downtown stakeholders (7/12)
- ✓ SODO BIA Transportation Committee (7/13)
- ✓ Ballard Mill Marina (7/16)
- ✓ Western Towboat & American Waterway Operators (7/18)
- ✓ Ferguson Terminal (7/18)
- ✓ Fremont Tugboat (7/19)
- ✓ Transit Access Coalition (7/25)
- ✓ Plymouth Housing Group (7/25)
- ✓ Coastal Transportation (7/25)
- ✓ CID Forum (7/25)
- ✓ Neighborhood House at High Point (7/26)
- ✓ Seattle Maritime Academy (7/26)
- ✓ West Seattle JuNO (7/26)
- ✓ Downtown Residents Council / DSA (7/27)
- ✓ Chinese Information & Service Center (7/30)
- ✓ Mercer Corridor Stakeholders Committee (7/31)

August briefings snapshot

- ✓ Seniors in Action Foundation (8/1)
- ✓ NW Marine Trade Association (8/3)
- ✓ Seattle Yacht Club (8/3)
- ✓ Bowman Refrigeration (8/7)
- ✓ Drink & Link in Delridge (8/8)
- ✓ Labor organizations (8/8)
- ✓ Tugboat tour with Western Towboat (8/10)
- ✓ The Salvation Army (8/20)
- ✓ Wing Luke Museum (8/21)
- ✓ Seahawks/Public Stadium Authority (8/22)
- ✓ Housing Development Consortium (8/23)
- ✓ Downtown Emergency Service Center (8/28)
- ✓ St. Luke's Episcopal Church (8/29)
- ✓ SLU Community Council, Transportation Committee (8/29)
- ✓ United Indians of All Tribes Foundation (8/29)

2018 Festivals

- ✓ Morgan Junction Festival (6/16)
- ✓ Festival Sundiata (6/16-6/17)
- ✓ West Seattle Summer Fest (7/13-7/15)
- ✓ Ballard Seafood Fest (7/13-7/15)
- ✓ Dragon Fest (7/14-7/15)
- ✓ South Lake Union Block Party (8/10)
- ✓ Delridge Day (8/11)
- ✓ Celebrate Little Saigon (8/26)
- Chinatown-ID Night Market (9/8)
- Fishermen's Fall Festival (9/15)
- Sustainable Ballard Festival (9/22)
- Magnolia Farmers Market (10/6)
- Dia de Muertos (10/27-10/28)

Station Charrettes

Collaborative design sessions with agencies and community stakeholders

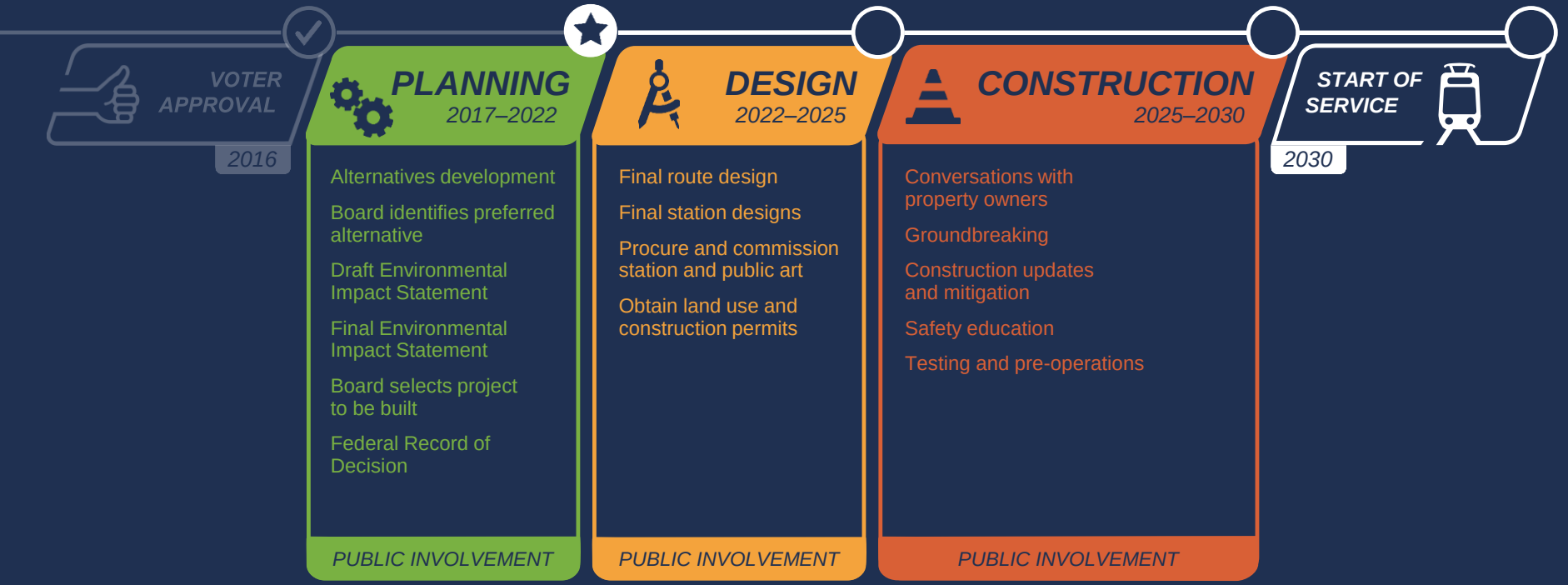
- ✓ 6/28: Ballard / Interbay
- ✓ 7/12: Seattle Center
- ✓ 7/20: Delridge
- ✓ 7/24: Alaska Junction / Avalon
- ✓ 7/30: Chinatown – International District
- ✓ 8/2: Denny / SLU
- ✓ 8/28 SODO/Stadium

Neighborhood Forums / Open Houses

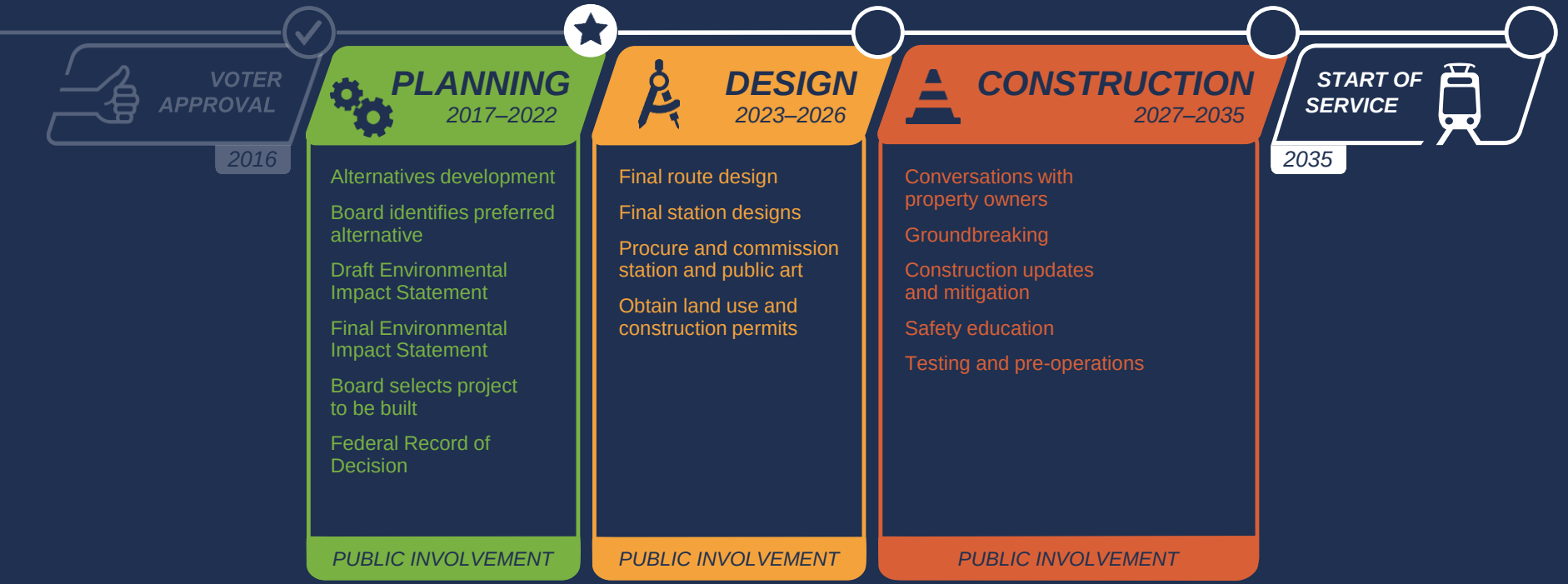
West Seattle	**Downtown Seattle**	**Ballard**
(Includes Delridge, Avalon and Alaska Junction stations)	***(Includes Denny, South Lake Union, Seattle Center, Midtown, Westlake, Chinatown-International District, Stadium and SODO stations)***	***(Includes Smith Cove, Interbay and Ballard stations)***
Saturday, Sept. 8 9 – 11:30 a.m. Seattle Lutheran High School Gym (4100 SW Genesee St., Seattle)	**Tuesday, Sept. 11** 5:30 – 8 p.m. Ruth Fisher Boardroom, Union Station (401 S. Jackson St., Seattle)	**Monday, Sept. 17** 5:30 – 8 p.m. Ballard Eagleson VFW (2812 NW Market St., Seattle)

Alternatives development overview

West Seattle project timeline



Ballard project timeline



VOTER APPROVAL

2016

PLANNING

DESIG

2017–2019

Alternatives development

Board identifies preferred alternative

2019–2022

Draft Environmental Impact Statement

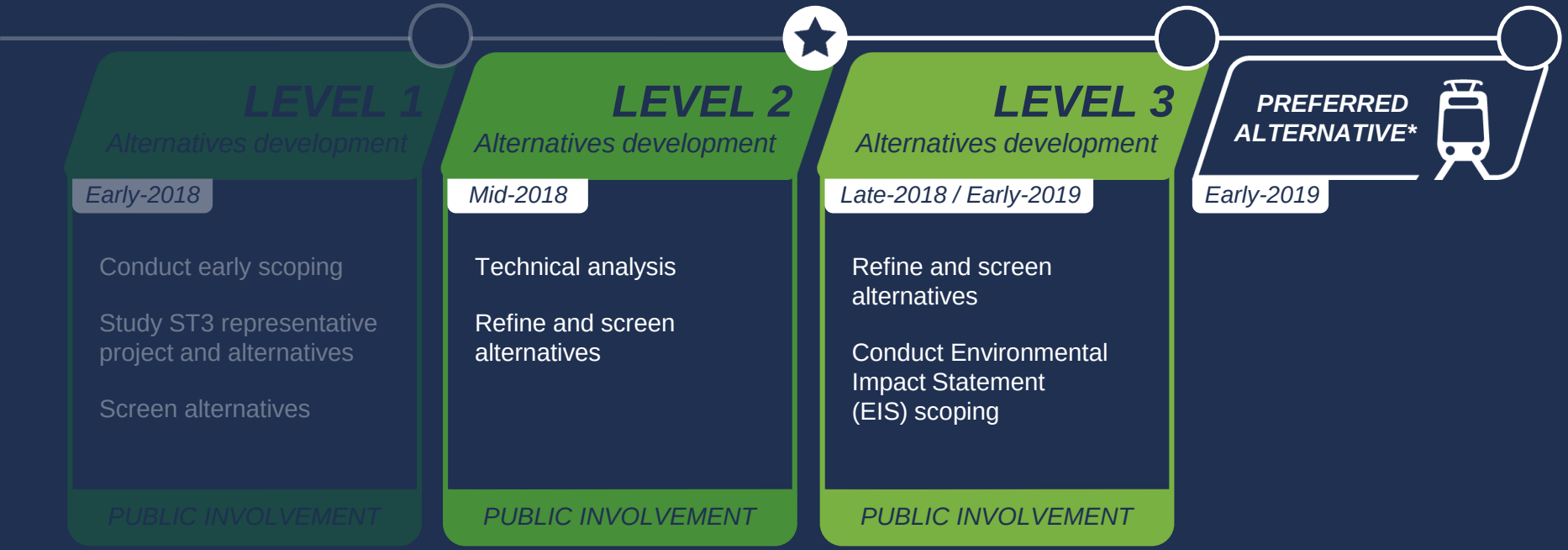
Final Environmental Impact Statement

Board selects project to be built

Federal Record of Decision

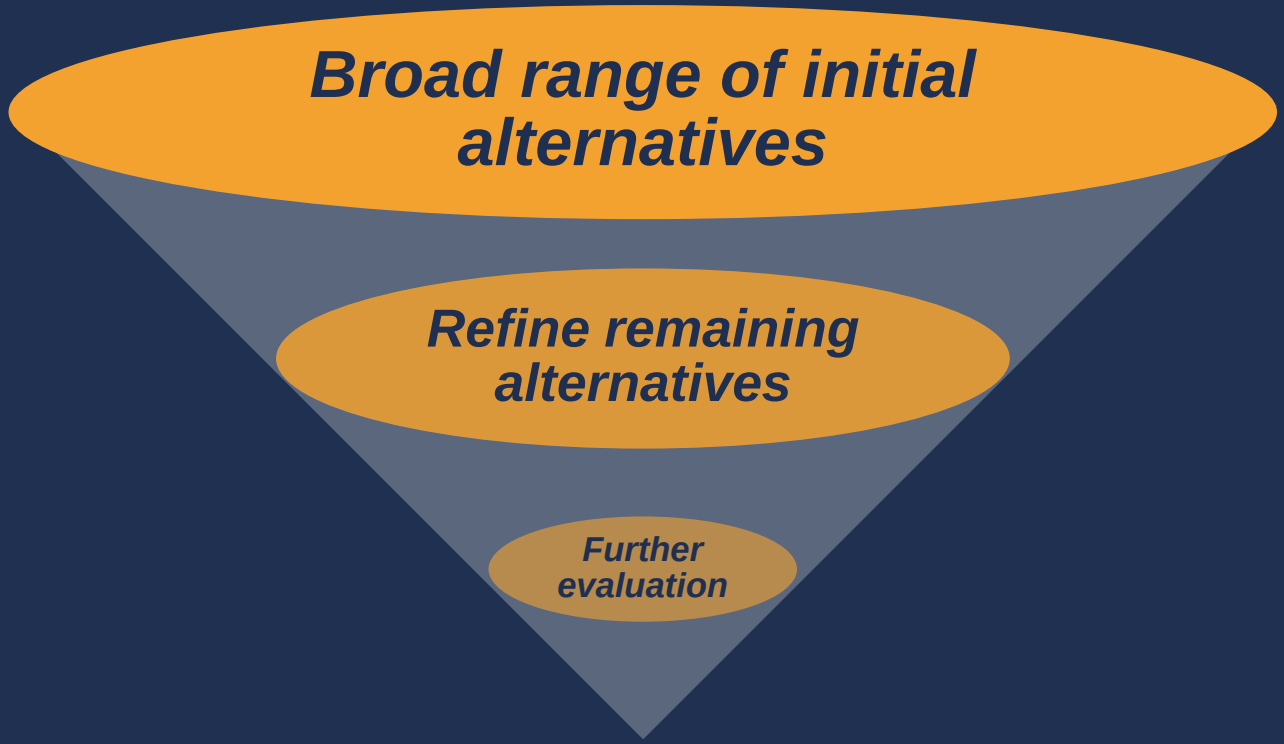
PUBLIC INVOLVEMENT

Alternatives development process



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

Screening process



Preferred Alternative and other EIS alternatives

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.	
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*.	
Implement a system that is consistent with the *ST3 Plan* that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.	
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 local land use plan consistency
- Modal integration
- Station area development opportunities
- Environmental effects
- Traffic operations
- Economic effects

Measures and methods

- *50+ quantitative and/or qualitative measures*
- *Rating thresholds for High, Medium and Low*
- *Key differentiators and findings*

Lower Performing

Medium Performing

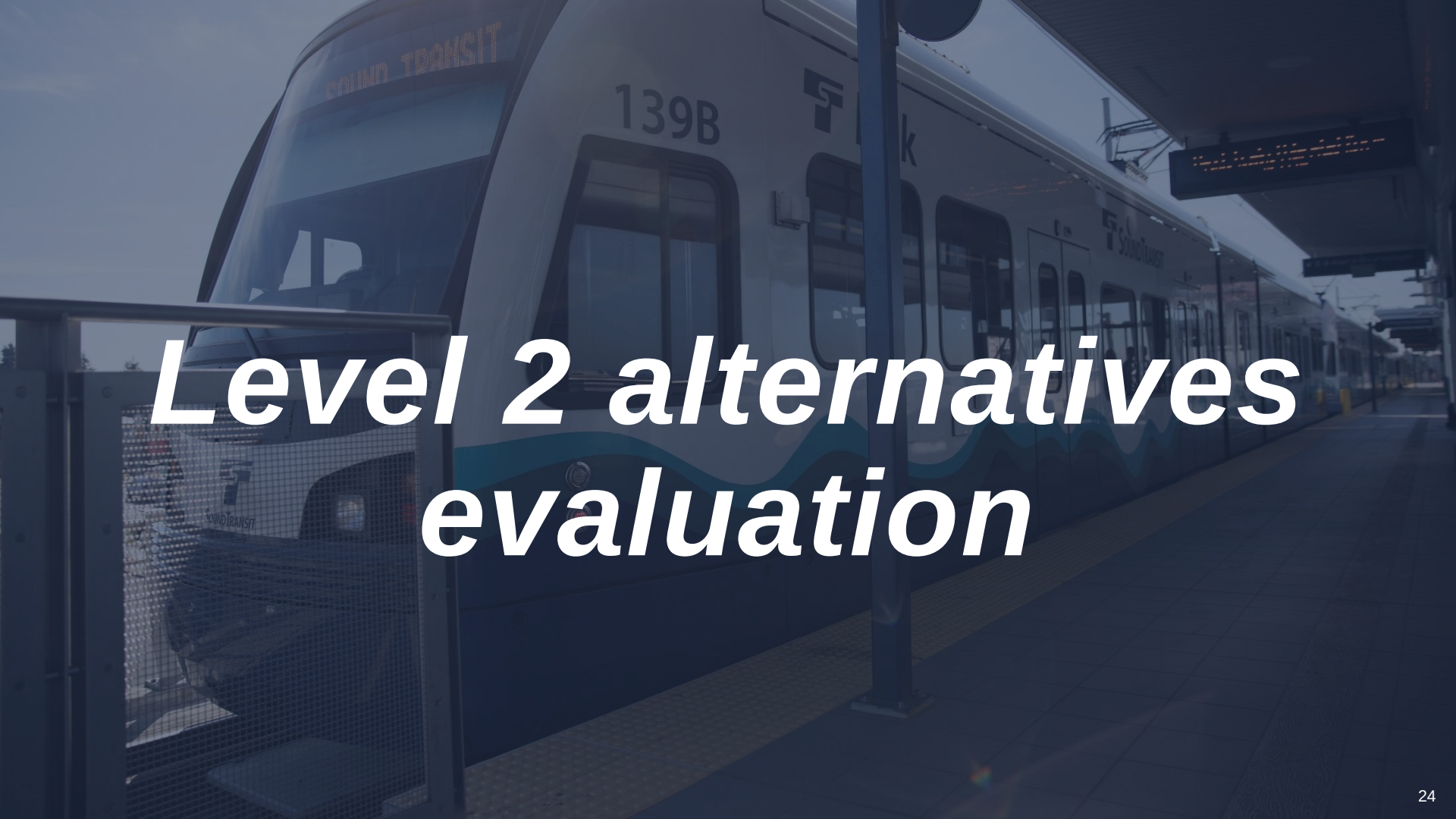
Higher Performing

Cost assessment

- **Purpose:** To ***inform comparison*** of Level 2 alternatives
- **Comparative costs *by segment***
  - Consistent methodology (2017$; construction, real estate, etc.)
  - Based on limited conceptual design (less than 5% design)
  - Final project budget established at 60% design (~ 2024)
- Costs for ***end-to-end alternatives*** in Level 3

Financial constraints

- ST3 Plan budget based on 2014 conceptual cost estimates
- Significant recent escalation in construction and real estate costs
- Level 2 cost assessment provides basis for comparison of alternatives within a segment
- Level 3 end-to-end alternatives will facilitate comparison to ST3 budget
- Be mindful of financial realities when considering Level 2 recommendations



Level 2 alternatives evaluation

Study segments

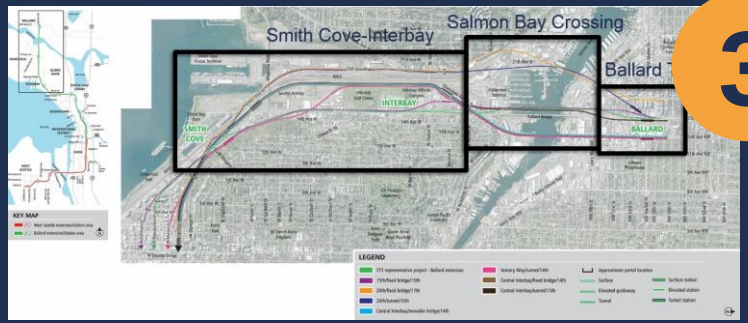
1

Map of alternatives

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed bridge/14th	Central Interbay/ Tunnel/15th
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.								
Service Interruptions	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Times (minutes)	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.								
ork Integration	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
er Carrying Capacity	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
tential (2040 pop/emp) [1]	17,200	16,700	18,000	17,800	15,400	16,400	15,400	16,500
Serve regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.								
nal Growth Centers Served	N/A [2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ufacturing/Industrial Centers Served	1	1	1	1	1	1	1	1
Accommodates Future LRT Extension	Medium	Medium	Lower	Higher	Medium	Higher	Medium	Higher
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.								
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Potential ST3 Schedule Effects	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Potential ST3 Operating Plan Effects	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Operational Constraints	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Conceptual Capital Cost Comparison	-	$200M increase	$500M increase	$700M increase	$200M increase	$300M increase	$100M increase	$500M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.								
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) [3]	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Low-Income Population [4,5]	6%	6%	6%	6%	6%	6%	6%	6%
Minority Population [4,5]	19% / 18%	20% / 18%	20% / 18%	20% / 18%	19% / 18%	19% / 18%	19% / 18%	19% / 18%
Youth Population [4,5]	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%
Elderly Population [4,5]	9% / 12%	11% / 12%	11% / 12%	11% / 12%	12% / 12%	11% / 12%	12% / 12%	10% / 12%
Limited English Proficiency Population [4,5]	10% / 10%	10% / 10%	10% / 10%	10% / 10%	9% / 10%	9% / 10%	9% / 10%	10% / 10%
	4% / 3%	4% / 3%	4% / 3%	4% / 3%	3% / 3%	3% / 3%	3% / 3%	3% / 3%
Disabled Population [4,5]	9% / 8%	9% / 8%	9% / 8%	9% / 8%	8% / 8%	8% / 8%	8% / 8%	9% / 8%

