

West Seattle and Ballard Link Extensions

Further Studies

Key findings and community feedback

Seattle Design Commission

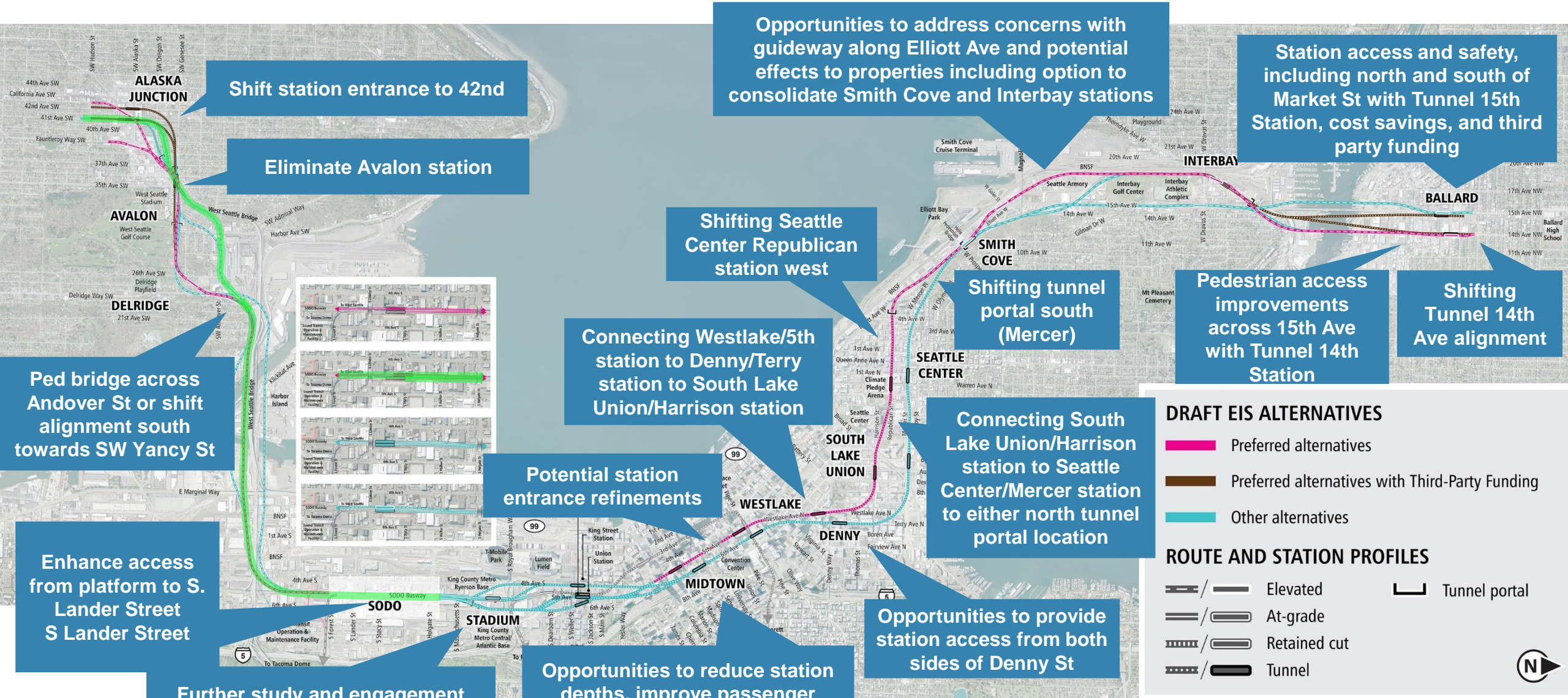
3/2/2023



Motion No. M2022-57

Confirms or modifies the preferred light rail route and station locations for the West Seattle and Ballard Link Extensions Final Environmental Impact Statement and requesting **further studies in some areas** to inform potential additional future Board action to confirm or modify the Preferred Alternative.

Areas of Further Study



Further studies corridor-wide engagement

July 28, 2022 – Feb. 17, 2023



12 open houses / workshops



17 email updates engaging more than **11K+** subscribers



4 online surveys with more than 2,000 responses



8 posts on social media platforms, with 783K+ impressions



100+ community briefings, tours, property owner meetings



200 businesses engaged through door-to-door outreach



6 fairs, festivals and other tabling events



180 residents engaged through in-language forums

***Chinatown-International District
(CID) Further Studies and
Community Feedback***



DRAFT EIS ALTERNATIVES

- Other alternatives
- Existing Link

ROUTE AND STATION PROFILES

- At-grade
- Retained cut
- Tunnel
- Tunnel portal

CID Further Studies Focus

Based on the Board Motion, the following study elements guided the further studies in CID:

- Seek to address remaining questions, minimize potential impacts, and maximize community benefits
- Explore how to create an integrated, well-connected hub for all modes, opportunities to enhance ridership and access, activate or modify use of Union Station and plaza, as well as funding and cost savings opportunities
- Include study concepts requested by community and agency partners, including but not limited to work to define a 4th Avenue shallow tunnel option with the goal to maximize benefits while minimizing costs and impacts

CID Engagement Snapshot

Engagement activities, 7/28/22 - 2/17/23

- Workshops & open houses = 6
- Community briefings & meetings = 35+
- Online surveys = 3
- Door to door outreach = 100+ businesses
- In-language residential and business forums = 5
- Survey responses = 650+

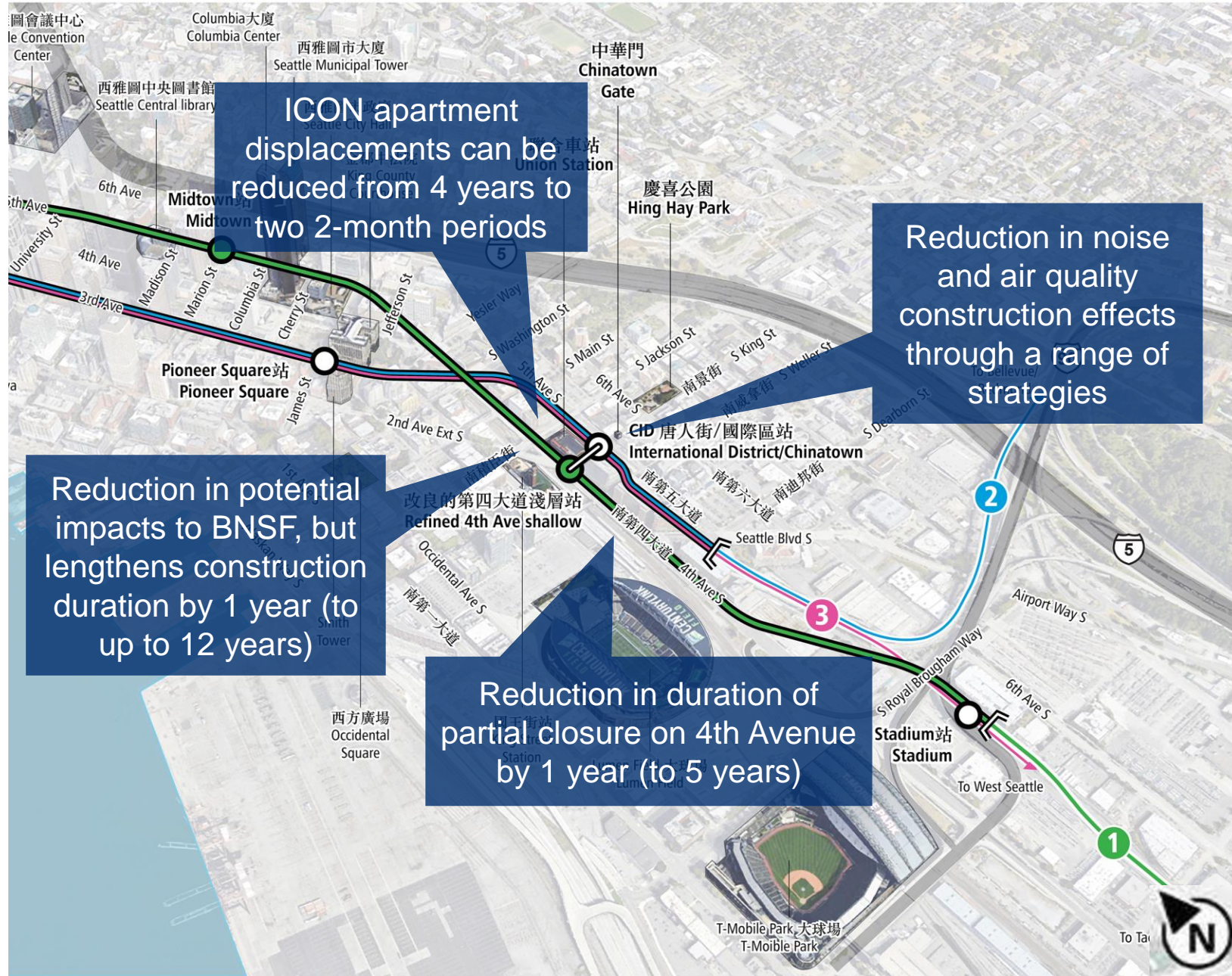


Refinements to 4th Ave Shallow (CID-1a)

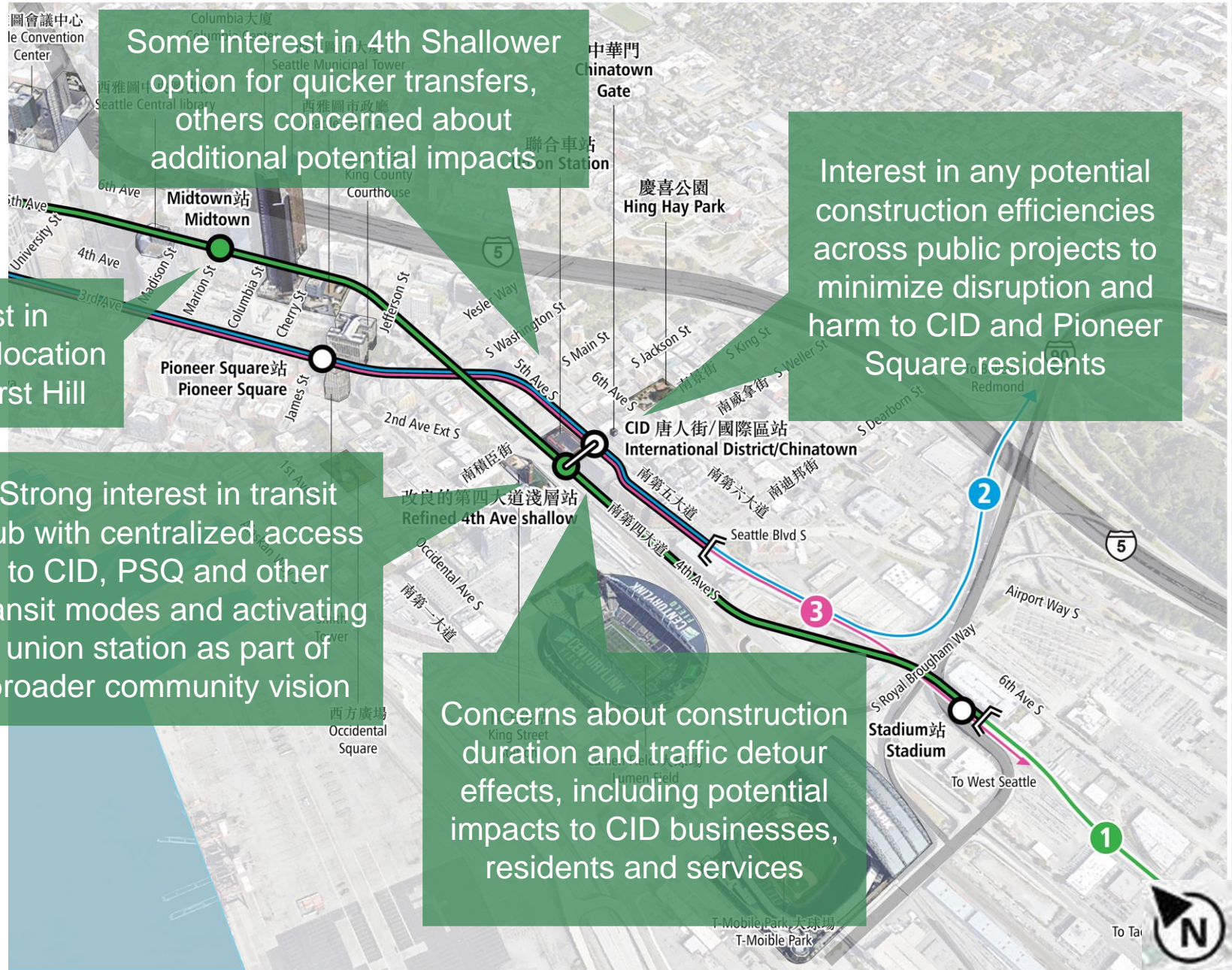
Maximize community benefits while minimizing costs and impacts