2

Evaluation measures



3

Key differentiators

	Key findings	Cost comparison*	Schedule comparison*
Representative Project			
Alternative 1	• Key finding • Key finding • Key finding	-$XXXM	Medium Performing
Alternative 2	• Key finding • Key finding • Key finding	+$XXXM	Lower Performing

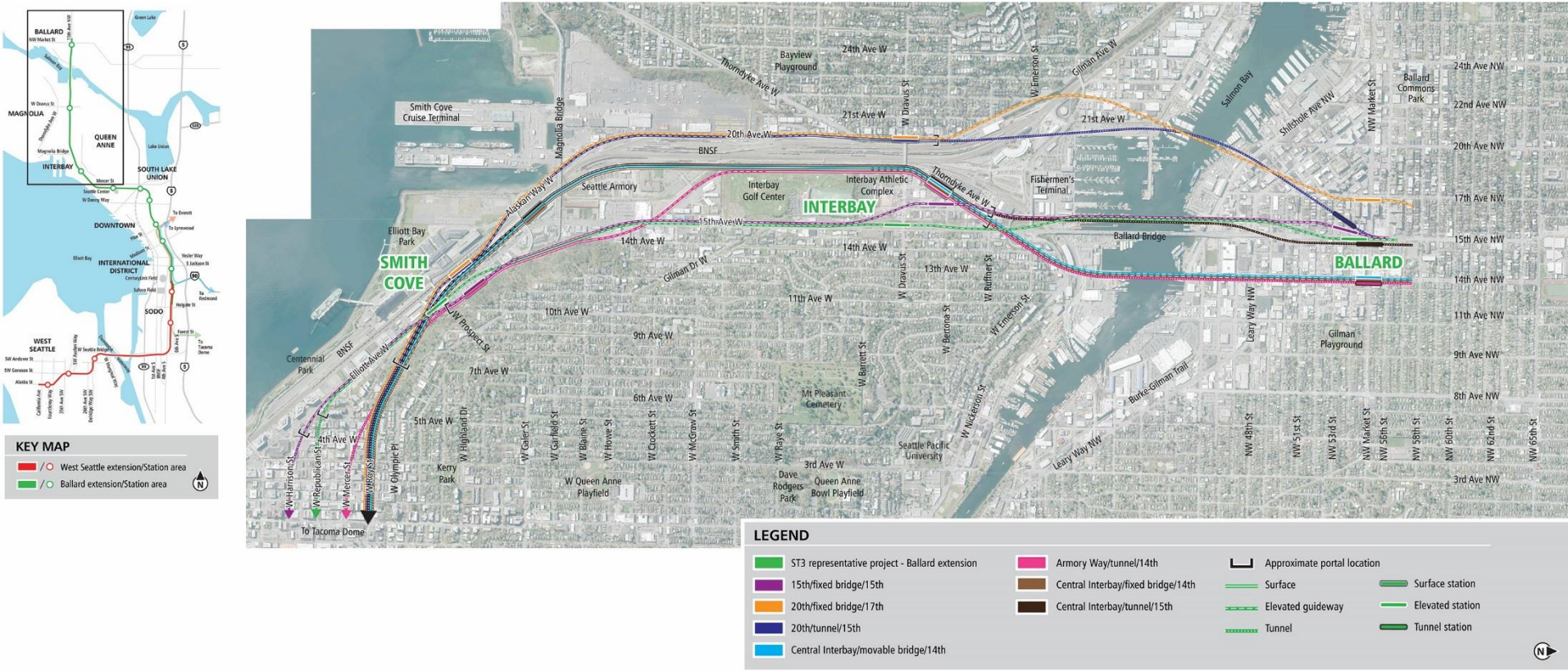
4

Summary

Level 2 alternatives

Interbay/Ballard

- ST3 Representative Project
- 15th/Fixed Bridge/15th
- 20th/Fixed Bridge/17th
- 20th/Tunnel/15th
- Armory Way/Tunnel/14th
- Central Interbay/Movable Bridge/14th
- Central Interbay/Fixed Bridge/14th
- Central Interbay/Tunnel/15th



Interbay/Ballard

Level 2 alternatives

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.								
Potential Service Interruptions	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Travel Times (minutes)	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.								
Network Integration	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	17,200	16,700	19,000	17,800	15,400	16,400	15,400	16,500
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.								
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1	1	1	1
Accommodates Future LRT Extension	Medium	Medium	Lower	Higher	Medium	Higher	Medium	Higher
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.								
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Potential ST3 Schedule Effects	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Potential ST3 Operating Plan Effects	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Operational Constraints	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Conceptual Capital Cost Comparison	-	$200M increase	$500M increase	$700M increase	$200M increase	$300M increase	$100M increase	$500M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.								
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 8%	Medium 9%	Medium 8%	Medium 8%	Medium 8%	Medium 8%	Medium 8%	Medium 9%
Low-Income Population (1/2)	19% / 18%	20% / 18%	20% / 18%	20% / 18%	19% / 18%	19% / 18%	19% / 18%	19% / 18%
Minority Population (1/2)	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%
Youth Population (1/2)	9% / 12%	11% / 12%	11% / 12%	11% / 12%	12% / 12%	11% / 12%	12% / 12%	10% / 12%
Elderly Population (1/2)	10% / 10%	10% / 10%	10% / 10%	10% / 10%	9% / 10%	9% / 10%	9% / 10%	10% / 10%
Limited English Proficiency Population (1/2)	4% / 3%	4% / 3%	4% / 3%	4% / 3%	3% / 3%	3% / 3%	3% / 3%	3% / 3%
Disabled Population (1/2)	9% / 8%	9% / 8%	9% / 8%	9% / 8%	8% / 8%	8% / 8%	8% / 8%	9% / 8%

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

Level 2 alternatives evaluation – *Part 1 of 2*

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.								
Potential Service Interruptions	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Travel Times (minutes)	5 to 6		5 to 6		5 to 6	5 to 6	5 to 6	5 to 6
Improve regional mobility by increasing connectivity and capacity th								*demand.*
Network Integration	Medium				Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium				Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	17,200				15,400	16,400	15,400	16,500
Connect regional centers as described in adopted regional and local								*plans and Sound Transit's Long-Range Plan.*
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1	1	1	1
Accommodates Future LRT Extension	Medium	Medium	Lower	Higher	Medium	Higher	Medium	Higher
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.								
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Potential ST3 Schedule Effects	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Potential ST3 Operating Plan Effects	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Operational Constraints	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Conceptual Capital Cost Comparison	-	$200M increase	$500M increase	$700M increase	$200M increase	$300M increase	$100M increase	$500M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.								
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 8%	Medium 9%	Medium 8%	Medium 8%	Medium 8%	Medium 8%	Medium 8%	Medium 9%
Low-Income Population (1/2)	19% / 18%	20% / 18%	20% / 18%	20% / 18%	19% / 18%	19% / 18%	19% / 18%	19% / 18%
Minority Population (1/2)	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%
Youth Population (1/2)	9% / 12%	11% / 12%	11% / 12%	11% / 12%	12% / 12%	11% / 12%	12% / 12%	10% / 12%
Elderly Population (1/2)	10% / 10%	10% / 10%	10% / 10%	10% / 10%	9% / 10%	9% / 10%	9% / 10%	10% / 10%
Limited English Proficiency Population (1/2)	4% / 3%	4% / 3%	4% / 3%	4% / 3%	3% / 3%	3% / 3%	3% / 3%	3% / 3%
Disabled Population (1/2)	9% / 8%	9% / 8%	9% / 8%	9% / 8%	8% / 8%	8% / 8%	8% / 8%	9% / 8%

Movable bridges have potential service interruptions

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

Level 2 alternatives evaluation – *Potential Service Interruptions*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.								
Potential Service Interruptions	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Travel Times (minutes)	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.								
Network Integration	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium			Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	17,200	16,700			15,400		15,400	16,500
Connect regional centers as described in adopted regional and local land use, transpo					*d Sound*			
Regional Growth Centers Served	N/A (3)	N/A			N/A		N/A	N/A
Manufacturing/Industrial Centers Served	1	1			1		1	1
Accommodates Future LRT Extension	Medium	Medium			Medium	Highe	Medium	Higher
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station loca					*that is technically fe*	*and financially*		*inable to build, operate, and maintain.*
Mode, Route and Stations per ST3	Higher	Higher	Higher	H	Higher	Higher	Higher	Higher
Potential ST3 Schedule Effects	Higher	Higher	Higher	Hi	Higher	Higher	Higher	Higher
Potential ST3 Operating Plan Effects	Lower	Higher	Higher	Hig er	Lower	Higher	Higher	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Higher	Lower	Higher	Lower
Operational Constraints	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Conceptual Capital Cost Comparison	-	$200M increase	$500M increase	$700M increase	$200M increase	$300M increase	$100M increase	$500M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.								
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 8%	Medium 9%	Medium 8%	Medium 8%	Medium 8%	Medium 8%	Medium 8%	Medium 9%
Low-Income Population (1/2)	19% / 18%	20% / 18%	20% / 18%	20% / 18%	19% / 18%	19% / 18%	19% / 18%	19% / 18%
Minority Population (1/2)	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%
Youth Population (1/2)	9% / 12%	11% / 12%	11% / 12%	11% / 12%	12% / 12%	11% / 12%	12% / 12%	10% / 12%
Elderly Population (1/2)	10% / 10%	10% / 10%	10% / 10%	10% / 10%	9% / 10%	9% / 10%	9% / 10%	10% / 10%
Limited English Proficiency Population (1/2)	4% / 3%	4% / 3%	4% / 3%	4% / 3%	3% / 3%	3% / 3%	3% / 3%	3% / 3%
Disabled Population (1/2)	9% / 8%	9% / 8%	9% / 8%	9% / 8%	8% / 8%	8% / 8%	8% / 8%	9% / 8%

Long spans (over BNSF tracks), constrained tunnel portal location, deeper tunnel station add complexity

At grade sections lessen complexity

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

= Key Differentiators

Level 2 alternatives evaluation – *Engineering Constraints, Constructability Issues*

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.								
Potential Service Interruptions	Lower	Higher	Higher	Higher	Lower	Higher	Higher	Higher
Travel Times (minutes)	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6	5 to 6
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.								
Network Integration	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	17,200	16,700	19,000	17,800	15,400	16,400	15,400	16,500
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.								
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1	1	1	1
Accommodates Future LRT Extension	Medium	Medium	Lower	Higher	Medium	Higher	Medium	Higher
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.								
Mode, Route and Stations per ST3	Higher	Higher	Higher	Hig	Hig		Higher	Higher
Potential ST3 Schedule Effects	Higher	Higher	Higher	Hig	Hig		Higher	Higher
Potential ST3 Operating Plan Effects	Lower	Higher	Higher		Lower		Higher	Higher
Engineering Constraints	Medium	Medium	Medium	L	Higher	er	Higher	Lower
Constructability Issues	Medium	Medium	Medium	Lo	Higher		Higher	Lower
Operational Constraints	Lower	Higher	Higher	Hig	Lower	Hi	Higher	Higher
Conceptual Capital Cost Comparison	-	$200M increase	$500M increase	$700M increase	$200M increase	$300M increase	$100M increase	$500M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.								
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 8%	Medium 9%	Medium 8%	Medium 8%	Medium 8%		ium 8%	Medium 9%
Low-Income Population (1/2)	19% / 18%	20% / 18%	20% / 18%	20% / 18%	19% / 18%		% / 18%	19% / 18%
Minority Population (1/2)	21% / 20%	21% / 20%	21% / 20%	21% / 20%	21% / 20%		% / 20%	21% / 20%
Youth Population (1/2)	9% / 12%	11% / 12%	11% / 12%	11% / 12%	12% / 12%	11% / 12%	12% / 12%	10% / 12%
Elderly Population (1/2)	10% / 10%	10% / 10%	10% / 10%	10% / 10%	9% / 10%	9% / 10%	9% / 10%	10% / 10%
Limited English Proficiency Population (1/2)	4% / 3%	4% / 3%	4% / 3%	4% / 3%	3% / 3%	3% / 3%	3% / 3%	3% / 3%
Disabled Population (1/2)	9% / 8%	9% / 8%	9% / 8%	9% / 8%	8% / 8%	8% / 8%	8% / 8%	9% / 8%

Highest cost alternative

Lowest cost tunnel alternative

Includes tunnel; requires 3rd Party funding

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

Level 2 alternatives evaluation – *Conceptual Capital Cost Comparison*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
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.								
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower	Lower	Lower	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	26	32	36	33	24	23	24	35
Passenger Transfers	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Higher	Medium	Medium	Higher	Higher	Higher	Higher	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Medium	Higher	Medium	Higher
Pedestrian/Limited Mobility Accessibility (1)	Lower	Medium	Higher	Higher	Lower	Medium	Lower	Medium
Development Potential (1)	Medium	Medium	Higher	Medium	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Lower	Lower	Medium	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.								
Historic Properties/Landmarks (2)	5	7	3	3	3	2	3	3
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0.2	1	0.9	0.9	4.2	3.9	4.2	3.9
Water Resource Effects (acres)	0.7	0.6	0	0	0.7	0	0.4	0
Fish and Wildlife Habitat Effects (acres)	11	11	0.5	0.5	1	11.4	1	0.5
Hazardous Material Sites (2)	11	15	11	11	16	12	16	12
Visual Effects	Medium	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Higher	Higher	Lower	Medium	Higher	Higher	Higher	Higher
Potentially Affected Properties	Medium	Lower	Lower	Higher	Higher	Higher	Higher	Higher
Residential Unit Displacements	Higher	Lower	Lower	Medium	Medium	Higher	Medium	Higher
Square Feet of Business Displacements	Medium	Medium	Medium	Higher	Medium	Higher	Medium	Lower
Construction Impacts	Lower	Medium	Lower	Medium	Higher	Higher	Higher	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Medium	Medium	Higher	Medium	Higher	Medium	Higher
Effects on Existing Transportation Facilities	Medium	Higher	Lower	Medium	Medium	Higher	Medium	Medium
Effects on Freight Movement	Lower	Medium	Medium	Medium	Medium	Higher	Medium	Higher
Business and Commerce Effects	Lower	Lower	Medium	Higher	Medium	Higher	Medium	Medium

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

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

Level 2 alternatives evaluation – *Part 2 of 2*

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
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.								
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower	Lower	Lower	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	26	32	36	33	24	23	24	35
Passenger Transfers	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Higher	Medium	Medium	Higher	Higher	Higher	Higher	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Medium	Medium	Medium	Higher
Pedestrian/Limited Mobility Accessibility (1)	Lower	Medium	Higher	Higher	Lower	Lower	Lower	Medium
Development Potential (1)	Medium	Medium	Higher	Medium	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Lower	Lower	Medium	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.								
Historic Properties/Landmarks (2)	5	7	3	3	3	2	3	3
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0.2	1	0.9	0.9	4.2	3.9	4.2	3.9
Water Resource Effects (acres)	0.7	0.6	0	0	0.7	0	0.4	0
Fish and Wildlife Habitat Effects (acres)	11	11	0.5	0.5	1	11.4	1	0.5
Hazardous Material Sites (2)	11	15	11	11	16	12	16	12
Visual Effects	Medium	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Higher	Higher	Lower	Medium	Higher	Higher	Higher	Higher
Potentially Affected Properties	Medium	Lower	Lower	Higher	Higher	Higher	Higher	Higher
Residential Unit Displacements	Higher	Lower	Lower	Medium	Medium	Higher	Medium	Higher
Square Feet of Business Displacements	Medium	Medium	Medium	Higher	Medium	Higher	Medium	Lower
Construction Impacts	Lower	Medium	Lower	Medium	Higher	Higher	Higher	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Medium	Medium	Higher	Medium	Higher	Medium	Higher
Effects on Existing Transportation Facilities	Medium	Higher	Lower	Medium	Medium	Higher	Medium	Medium
Effects on Freight Movement	Lower	Medium	Medium	Medium	Medium	Higher	Medium	Higher
Business and Commerce Effects	Lower	Lower	Medium	Higher	Medium	Higher	Medium	Medium

Farther from center of Urban Village

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

Lower Performing | Medium Performing | Higher Performing

= Key Differentiators

Interbay/Ballard

Level 2 alternatives evaluation – *Compatibility with Urban Centers/Villages*

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
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.								
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower	Lower	Lower	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	26	32	36	33	24	23	24	35
Passenger Transfers	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Higher	Medium	Medium	Higher	Higher	Higher	Higher	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Medium	Higher	Medium	Higher
Pedestrian/Limited Mobility Accessibility (1)	Lower	Medium	Higher	Higher	Lower	Medium	Lower	Medium
Development Potential (1)		ium	Higher	Medium	Medium		Medium	Medium
Equitable Development Opportunities		her	Lower	Lower	Medium		Medium	Higher
Preserve and promote a healthy environment an… …verse impacts on the natural, built and social environments through su…								
Historic Properties/Landmarks (2)		7	3	3	3	2	3	3
Potential for Effects to Archaeological Resources (1)	…er	…ower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0.2	…1	0.9	0.9	4.2	3.9	4.2	3.9
Water Resource Effects (acres)	0.7	0.6	0	0	0.7	0	0.4	0
Fish and Wildlife Habitat Effects (acres)	11	11	0.5	0.5	1	11.4	1	0.5
Hazardous Material Sites (2)	11	15	11	11	16	12	16	12
Visual Effects	Medium	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Higher	Higher	Lower	Medium	Higher	Higher	Higher	Higher
Potentially Affected Properties	Medium	Lower	Lower	Higher	Higher	Higher	Higher	Higher
Residential Unit Displacements	Higher	Lower	Lower	Medium	Medium	Higher	Medium	Higher
Square Feet of Business Displacements	Medium	Medium	Medium	Higher	Medium	Higher	Medium	Lower
Construction Impacts	Lower	Medium	Lower	Medium	Higher	Higher	Higher	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Medium	Medium	Higher	Medium	Higher	Medium	Higher
Effects on Existing Transportation Facilities	Medium	Higher	Lower	Medium	Medium	Higher	Medium	Medium
Effects on Freight Movement	Lower	Medium	Medium	Medium	Medium	Higher	Medium	Higher
Business and Commerce Effects	Lower	Lower	Medium	Higher	Medium	Higher	Medium	Medium

Bridge columns in waterway

Bridge columns in waterway

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

Lower Performing | Medium Performing | Higher Performing

= Key Differentiators

Interbay/Ballard

Level 2 alternatives evaluation – *Water Resource Effects*

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
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.								
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower	Lower	Lower	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	26	32	36	33	24	23	24	35
Passenger Transfers	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Higher	Medium	Medium	Higher	Higher	Higher	Higher	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Medium	Higher	Medium	Higher
Pedestrian/Limited Mobility Accessibility (1)	Lower	Medium	Higher	Higher	Lower	Medium	Lower	Medium
Development Potential (1)	Medium	Medium	Higher	Medium	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Lower	Lower	Medium	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.								
Historic Properties/Landmarks (2)					3	2	3	3
Potential for Effects to Archaeological Resources (1)			L		Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)					4.2	3.9	4.2	3.9
Water Resource Effects (acres)					0.7	0	0.4	0
Fish and Wildlife Habitat Effects (acres)	11	11			1	11.4	1	0.5
Hazardous Material Sites (2)	11	15	11	11	16	12	16	12
Visual Effects	Medium	edium	Mediu	Higher	Medium	Medium	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Higher	igher	Lowe	Medium	Higher	Higher	Higher	Higher
Potentially Affected Properties	Medium	Lower	Lower	Higher	Higher	Higher	Higher	Higher
Residential Unit Displacements	Higher	Lower	Lower	Medium	Medium	Higher	Medium	Higher
Square Feet of Business Displacements	Medium	Medium	Medium	Higher	Medium	Higher	Medium	Lower
Construction Impacts	Lower	Medium	Lower	Medium	Higher	Higher	Higher	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Medium	Medium	Higher	Medium	Higher	Medium	Higher
Effects on Existing Transportation Facilities	Medium	Higher	Lower	Medium	Medium	Higher	Medium	Medium
Effects on Freight Movement	Lower	Medium	Medium	Medium	Medium	Higher	Medium	Higher
Business and Commerce Effects	Lower	Lower	Medium	Higher	Medium	Higher	Medium	Medium

Elevated guideway (west side 15th) affects more parcels

Ballard terminus/ water crossing location affects more residences

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

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

Level 2 alternatives evaluation – *Potentially Affected Properties*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
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.								
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower	Lower	Lower	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	26	32	36	33	24	23	24	35
Passenger Transfers	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Higher	Medium	Medium	Higher	Higher	Higher	Higher	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Medium	Higher	Medium	Higher
Pedestrian/Limited Mobility Accessibility (1)	Lower	Medium	Higher	Higher	Lower	Medium	Lower	Medium
Development Potential (1)	Medium	Medium	Higher	Medium	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Lower	Lower	Medium	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.								
Historic Properties/Landmarks (2)	5	7	3	3	3	2	3	3
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0.2	1	0.9	0.9	4.2	3.9	4.2	3.9
Water Resource Effects (acres)	0.7	0.6	0	0	0.7	0	0.4	0
Fish and Wildlife Habitat Effects (acres)	11	11	0.5	0.5	1	11.4	1	0.5
Hazardous Material Sites (2)	11	15	11	11	16	12	16	12
Visual Effects	Medium	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Higher	Higher	Lower	Medium	Higher	Higher	Higher	Higher
Potentially Affected Properties	Medium	Lo		Higher	Higher	Higher	Higher	Higher
Residential Unit Displacements	Higher	Lo		Medium	Medium	Higher	Medium	Higher
Square Feet of Business Displacements	Medium	Me		Higher	Medium	Higher	Medium	Lower
Construction Impacts	Lower	Me	Lower	Medium	Higher	Higher	Higher	Medium
Burden on Low-Income/Minority	Higher		Higher	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower		Medium	Higher	Medium	Higher	Medium	Higher
Effects on Existing Transportation Facilities	Medium	Higher	Lower	Medium	Medium	Higher	Medium	Medium
Effects on Freight Movement	Lower	Medium	Medium	Medium	Medium	Higher	Medium	Higher
Business and Commerce Effects	Lower	Lower	Medium	Higher	Medium	Higher	Medium	Medium

More effect on traffic, freight and navigation

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

Lower Performing | Medium Performing | Higher Performing

= Key Differentiators

Interbay/Ballard

Level 2 alternatives evaluation – *Traffic Circulation and Access, Freight Movement*

Evaluation Measures	ST3 Representative Project	15th/Fixed Bridge/ 15th	20th/Fixed Bridge/ 17th	20th/Tunnel/ 15th	Central Interbay/ Movable Bridge/ 14th	Armory Way/ Tunnel/14th	Central Interbay/ Fixed Bridge/14th	Central Interbay/ Tunnel/15th
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.								
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower	Lower	Lower	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	26	32	36	33	24	23	24	35
Passenger Transfers	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Higher	Medium	Medium	Higher	Higher	Higher	Higher	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Medium	Higher	Medium	Higher
Pedestrian/Limited Mobility Accessibility (1)	Lower	Medium	Higher	Higher	Lower	Medium	Lower	Medium
Development Potential (1)	Medium	Medium	Higher	Medium	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Lower	Lower	Medium	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.								
Historic Properties/Landmarks (2)	5	7	3	3	3	2	3	3
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0.2	1	0.9	0.9	4.2	3.9	4.2	3.9
Water Resource Effects (acres)	0.7	0.6	0	0	0.7	0	0.4	0
Fish and Wildlife Habitat Effects (acres)	11	11	0.5	0.5	1	11.4	1	0.5
Hazardous Material Sites (2)	11	15	11	11	16	12	16	12
Visual Effects	Medium	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Higher	Higher	Lower	Medium	Higher	Higher	Higher	Higher
Potentially Affected Properties	Medium	Lower	Lower	Higher	Higher	Higher	Higher	Higher
Residential Unit Displacements	H		Lower	Medium	Medium	Higher	Medium	Higher
Square Feet of Business Displacements	M		Medium	Higher	Medium		Medium	Lower
Construction Impacts			Lower	Medium	Higher		Higher	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher		Higher	Higher
Traffic Circulation and Access Effects	Lower	Medium	Medium	Higher	Medium	High	Medium	Higher
Effects on Existing Transportation Facilities	Medium	Higher	Lower	Medium	M	Higher	M	Medium
Effects on Freight Movement	Lower	Medium	Medium	Medium	Medium	Higher	Medium	Higher
Business and Commerce Effects	Lower	Lower	Medium	Higher	Medium	Higher	Medium	Medium

More business, commerce effects

Less business, commerce effects

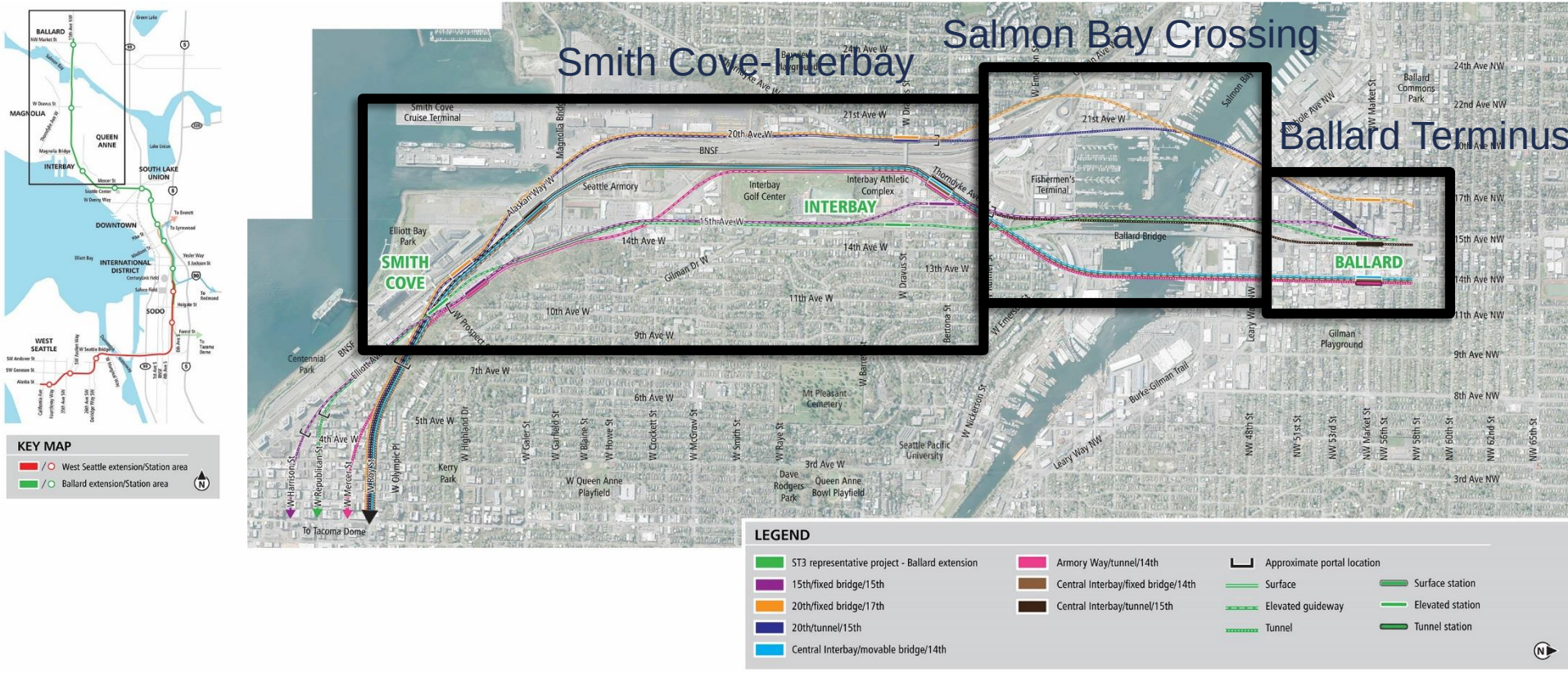
(1) Within station walksheds and/or defined buffer of alignment
(2) On properties that overlap with the project footprint

Lower Performing | Medium Performing | Higher Performing

Interbay/Ballard

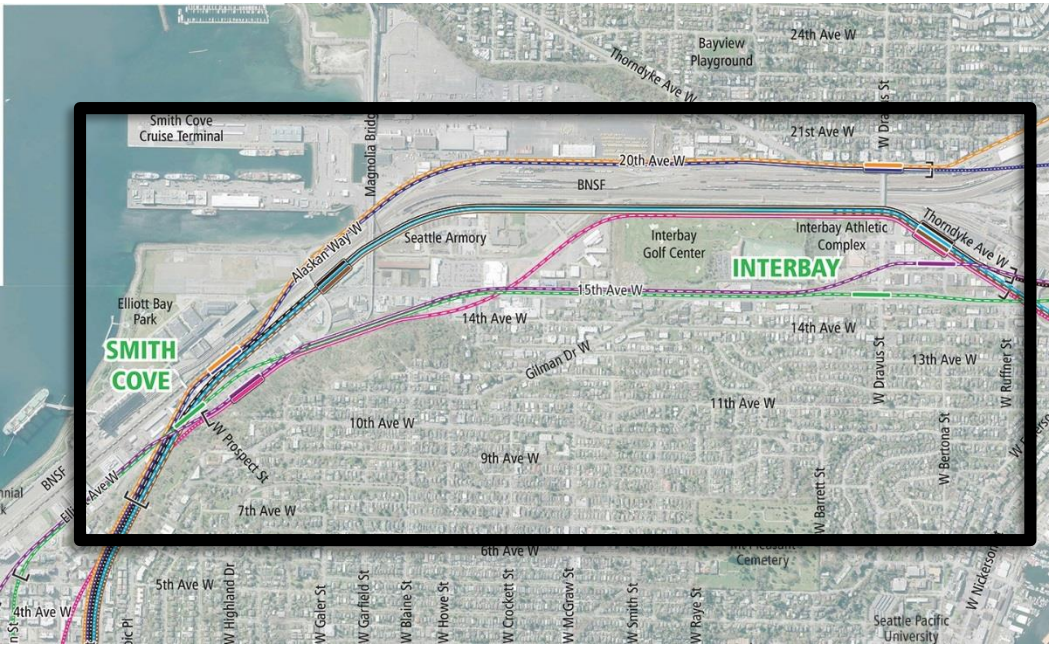
Level 2 alternatives evaluation – *Business and Commerce Effects*

= Key Differentiators



Interbay/Ballard

Key differentiators – *By sub-segment*



Smith Cove-Interbay:

Key differentiators

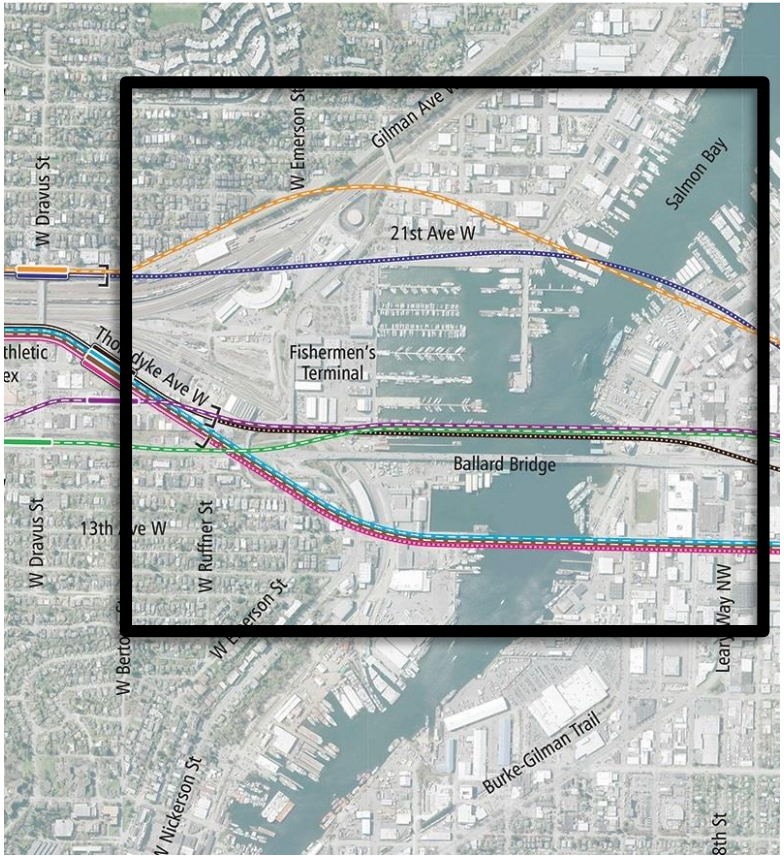
- Station location
- Traffic
- Engineering constraints

Interbay/Ballard

Key differentiators – *Smith Cove-Interbay*

Key differentiators Smith Cove-Interbay

Alternative	Key differentiators
ST3 Representative Project	
15th/Fixed Bridge/15th	Lessens traffic/freight effects (avoids 15th Ave median)
20th/Fixed Bridge/17th	Lessens traffic/freight effects (avoids 15th Ave) Long span bridge (over BNSF tracks) adds complexity
20th/Tunnel/15th	
Central Interbay/ Movable Bridge/14th	Lessens traffic/freight effects (avoids 15th Ave) At-grade sections (along BNSF tracks) lessen complexity
Armory Way/ Tunnel/14th	
Central Interbay/ Fixed Bridge/14th	
Central Interbay/ Tunnel/15th	



Salmon Bay Crossing:

Key differentiators

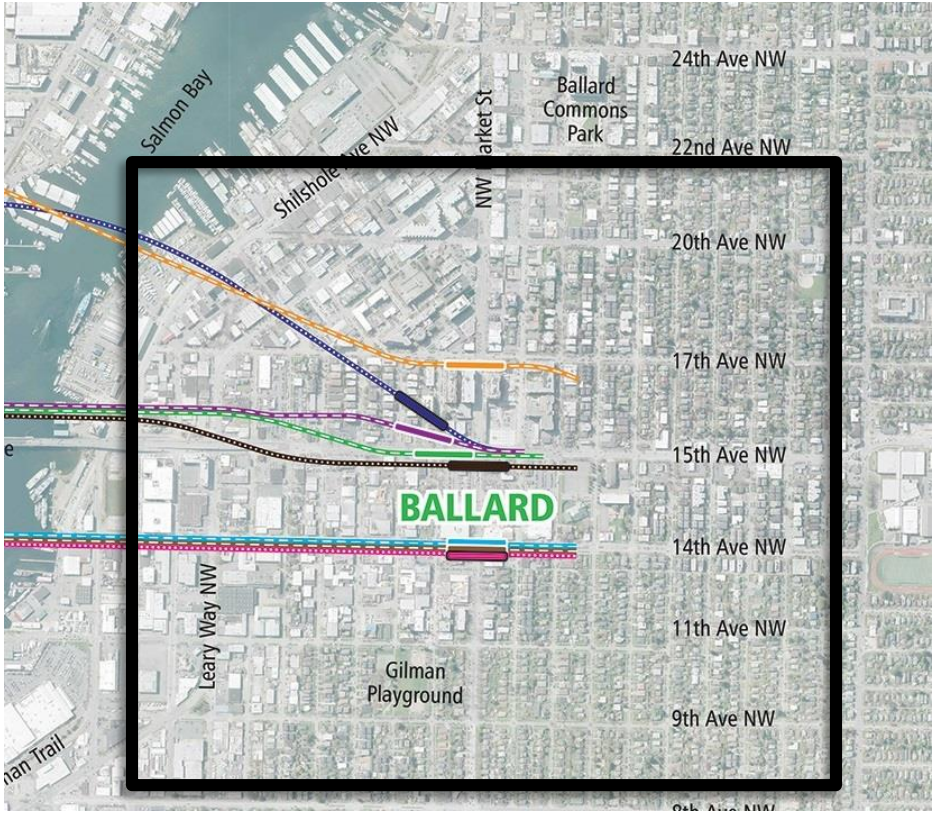
- Crossing location
- Crossing type
  - Bridge (fixed or movable)
  - Tunnel
- Freight movement
- Business/commerce effects

Interbay/Ballard

Key differentiators – *Salmon Bay Crossing*

Key differentiators Salmon Bay Crossing

Alternative	Key differentiators
ST3 Representative Project	
15th/Fixed Bridge/15th	Fewer columns in water than movable bridge Maritime business effects (Fishermen's Terminal)
20th/Fixed Bridge/17th	Long-span fixed bridge avoids columns in water
20th/Tunnel/15th	Longer tunnel, more constrained portal Includes tunnel; requires 3rd Party funding
Central Interbay/ Movable Bridge/14th	Potential service interruptions Maritime business and potential vessel navigation effects
Armory Way/ Tunnel/14th	Shorter tunnel, less constrained portal Includes tunnel; requires 3rd Party funding
Central Interbay/ Fixed Bridge/14th	Fewer columns in water than movable bridge Maritime business effects
Central Interbay/ Tunnel/15th	Shorter tunnel, less constrained portal Includes tunnel; requires 3rd Party funding



Ballard Terminus:

Key differentiators

- Ballard Station location
- Elevated or tunnel

Key differentiators Ballard Terminus

Alternative	Key differentiators
ST3 Representative Project	
15th/Fixed Bridge/15th	Elevated guideway (west side 15th Ave NW) affects more parcels More residential displacements
20th/Fixed Bridge/17th	Ballard terminus/crossing location affects more residences Closer to center of Urban Village
20th/Tunnel/15th	Tunnel station (west side 15th Ave NW) affects residences Deeper tunnel station (~120'); adds complexity
Central Interbay/ Movable Bridge/14th	Affects fewer parcels (along 14th Ave NW) Farther from center of Urban Village Shallower tunnel station (~70')
Armory Way/ Tunnel/14th	
Central Interbay/ Fixed Bridge/14th	
Central Interbay/ Tunnel/15th	Tunnel station (east side 15th Ave NW) affects businesses Shallower tunnel station (~80')

Summary Interbay/Ballard

Alternative	Key findings	Cost comparison*	Schedule Comparison**
ST3 Representative Project			
Central Interbay/ Fixed Bridge/14th	• Maritime business effects (but less than movable bridge) • Affects fewer parcels in Ballard (along 14th Ave NW)	+ $100M	Higher Performing
Central Interbay/ Movable Bridge/14th	• Potential service interruptions • Maritime business and potential vessel navigation effects • Affects fewer parcels in Ballard (along 14th Ave NW)	+ $200M	Higher Performing
15th/Fixed Bridge/15th	• Maritime business effects (Fishermen's Terminal) • Elevated guideway (west side 15th Ave NW) affects more residences	+ $200M	Higher Performing
Armory Way/ Tunnel/14th	• Less environmental, maritime business/navigation effects • Affects fewer parcels in Ballard (along 14th Ave NW) • Includes tunnel; requires 3rd Party funding	+ $300M	Higher Performing
Central Interbay/ Tunnel/15th	• Less environmental, maritime business/navigation effects • Tunnel station (east side 15th Ave NW) affects businesses • Includes tunnel; requires 3rd Party funding	+ $500M	Higher Performing
20th/Fixed Bridge/17th	• Long span bridge (over BNSF tracks) adds complexity • Ballard terminus/crossing location affects more residences	+ $500M	Higher Performing
20th/Tunnel/15th	• Long span bridge (over BNSF tracks), constrained tunnel portal location, deeper tunnel station add complexity • Tunnel station (west side 15th Ave NW) affects residences • Includes tunnel; requires 3rd Party funding	+ $700M	Higher Performing

*Cost compared to cost of ST3 Representative Project for this segment. Schedule compared to overall ST3 schedule for this extension.

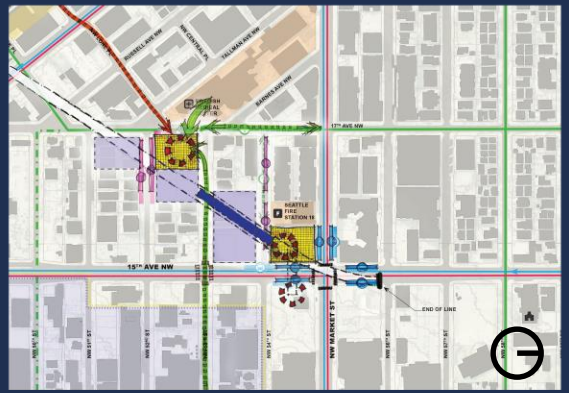
Station Charrette Feedback* Ballard Station

17th Ave NW
Elevated

- Good location to serve historic center of Ballard and Swedish Medical Center
- Concern about potential construction effects on neighborhood
- Concern about compatibility of elevated station with neighborhood
- Challenging for transit integration and circulation (fire station operations)
- Good non-motorized access
- Some TOD potential

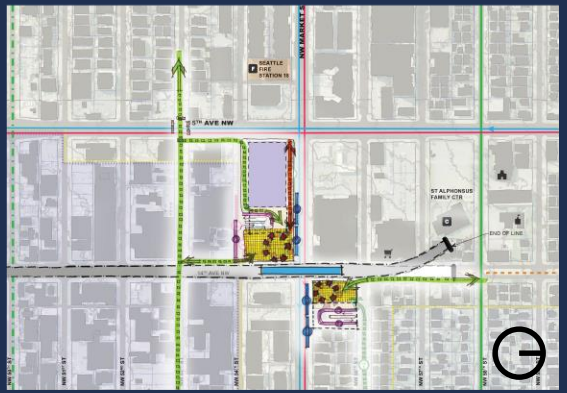
15th Ave NW
Elevated or Tunnel

- Moving station out of ROW reduces freight conflicts
- Concern about compatibility of elevated station with neighborhood
- Close to an area with good development potential
- Excellent transit integration and circulation
- Good non-motorized access
- Considerable TOD potential (tunnel)
- Some TOD potential (elevated)



14th Ave NW
Elevated or Tunnel

- Location farthest from historic center of Ballard, but still in the urban village
- Most compatible elevated option, with large available ROW and potential for reconstructing 14th as a more full-service street
- On the path of future growth, though much of station area is zoned industrial
- Good transit integration and circulation
- Good non-motorized access
- Considerable TOD potential



*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Station Charrette Feedback* Interbay Station

20th Ave W At Grade or Elevated

- Good location to serve Magnolia
- Not much zoned development capacity in the station area
- Challenging for transit integration, requiring long deviations
- Good non-motorized access to existing facilities
- Limited TOD potential

17th Ave W At Grade or Elevated

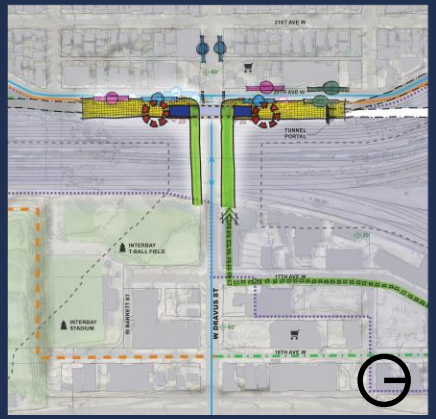
- Best serves emerging Interbay Triangle neighborhood
- Good transit integration
- Challenging for non-motorized access from east, but opportunities for substantial enhancements
- Considerable TOD potential

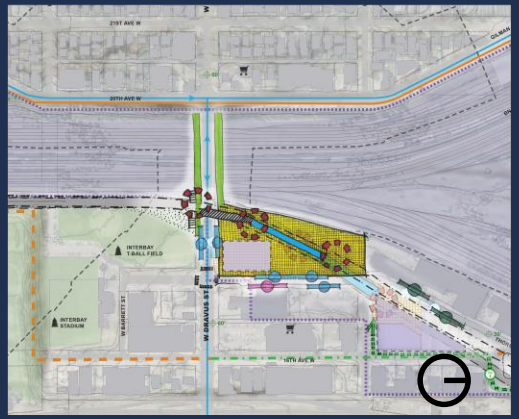
16th Ave W Elevated

- Not developed further in charrette
- Concerns about station compatibility with emerging neighborhood fabric
- Challenging for transit integration
- Challenging for non-motorized access
- Some TOD potential

15th Ave W Elevated

- Not developed further in charrette
- Concerns about potential effects to freight and general mobility on 15th Ave W corridor during construction
- Good transit integration
- Challenging for non-motorized access
- Limited TOD potential