Cost (Pike to Holgate): \$3.1 billion

Cost delta compared to realigned financial plan: +\$700 million



Refinements to 4th Ave Shallow (CID-1a)



Station North of CID

Other ideas from community and agency partners



Cost (Pike to Holgate): **\$2.05 billion**
Cost delta compared to realigned financial plan: **-\$360 million**

Station North of CID

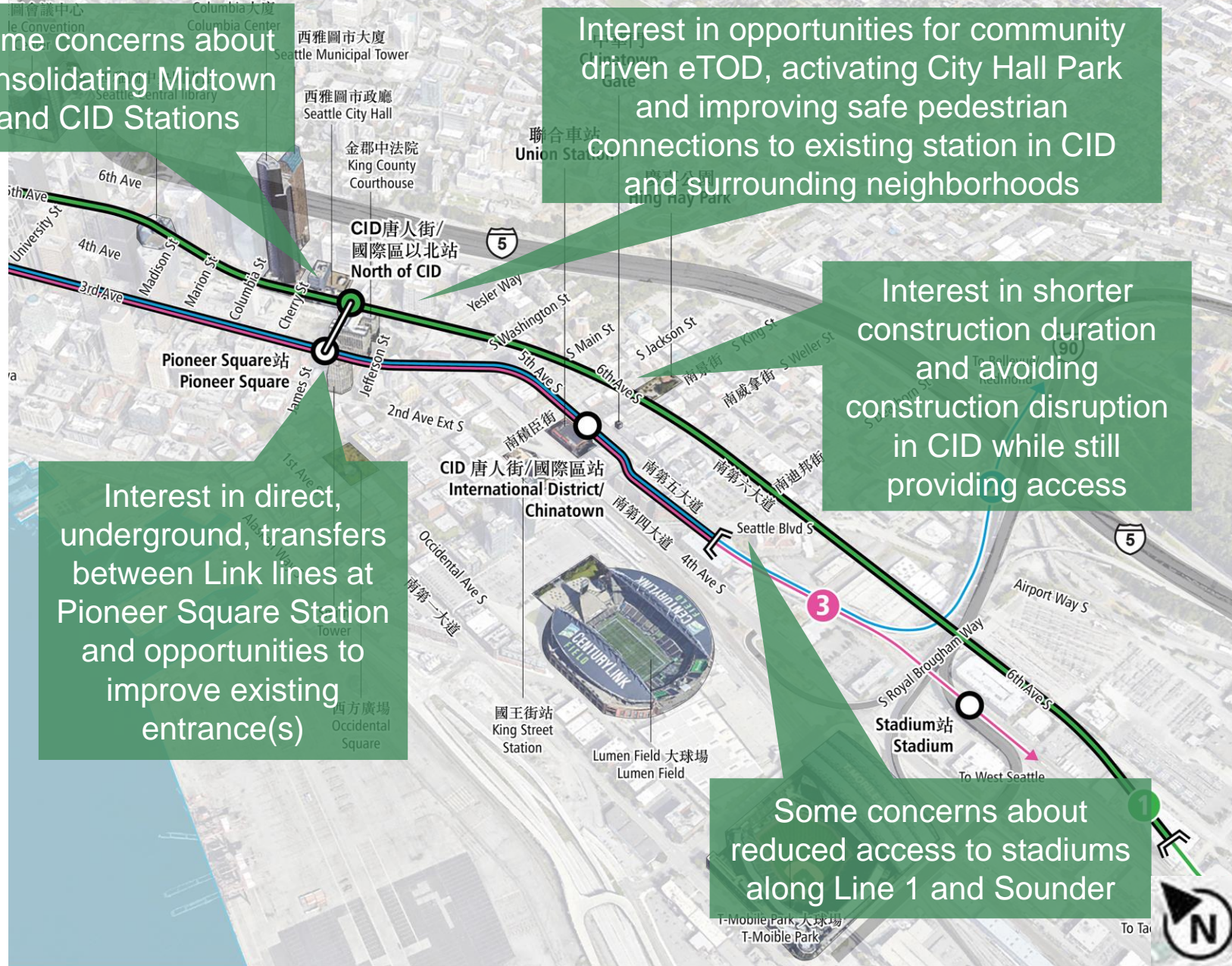
Some concerns about consolidating Midtown and CID Stations

Interest in opportunities for community driven eTOD, activating City Hall Park and improving safe pedestrian connections to existing station in CID and surrounding neighborhoods

Interest in shorter construction duration and avoiding construction disruption in CID while still providing access

Interest in direct, underground, transfers between Link lines at Pioneer Square Station and opportunities to improve existing entrance(s)

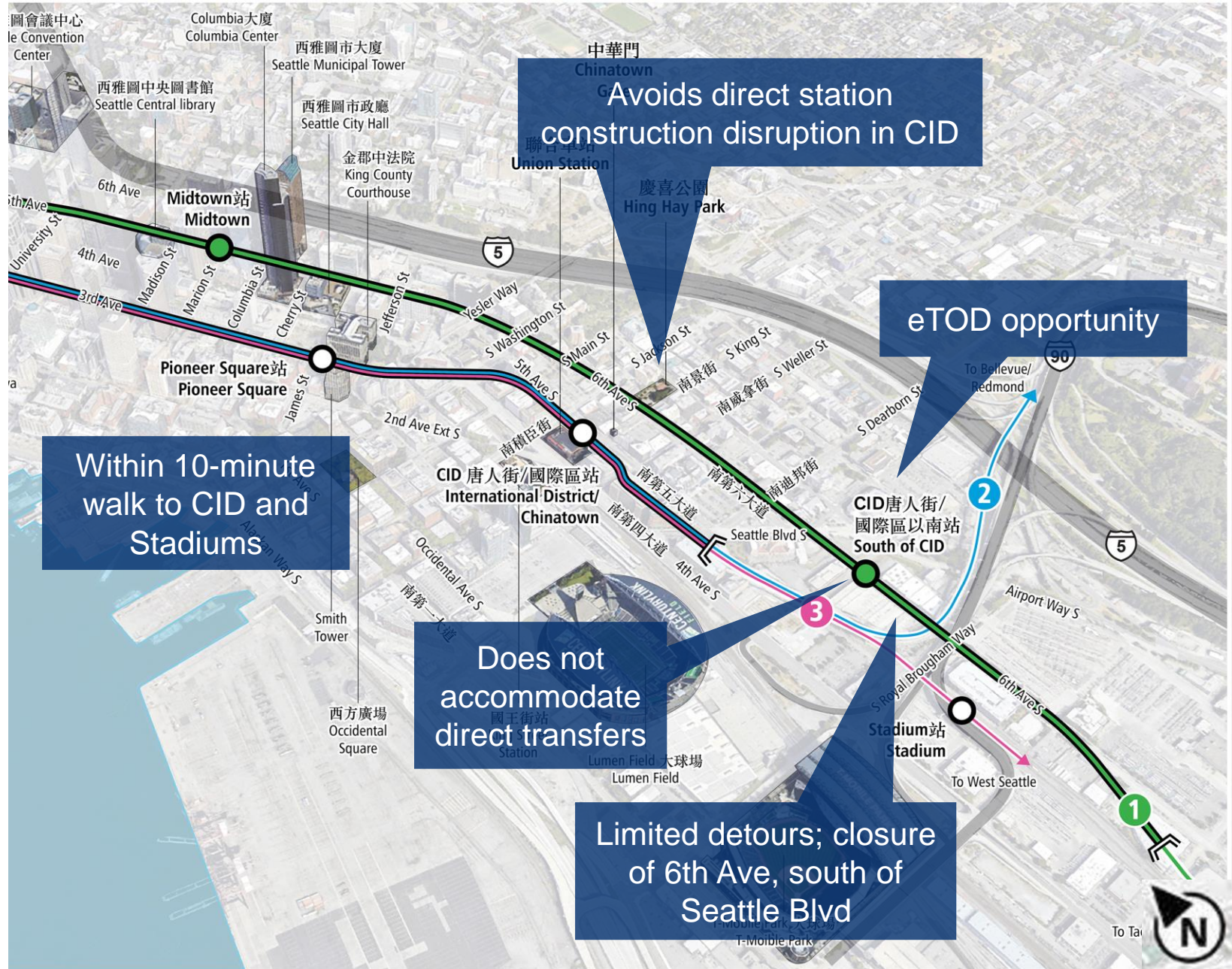
Some concerns about reduced access to stadiums along Line 1 and Sounder



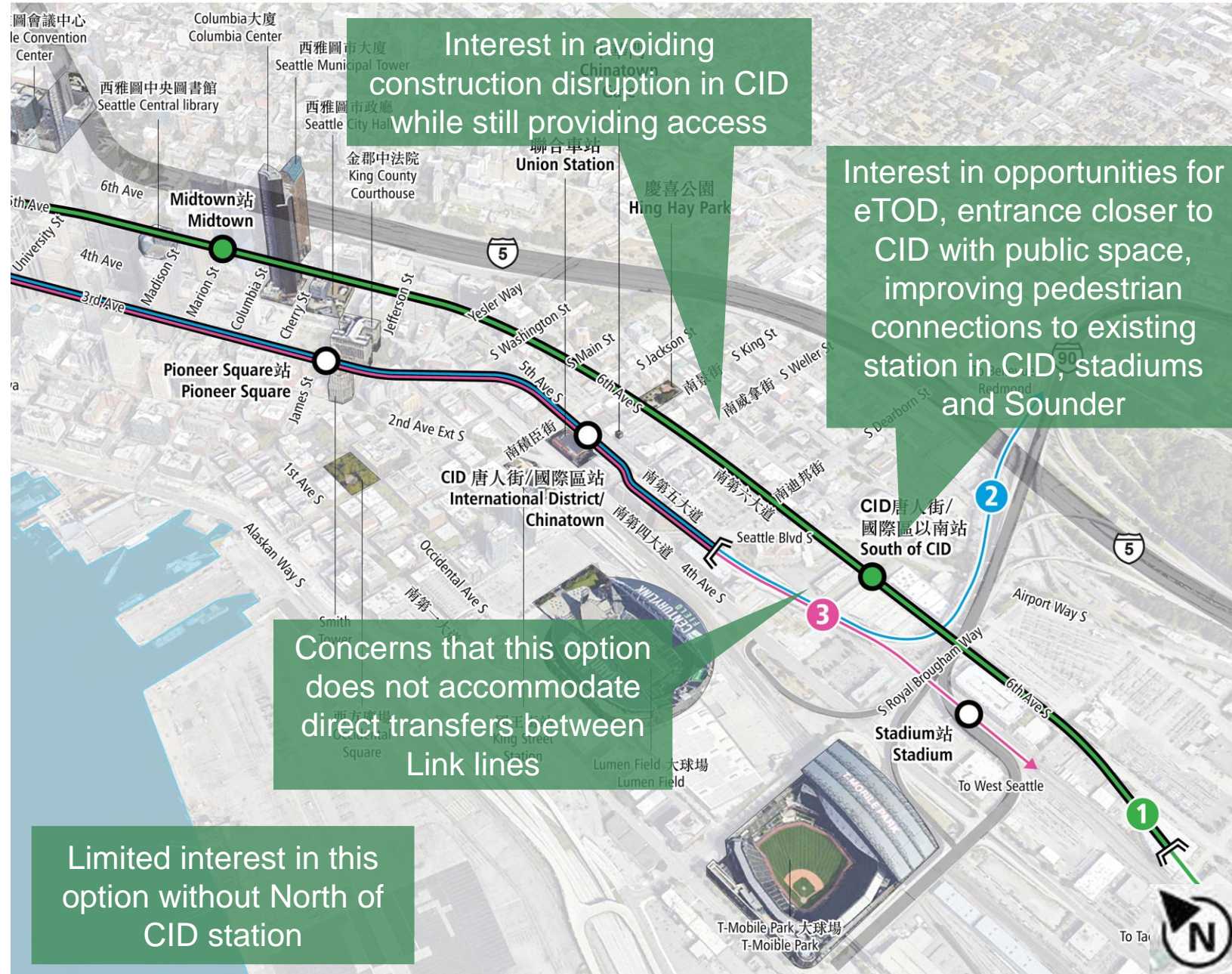
Station South of CID

Other ideas from community and agency partners

Cost (Pike to Holgate): **\$2.5 billion**
Cost delta compared to realigned financial plan: **+\$80 million**

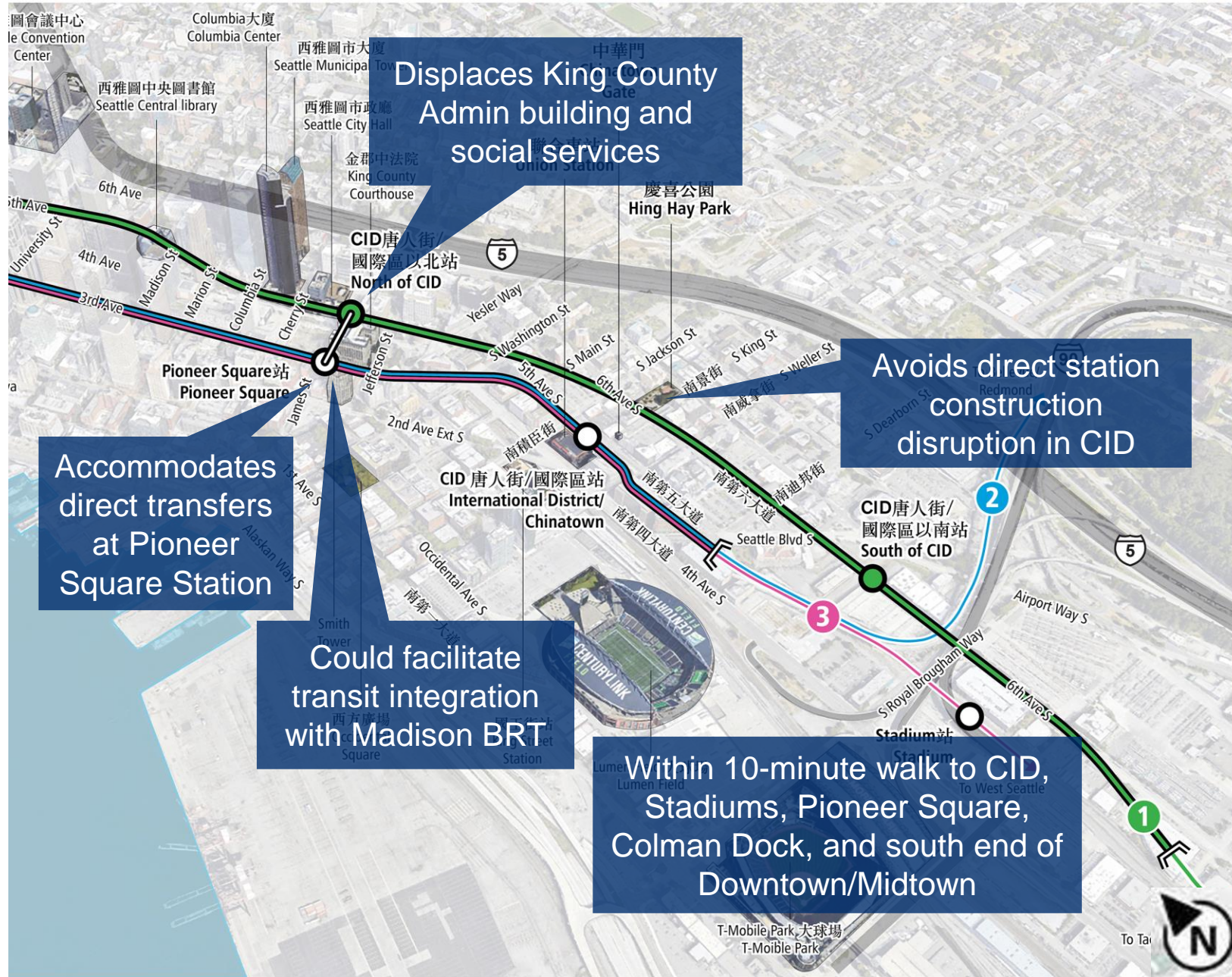


Station South of CID



Station North of CID and Station South of CID

Other ideas from community and agency partners

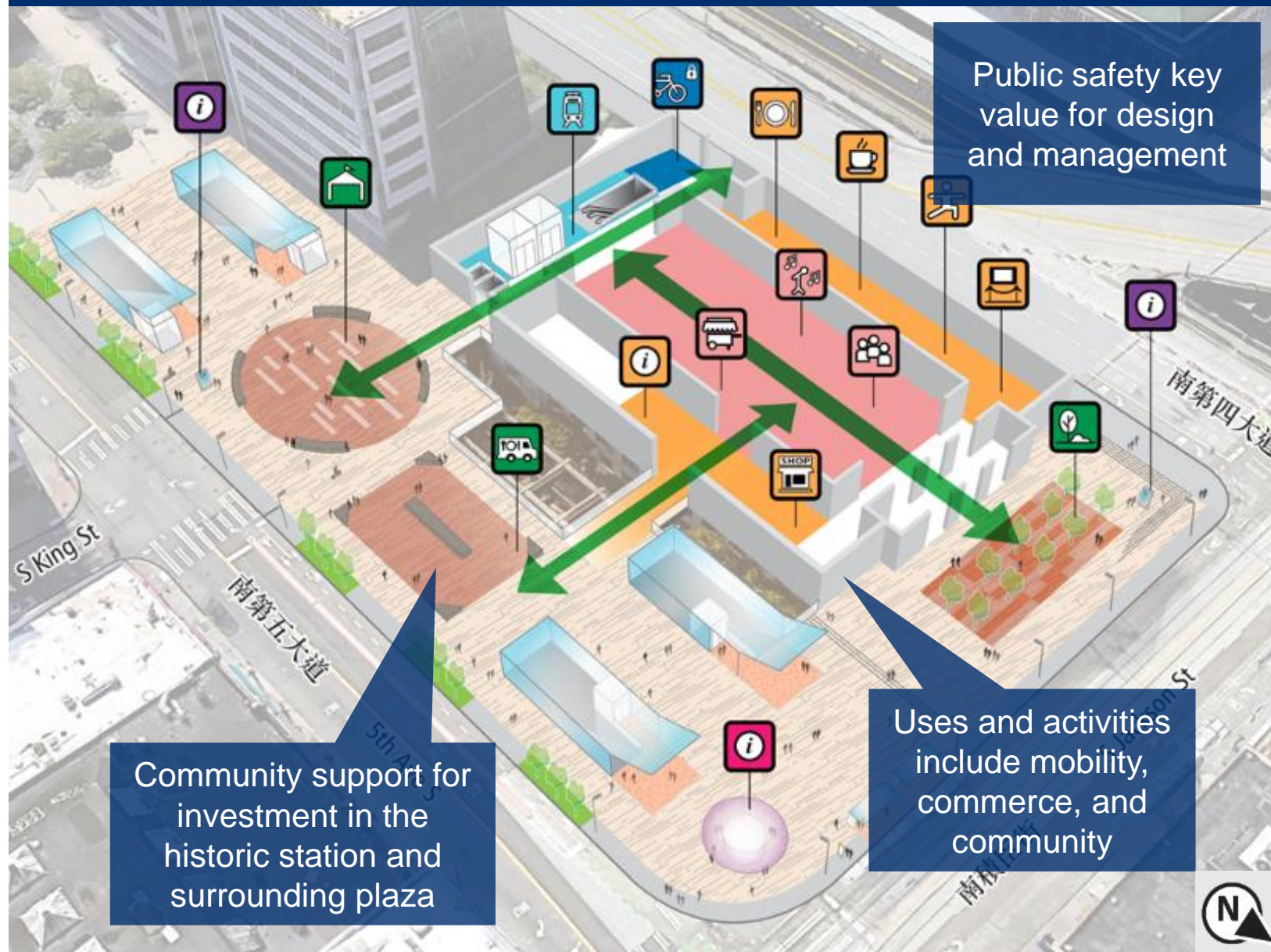


Cost (Pike to Holgate): **\$2.55 billion**
 Cost delta compared to realigned financial plan: **+\$160 million**