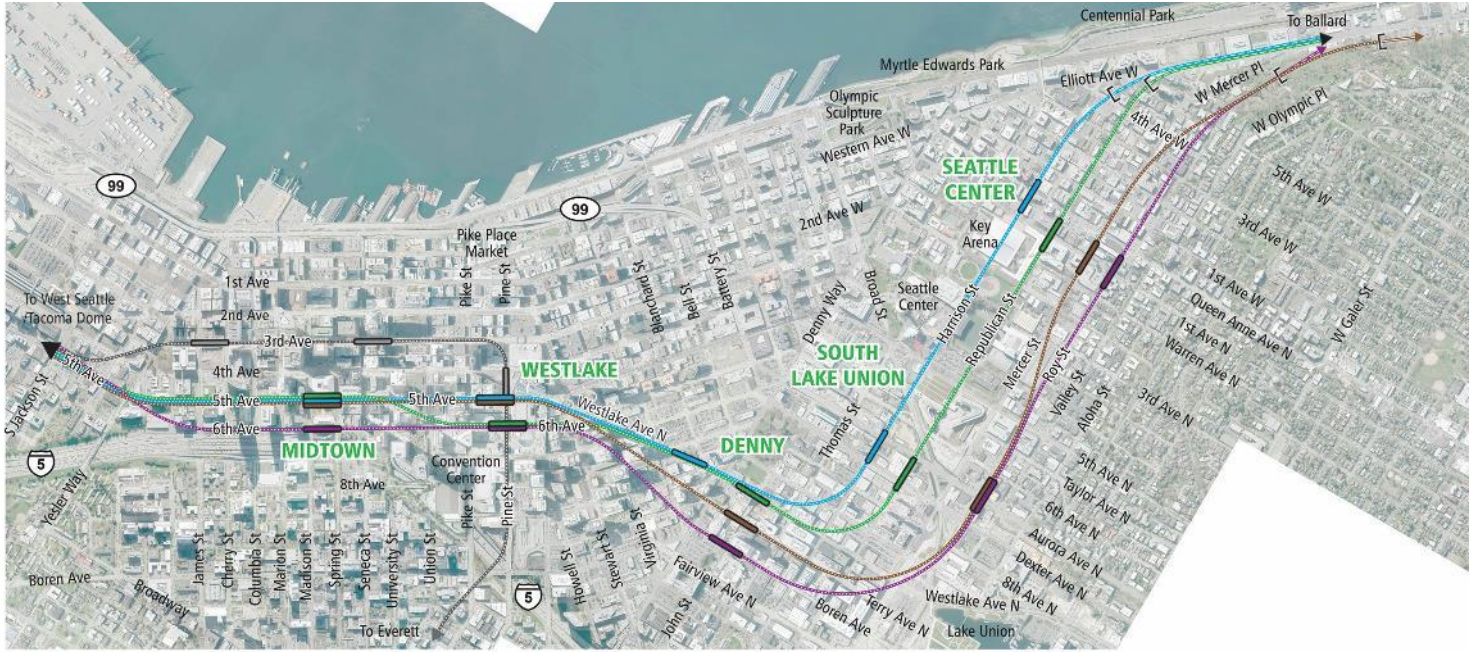


*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Level 2 alternatives

Downtown

- ST3 Representative Project
- 5th/Harrison
- 6th/Boren/Roy
- 5th/Terry/Roy/Mercer



LEGEND

- ST3 representative project - Ballard extension
- 5th/Harrison
- 5thTerry/Roy/Mercer
- 6th/Boren/Roy
- Existing Link light rail
- Approximate portal location
- Surface
- Elevated
- Tunnel
- Tunnel station

N

Downtown

Level 2 alternatives

Evaluation Measures	ST3 Representative Project	5th/Harrison	6th/Boren/Roy	5th/Terry/Roy/Mercer
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.				
Potential Service Interruptions	Higher	Higher	Higher	Higher
Travel Times (minutes)	8 to 9	8 to 9	8 to 9	8 to 9
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.				
Network Integration	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	167,800	163,300	176,700	176,700
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.				
Regional Growth Centers Served	3	3	3	3
Manufacturing/Industrial Centers Served	N/A (3)	N/A	N/A	N/A
Accommodates Future LRT Extension	Medium	Medium	Medium	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.				
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher
Potential ST3 Schedule Effects	Higher	Higher	Higher	Higher
Potential ST3 Operating Plan Effects	Higher	Higher	Higher	Higher
Engineering Constraints	Lower	Lower	Medium	Lower
Constructability Issues	Lower	Lower	Lower	Lower
Operational Constraints	Medium	Medium	Higher	Medium
Conceptual Capital Cost Comparison	---	$200M increase	Similar	$200M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.				
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 27%	Medium 29%	Medium 24%	Medium 26%
Low-Income Population (1/2)	28% / 30%	29% / 30%	28% / 30%	28% / 30%
Minority Population (1/2)	36% / 36%	36% / 36%	34% / 36%	35% / 36%
Youth Population (1/2)	4% / 4%	4% / 4%	4% / 4%	4% / 4%
Elderly Population (1/2)	14% / 13%	14% / 13%	15% / 13%	14% / 13%
Limited English Proficiency Population (1/2)	5% / 5%	5% / 5%	5% / 5%	5% / 5%
Disabled Population (1/2)	12% / 12%	12% / 12%	12% / 12%	12% / 12%

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Downtown

Level 2 alternatives evaluation – *Part 1 of 2*

Evaluation Measures	ST3 Representative Project	5th/Harrison	6th/Boren/Roy	5th/Terry/Roy/Mercer
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.				
Potential Service Interruptions	Higher	Higher	Higher	Higher
Travel Times (minutes)	8 to 9	8 to 9	8 to 9	8 to 9
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.				
Network Integration	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	167,800	163,300	176,700	176,700
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long Range Plan				
Regional Growth Centers Served	3	3		3
Manufacturing/Industrial Centers Served	N/A (3)			N/A
Accommodates Future LRT Extension	Medium			Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corri *t is t* *to build, operate, and maintain.*				
Mode, Route and Stations per ST3	Higher			Higher
Potential ST3 Schedule Effects	Higher		Higher	Higher
Potential ST3 Operating Plan Effects	Higher	Hig*er	Higher	Higher
Engineering Constraints	Lower	Lower	Medium	Lower
Constructability Issues	Lower	Lower	Lower	Lower
Operational Constraints	Medium	Medium	Higher	Medium
Conceptual Capital Cost Comparison	---	$200M increase	Similar	$200M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.				
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 27%	Medium 29%	Medium 24%	Medium 26%
Low-Income Population (1/2)	28% / 30%	29% / 30%	28% / 30%	28% / 30%
Minority Population (1/2)	36% / 36%	36% / 36%	34% / 36%	35% / 36%
Youth Population (1/2)	4% / 4%	4% / 4%	4% / 4%	4% / 4%
Elderly Population (1/2)	14% / 13%	14% / 13%	15% / 13%	14% / 13%
Limited English Proficiency Population (1/2)	5% / 5%	5% / 5%	5% / 5%	5% / 5%
Disabled Population (1/2)	12% / 12%	12% / 12%	12% / 12%	12% / 12%

Engineering challenges with tunneling under Key Arena

Avoids building foundation tie-backs on 5th Ave but more constrained Denny station on Boren

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Downtown

Level 2 alternatives evaluation – *Engineering Constraints*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	5th/Harrison	6th/Boren/Roy	5th/Terry/Roy/Mercer
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.				
Potential Service Interruptions	Higher	Higher	Higher	Higher
Travel Times (minutes)	8 to 9	8 to 9	8 to 9	8 to 9
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.				
Network Integration	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	167,800	163,300	176,700	176,700
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.				
Regional Growth Centers Served	3	3	3	3
Manufacturing/Industrial Centers Served	N/A (3)	N/A	N/A	N/A
Accommodates Future LRT Extension	Medium	Medium	Medium	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.				
Mode, Route and Stations per ST3	Higher	Higher		Higher
Potential ST3 Schedule Effects	Higher	Higher		Higher
Potential ST3 Operating Plan Effects	Higher	Higher		Higher
Engineering Constraints	Lower	Lower	Medium	Lower
Constructability Issues	Lower	Lower	Lower	Lower
Operational Constraints	Medium	Medium	Higher	Medium
Conceptual Capital Cost Comparison	---	$200M increase	Similar	$200M increase
Operating Cost Impacts	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.				
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 27%	Medium 29%	Medium 24%	Medium 26%
Low-Income Population (1/2)	28% / 30%	29% / 30%	28% / 30%	28% / 30%
Minority Population (1/2)	36% / 36%	36% / 36%	34% / 36%	35% / 36%
Youth Population (1/2)	4% / 4%	4% / 4%	4% / 4%	4% / 4%
Elderly Population (1/2)	14% / 13%	14% / 13%	15% / 13%	14% / 13%
Limited English Proficiency Population (1/2)	5% / 5%	5% / 5%	5% / 5%	5% / 5%
Disabled Population (1/2)	12% / 12%	12% / 12%	12% / 12%	12% / 12%

Higher cost alternatives

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

Downtown

= Key Differentiators

Level 2 alternatives evaluation – *Conceptual Capital Cost Comparison*

Evaluation Measures	ST3 Representative Project	5th/Harrison	6th/Boren/Roy	5th/Terry/Roy/Mercer
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.				
Compatibility with Urban Centers/Villages (1)	Higher	Higher	Higher	Higher
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	171	171	169	168
Passenger Transfers	Lower	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Lower	Medium	Lower	Medium
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Medium	Medium
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.				
Historic Properties/Landmarks (2)	31	35	23	34
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0	0	1.1	0
Water Resources Effects (acres)	0	0	0	0
Fish and Wildlife Habitat Effects (acres)	0	0	1.1	0
Hazardous Material Sites (2)	18	12	23	18
Visual Effects	Higher	Higher	Medium	Higher
Noise and Vibration Sensitive Receivers (1)	Higher	Medium	Medium	Higher
Potentially Affected Properties	Medium	Medium	Medium	Medium
Residential Unit Displacements	Medium	Higher	Lower	Lower
Square Feet of Business Displacements	Higher	Lower	Higher	Higher
Construction Impacts	Medium	Lower	Medium	Higher
Burden on Low-Income/Minority	Medium	Medium	Medium	Medium
Traffic Circulation and Access Effects	Higher	Higher	Higher	Higher
Effects to Existing Transportation Facilities	Medium	Lower	Higher	Medium
Effects to Freight Movement	Higher	Higher	Higher	Higher
Business and Commerce Effects	Higher	Lower	Medium	Medium

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

Lower Performing | Medium Performing | Higher Performing

Downtown

Level 2 alternatives evaluation – *Part 2 of 2*

Evaluation Measures	ST3 Representative Project	5th/Harrison	6th/Boren/Roy	5th/Terry/Roy/Mercer
Encourage equitable and sustainable urban growth in station areas through support of transit-oriented development, station acce… …that is consistent with local land use plans and policies.				
Compatibility with Urban Centers/Villages (1)	Higher			Higher
Station Land Use Plan Consistency	Higher			Higher
Activity Nodes Served (1)	171			168
Passenger Transfers	Lower	Medium	Mediu…	Medium
Bus/Rail and Rail/Rail Integration (1)	Lower	Medium	Lower	Medium
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Medium	Medium
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.				
Historic Properties/Landmarks (2)	31	35	23	34
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0	0	1.1	0
Water Resources Effects (acres)	0	0	0	0
Fish and Wildlife Habitat Effects (acres)	0	0	1.1	0
Hazardous Material Sites (2)	18	12	23	18
Visual Effects	Higher	Higher	Medium	Higher
Noise and Vibration Sensitive Receivers (1)	Higher	Medium	Medium	Higher
Potentially Affected Properties	Medium	Medium	Medium	Medium
Residential Unit Displacements	Medium	Higher	Lower	Lower
Square Feet of Business Displacements	Higher	Lower	Higher	Higher
Construction Impacts	Medium	Lower	Medium	Higher
Burden on Low-Income/Minority	Medium	Medium	Medium	Medium
Traffic Circulation and Access Effects	Higher	Higher	Higher	Higher
Effects to Existing Transportation Facilities	Medium	Lower	Higher	Medium
Effects to Freight Movement	Higher	Higher	Higher	Higher
Business and Commerce Effects	Higher	Lower	Medium	Medium

Better bus/rail integration opportunity at SLU station on Harrison

Lower bus/rail integration opportunity at Seattle Center station on Roy

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

Lower Performing | Medium Performing | Higher Performing

Downtown

Level 2 alternatives evaluation – *Bus/Rail and Rail/Rail Integration*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	5th/Harrison	6th/Boren/Roy	5th/Terry/Roy/Mercer
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.				
Compatibility with Urban Centers/Villages (1)	Higher	Higher	Higher	Higher
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	171	171	169	168
Passenger Transfers	Lower	Medium	Medium	Medium
Bus/Rail and Rail/Rail Integration (1)	Lower	Medium	Lower	Medium
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Medium
Equitable Development Opportunities	Lower	Higher	Medium	Medium
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.				
Historic Properties/Landmarks (2)	31	35	23	34
Potential for Effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0	0	1.1	0
Water Resources Effects (acres)	0	0	0	0
Fish and Wildlife Habitat Effects (acres)	0	0	1.1	0
Hazardous Material Sites (2)	18	18	23	18
Visual Effects	Higher	Higher	Medium	Higher
Noise and Vibration Sensitive Receivers (1)	Higher	Medium	Medium	Higher
Potentially Affected Properties	Medium	Medium	Medium	Medium
Residential Unit Displacements	Medium	Higher	Lower	Lower
Square Feet of Business Displacements	Higher	Lower	Higher	Higher
Construction Impacts	Medium	Lower	Medium	Higher
Burden on Low-Income/Minority	Medium	Medium	Medium	Medium
Traffic Circulation and Access Effects	Higher	Higher	Higher	Higher
Effects to Existing Transportation Facilities	Medium	Lower	Higher	Medium
Effects to Freight Movement	Higher	Higher	Higher	Higher
Business and Commerce Effects	Higher	Lower	Medium	Medium

Property effects due to tunnel portal location on Harrison

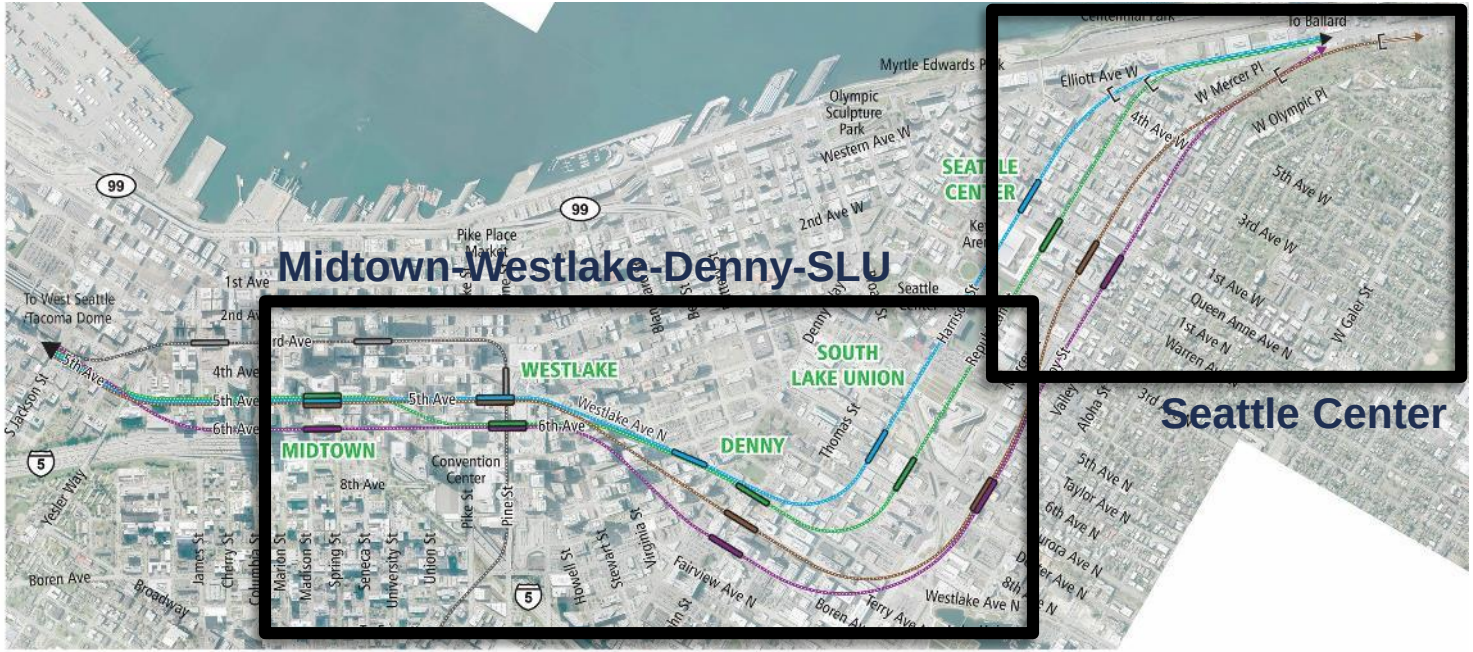
(1) Within station walksheds and/or defined buffer of alignment
(2) On properties that overlap with the project footprint

Lower Performing | Medium Performing | Higher Performing

Downtown

= Key Differentiators

Level 2 alternatives evaluation – *Business Displacements, Construction Impacts*



LEGEND

- ST3 representative project - Ballard extension
- 5th/Harrison
- 5thTerry/Roy/Mercer
- 6th/Boren/Roy
- Existing Link light rail
- Approximate portal location
- Surface
- Elevated
- Tunnel
- Tunnel station

Downtown

Key differentiators – *By sub-segment*

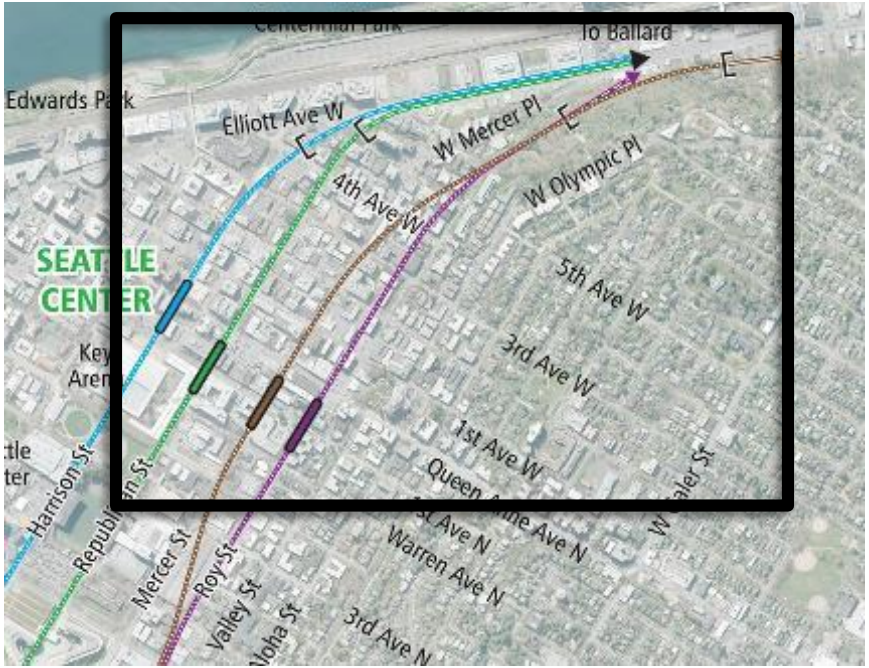
Midtown-Westlake-Denny-SLU:

Key differentiators

- Station location
- Bus-rail integration
- Engineering constraints

Key differentiators Midtown-Westlake-Denny-SLU

Alternative	Key differentiators
ST3 Representative Project	
5th/Harrison	Better bus/rail integration opportunity at SLU station on Harrison
6th/Boren/Roy	Avoids building foundation tie-backs on 5th Ave, SR 99 portal and sewer More constrained Denny station on Boren
5th/Terry/Roy/Mercer	Avoids SR 99 portal and sewer



Seattle Center:

Key differentiators

- Station location
- Property effects
- Bus-rail integration
- Portal location

Key differentiators Seattle Center

Alternative	Key differentiators
ST3 Representative Project	
5th/Harrison	Tunnel station on Harrison, west of soon-to-be-renovated Key Arena Engineering challenges with tunneling under Key Arena Property effects due to tunnel portal location on Harrison
6th/Boren/Roy	Tunnel station on Roy, two blocks from Key Arena Lower bus/rail integration opportunity at Seattle Center station on Roy
5th/Terry/Roy/Mercer	Tunnel station on Mercer, one block from Key Arena

Summary Downtown

Alternative	Key findings	Cost comparison*	Schedule comparison*
ST3 Representative Project			
6th/Boren/Roy	• Avoids building tie-backs on 5th Ave, SR 99 portal and sewer • More constrained Denny station location on Boren • Seattle Center station location on Roy, two blocks from Key Arena • Lower bus/rail integration opportunity at Seattle Center station on Roy	Similar	Higher Performing
5th/Harrison	• Better bus/rail integration opportunity at SLU station on Harrison • Higher property effects due to tunnel portal location on Harrison west of Seattle Center • Engineering challenges with tunneling under Key Arena	+ $200M	Higher Performing
5th/Terry/Roy/ Mercer	• Avoids SR 99 portal and sewer • Seattle Center station location on Mercer, one block from Key Arena	+ $200M	Higher Performing

*Cost compared to cost of ST3 Representative Project for this segment. Schedule compared to overall ST3 schedule for this extension.