Potential Activation Concept

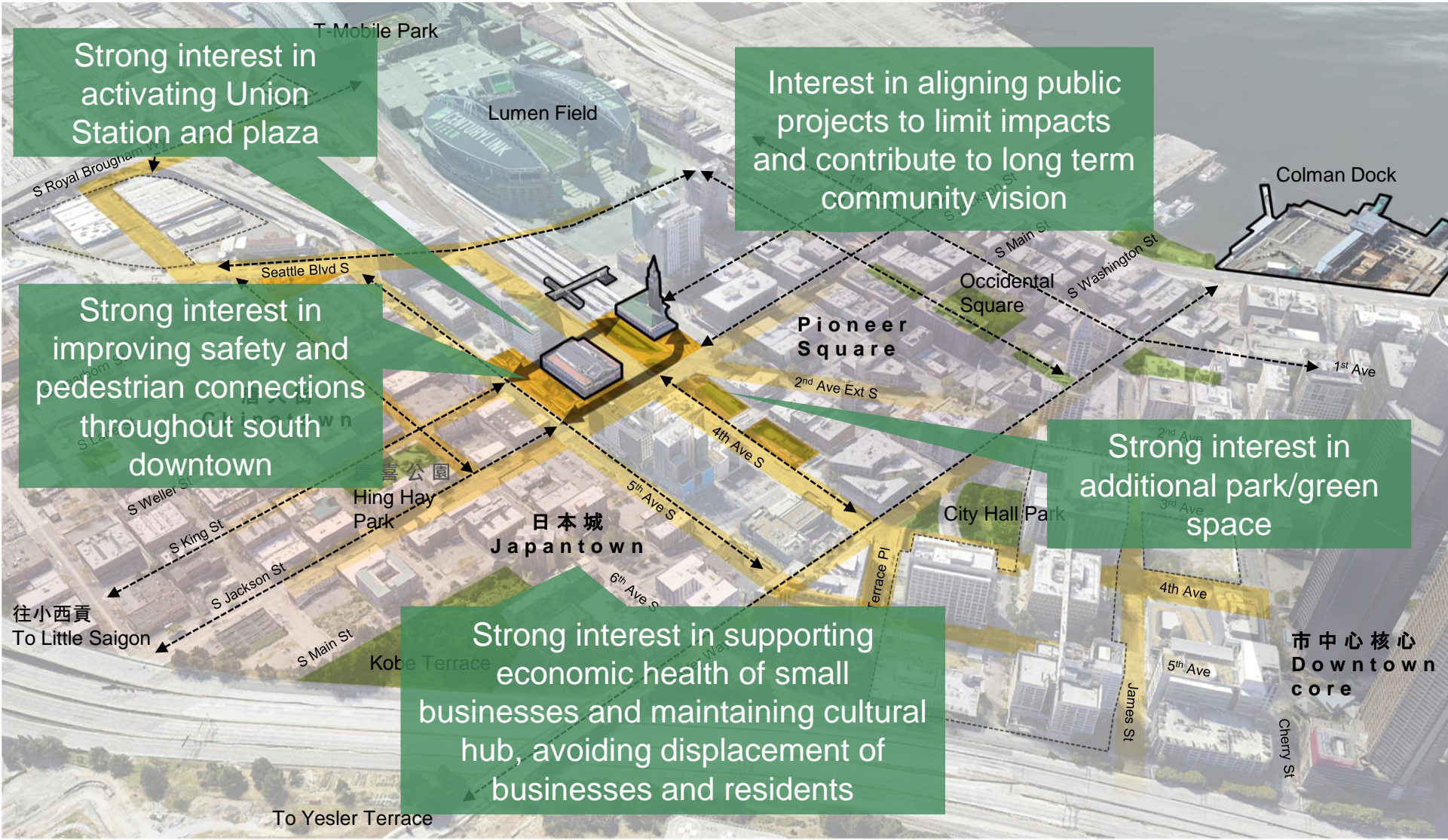
Union Station Activation

*Activate and/or
modify uses of
Union Station and
the adjacent plaza*










Historic station hub and neighborhood connections

Additional community feedback










	公共廣場 (現有的和潛在的) Public plaza (existing and potential)
	步行街 (現有的和潛在的) Pedestrian-focused street (existing and potential)
	公共公園 Public park
	計劃的未來發展 Planned future development
	重點步行路線 Key walking route

CID: Results comparison

	Refined 4th Avenue Shallow Station (CID-1a)	Station North of CID Only	Station North of CID and Station South of CID
Feasibility 	<ul style="list-style-type: none"> Construction and schedule risk 	-	-
Passenger Experience 	<ul style="list-style-type: none"> Shallow CID (80') and deep Midtown station (195-205') 3.2 min transfer time btw Link 	<ul style="list-style-type: none"> Shallower station (80-105') 3.3 min transfer time btw Link* Fully below-grade Link transfer Adds transfer btw 1 Line and Sounder 	<ul style="list-style-type: none"> Shallower stations (80-115') 3.3 min transfer time btw Link* Fully below-grade Link transfer Adds transfer btw 1 Line and Sounder
Ridership, Access, eTOD Potential 	<ul style="list-style-type: none"> No expected change in ridership Link light rail closure (6 to 7 weeks) 	<ul style="list-style-type: none"> Small reduction in ridership eTOD potential north of CID 	<ul style="list-style-type: none"> Small reduction in ridership eTOD potential north and south of CID
Future Expansion 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude
Environmental 	<ul style="list-style-type: none"> Construction duration of 10-12 years Full closure of major traffic spine 4th Ave S for 4 years plus partial closure for 5 years Reduces displacement of ICON apartments (to two 2-month periods) 	<ul style="list-style-type: none"> Construction duration of 6-7 years Full closure of James St for 4 years Displacement of KC Admin building and social service providers 	<ul style="list-style-type: none"> Construction duration of 6-7 years Full closure of James St for 4 years and closure of 6th Ave S (south of Seattle Blvd) for 5-6 years Displacement of KC Admin building and social service providers
Equity 	<ul style="list-style-type: none"> Centralized access to CID, PSQ, and transit modes 4th Ave S traffic detour effects 	<ul style="list-style-type: none"> Avoids direct station construction disruption and traffic detours in CID 	<ul style="list-style-type: none"> Avoids direct station construction disruption and traffic detours in CID
Cost  compared to realigned financial plan in \$2019 (Pike to Holgate)	+\$700M	-\$360M	+\$160M

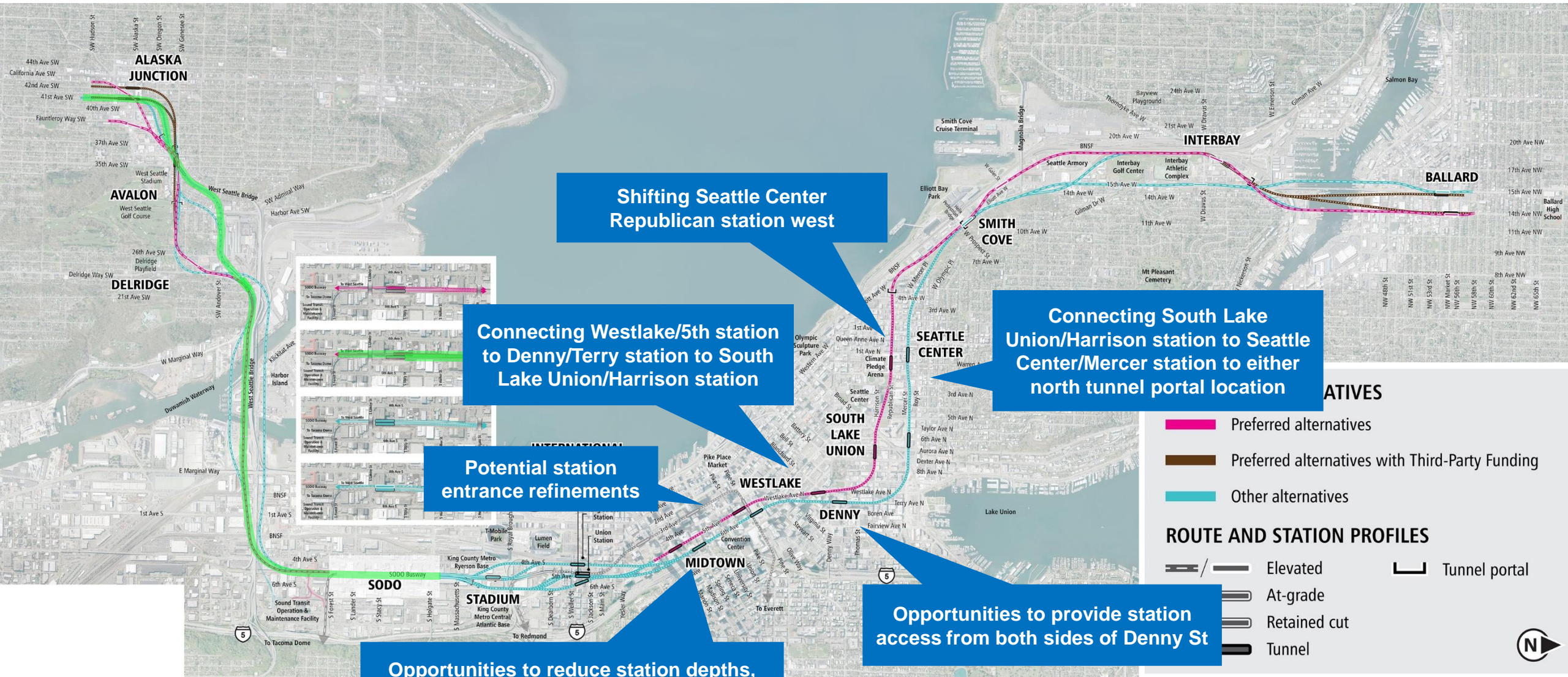
CID: Results comparison

	Refined 4th Avenue Shallow Station (CID-1a)	4th Avenue Shallower Station	Station North of CID and Station South of CID
Feasibility 	<ul style="list-style-type: none"> Construction and schedule risk 	<ul style="list-style-type: none"> In addition to impacts of CID-1a, added risk to DSTT and BNSF 	-
Passenger Experience 	<ul style="list-style-type: none"> Shallow CID (80') and deep Midtown station (195-205') 3.2 min transfer time btw Link 	<ul style="list-style-type: none"> Shallower CID (40-45') and Midtown stations (140-145') 2.5 min transfer time btw Link 	<ul style="list-style-type: none"> Shallower stations (80-115') 3.3 min transfer time btw Link* Fully below-grade Link transfer Adds transfer btw 1 Line and Sounder
Ridership, Access, eTOD Potential 	<ul style="list-style-type: none"> No expected change in ridership Link light rail closure (6 to 7 weeks) 	<ul style="list-style-type: none"> No expected change in ridership eTOD potential north of CID Link light rail closure (6 to 7 weeks) 	<ul style="list-style-type: none"> Small reduction in ridership eTOD potential north and south of CID
Future Expansion 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude
Environmental 	<ul style="list-style-type: none"> Construction duration of 10-12 years Full closure of major traffic spine 4th Ave S for 4 years plus partial closure for 5 years Reduces displacement of ICON apartments (to two 2-month periods) 	<p>In addition to impacts of CID-1a:</p> <ul style="list-style-type: none"> Extends 4th Ave S closure further north Adds closures of Yesler Way and Washington St for two years Adds reconstruction of Yesler Bridge Adds displacement of KC Admin building and social service providers 	<ul style="list-style-type: none"> Construction duration of 6-7 years Full closure of James St for 4 years and closure of 6th Ave S (south of Seattle Blvd) for 5-6 years Displacement of KC Admin building and social service providers
Equity 	<ul style="list-style-type: none"> Centralized access to CID, PSQ, and transit modes 4th Ave S traffic detour effects 	<ul style="list-style-type: none"> Centralized access to CID, PSQ, and transit modes 4th Ave S traffic detour effects 	<ul style="list-style-type: none"> Avoids direct station construction disruption and traffic detours in CID
Cost compared to realigned financial plan in \$2019 (Pike to Holgate) 	+\$700M	+\$800M	+\$160M

*Note: Does not include out-of-direction travel for passengers transferring between the 2 Line from areas to the east and areas south on the 1 Line

***Downtown
Further Studies and
Community Feedback***

Ballard Link Extension: Further studies – Downtown



Shifting Seattle Center Republican station west

Connecting Westlake/5th station to Denny/Terry station to South Lake Union/Harrison station

Connecting South Lake Union/Harrison station to Seattle Center/Mercer station to either north tunnel portal location

Potential station entrance refinements

Opportunities to provide station access from both sides of Denny St

Opportunities to reduce station depths, improve passenger access and experience and refine Midtown station entrance

- ALTERNATIVES**
- Preferred alternatives
 - Preferred alternatives with Third-Party Funding
 - Other alternatives

- ROUTE AND STATION PROFILES**
- Elevated
 - At-grade
 - Retained cut
 - Tunnel
 - Tunnel portal

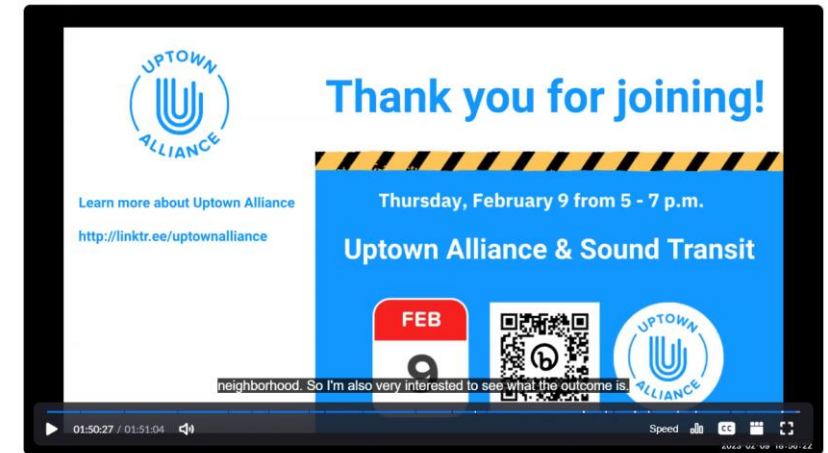
Downtown Engagement Snapshot

Engagement activities, 7/28/22 - 2/17/23

- Community briefings & meetings = 25+
- Workshops & open houses = 5
- Online surveys = 1
- Door to door outreach = 85+ businesses
- Survey responses = 265

zoom

February 9th - Sound Transit and Uptown Allian...



Seattle Center Orgs 2022 -23 Engagement

Draft EIS publication & further study period

Date	Briefing/Workshop
Feb 16	Draft EIS Results: Overview and Station Planning
Mar 18	Draft EIS Deep Dive: Construction focus
Apr 8	Reflections and Potential Refinements
July 2022: ST Board requested further studies for Ballard Link Extension	
Oct 7	Board direction, Mercer, and further study effort
Nov 4	Mx and Match, Republican West Further Studies
Dec 7	Construction Methods and Access
Jan 23	Republican West, North Portal & Further Studies Summary
→ Feb 23	Traffic and Access During Construction
February/March 2023: Status Report to ST Board on Areas of Further Study	

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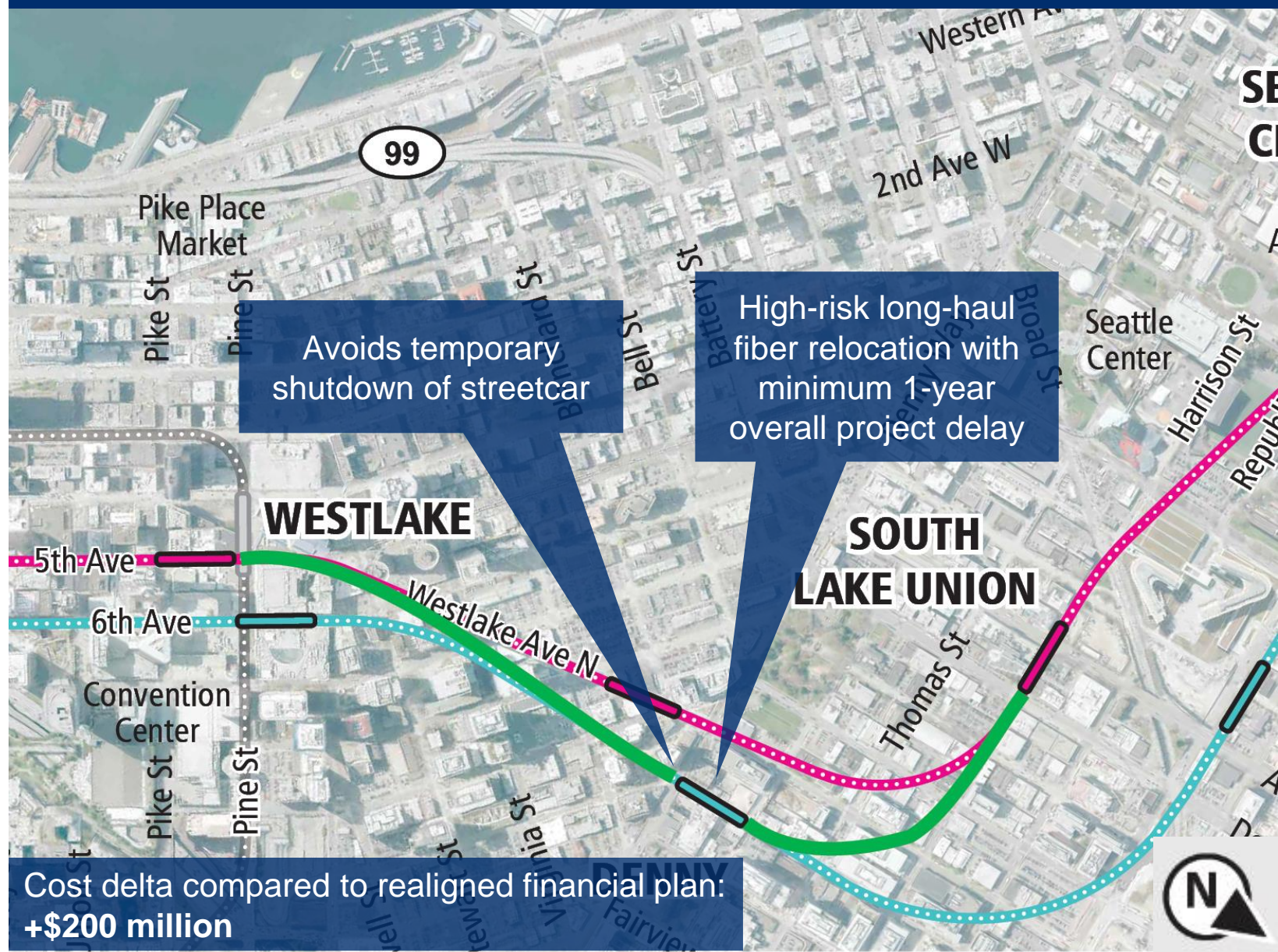
SOUNDTRANSIT

South Lake Union: Mix-and-Match

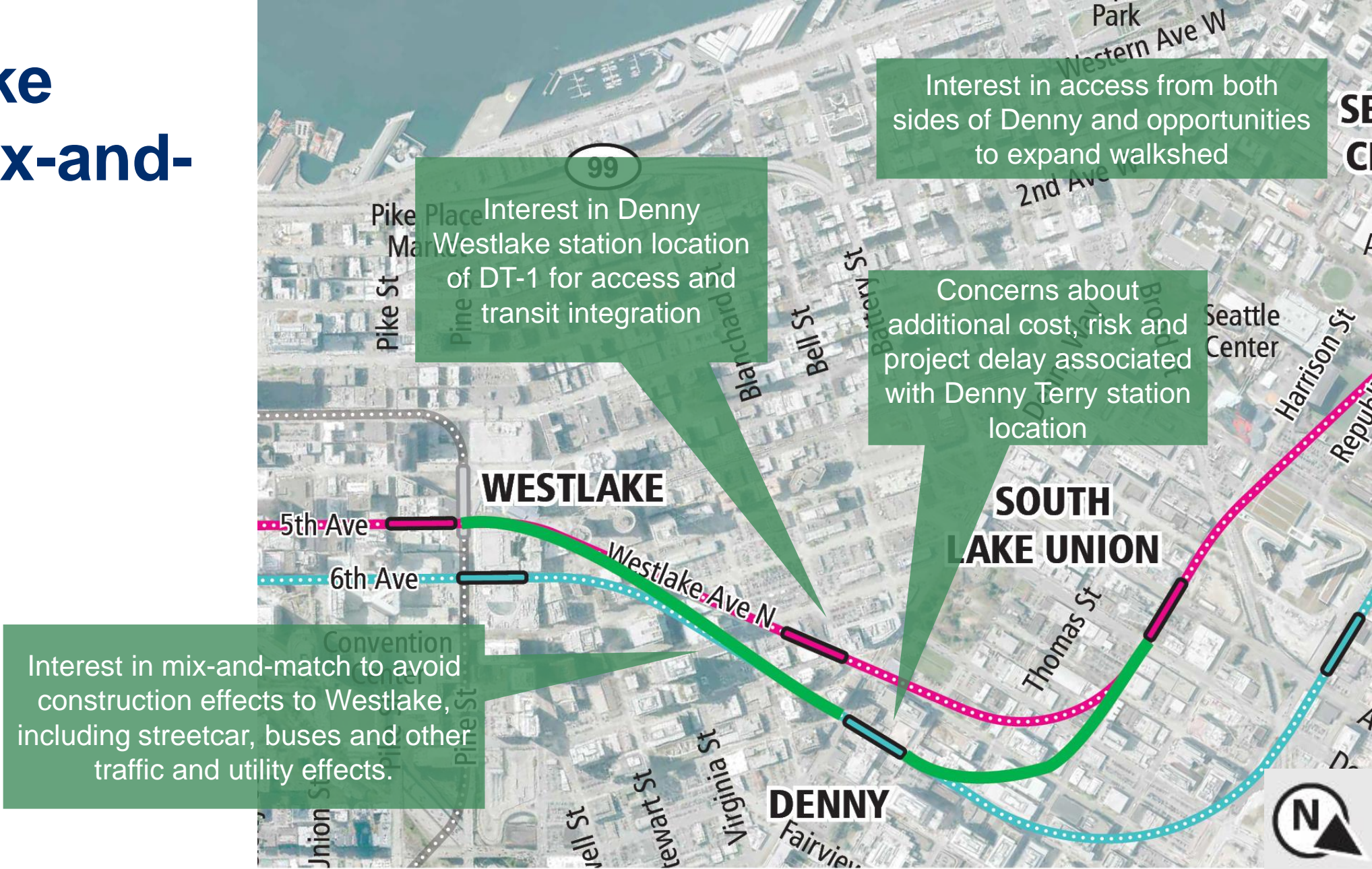
Connecting Westlake/5th station to Denny/Terry station to South Lake Union/Harrison station

Study focus:
Feasibility of mix-and-match








Compared to Preferred 5th / Harrison Alternative (DT-1)