Station Charrette Feedback* Seattle Center Station

Harrison St Tunnel

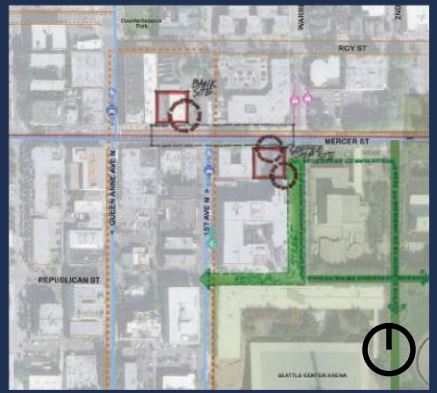
- Good location to serve Key Arena, but concern about connection to broader Seattle Center
- Farthest from “Heart of Uptown,” but serves core of up-zoned neighborhood
- Good transit integration
- Good non-motorized access
- Good TOD potential

Republican St Tunnel

- Location serves Seattle Center, Key Arena, and Uptown
- Good opportunities for station entries integrated into existing buildings
- Good transit integration and non-motorized access
- High urban design potential

Mercer St Tunnel

- Location serves Uptown well, but concern about legibility of connection to Seattle Center
- Good opportunities for station entries integrated into buildings on Mercer
- Excellent transit integration
- Good non-motorized access
- Good TOD potential



Roy St Tunnel

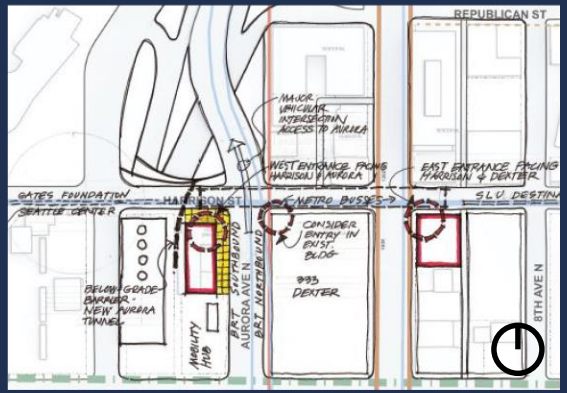
- Location serves Uptown, but concern about legibility of connection to Seattle Center
- Some opportunities for station entries integrated into buildings
- Challenging for transit integration and non-motorized access

*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Station Charrette Feedback* South Lake Union Station

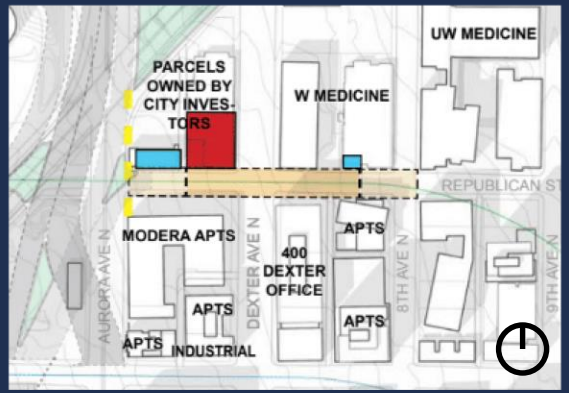
Harrison St Tunnel

- Good location to serve South Lake Union, Gates Foundation, east entrance of Seattle Center
- Good opportunities for station entries integrated into new or existing buildings
- Excellent transit integration for buses traveling on SR 99
- Good non-motorized access through existing and planned facilities



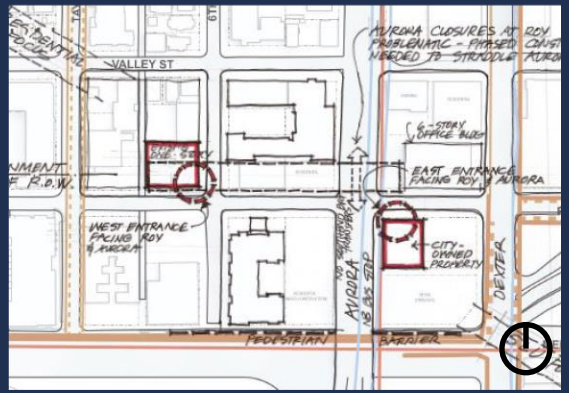
Republican St Tunnel

- Challenging location due to SR 99 adjacency
- Serves SLU but not Gates Foundation or Seattle Center
- Limited opportunities for station entries integrated into new or existing buildings
- Poor transit integration for buses traveling on SR 99
- Poor non-motorized access due to truncated walkshed



Roy St Tunnel

- Challenging location due to SR 99
- Serves north end of SLU, but provides good connection to Lake Union as well as Queen Anne
- Good opportunities for station entries integrated into new buildings
- Challenging for transit integration; would require reconfiguration of SR 99 bus lanes
- Challenging for non-motorized access

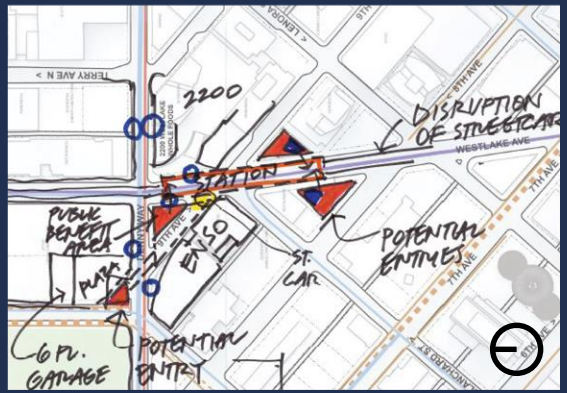


*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Station Charrette Feedback* Denny Station

Westlake Ave Tunnel

- Good location to serve Amazon HQ and new Denny Triangle development
- Good opportunities for station entries integrated into public space and/or buildings
- Excellent transit integration
- Excellent non-motorized access
- Concerns about construction impacts on traffic and streetcar operations

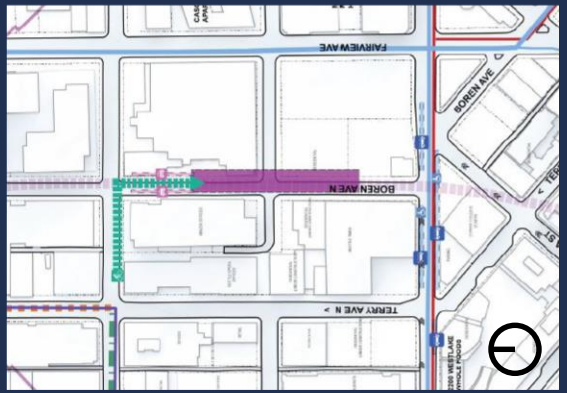


Terry Ave N Tunnel

- Good location to serve Cascade neighborhood
- Good opportunities for station entries integrated into new and/or existing buildings
- Challenging for transit integration
- Good non-motorized access, with opportunity to negotiate grade on Denny through hill climbs or escalators in station

Boren Ave N Tunnel

- Not further developed in charrette
- Farthest from densest part of Denny Triangle
- Constrained by brand-new development, but some opportunity to locate station entries in triangular parcels
- Challenging for transit integration
- Challenging for non-motorized access; at top of steep grade on Denny



*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Level 2 alternatives

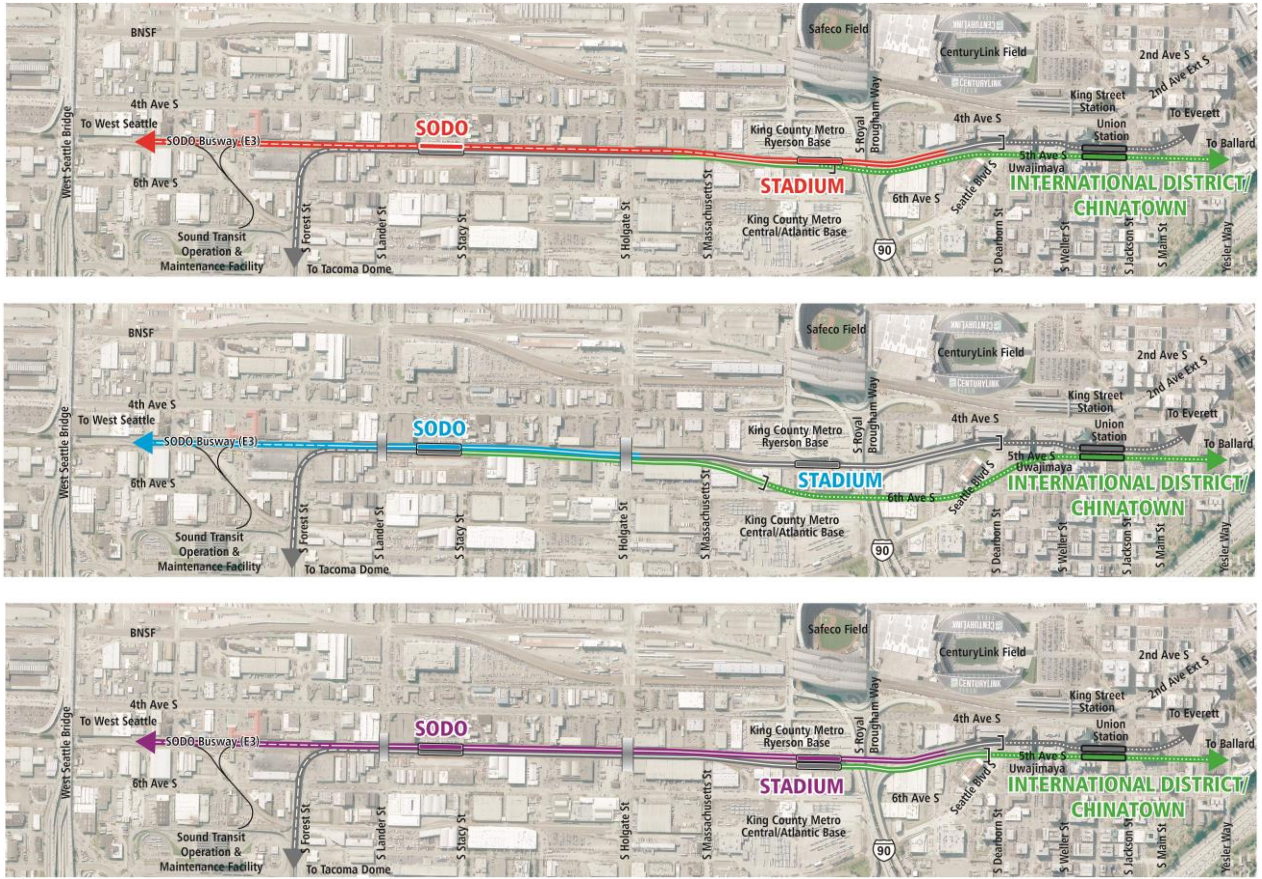
SODO/Chinatown-ID

- ST3 Representative Project
- Massachusetts Tunnel Portal
- Surface E-3
- 4th Avenue Cut-and-Cover C-ID
- 4th Avenue Mined C-ID
- 5th Avenue Mined C-ID
- Occidental Avenue

ST3 Representative Project

Massachusetts Tunnel Portal

Surface E-3



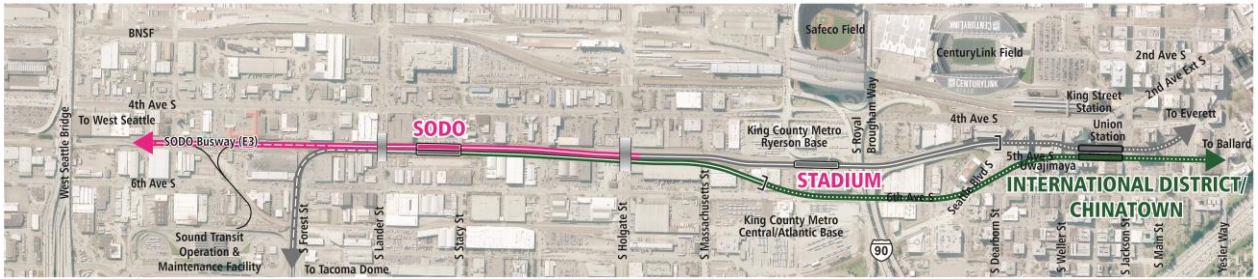
SODO and Chinatown-ID

Level 2 alternatives – *1 of 3*

4th Avenue
Cut-and-Cover C-ID

4th Avenue
Mined C-ID

5th Avenue Mined C-ID



SODO and Chinatown-ID

Level 2 alternatives – *2 of 3*

Occidental Avenue

SODO and Chinatown-ID

Level 2 alternatives – *3 of 3*

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.							
Potential Service Interruptions	Lower	Medium	Higher	Lower	Lower	Medium	Higher
Travel Times (minutes)	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.							
Network Integration	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	35,900	35,900	35,900	35,300	35,300	35,900	37,100
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.							
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1	1	1
Accommodates Future LRT Extension	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.							
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Medium
Potential ST3 Schedule Effects	Higher	Higher	Higher	Lower	Lower	Medium	Higher
Potential ST3 Operating Plan Effects	Medium	Medium	Higher	Higher	Lower	Medium	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Operational Constraints	Medium	Medium	Higher	Medium	Lower	Medium	Medium
Conceptual Capital Cost Comparison	-	$200M decrease	$400M decrease	$600M increase	$500M increase	Similar	Similar (+ $200M in SODO)
Operating Cost Impacts	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.							
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Higher 80%	Higher 80%	Higher 80%	Higher 75%	Higher 75%	Higher 80%	Higher 73%
Low-Income Population (1/2)	59% / 49%	59% / 49%	59% / 49%	57% / 49%	57% / 49%	59% / 49%	58% / 49%
Minority Population (1/2)	65% / 54%	65% / 54%	65% / 54%	63% / 54%	63% / 54%	65% / 54%	65% / 53%
Youth Population (1/2)	7% / 7%	7% / 7%	7% / 7%	6% / 7%	6% / 7%	7% / 7%	7% / 8%
Elderly Population (1/2)	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%
Limited English Proficiency Population (1/2)	30% / 19%	30% / 19%	30% / 19%	28% / 19%	28% / 19%	30% / 19%	30% / 18%
Disabled Population (1/2)	24% / 19%	24% / 19%	24% / 19%	25% / 19%	25% / 19%	24% / 19%	24% / 19%

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Part 1 of 2*

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.							
Potential Service Interruptions	Lower	Medium	Higher	Lower	Lower	Medium	Higher
Travel Times (minutes)	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected tra							
Network Integration	Medium	Medium	Higher			Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium			Medium	Medium
Ridership Potential (2040 pop/emp) (1)	35,900	35,900	35,900			35,900	37,100
Connect regional centers as described in adopted regional and local land use, transportation, and economic develop							
Regional Growth Centers Served	N/A (3)	N/A	N/A			N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1			1	1
Accommodates Future LRT Extension	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.							
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Medium
Potential ST3 Schedule Effects	Higher	Higher	Higher	Lower	Lower	Medium	Higher
Potential ST3 Operating Plan Effects	Medium	Medium	Higher	Higher	Lower	Medium	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Operational Constraints	Medium	Medium	Higher	Medium	Lower	Medium	Medium
Conceptual Capital Cost Comparison	-	$200M decrease	$400M decrease	$600M increase	$500M increase	Similar	Similar (+ $200M in SODO)
Operating Cost Impacts	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.							
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Higher 80%	Higher 80%	Higher 80%	Higher 75%	Higher 75%	Higher 80%	Higher 73%
Low-Income Population (1/2)	59% / 49%	59% / 49%	59% / 49%	57% / 49%	57% / 49%	59% / 49%	58% / 49%
Minority Population (1/2)	65% / 54%	65% / 54%	65% / 54%	63% / 54%	63% / 54%	65% / 54%	65% / 53%
Youth Population (1/2)	7% / 7%	7% / 7%	7% / 7%	6% / 7%	6% / 7%	7% / 7%	7% / 8%
Elderly Population (1/2)	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%
Limited English Proficiency Population (1/2)	30% / 19%	30% / 19%	30% / 19%	28% / 19%	28% / 19%	30% / 19%	30% / 18%
Disabled Population (1/2)	24% / 19%	24% / 19%	24% / 19%	25% / 19%	25% / 19%	24% / 19%	24% / 19%

New grade-separated roadway crossings (Lander, Holgate) improve existing rail/traffic/ freight operations

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Potential Service Interruptions*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.							
Potential Service Interruptions	Lower	Medium	Higher	Lower	Lower	Medium	Higher
Travel Times (minutes)	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.							
Network Integration	Medium	Medium			Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium			Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	35,900	35,900			35,300	35,900	37,100
Connect regional centers as described in adopted regional and local land use, transportation, and e					*it's Long-Range Plan.*		
Regional Growth Centers Served	N/A (3)	N/A			N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1			1	1	1
Accommodates Future LRT Extension	Medium	Medium			Medium	Medium	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, an					*ble and financially sustainable to build, operate, and maintain.*		
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Medium
Potential ST3 Schedule Effects	Higher	Higher	Higher	Lower	Lower	Medium	Higher
Potential ST3 Operating Plan Effects	Medium	Medium	Higher	Higher	Lower	Medium	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Operational Constraints	Medium	Medium	Higher	Medium	Lower	Medium	Medium
Conceptual Capital Cost Comparison	-	$200M decrease	$400M decrease	$600M increase	$500M increase	Similar	Similar (+ $200M in SODO)
Operating Cost Impacts	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.							
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Higher 80%	Higher 80%	Higher 80%	Higher 75%	Higher 75%	Higher 80%	Higher 73%
Low-Income Population (1/2)	59% / 49%	59% / 49%	59% / 49%	57% / 49%	57% / 49%	59% / 49%	58% / 49%
Minority Population (1/2)	65% / 54%	65% / 54%	65% / 54%	63% / 54%	63% / 54%	65% / 54%	65% / 53%
Youth Population (1/2)	7% / 7%	7% / 7%	7% / 7%	6% / 7%	6% / 7%	7% / 7%	7% / 8%
Elderly Population (1/2)	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%
Limited English Proficiency Population (1/2)	30% / 19%	30% / 19%	30% / 19%	28% / 19%	28% / 19%	30% / 19%	30% / 18%
Disabled Population (1/2)	24% / 19%	24% / 19%	24% / 19%	25% / 19%	25% / 19%	24% / 19%	24% / 19%

Requires 3rd party funding for rebuild of 4th Ave viaduct; engineering/constructability issues and potential schedule delay

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Potential ST3 Schedule Effects*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.							
Potential Service Interruptions	Lower	Medium	Higher	Lower	Lower	Medium	Higher
Travel Times (minutes)	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.							
Network Integration	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	35,900	35,900	35,900	35,300	35,300	35,900	37,100
Connect regional centers as described in adopted regional and local land use, transporta					*ransit's Long-Range Plan.*		
Regional Growth Centers Served	N/A (3)	N/A			N/A	N/A	
Manufacturing/Industrial Centers Served	1	1			1	1	
Accommodates Future LRT Extension	Medium	Medium			Medium	Medium	
Implement a system that is consistent with the ST3 Plan that established transit mode, c					*feasible and financially sustainable to buil*		
Mode, Route and Stations per ST3	Higher	Higher			Higher	Higher	
Potential ST3 Schedule Effects	Higher	Higher	Higher		Lower	Medium	Hig
Potential ST3 Operating Plan Effects	Medium	Medium	Higher		Lower	Medium	Higher
Engineering Constraints	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Constructability Issues	Medium	Medium	Medium	Lower	Lower	Medium	Lower
Operational Constraints	Medium	Medium	Higher	Medium	Lower	Medium	Medium
Conceptual Capital Cost Comparison	-	$200M decrease	$400M decrease	$600M increase	$500M increase	Similar	Similar (+ $200M in SODO)
Operating Cost Impacts	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.							
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Higher 80%	Higher 80%	Higher 80%	Higher 75%	Higher 75%	Higher 80%	Higher 73%
Low-Income Population (1/2)	59% / 49%	59% / 49%	59% / 49%	57% / 49%	57% / 49%	59% / 49%	58% / 49%
Minority Population (1/2)	65% / 54%	65% / 54%	65% / 54%	63% / 54%	63% / 54%	65% / 54%	65% / 53%
Youth Population (1/2)	7% / 7%	7% / 7%	7% / 7%	6% / 7%	6% / 7%	7% / 7%	7% / 8%
Elderly Population (1/2)	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%
Limited English Proficiency Population (1/2)	30% / 19%	30% / 19%	30% / 19%	28% / 19%	28% / 19%	30% / 19%	30% / 18%
Disabled Population (1/2)	24% / 19%	24% / 19%	24% / 19%	25% / 19%	25% / 19%	24% / 19%	24% / 19%

Major engineering/constructability constraints (4th Ave viaduct rebuild, adjacent to active BNSF railway, proximity/disruption to existing transit tunnel, etc.)

Requires long-span structures over BNSF tracks

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

= Key Differentiators

Level 2 alternatives evaluation – *Engineering Constraints, Constructability Issues*

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.							
Potential Service Interruptions	Lower	Medium	Higher	Lower	Lower	Medium	Higher
Travel Times (minutes)	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.							
Network Integration	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	35,900	35,900	35,900	35,300	35,300	35,900	37,100
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.							
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1	1	1
Accommodates Future LRT Extension	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.							
Mode, Route and Stations per ST3	Higher	Higher	Higher	Higher	Higher	Higher	Medium
Potential ST3 Schedule Effects	Higher	Higher	Higher	Lower	Lower	Medium	
Potential ST3 Operating Plan Effects	Medium	Medium	Higher			Medium	
Engineering Constraints	Medium	Medium	Medium			Medium	
Constructability Issues	Medium	Medium	Medium			Medium	Lower
Operational Constraints	Medium	Medium	Higher	Medium	Lower	Medium	Medium
Conceptual Capital Cost Comparison	-	$200M decrease	$400M decrease	$600M increase	$500M increase	Similar	Similar (+ $200M in SODO)
Operating Cost Impacts	Medium	Medium	Higher	Medium	Medium	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.							
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Higher 80%	Higher 80%	Higher 80%	Higher 75%	Higher 75%	Higher 80%	Higher 73%
Low-Income Population (1/2)	59% / 49%	59% / 49%	59% / 49%	57% / 49%	57% / 49%	59% / 49%	58% / 49%
Minority Population (1/2)	65% / 54%	65% / 54%	65% / 54%	63% / 54%	63% / 54%	65% / 54%	65% / 53%
Youth Population (1/2)	7% / 7%	7% / 7%	7% / 7%	6% / 7%	6% / 7%	7% / 7%	7% / 8%
Elderly Population (1/2)	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%	20% / 19%
Limited English Proficiency Population (1/2)	30% / 19%	30% / 19%	30% / 19%	28% / 19%	28% / 19%	30% / 19%	30% / 18%
Disabled Population (1/2)	24% / 19%	24% / 19%	24% / 19%	25% / 19%	25% / 19%	24% / 19%	24% / 19%

Highest cost Chinatown-ID alternatives

Highest cost SODO alternative

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

= Key Differentiators

Level 2 alternatives evaluation – *Conceptual Capital Cost Comparison*

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
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.							
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	57	57	57	54	54	57	56
Passenger Transfers	Higher	Medium	Medium	Medium	Lower	Lower	Medium
Bus/Rail and Rail/Rail Integration (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bicycle Accessibility (1)	21%	21%	21%	21%	21%	21%	21%
Pedestrian/Limited Mobility Accessibility (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Development Potential (1)	14%	14%	14%	13%	13%	14%	15%
Equitable Development Opportunities	Lower	Medium	Lower	Medium	Lower	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.							
Historic Properties/Landmarks (2)	3	2	3	5	2	3	3
Potential for effects to Archaeological Resources(1)	Lower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	0	0	0	0	0	0	0
Water Resource Effects (acres)	0	0	0	0	0	0	0
Fish and Wildlife Habitat Effects (acres)	0	0	0	0	0	0	0
Hazardous Materials Sites (1)	4	9	4	5	9	9	6
Visual Effects	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Noise and Vibration Sensitive Receivers (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Potentially Affected Properties	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Residential Unit Displacements	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Square Feet of Business Displacements	Higher	Lower	Higher	Lower	Higher	Lower	Lower
Construction Impacts	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Burden on Low-Income/Minority	Medium	Medium	Medium	Lower	Lower	Higher	Medium
Traffic Circulation and Access Effects	Medium	Higher	Medium	Lower	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Effects on Freight Movement	Medium	Higher	Medium	Lower	Lower	Higher	Lower
Business and Commerce Effects	Medium	Medium	Medium	Medium	Medium	Higher	Lower