South Lake Union: Mix-and-Match



South Lake Union: Results comparison

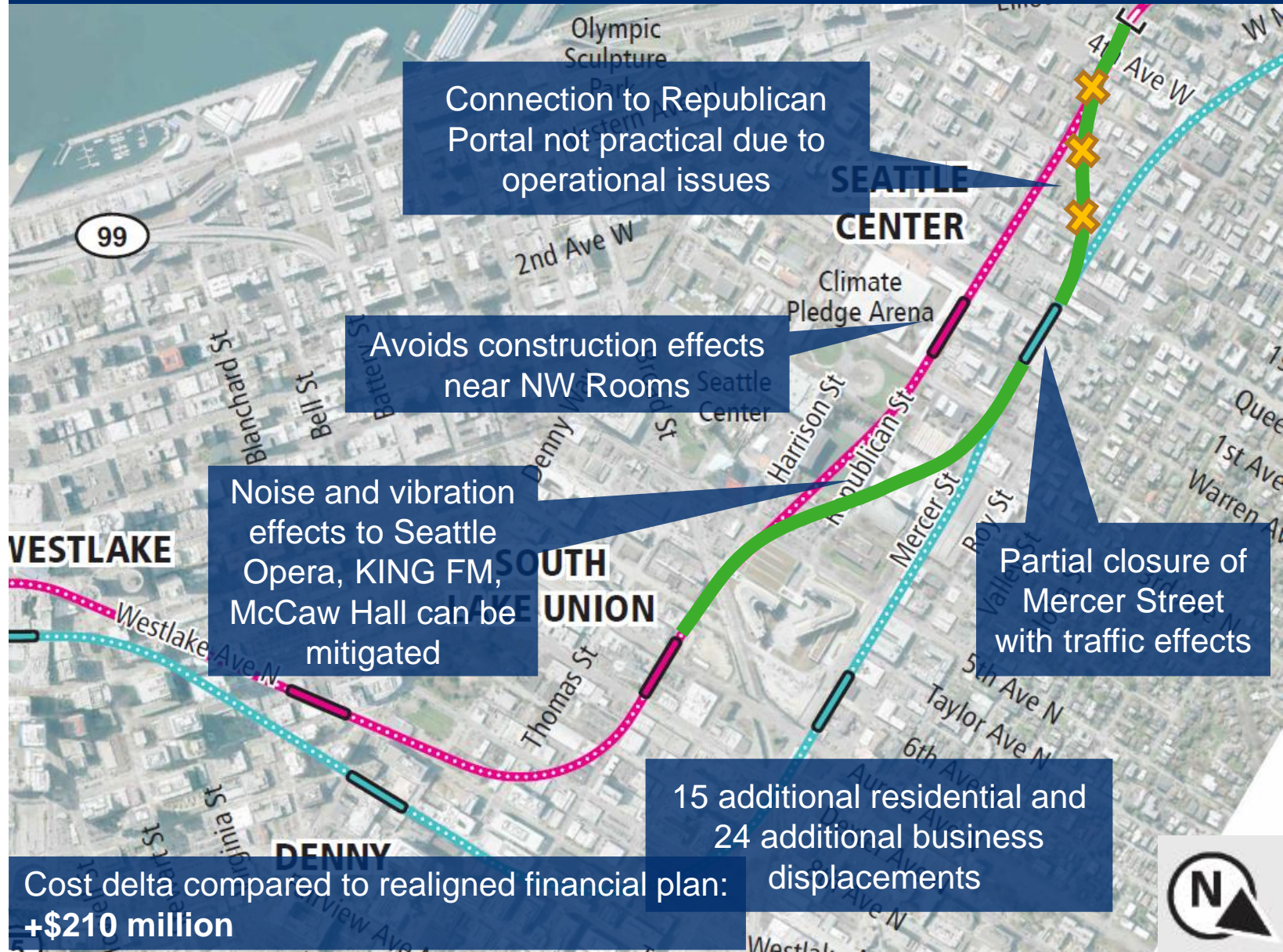
	Denny Station at Westlake Ave (DT-1)	Denny Station at Terry Ave (DT-2) with Mix-and-Match	Denny Station at Terry Ave (DT-2) with Mix-and Match and Entrance Refinements
Feasibility 	-	<ul style="list-style-type: none"> Construction and schedule risk 	<ul style="list-style-type: none"> Construction and schedule risk
Passenger Experience 	<ul style="list-style-type: none"> Convenient transfer to transit on Westlake Avenue 	<ul style="list-style-type: none"> Less convenient transfer to transit on Westlake Avenue 	<ul style="list-style-type: none"> Shortens walk to transit lines on Westlake Avenue Adds station access to both sides of Denny Way
Ridership, Access, eTOD Potential 	-	<ul style="list-style-type: none"> Minimal impact to ridership 	<ul style="list-style-type: none"> Minimal impact to ridership
Future Expansion 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude
Environmental 	<ul style="list-style-type: none"> Full closure of Westlake Ave between 7th Ave and Denny Way for 4 years Streetcar effects 	<ul style="list-style-type: none"> Full closure of Terry Ave between Denny Way and Thomas St for 4 years Avoids streetcar effects 	<ul style="list-style-type: none"> Full closure of Terry Ave between Denny Way and Thomas St for 4 years Avoids streetcar effects
Equity 	-	-	-
Cost compared to realigned financial plan in \$2019 	-	+\$200M	+\$190M

Seattle Center: Mix-and-Match

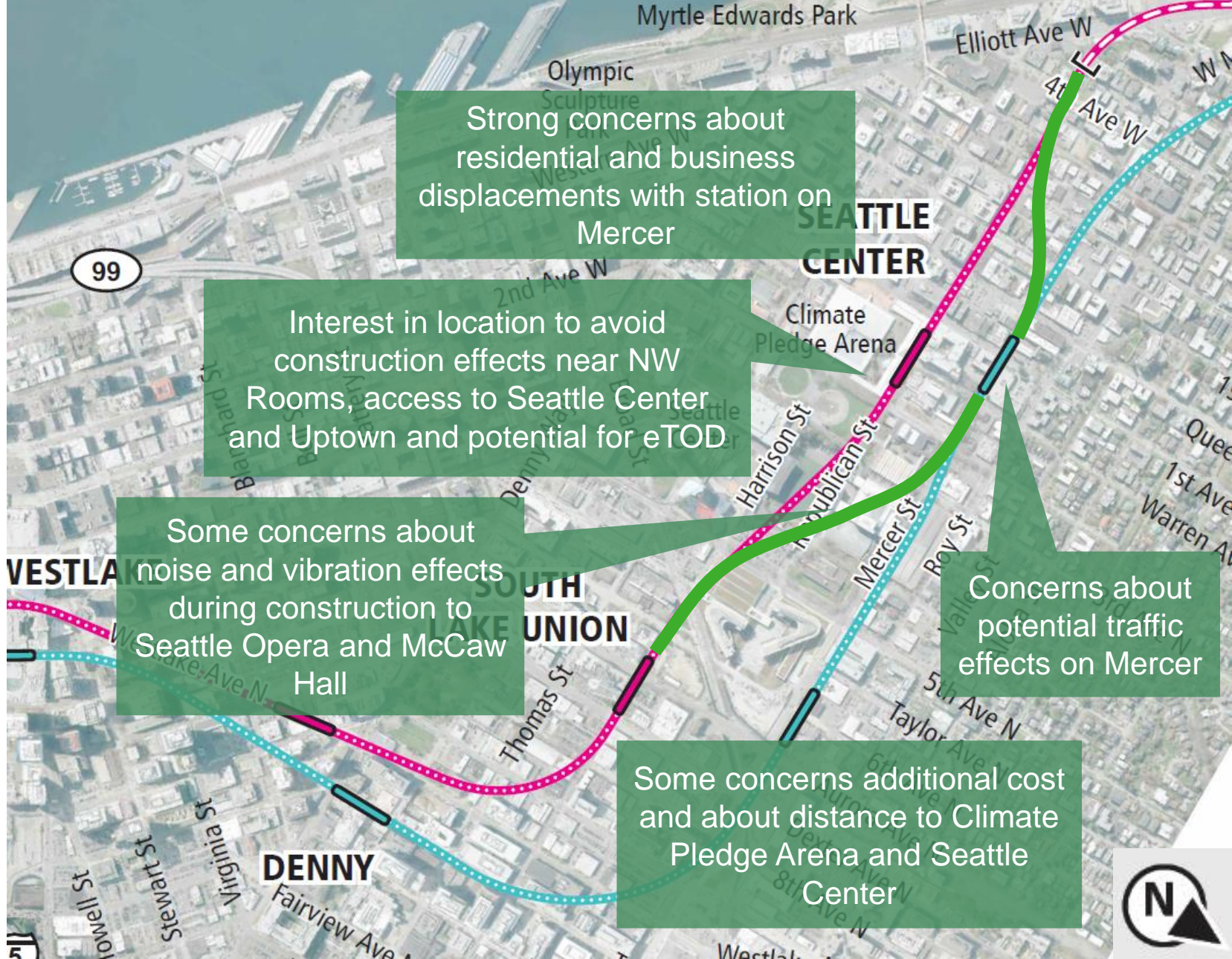
Connecting South Lake Union/Harrison station to Seattle Center/Mercer station to either north tunnel portal location

Study focus:
Feasibility of mix-and-match

Compared to Preferred 5th / Harrison Alternative (DT-1)