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

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Part 2 of 2*

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
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.							
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	57	57	57	54	54	57	56
Passenger Transfers	Higher	Medium	Medium	Medium	Lower	Lower	Medium
Bus/Rail and Rail/Rail Integration (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bicycle Accessibility (1)	21%	21%	21%	21%	21%	21%	21%
Pedestrian/Limited Mobility Accessibility (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Development Potential (1)	14%	14%	14%	13%	13%	14%	15%
Equitable Development Opportunities	Lower	Medium	Lower	Medium		dium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments							
Historic Properties/Landmarks (2)	3	2	3	5		3	3
Potential for effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower		wer	Lower
Parks and Recreational Resources Effects (acres)	0	0	0	0		0	0
Water Resource Effects (acres)	0	0	0	0		0	0
Fish and Wildlife Habitat Effects (acres)	0	0	0	0		0	0
Hazardous Materials Sites (1)	4	9	4	5	9	9	6
Visual Effects	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Noise and Vibration Sensitive Receivers (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Potentially Affected Properties	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Residential Unit Displacements	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Square Feet of Business Displacements	Higher	Lower	Higher	Lower	Higher	Lower	Lower
Construction Impacts	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Burden on Low-Income/Minority	Medium	Medium	Medium	Lower	Lower	Higher	Medium
Traffic Circulation and Access Effects	Medium	Higher	Medium	Lower	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Effects on Freight Movement	Medium	Higher	Medium	Lower	Lower	Higher	Lower
Business and Commerce Effects	Medium	Medium	Medium	Medium	Medium	Higher	Lower

~200' deep mined stations provide relatively poor rider access and ease of transfers (also results in ~250' deep Midtown Station)

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

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Passenger Transfers*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
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.							
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	57	57	57	54	54	57	56
Passenger Transfers	Higher	Medium	Medium	Medium	Lower	Lower	Medium
Bus/Rail and Rail/Rail Integration (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bicycle Accessibility (1)	21%	21%	21%	21%	21%	21%	21%
Pedestrian/Limited Mobility Accessibility (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Development Potential (1)	14%	14%	14%	13%	13%	14%	15%
Equitable Development Opportunities	Lower	Medium	Lower	Medium	Lower	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.							
Historic Properties/Landmarks (2)	3	2	3	5	2	3	
Potential for effects to Archaeological Resources (1)	Lower	Lower	Lower		Lower	Lower	
Parks and Recreational Resources Effects (acres)	0	0	0				
Water Resource Effects (acres)	0		0				
Fish and Wildlife Habitat Effects (acres)	0		0				
Hazardous Materials Sites (1)	4		4				
Visual Effects	Higher		Higher		Higher	Higher	
Noise and Vibration Sensitive Receivers (1)	Medium		Medium		Medium	Medium	
Potentially Affected Properties	Medium		Medium		Medium	Medium	
Residential Unit Displacements	Medium		Medium		Medium	Medium	
Square Feet of Business Displacements	Higher	Lower	Higher	Lower	Higher	Lower	Lower
Construction Impacts	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Burden on Low-Income/Minority	Medium	Medium	Medium	Lower	Lower	Higher	Medium
Traffic Circulation and Access Effects	Medium	Higher	Medium	Lower	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Effects on Freight Movement	Medium	Higher	Medium	Lower	Lower	Higher	Lower
Business and Commerce Effects	Medium	Medium	Medium	Medium	Medium	Higher	Lower

Property effects (tunnel portal in SODO)

Property effects along 4th Ave (incl. King County Admin Building)

Property effects (tunnel portal in SODO)

Property effects along Occidental, BNSF crossings and maintenance facility connection

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

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Business Displacements*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
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.							
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	57	57	57	54	54	57	56
Passenger Transfers	Higher	Medium	Medium	Medium	Lower	Lower	Medium
Bus/Rail and Rail/Rail Integration (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bicycle Accessibility (1)	21%	21%	21%	21%	21%	21%	21%
Pedestrian/Limited Mobility Accessibility (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Development Potential (1)	14%	14%	14%	13%	13%	14%	15%
Equitable Development Opportunities	Lower	Medium	Lower	Medium	Lower	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.							
Historic Properties/Landmarks (2)	3	2	3	5	2	3	3
Potential for effects to Archaeological Resources(1)	Lower	Lower	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effe		0			0	0	0
Water Resource Effects (acre		0					0
Fish and Wildlife Habitat Effects (		0					0
Hazardous Materials Sites (1		9					6
Visual Effects		ligher					Higher
Noise and Vibration Sensitive Rece		edium			N		Medium
Potentially Affected Properti		edium			N		Medium
Residential Unit Displacements	Mediu	Medium	Medium	Me	Medium	Medium	Medium
Square Feet of Business Displacements	Higher	Lower	Higher	Lo	Higher	Lower	Lower
Construction Impacts	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Burden on Low-Income/Minority	Medium	Medium	Medium	Lower	Lower	Higher	Medium
Traffic Circulation and Access Effects	Medium	Higher	Medium	Lower	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Effects on Freight Movement	Medium	Higher	Medium	Lower	Lower	Higher	Lower
Business and Commerce Effects	Medium	Medium	Medium	Medium	Medium	Higher	Lower

Cut-and-cover tunnel on 5th Ave, periodic closures (8,500 vehicles/day), greater noise/vibration/visual effects to Chinatown/ID

Cut-and-cover tunnel on 4th Ave, periodic closures (33,000 vehicles/day), less noise/vibration/visual effects to Chinatown/ID

Mined station on 4th Ave, full closure (33,000 vehicles/day), less noise/vibration/visual effects to Chinatown/ID

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

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Construction Impacts*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
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.							
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	57	57	57	54	54	57	56
Passenger Transfers	Higher	Medium	Medium	Medium	Lower	Lower	Medium
Bus/Rail and Rail/Rail Integration (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bicycle Accessibility (1)	21%	21%	21%	21%	21%	21%	21%
Pedestrian/Limited Mobility Accessibility (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Development Potential (1)	14%	14%	14%	13%	13%	14%	15%
Equitable Development Opportunities	Lower	Medium	Lower	Medium	Lower	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.							
Historic Properties/Landmarks (2)	3	2	3	5	2	3	3
Potential for effects to Archaeological Resources(1)	Lower	Lower				er	Lower
Parks and Recreational Resources Effects (acres)	0	0					0
Water Resource Effects (acres)	0	0					0
Fish and Wildlife Habitat Effects (acres)	0	0					0
Hazardous Materials Sites (1)	4	9					6
Visual Effects	Higher	Higher				er	Higher
Noise and Vibration Sensitive Receivers (1)	Medium	Medium				um	Medium
Potentially Affected Properties	Medium	Medium				Medium	Medium
Residential Unit Displacements	Medium	Medium	Medium	dium	Medium	Medium	Medium
Square Feet of Business Displacements	Higher	Lower	Higher	Lower	Higher	Lower	Lower
Construction Impacts	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Burden on Low-Income/Minority	Medium	Medium	Medium	Lower	Lower	Higher	Medium
Traffic Circulation and Access Effects	Medium	Higher	Medium	Lower	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Effects on Freight Movement	Medium	Higher	Medium	Lower	Lower	Higher	Lower
Business and Commerce Effects	Medium	Medium	Medium	Medium	Medium	Higher	Lower

Displacement of social services at Jefferson portal site; traffic detour effects from partial 4th Ave lane closures during full viaduct replacement

Traffic detour effects from full 4th Ave lane closures during partial viaduct replacement

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

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

Level 2 alternatives evaluation – *Burden on Low-Income/Minority*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Massachusetts Tunnel Portal	Surface E-3	4th Avenue Cut-and-Cover C-ID	4th Avenue Mined C-ID	5th Avenue Mined C-ID	Occidental Avenue
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.							
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Station Land Use Plan Consistency	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Activity Nodes Served (1)	57	57	57	54	54	57	56
Passenger Transfers	Higher	Medium	Medium	Mdium	Lower	Lower	Medium
Bus/Rail and Rail/Rail Integration (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Bicycle Accessibility (1)	21%	21%	21%	21%	21%	21%	21%
Pedestrian/Limited Mobility Accessibility (1)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Development Potential (1)	14%	14%	14%	13%	13%	14%	15%
Equitable Development Opportunities	Lower	Medium	Lower	Medium	Lower	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices							
Historic Properties/Landmarks (2)	3	2	3	5		3	3
Potential for effects to Archaeological Resources(1)	Lower	Lower	Lower	Lower		Lower	Lower
Parks and Recreational Resources Effects (acres)	0					0	0
Water Resource Effects (acres)	0					0	0
Fish and Wildlife Habitat Effects (acres)	0					0	0
Hazardous Materials Sites (1)	4					9	6
Visual Effects							
Noise and Vibration Sensiti			M	m			
Potentially Affected P			M	m			
Residential Unit Displ			M	m			
Square Feet of Business Displacements					High		
Construction Impacts	ver	Higher	Medium	Lower	Lower	High	Medium
Burden on Low-Income/Minority	edium	Medium	Medium	Lower	Lower	Higher	Medium
Traffic Circulation and Access Effects	Medium	Higher	Medium	Lower	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Lower	Lower	Higher	Medium
Effects on Freight Movement	Medium	Higher	Medium	Lower	Lower	Higher	Lower
Business and Commerce Effects	Medium	Medium	Medium	Medium	Medium	Higher	Lower

Construction effects on WSDOT ramp structures and foundations

New grade-separated roadway crossings (Lander, Holgate) improve existing rail/traffic/freight operations

Construction effects, including 4th Ave lane closures during full replacement of viaduct structure

Construction effects, including displacement of Ryerson Bus Base and lane closures on 4th Ave due to partial replacement of viaduct structure

Less construction effects, lane closures on 5th Ave with mined station

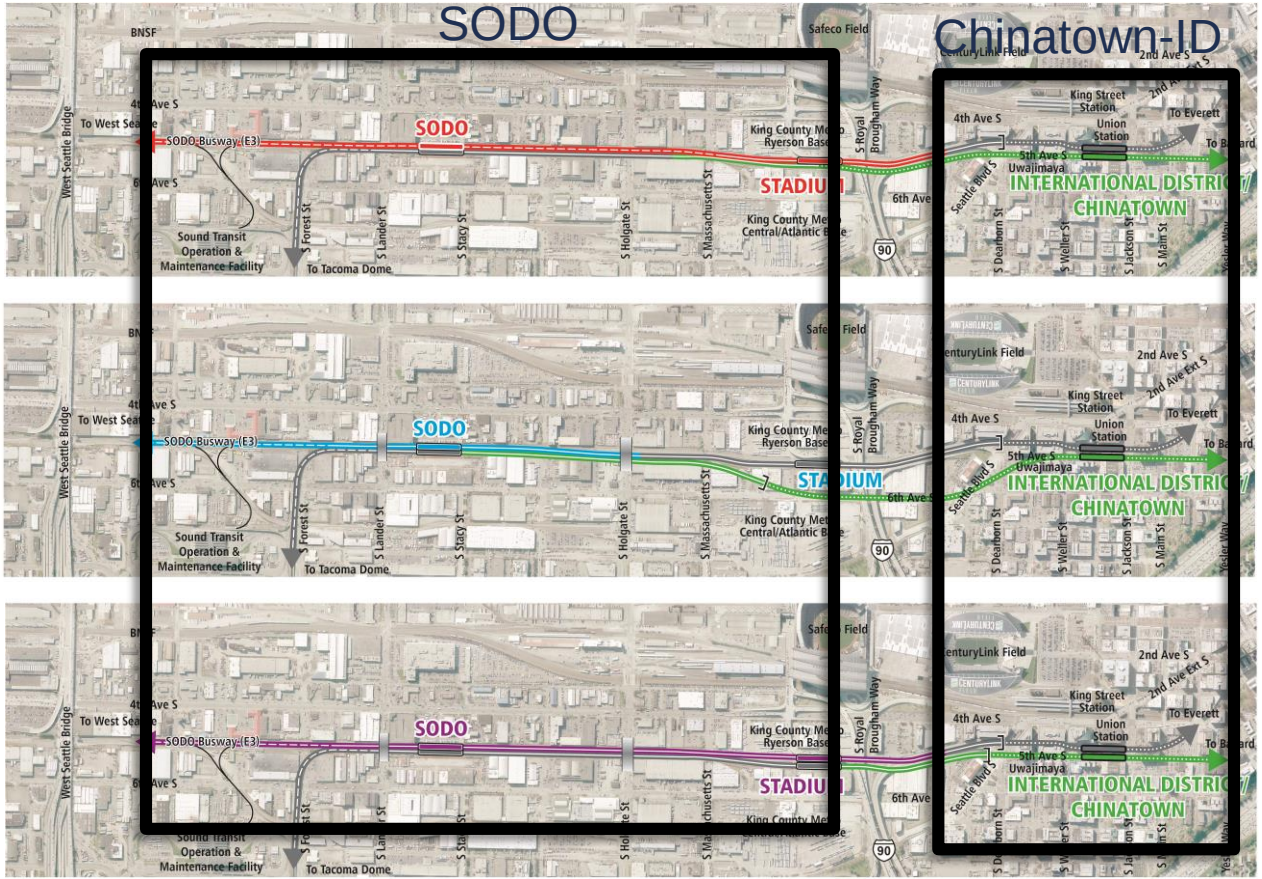
(1) Within station walksheds and/or defined buffer of alignment
(2) On properties that overlap with the project footprint

Lower Performing | Medium Performing | Higher Performing

SODO and Chinatown-ID

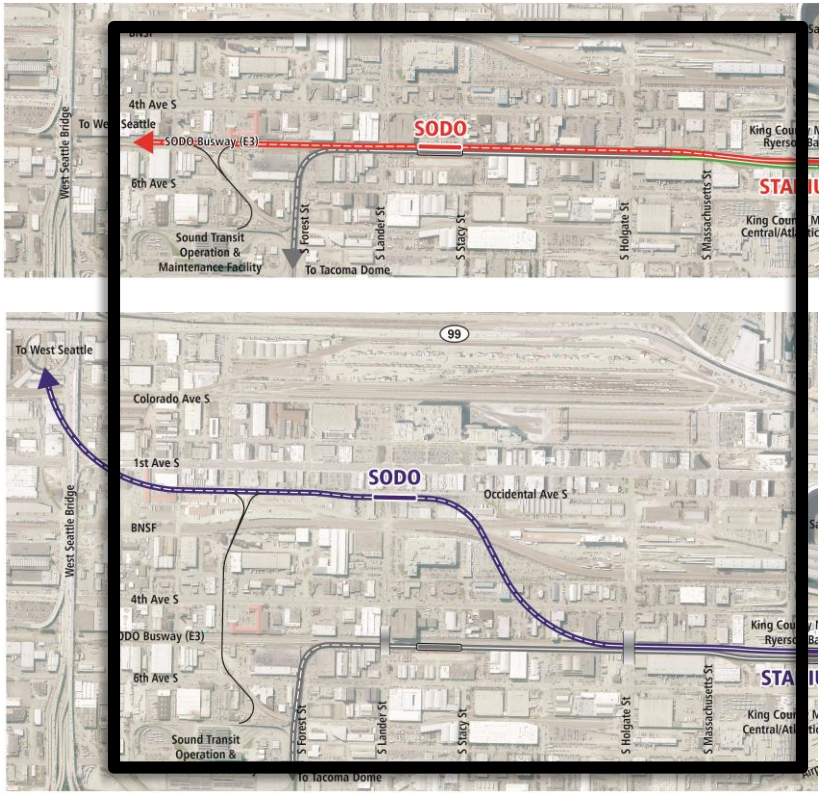
= Key Differentiators

Level 2 alternatives evaluation – *Traffic Circulation, Existing Facilities, Freight*



SODO and Chinatown-ID

Key differentiators – *By sub-segment*



SODO:

Key differentiators

- New SODO Station location
- Transfer with existing station
- Engineering/ constructability issues
- Bus operations
- Property effects
- Rail, traffic & freight operations

SODO and Chinatown-ID

Key differentiators – *SODO*

Summary SODO

Alternative	Key findings	Cost comparison*	Schedule comparison*
ST3 Representative Project			
Surface E-3	• New at-grade SODO Station on E-3 transitway at Lander • Transfer at existing SODO Station • Bus operations on E-3 transitway displaced • New grade-separated roadway crossings (Lander, Holgate) improve existing rail/traffic/freight operations • Property effects at tunnel portal site (for Massachusetts Tunnel Portal alternative only) • Massachusetts Tunnel Portal alternative avoids impacts to Ryerson Base	- $100M	Higher Performing
Massachusetts Tunnel Portal		**	Higher Performing
Occidental Ave.	• New elevated SODO Station on Occidental Ave at Lander • Transfer at existing Stadium Station • Long span bridges over BNSF tracks and longer track connection to maintenance facility • Bus operations on E-3 transitway partially displaced • Property effects along Occidental, BNSF crossings and maintenance facility connection	+ $200M	Higher Performing

*Cost compared to cost of ST3 Representative Project for this SODO sub-segment only. Schedule compared to overall ST3 schedule for this extension.
**Cost comparison reflected in Chinatown/ID summary table.

Chinatown-International District:

Key differentiators

- Station location
- Ease of station access/passenger transfers
- Construction, traffic effects
- Property effects
- Viaduct re-build project issues

SODO and Chinatown-ID

Key differentiators – *Chinatown-International District*

Summary Chinatown-ID

Alternative	Key findings	Cost comparison*	Schedule comparison*
ST3 Representative Project			
E-3 Surface (shorter 5th Ave Cut-and-Cover Tunnel)	• Shallow cut-and-cover station under 5th Ave; easy rider access/transfers • Construction effects, lane closures on 5th Ave in station area	- $300M**	Higher Performing
Massachusetts Tunnel Portal (5th Ave Bored Tunnel)	• Shallow cut-and-cover station under 5th Ave; easy rider access/transfers • Construction effects, lane closures on 5th Ave in station area	- $200M	Higher Performing
5th Ave Mined C-ID	• Deep mined station (~200') under 5th Ave; poor rider access/transfers • Less construction effects, lane closures on 5th Ave with mined station • Some property effects (for mined station access shaft) • Results in very deep Midtown Station (~250')	Similar	Medium Performing
4th Ave Mined C-ID	• Deep mined station (~200') under 4th Ave, poor rider access/transfers • Major engineering/constructability constraints (4th Ave viaduct demolition/rebuild, active BNSF railway, existing transit tunnel, etc.) • Large property effects (Ryerson Base for tunnel portal site) • Requires 3rd party funding of 4th Ave Viaduct re-build costs • Results in very deep Midtown Station (~250')	+ $500M	Lower Performing
4th Ave Cut-and-Cover C-ID	• Shallow cut-and-cover station under 4th Ave; easy rider access/transfers • Major engineering/constructability constraints (4th Ave viaduct demolition/rebuild, active BNSF railway, existing transit tunnel, etc.) • Large property effects (King County Admin Building) • Requires 3rd party funding of 4th Ave Viaduct re-build costs	+ $600M	Lower Performing

*Cost compared to cost of ST3 Representative Project for this segment. Schedule compared to overall ST3 schedule for this extension.

**Cost comparison for Chinatown/ID sub-segment only; total SODO/C-ID segment cost difference is - $400M compared to ST3 Representative Project.

Station Charrette Feedback* Chinatown-ID

5th Ave S Tunnel Cut and Cover

- Greatest concern about construction effects to C-ID neighborhood and displacement of businesses
- Less opportunity to connect to King Street Station
- Could activate Union Station and plaza
- Some TOD potential

5th Ave S Tunnel Mined

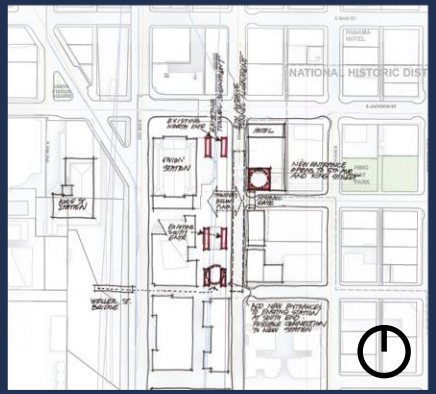
- Less concern about construction effects
- Less opportunity to connect to King Street Station
- Could activate Union Station and plaza
- Could span Jackson Street
- Some TOD potential

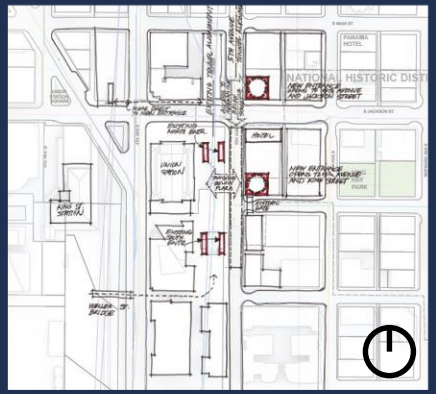
4th Ave S Tunnel Cut and Cover

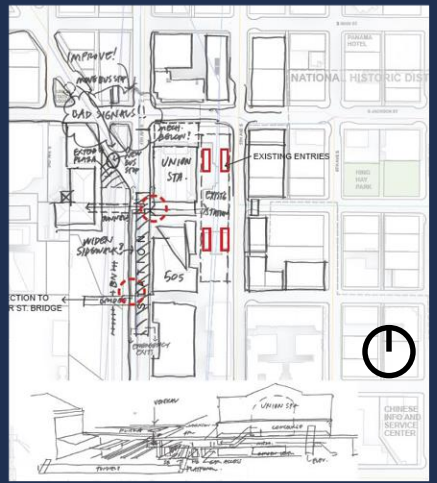
- Concern about construction effects to traffic with 4th Ave S viaduct rebuild
- Opportunity to connect to King Street Station services
- Could activate Union Station
- Limited TOD potential

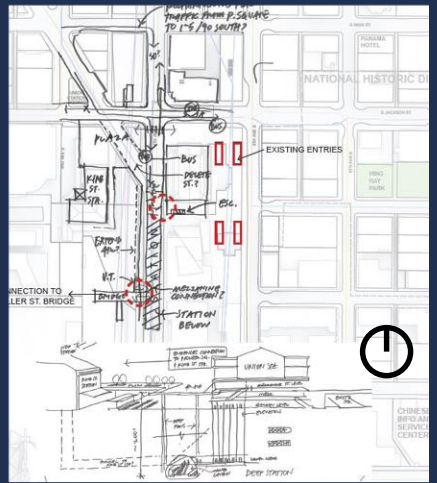
4th Ave S Tunnel Mined

- Concern about construction effects to traffic with 4th Ave S viaduct rebuild
- Opportunity to connect to King Street Station services via station mezzanine
- Could activate Union Station
- Limited TOD potential