Seattle Center: Mix-and-Match

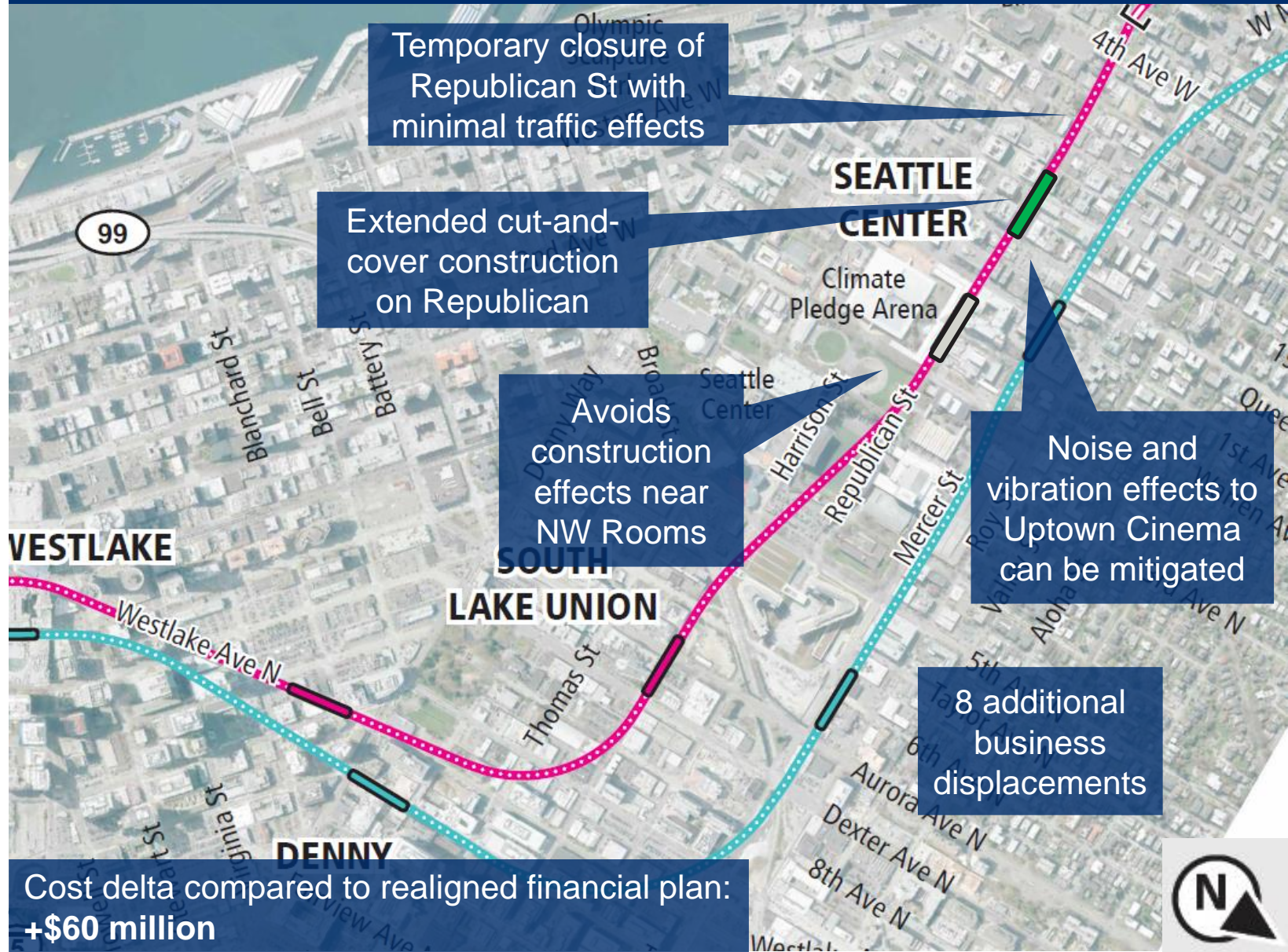


Seattle Center: Republican West

Shifting Seattle Center Republican station west

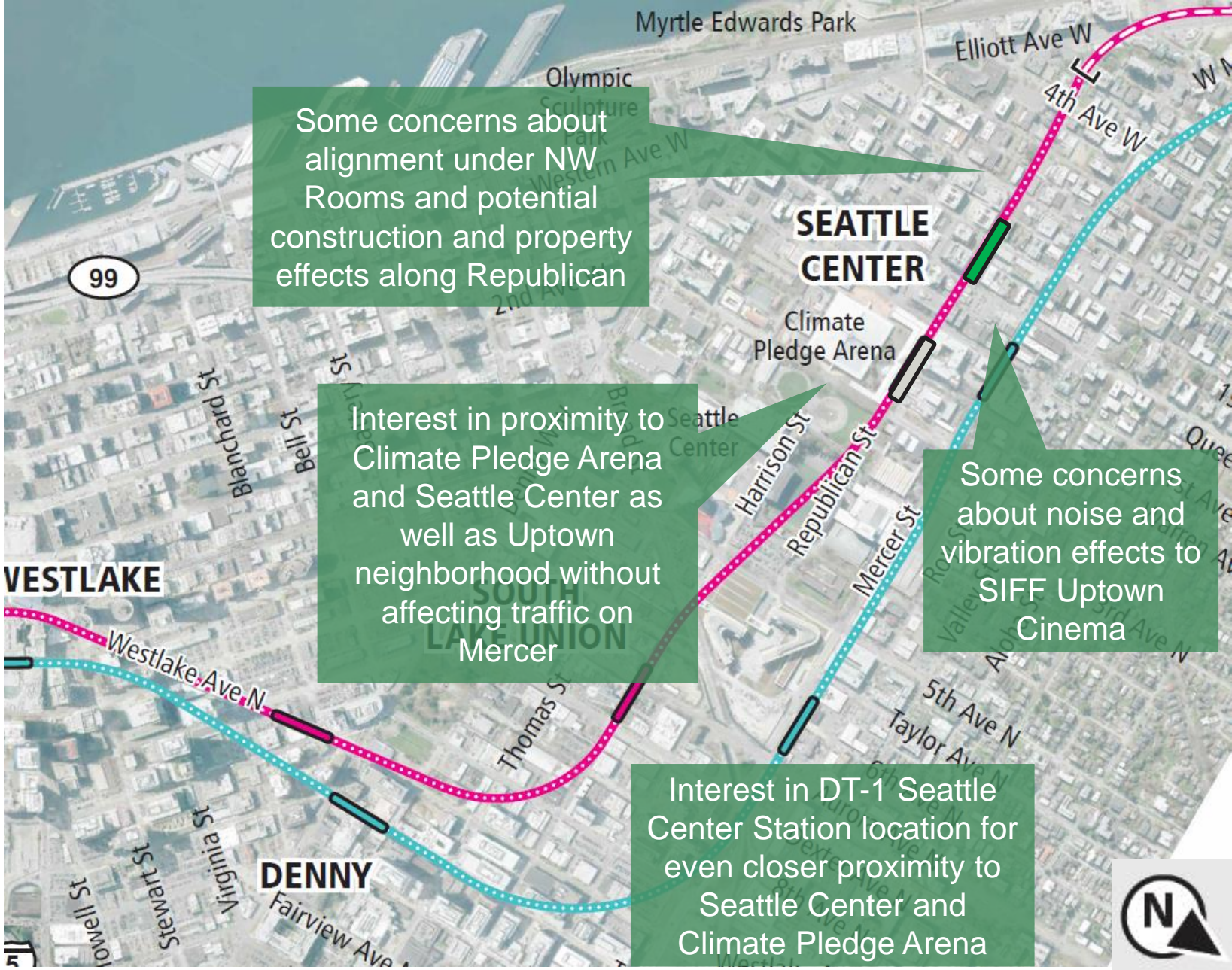
Study focus:
**Feasibility of shifting station
west**

Compared to Preferred 5th / Harrison Alternative (DT-1)










Cost delta compared to realigned financial plan:
+\$60 million

Seattle Center: Republican West

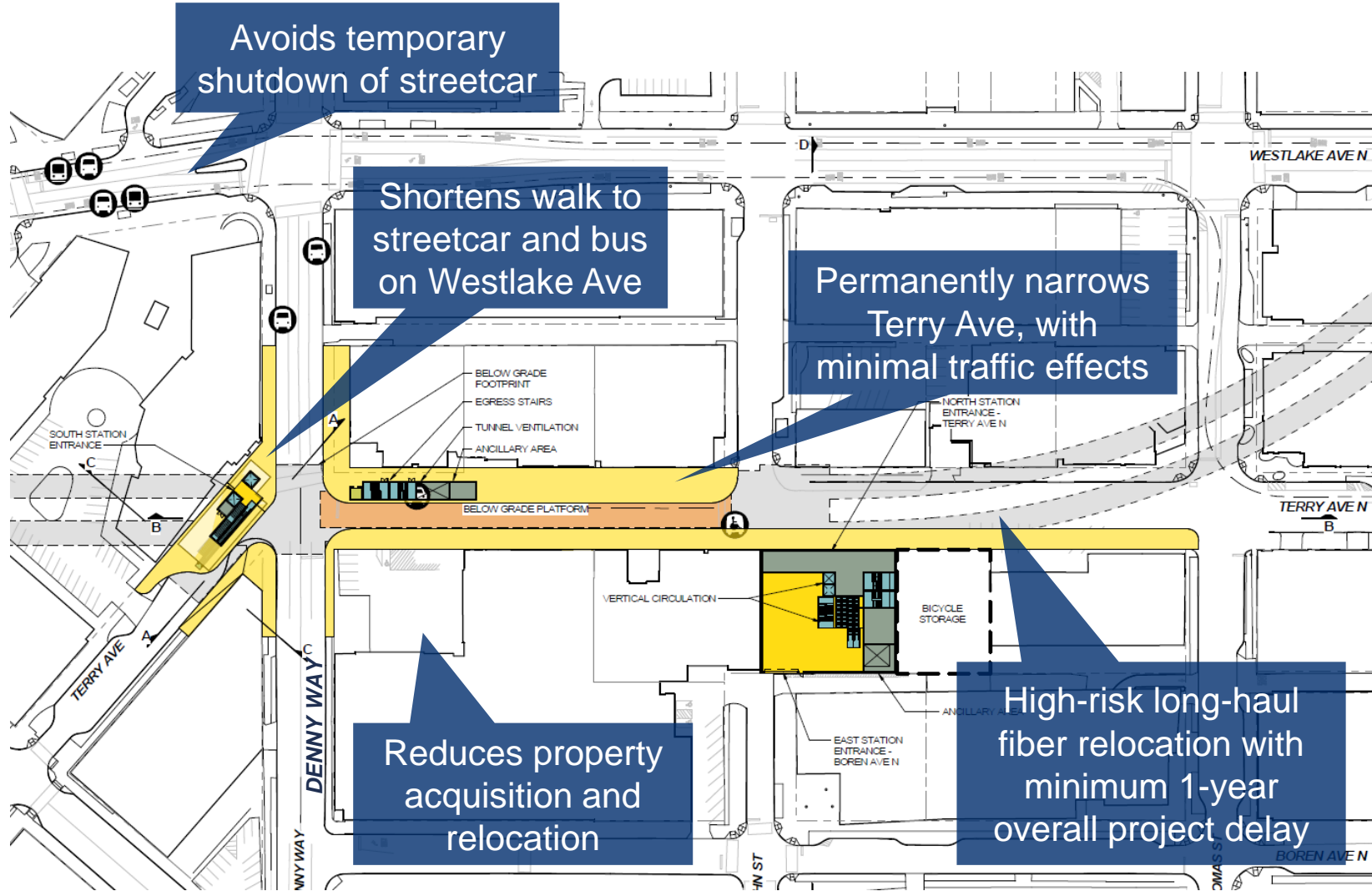


Seattle Center: Results comparison

	Seattle Center Station at Republican (DT-1)	Seattle Center Station Shifted West on Republican	Seattle Center Station at Mercer (DT-2) with Mix-and-Match
Feasibility 	-	-	-
Passenger Experience 	-	-	-
Ridership, Access, eTOD Potential 	-	-	-
Future Expansion 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude
Environmental 	<ul style="list-style-type: none"> Full closure of Republican St between Queen Anne N and Warren Ave N for 5 years Affects Seattle Center/ NW Rooms during construction 	<ul style="list-style-type: none"> Full closure of Republican St between 3rd Ave W and Queen Anne Ave N for up to 5 years Avoids effects to Seattle Center Affects Uptown Cinema during construction 	<ul style="list-style-type: none"> Partial closure of Mercer St between Warren Ave N and 1st Ave W for 3.5 years Avoids effects to Seattle Center Fewer residential and more business displacements than DT-1
Equity 	-	-	-
Cost compared to realigned financial plan in \$2019 	-	+\$60M	+\$210M