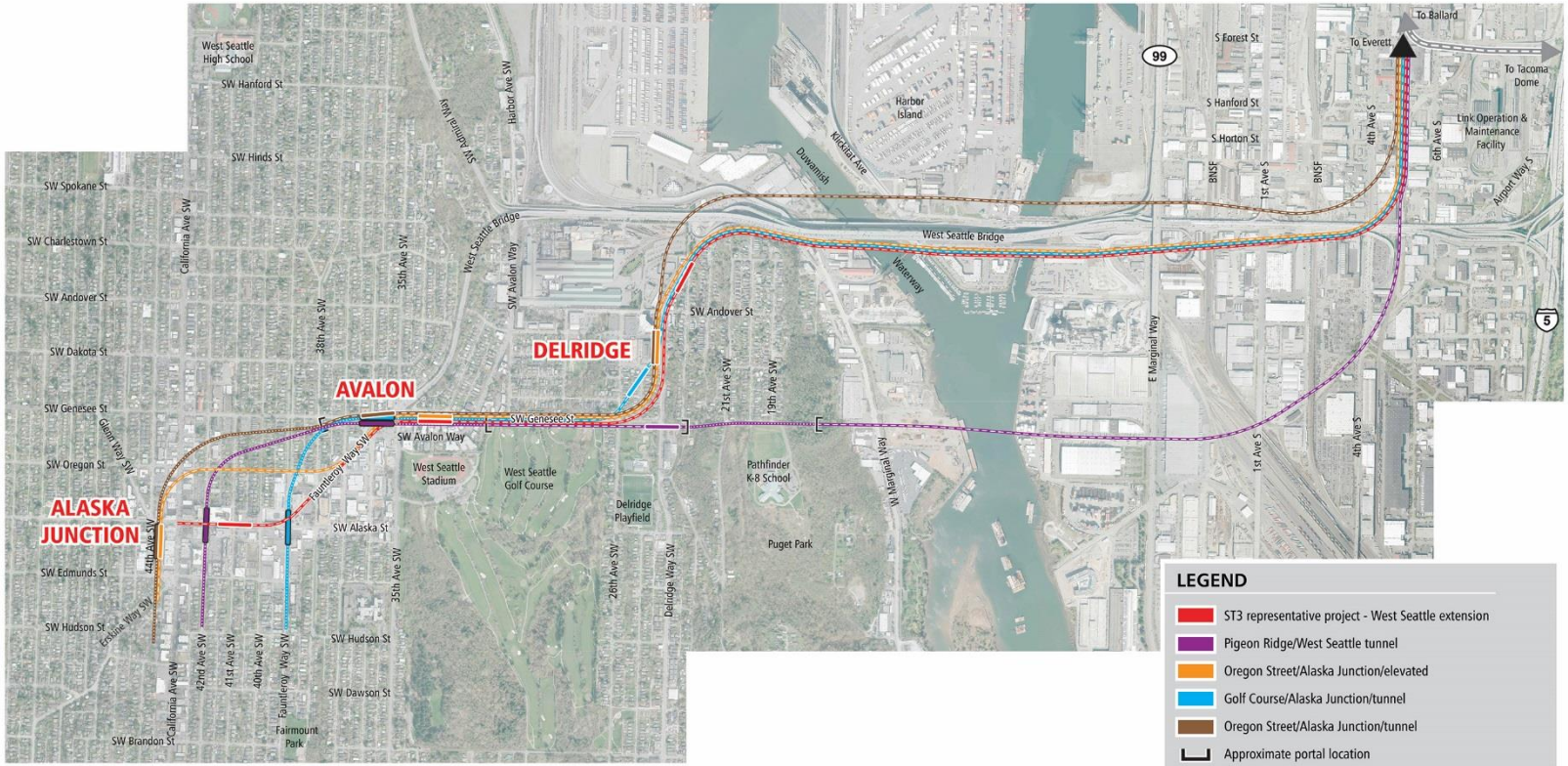


*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Level 2 alternatives

West Seattle/Duwamish

- ST3 Representative Project
- Pigeon Ridge/West Seattle Tunnel
- Oregon Street/Alaska Junction/Elevated
- Oregon Street/Alaska Junction/Tunnel (new)
- Golf Course/Alaska Junction/Tunnel (modified)



LEGEND

- ST3 representative project - West Seattle extension
- Pigeon Ridge/West Seattle tunnel
- Oregon Street/Alaska Junction/elevated
- Golf Course/Alaska Junction/tunnel
- Oregon Street/Alaska Junction/tunnel
- Approximate portal location
- Elevated
- Elevated station
- Tunnel
- Tunnel station

N

West Seattle/Duwamish

Level 2 alternatives

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.					
Potential Service Interruptions	Higher	Higher	Higher	Higher	Higher
Travel Times (minutes)	7 to 8	7 to 8	7 to 8	7 to 8	7 to 8
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.					
Network Integration	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	11,200	12,500	12,000	10,700	12,500
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.					
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1
Accommodates Future LRT Extension	Lower	Medium	Lower	Higher	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.					
Mode, Route and Stations per ST3	Higher	Higher	Higher	Medium	Higher
Potential ST3 Schedule Effects	Higher	Lower	Higher	Lower	Lower
Potential ST3 Operating Plan Effects	Higher	Higher	Higher	Higher	Higher
Engineering Constraints	Medium	Lower	Medium	Medium	Higher
Constructability Issues	Lower	Lower	Lower	Lower	Medium
Operational Constraints	Medium	Higher	Medium	Medium	Medium
Conceptual Capital Cost Comparison	-	$1,200M increase	Similar	$700M increase	$500M increase
Operating Cost Impacts	Higher	Medium	Higher	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.					
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 15%	Medium 13%	Medium 14%	Medium 15%	Medium 13%
Low-Income Population (1/2)	25% / 21%	24% / 21%	23% / 21%	26% / 21%	23% / 21%
Minority Population (1/2)	22% / 26%	23% / 26%	21% / 26%	23% / 26%	21% / 26%
Youth Population (1/2)	13% / 17%	14% / 17%	14% / 17%	13% / 17%	14% / 17%
Elderly Population (1/2)	16% / 13%	15% / 13%	15% / 13%	16% / 13%	15% / 13%
Limited English Proficiency Population (1/2)	3% / 4%	3% / 4%	3% / 4%	3% / 4%	3% / 4%
Disabled Population (1/2)	9% / 9%	9% / 9%	9% / 9%	9% / 9%	9% / 9%

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Part 1 of 2*

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.					
Potential Service Interruptions	Higher	Higher	Higher	Higher	Higher
Travel Times (minutes)	7 to 8	7 to 8	7 to 8	7 to 8	7 to 8
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.					
Network Integration	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	12,500	12,500	12,500	12,500	12,500
Connect regional centers as described in adopte… transportation, and economic deve…					
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1
Accommodates Future LRT Extension	Lower	Medium	Lower	Higher	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.					
Mode, Route and Stations per ST3	Higher	Higher	Higher	Medium	Higher
Potential ST3 Schedule Effects	Higher	Lower	Higher	Lower	Lower
Potential ST3 Operating Plan Effects	Higher	Higher	Higher	Higher	Higher
Engineering Constraints	Medium	Lower	Medium	Medium	Higher
Constructability Issues	Lower	Lower	Lower	Lower	Medium
Operational Constraints	Medium	Higher	Medium	Medium	Medium
Conceptual Capital Cost Comparison	-	$1,200M increase	Similar	$700M increase	$500M increase
Operating Cost Impacts	Higher	Medium	Higher	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.					
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 15%	Medium 13%	Medium 14%	Medium 15%	Medium 13%
Low-Income Population (1/2)	25% / 21%	24% / 21%	23% / 21%	26% / 21%	23% / 21%
Minority Population (1/2)	22% / 26%	23% / 26%	21% / 26%	23% / 26%	21% / 26%
Youth Population (1/2)	13% / 17%	14% / 17%	14% / 17%	13% / 17%	14% / 17%
Elderly Population (1/2)	16% / 13%	15% / 13%	15% / 13%	16% / 13%	15% / 13%
Limited English Proficiency Population (1/2)	3% / 4%	3% / 4%	3% / 4%	3% / 4%	3% / 4%
Disabled Population (1/2)	9% / 9%	9% / 9%	9% / 9%	9% / 9%	9% / 9%

Complicates future LRT extension

Complicates future LRT extension

Best accommodates future LRT extension

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

= Key Differentiators

Level 2 alternatives evaluation – *Accommodates Future LRT Extension*

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.					
Potential Service Interruptions	Higher	Higher	Higher	Higher	Higher
Travel Times (minutes)	7 to 8	7 to 8	7 to 8	7 to 8	7 to 8
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.					
Network Integration	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	11,200	12,500	12,000	10,700	12,500
Connect regional centers as described in adopted regional and local land use, transportation, and economic d… …t's Long-Range Plan.					
Regional Growth Centers Served	N/A (3)	N/A		N/A	N/A
Manufacturing/Industrial Centers Served	1	1		1	1
Accommodates Future LRT Extension	Lower	Medium	Lower	Higher	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station loc… …s and that is technically …sible and financially sustainable to build, operate, and maintain.					
Mode, Route and Stations per ST3	Higher	Higher	Higher	Medium	Higher
Potential ST3 Schedule Effects	Higher	Lower	Higher	Lower	Lower
Potential ST3 Operating Plan Effects	Higher	Higher	Higher	Higher	Higher
Engineering Constraints	Medium	Lower	Medium	Medium	Higher
Constructability Issues	Lower	Lower	Lower	Lower	Medium
Operational Constraints	Medium	Higher	Medium	Medium	Medium
Conceptual Capital Cost Comparison	-	$1,200M increase	Similar	$700M increase	$500M increase
Operating Cost Impacts	Higher	Medium	Higher	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.					
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 15%	Medium 13%	Medium 14%	Medium 15%	Medium 13%
Low-Income Population (1/2)	25% / 21%	24% / 21%	23% / 21%	26% / 21%	23% / 21%
Minority Population (1/2)	22% / 26%	23% / 26%	21% / 26%	23% / 26%	21% / 26%
Youth Population (1/2)	13% / 17%	14% / 17%	14% / 17%	13% / 17%	14% / 17%
Elderly Population (1/2)	16% / 13%	15% / 13%	15% / 13%	16% / 13%	15% / 13%
Limited English Proficiency Population (1/2)	3% / 4%	3% / 4%	3% / 4%	3% / 4%	3% / 4%
Disabled Population (1/2)	9% / 9%	9% / 9%	9% / 9%	9% / 9%	9% / 9%

Tunnel options could affect schedule

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Potential ST3 Schedule Effects*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.					
Potential Service Interruptions	Higher	Higher	Higher	Higher	Higher
Travel Times (minutes)	7 to 8	7 to 8	7 to 8	7 to 8	7 to 8
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.					
Network Integration	Medi		Medium	Medium	Medium
Passenger Carrying Capacity	Medi		Medium	Medium	
Ridership Potential (2040 pop/emp) (1)	11,2		12,000	10,700	
Connect regional centers as described in adopted regional and			*opment plans and Sound Transit's Long-Range Plan.*		
Regional Growth Centers Served	N/A		N/A	N/A	
Manufacturing/Industrial Centers Served	1		1	1	
Accommodates Future LRT Extension	Lower	M	Lower	Higher	
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor			*tion locations and that is technically feasible and financially sustainable to build, oper*		*d maintain.*
Mode, Route and Stations per ST3	Higher	High	Higher	Medium	gher
Potential ST3 Schedule Effects	Higher	Lowe	Higher	Lower	Lower
Potential ST3 Operating Plan Effects	Higher	Higher	Higher	Higher	Higher
Engineering Constraints	Medium	Lower	Medium	Medium	Higher
Constructability Issues	Lower	Lower	Lower	Lower	Medium
Operational Constraints	Medium	Higher	Medium	Medium	Medium
Conceptual Capital Cost Comparison	-	$1,200M increase	Similar	$700M increase	$500M increase
Operating Cost Impacts	Higher	Medium	Higher	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.					
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 15%	Medium 13%	Medium 14%	Medium 15%	Medium 13%
Low-Income Population (1/2)	25% / 21%	24% / 21%	23% / 21%	26% / 21%	23% / 21%
Minority Population (1/2)	22% / 26%	23% / 26%	21% / 26%	23% / 26%	21% / 26%
Youth Population (1/2)	13% / 17%	14% / 17%	14% / 17%	13% / 17%	14% / 17%
Elderly Population (1/2)	16% / 13%	15% / 13%	15% / 13%	16% / 13%	15% / 13%
Limited English Proficiency Population (1/2)	3% / 4%	3% / 4%	3% / 4%	3% / 4%	3% / 4%
Disabled Population (1/2)	9% / 9%	9% / 9%	9% / 9%	9% / 9%	9% / 9%

Most engineering constraints (tunnel through unstable slopes, widest water crossing, wide Union Pacific Argo railyard crossing, high voltage lines, etc.)

Fewer engineering constraints (avoids Pigeon Point steep slope)

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Engineering Constraints*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.					
Potential Service Interruptions	Higher	Higher	Higher	Higher	Higher
Travel Times (minutes)	7 to 8	7 to 8	7 to 8	7 to 8	7 to 8
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet projected transit demand.					
Network Integration	Medium	Medium	Medium	Medium	Medium
Passenger Carrying Capacity	Medium	Medium	Medium	Medium	Medium
Ridership Potential (2040 pop/emp) (1)	11,200	12,500	12,000	10,700	12,500
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Long-Range Plan.					
Regional Growth Centers Served	N/A (3)	N/A	N/A	N/A	N/A
Manufacturing/Industrial Centers Served	1	1	1	1	1
Accommodates Future LRT Extension	Lower	Medium	Lower	Higher	Medium
Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.					
Mode, Route and Stations per ST3	Higher	Higher			Higher
Potential ST3 Schedule Effects	Higher	Lower			Lower
Potential ST3 Operating Plan Effects	Higher	Higher			Higher
Engineering Constraints	Medium	Lower			Higher
Constructability Issues	Lower	Lower	Lower	Lower	Medium
Operational Constraints	Medium	Higher	Medium	Medium	Medium
Conceptual Capital Cost Comparison	-	$1,200M increase	Similar	$700M increase	$500M increase
Operating Cost Impacts	Higher	Medium	Higher	Medium	Medium
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.					
Opportunities for Low-Income/Minority (activity nodes/subsidized rental units) (1)	Medium 15%	Medium 13%	Medium 14%	Medium 15%	Medium 13%
Low-Income Population (1/2)	25% / 21%	24% / 21%	23% / 21%	26% / 21%	23% / 21%
Minority Population (1/2)	22% / 26%	23% / 26%	21% / 26%	23% / 26%	21% / 26%
Youth Population (1/2)	13% / 17%	14% / 17%	14% / 17%	13% / 17%	14% / 17%
Elderly Population (1/2)	16% / 13%	15% / 13%	15% / 13%	16% / 13%	15% / 13%
Limited English Proficiency Population (1/2)	3% / 4%	3% / 4%	3% / 4%	3% / 4%	3% / 4%
Disabled Population (1/2)	9% / 9%	9% / 9%	9% / 9%	9% / 9%	9% / 9%

Higher cost alternatives; requires 3rd Party funding

(1) Within station walksheds
(2) Within 15 minute ride on connecting high frequency transit
(3) NA = Measure not applicable to this segment

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

= Key Differentiators

Level 2 alternatives evaluation – *Conceptual Capital Cost Comparison*

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
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.					
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	40	41	42	38	42
Passenger Transfers	Medium	Higher	Medium	Medium	Higher
Bus/Rail and Rail/Rail Integration (1)	Medium	Higher	Medium	Medium	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Medium	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Higher	Medium
Equitable Development Opportunities	Lower	Lower	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.					
Historic Properties/Landmarks (2)	1	1	1	1	2
Potential for effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	1.5	3.5	1.5	2.8	0.6
Water Resource Effects (acres)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fish and Wildlife Habitat Effects (acres)	3.7	5.3	3.7	3.7	1.9
Hazardous Materials Sites (1)	11	7	8	14	14
Visual Effects	Lower	Medium	Lower	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Lower	Lower	Lower	Medium	Lower
Potentially Affected Properties	Higher	Higher	Lower	Higher	Lower
Residential Unit Displacements	Medium	Lower	Lower	Higher	Lower
Square Feet of Business Displacements	Higher	Medium	Lower	Higher	Medium
Construction Impacts	Lower	Higher	Lower	Medium	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Higher	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Medium	Higher
Effects on Freight Movement	Medium	Medium	Medium	Medium	Lower
Business and Commerce Effects	Medium	Higher	Lower	Medium	Medium

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

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Part 2 of 2*

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
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.					
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	40	41	42	38	42
Passenger Transfers	Medium	Higher	Medium	Medium	Higher
Bus/Rail and Rail/Rail Integration (1)	Medium	Higher	Medium	Medium	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Medium	Higher	Higher	Higher	Higher
Development Potential (1)	Medium		Medium	Higher	Medium
Equitable Development Opportunities	Lower		Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adv… …nd social environments through sustainable practices.					
Historic Properties/Landmarks (2)	1	1	1	1	2
Potential for effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	1.5	3.5	1.5	2.8	0.6
Water Resource Effects (acres)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fish and Wildlife Habitat Effects (acres)	3.7	5.3	3.7	3.7	1.9
Hazardous Materials Sites (1)	11	7	8	14	14
Visual Effects	Lower	Medium	Lower	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Lower	Lower	Lower	Medium	Lower
Potentially Affected Properties	Higher	Higher	Lower	Higher	Lower
Residential Unit Displacements	Medium	Lower	Lower	Higher	Lower
Square Feet of Business Displacements	Higher	Medium	Lower	Higher	Medium
Construction Impacts	Lower	Higher	Lower	Medium	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Higher	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Medium	Higher
Effects on Freight Movement	Medium	Medium	Medium	Medium	Lower
Business and Commerce Effects	Medium	Higher	Lower	Medium	Medium

Most effects to Duwamish Greenbelt

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

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Fish and Wildlife Habitat Effects*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
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.					
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	40	41	42	38	42
Passenger Transfers	Medium	Higher	Medium	Medium	Higher
Bus/Rail and Rail/Rail Integration (1)	Medium	Higher	Medium	Medium	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Medium	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Higher	Medium
Equitable Development Opportunities	Lower	Lower		Medium	
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and *h sustainable practices*					
Historic Properties/Landmarks (2)	1				
Potential for effects to Archaeological Resources (1)	Lower				
Parks and Recreational Resources Effects (acres)	1.5				
Water Resource Effects (acres)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fish and Wildlife Habitat Effects (acres)	3.7	5.3	3.7	3.7	1.9
Hazardous Materials Sites (1)	11	7	8	14	14
Visual Effects	Lower	Medium	Lower	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Lower	Lower	Lower	Medium	Lower
Potentially Affected Properties	Higher	Higher	Lower	Higher	Lower
Residential Unit Displacements	Medium	Lower	Lower	Higher	Lower
Square Feet of Business Displacements	Higher	Medium	Lower	Higher	Medium
Construction Impacts	Lower	Higher	Lower	Medium	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Higher	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Medium	Higher
Effects on Freight Movement	Medium	Medium	Medium	Medium	Lower
Business and Commerce Effects	Medium	Higher	Lower	Medium	Medium

Low guideway along Genesee

High guideway along Genesee; elevated along Oregon and 44th

Low guideway along Genesee

High guideway along Genesee; elevated Avalon Station

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

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Visual Effects*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
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.					
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	40	41	42	38	42
Passenger Transfers	Medium	Higher	Medium	Medium	Higher
Bus/Rail and Rail/Rail Integration (1)	Medium	Higher	Medium	Medium	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Medium	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Higher	Medium
Equitable Development Opportunities	Lower	Lower	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing ... environments through sustainable p...					
Historic Properties/Landmarks (2)	1		1		
Potential for effects to Archaeological Resources (1)	Lower		Lower	L...	
Parks and Recreational Resources Effects (acres)	1.5		1.5		
Water Resource Effects (acres)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fish and Wildlife Habitat Effects (acres)	3.7	5.3	3.7	3.7	1.9
Hazardous Materials Sites (1)	11	7	8	14	14
Visual Effects	Lower	Medium	Lower	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Lower	Lower	Lower	Medium	Lower
Potentially Affected Properties	Higher	Higher	Lower	Higher	Lower
Residential Unit Displacements	Medium	Lower	Lower	Higher	Lower
Square Feet of Business Displacements	Higher	Medium	Lower	Higher	Medium
Construction Impacts	Lower	Higher	Lower	Medium	Medium
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Higher	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Medium	Higher
Effects on Freight Movement	Medium	Medium	Medium	Medium	Lower
Business and Commerce Effects	Medium	Higher	Lower	Medium	Medium

Elevated guideway and station at 44th increases residential and business effects

Tunnel station at Fauntleroy lessens residential and business effects

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

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

Level 2 alternatives evaluation – *Residential and Business Displacements*

= Key Differentiators

Evaluation Measures	ST3 Representative Project	Pigeon Ridge/West Seattle Tunnel	Oregon Street/Alaska Junction/ Elevated	Golf Course/Alaska Junction/ Tunnel	Oregon Street/Alaska Junction/ Tunnel
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.					
Compatibility with Urban Centers/Villages (1)	Medium	Medium	Medium	Medium	Lower
Station Land Use Plan Consistency	Higher	Higher	Higher	Higher	Higher
Activity Nodes Served (1)	40	41	42	38	42
Passenger Transfers	Medium	Higher	Medium	Medium	Higher
Bus/Rail and Rail/Rail Integration (1)	Medium	Higher	Medium	Medium	Higher
Bicycle Accessibility (1)	Higher	Higher	Higher	Higher	Higher
Pedestrian/Limited Mobility Accessibility (1)	Medium	Higher	Higher	Higher	Higher
Development Potential (1)	Medium	Medium	Medium	Higher	Medium
Equitable Development Opportunities	Lower	Lower	Medium	Medium	Higher
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.					
Historic Properties/Landmarks (2)	1	1	1	1	2
Potential for effects to Archaeological Resources (1)	Lower	Lower	Lower	Lower	Lower
Parks and Recreational Resources Effects (acres)	1.5	3.5	1.5	2.8	0.6
Water Resource Effects (acres)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fish and Wildlife Habitat Effects (acres)	3.7	5.3	3.7	3.7	1.9
Hazardous Materials Sites (1)	11	7	8	14	14
Visual Effects	Lower	Medium	Lower	Medium	Medium
Noise and Vibration Sensitive Receivers (1)	Lower	Lower	Lower	Medium	Lower
Potentially Affected Properties	Higher	Higher			
Residential Unit Displacements	Medium	Lower			
Square Feet of Business Displacements	Higher	Medium			
Construction Impacts	Lower	Higher			
Burden on Low-Income/Minority	Higher	Higher	Higher	Higher	Higher
Traffic Circulation and Access Effects	Lower	Higher	Medium	Higher	Medium
Effects on Existing Transportation Facilities	Lower	Higher	Medium	Medium	Higher
Effects on Freight Movement	Medium	Medium	Medium	Medium	Lower
Business and Commerce Effects	Medium	Higher	Lower	Medium	Medium

Elevated guideway on north side of West Seattle bridge; affects freight, port terminal facilities during construction

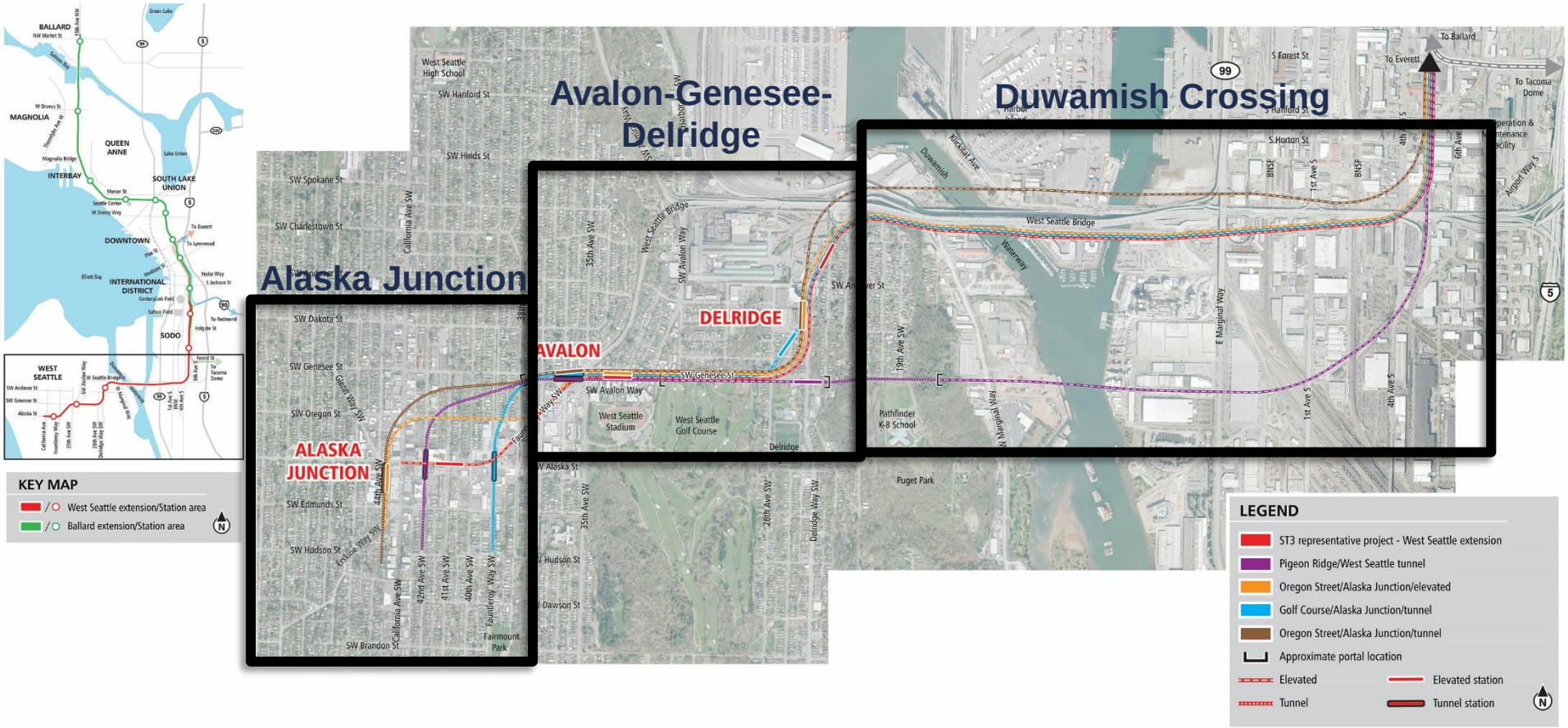
(1) Within station walksheds and/or defined buffer of alignment
(2) On properties that overlap with the project footprint

Lower Performing | Medium Performing | Higher Performing

West Seattle/Duwamish

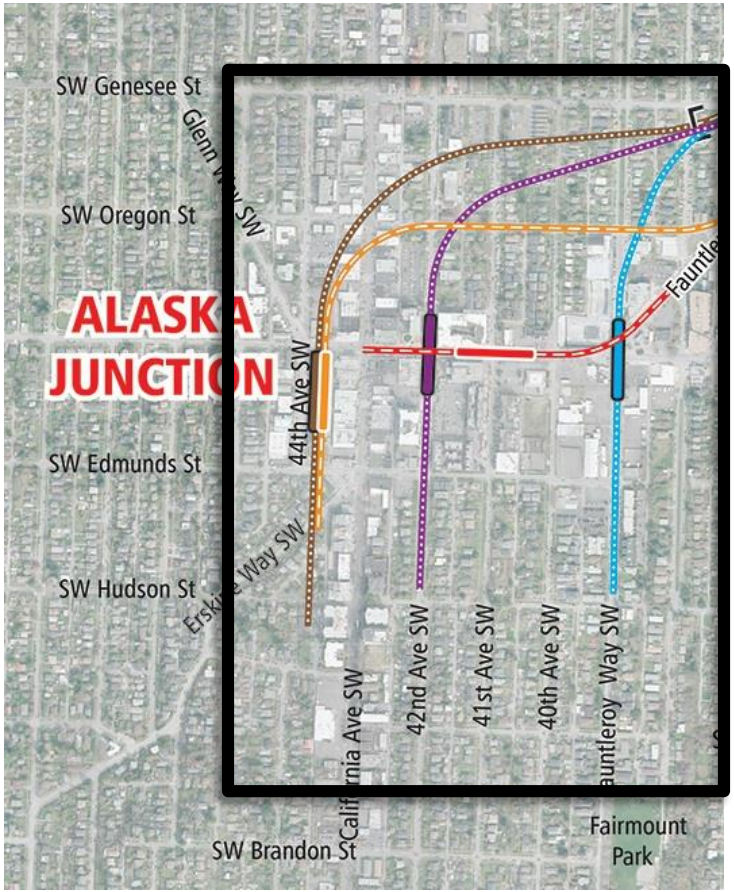
Level 2 alternatives evaluation – *Effects on Freight Movement*

= Key Differentiators



West Seattle/Duwamish

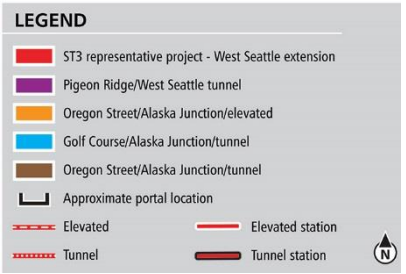
Key differentiators – *By sub-segment*



Alaska Junction:

Key differentiators

- Station location
- Residential/business effects
- Ease of future extension
- Guideway height in Delridge



West Seattle/Duwamish

Key differentiators – *Alaska Junction*

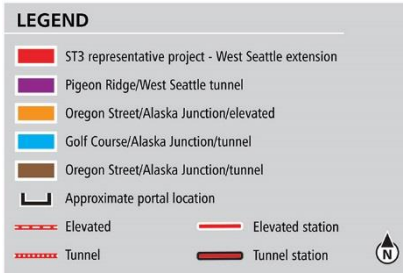
Key differentiators Alaska Junction

Alternative	Key differentiators
ST3 Representative Project	
Pigeon Ridge / West Seattle Tunnel	Tunnel station at 42nd Ave SW Facilitates low guideway in Delridge (along Genesee) Includes tunnel; requires 3rd Party funding
Oregon Street / Alaska Junction / Elevated	Elevated station at 44th Ave SW Increases residential and business effects Complicates future extension south
Golf Course / Alaska Junction / Tunnel	Tunnel station at Fauntleroy Way SW Lessens residential and business effects Facilitates low guideway in Delridge (along Genesee) Includes tunnel; requires 3rd Party funding
Oregon Street / Alaska Junction / Tunnel	Tunnel station at 44th Ave SW; tunnel portal in 37th Ave SW vicinity Includes tunnel; requires 3rd Party funding

Avalon-Genesee-Delridge:

Key differentiators

- Station location
- Residential/business effects
- Guideway height

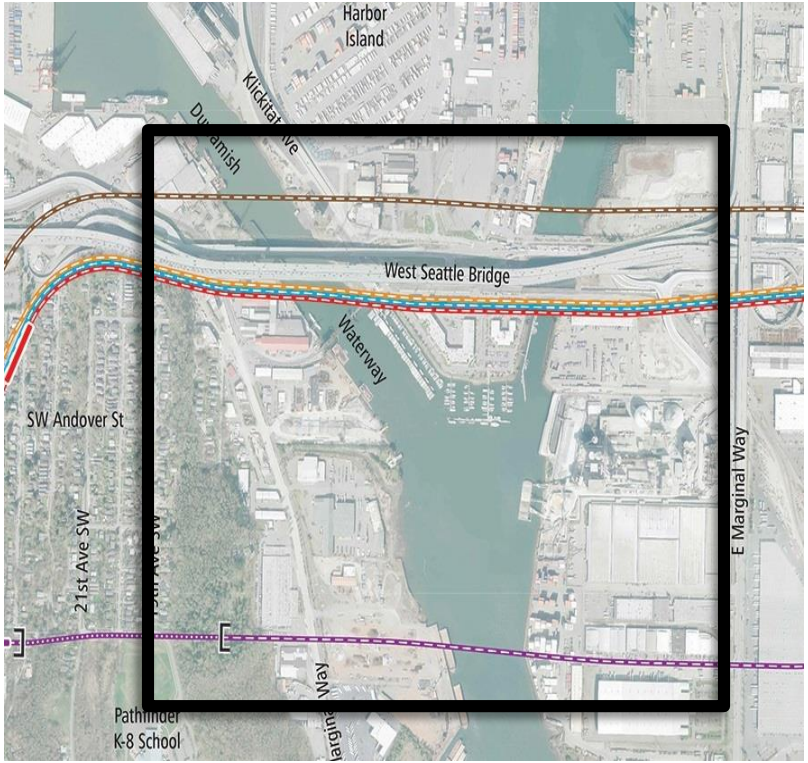


West Seattle/Duwamish

Key differentiators – *Avalon-Genesee-Delridge*

Key differentiators Avalon-Genesee-Delridge

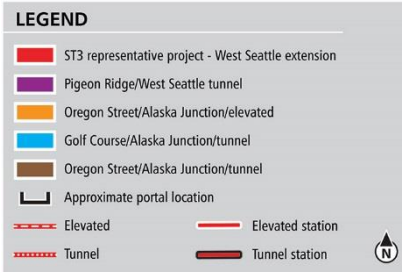
Alternative	Key differentiators
ST3 Representative Project	
Pigeon Ridge / West Seattle Tunnel	Furthest south Delridge station location Lessens residential and business effects in Delridge Low guideway along Genesee; tunnel Avalon station
Oregon Street / Alaska Junction / Elevated	Delridge station south of SW Andover Street High guideway along Genesee; elevated Avalon station
Golf Course / Alaska Junction / Tunnel	Off-street Delridge station west of Delridge Way SW Low guideway along Genesee; tunnel Avalon station
Oregon Street / Alaska Junction / Tunnel	Delridge station south of SW Andover Street High guideway along Genesee; elevated Avalon station



Duwamish Crossing:

Key differentiators

- Crossing location
- Engineering constraints
- Fish and wildlife effects
- Freight movement



West Seattle/Duwamish

Key differentiators – *Duwamish Crossing*

Key differentiators Duwamish Crossing

Alternative	Key differentiators
ST3 Representative Project	
Pigeon Ridge / West Seattle Tunnel	Bridge crossing near Idaho Street; south of Harbor Island Most engineering constraints (tunnel through unstable slopes, widest water crossing, wide Union Pacific Argo railyard crossing, high voltage lines etc.) Most effects to Duwamish Greenbelt
Oregon Street / Alaska Junction / Elevated	Bridge crossing on south side of West Seattle bridge Some engineering constraints (Pigeon Point steep slope) Some effects to Duwamish Greenbelt (Pigeon Point)
Golf Course / Alaska Junction / Tunnel	
Oregon Street / Alaska Junction / Tunnel	Bridge crossing on north side of West Seattle bridge Fewer engineering constraints (avoids Pigeon Point steep slope) Avoids effects to Duwamish Greenbelt Affects freight, port terminal facilities during construction

Summary West Seattle / Duwamish

Alternative	Key findings	Cost comparison*	Schedule comparison*
ST3 Representative Project			
Oregon Street / Alaska Junction / Elevated	• 3 elevated stations • Increases residential/business effects at Junction • Complicates future extension south • High guideway along Genesee	Similar	Higher Performing
Oregon Street / Alaska Junction / Tunnel	• 1 tunnel station; 2 elevated stations • High guideway along Genesee • Fewer engineering constraints • Affects freight, port terminal facilities during construction • Includes tunnel; requires 3rd Party funding	+ $500M	Lower Performing
Golf Course / Alaska Junction / Tunnel	• 2 tunnel stations; 1 elevated station • Lessens residential/business effects at Junction • Low guideway along Genesee • Includes tunnel; requires 3rd Party funding	+ $700M	Lower Performing
Pigeon Ridge / West Seattle Tunnel	• 2 tunnels; 2 tunnel stations; 1 elevated station • Most engineering constraints • Most effects to Duwamish Greenbelt • Low guideway along Genesee • Lessens residential and business effects in Delridge • Includes two tunnels; requires 3rd Party funding	+ $1,200M	Lower Performing

*Cost compared to cost of ST3 Representative Project for this segment. Schedule compared to overall ST3 schedule for this extension.

Station Charrette Feedback* Delridge Station

Center Delridge Elevated

- Not further developed in charrette
- Farthest from community center and amenities
- Challenging for transit integration
- Challenging non-motorized access and wayfinding
- Limited TOD potential

W Side Delridge Elevated

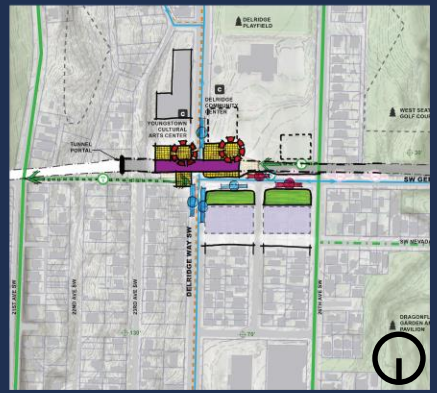
- Concerns about station height and bulk, compatibility with neighborhood
- Good transit integration, but would require access enhancements to east
- Good non-motorized access
- Some TOD potential

25th Avenue S Elevated

- Lower guideway and station could be more compatible with neighborhood
- Close to community center and amenities
- Good transit integration, but would require wayfinding and access enhancements
- Considerable potential for TOD in partnership

Genesee Elevated

- Lower guideway and station more compatible with neighborhood
- Directly serves community center and amenities, but affects skate park
- Excellent transit integration and non-motorized access
- Limited TOD potential



*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Station Charrette Feedback* Avalon Station

South Side Genesee
Elevated

- Concern about station height and bulk, compatibility with neighborhood
- Concerns about potential traffic queuing lengths and intersection safety
- Challenging transit integration
- Limited non-motorized access; concerns about pedestrian and cyclist safety
- Limited TOD potential

Fauntleroy Span
Elevated and Cut and Cover

- Concern about elevated station height and bulk, compatibility with neighborhood, but potential for gateway expression
- Concerns about potential traffic queuing lengths and intersection safety
- Challenging transit integration
- Good non-motorized access by siting entries on both sides of Fauntleroy
- Some TOD potential

*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Station Charrette Feedback* Alaska Junction Station

SW Alaska St Elevated

- Not explored further in charrette
- Concern about station height and bulk, compatibility with neighborhood
- Good transit integration and non-motorized access
- Some TOD potential

44th Ave SW Elevated or Tunnel

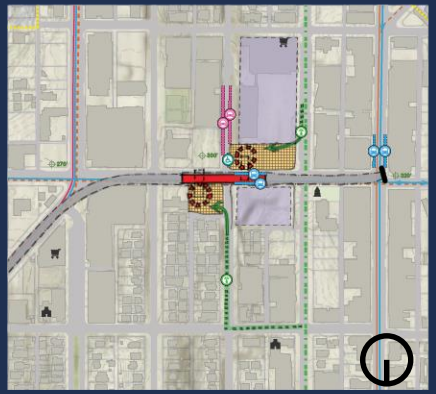
- Concern about effects to neighborhood character if elevated
- Permanent effects to business parking likely
- Excellent transit integration
- Good non-motorized access
- Limited TOD potential

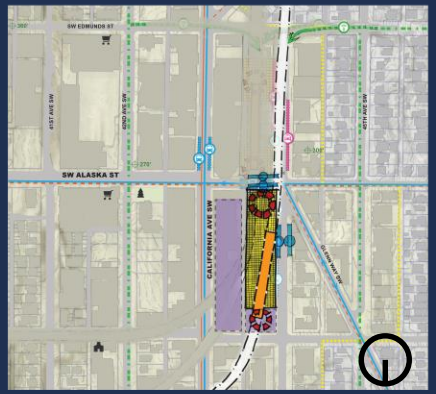
42nd/41st Ave SW Tunnel

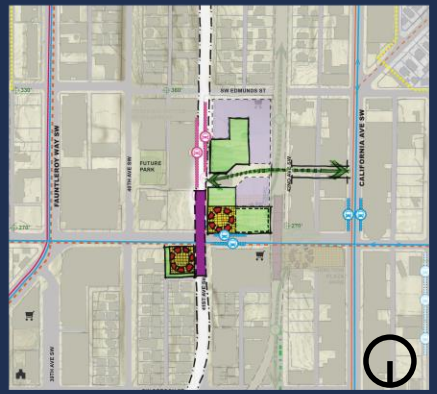
- Most compatible with neighborhood character
- Great urban design potential
- Opportunities for enhanced public realm
- Excellent transit integration and non-motorized access
- Considerable TOD potential

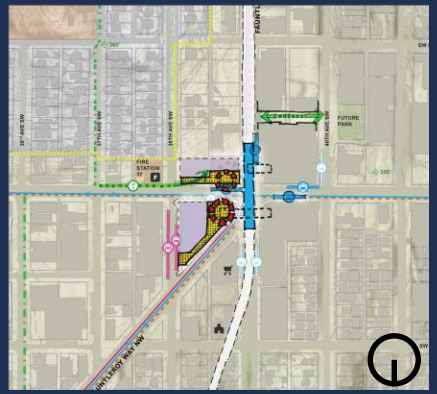
Fauntleroy Way SW Tunnel

- More distant from heart of business district, but closer to new development areas and amenities
- Somewhat challenging for transit integration
- Good non-motorized access
- Some TOD potential





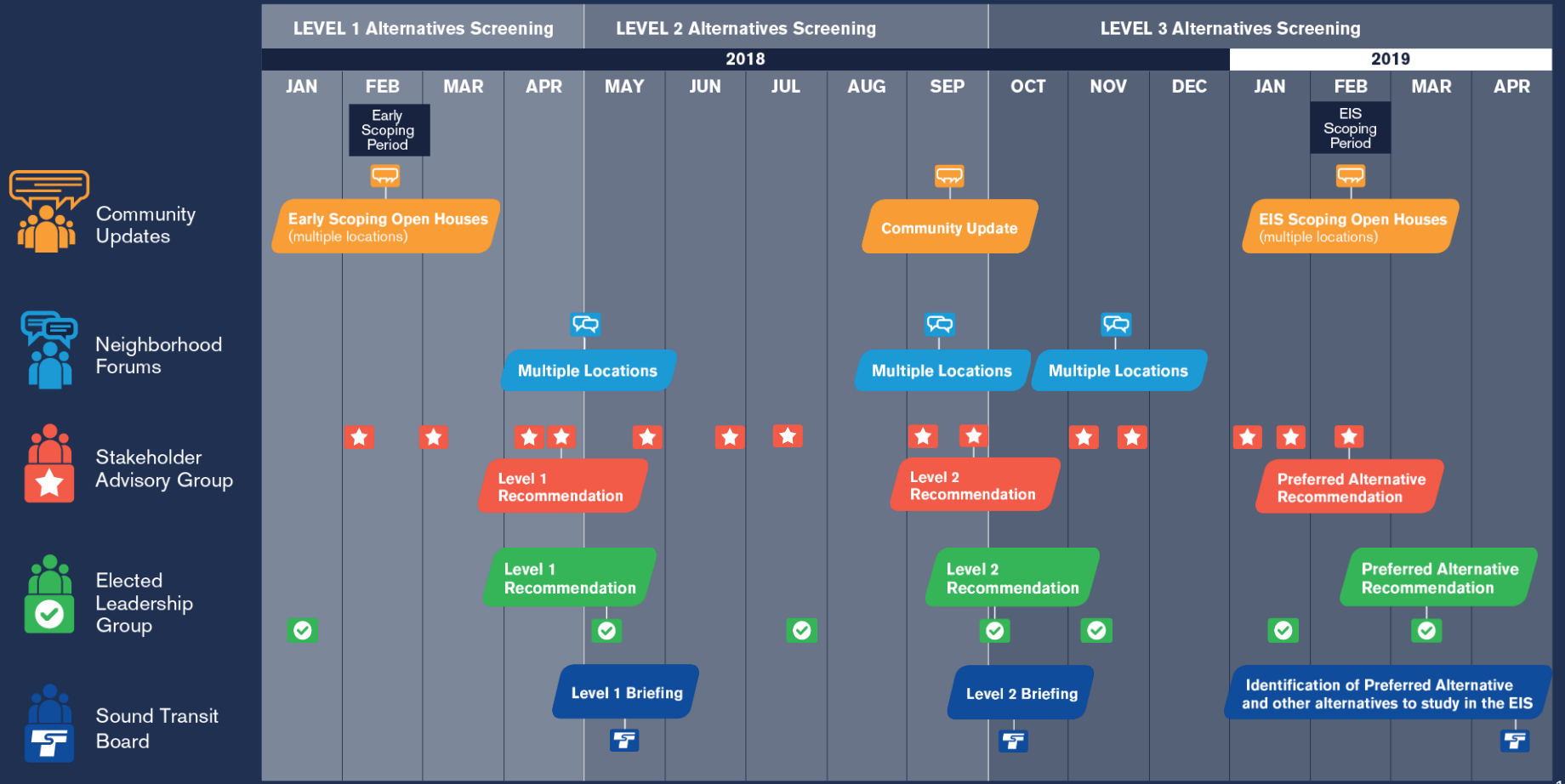




*Summary of feedback from agency and community stakeholders. Images are illustrative only.

Next steps

Community engagement and collaboration



Meeting dates subject to change.

Next steps

SAG Meeting #8	Sep 5	Level 2 evaluation results
Neighborhood Forum/Open House West Seattle	Sep 8	Level 2 evaluation results
Neighborhood Forum/Open House Downtown	Sep 11	Level 2 evaluation results
Neighborhood Forum/Open House Ballard	Sep 17	Level 2 evaluation results
SAG Meeting #9	Sep 26	Level 2 recommendations
ELG Meeting #4	Oct 5	Level 2 recommendations


soundtransit.org/wsblink
SoundTransit