Denny Station: Entrance on Both Sides of Denny

*Opportunities to
provide station
access from both
sides of Denny Way*



Avoids temporary shutdown of streetcar

Shortens walk to streetcar and bus on Westlake Ave

Permanently narrows Terry Ave, with minimal traffic effects

Reduces property acquisition and relocation

High-risk long-haul fiber relocation with minimum 1-year overall project delay

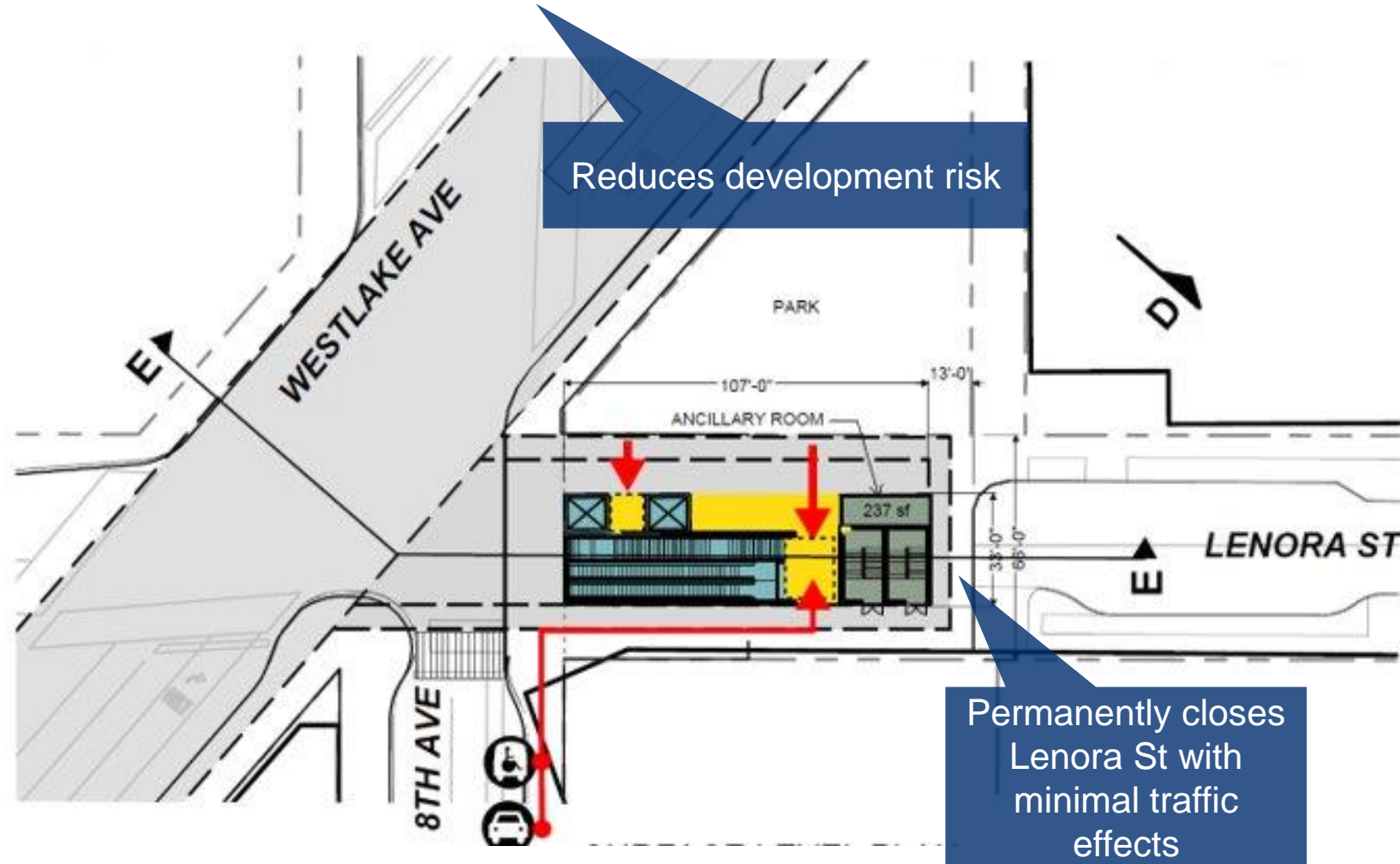
Study focus:
Improve passenger access

Cost delta compared to realigned financial plan:
+\$190 million (with SLU Mix-and-Match)



Denny Station (DT-1): Lenora Street Right-of-Way

Shift station entrance into public right-of-way

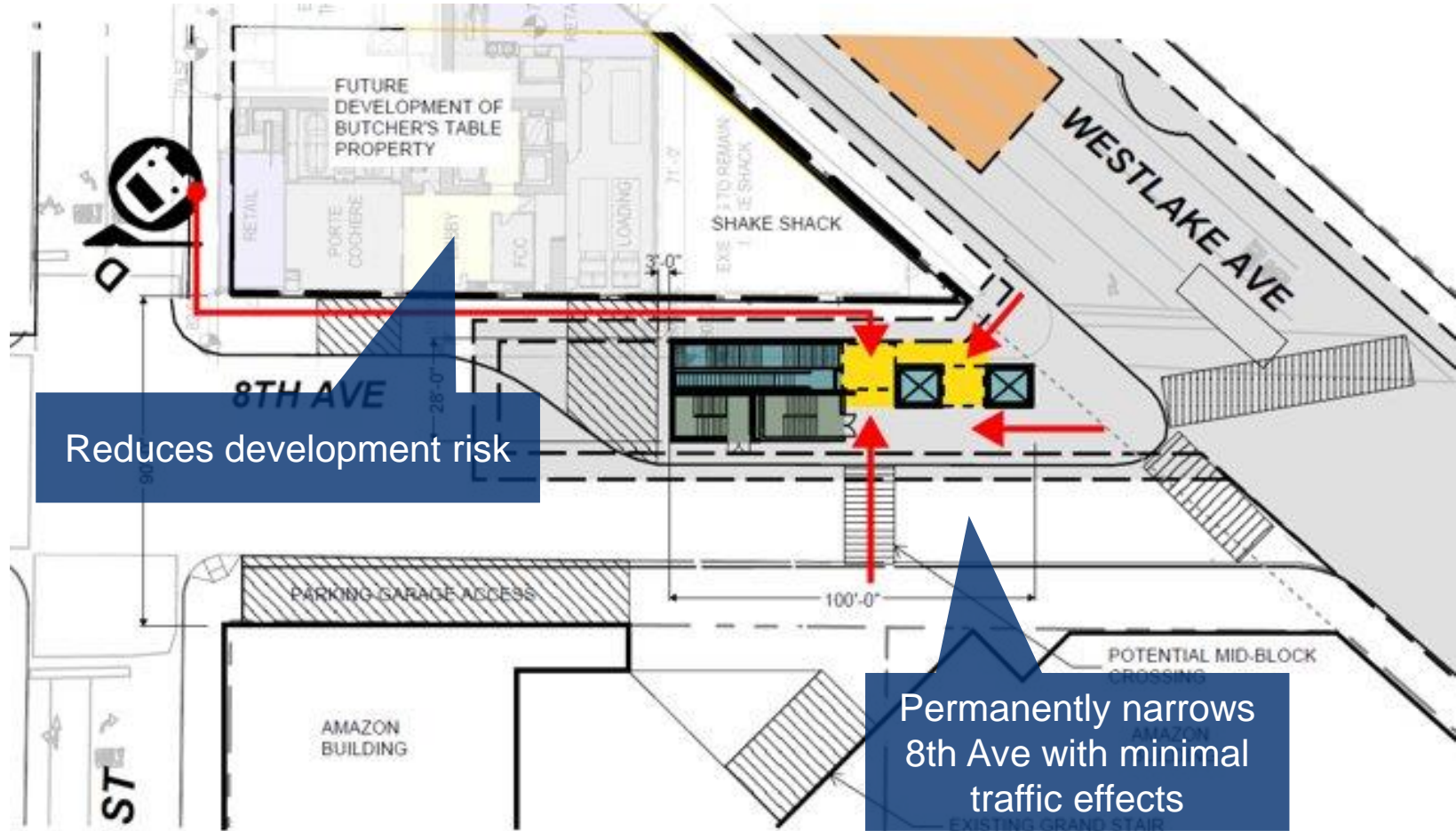


Study focus:
Reduce costs

Cost delta compared to realigned financial plan:
-\$20 million

Denny Station (DT-1): 8th Ave Right-of-Way

Shift station entrance into public right-of-way



Reduces development risk

Permanently narrows 8th Ave with minimal traffic effects

Study focus:
Reduce costs

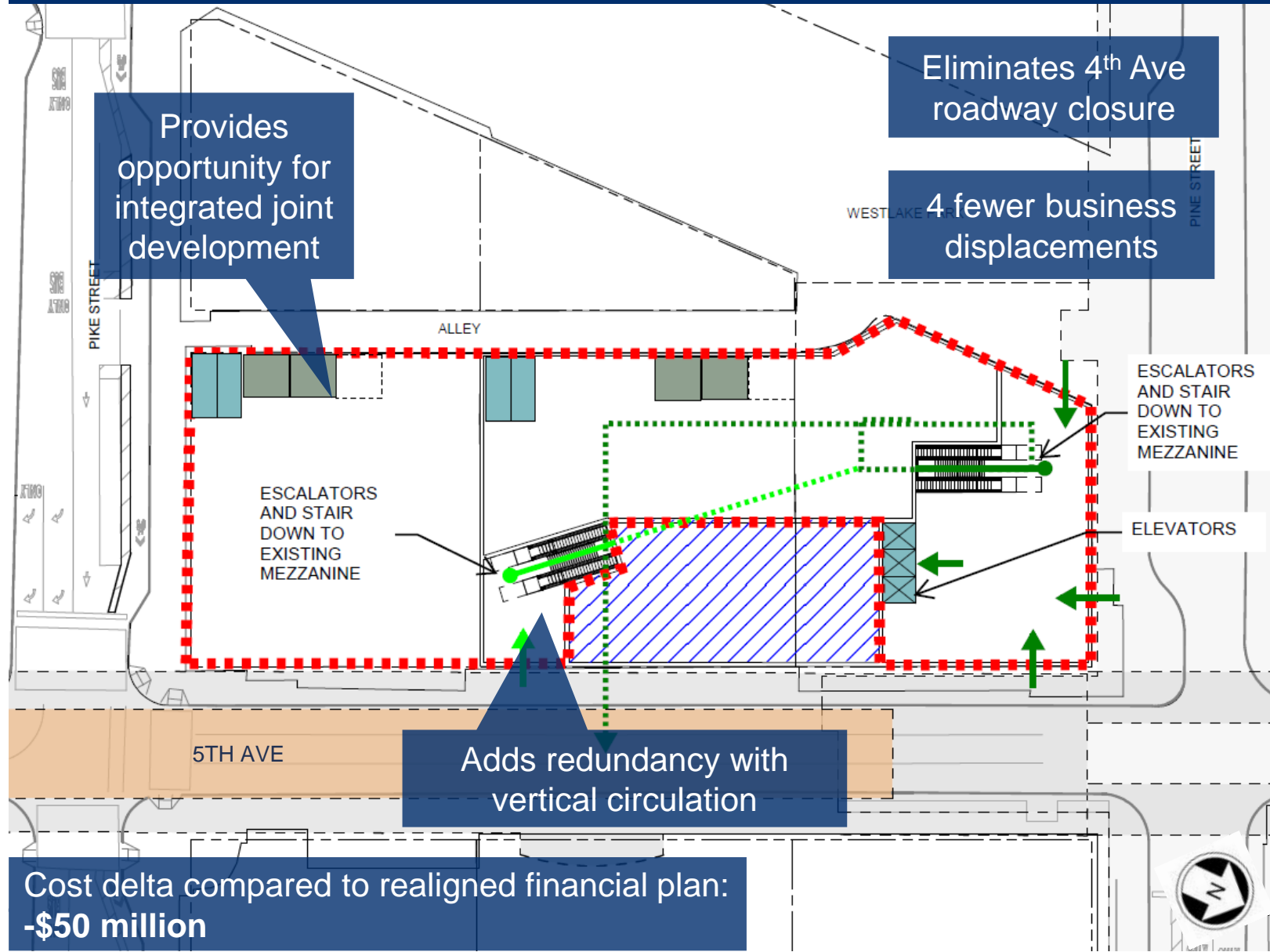
Cost delta compared to realigned financial plan:
-\$60 million

Westlake Station (DT-1): Entrance Consolidation

Consolidate station entrances

Study focus:

- Reduce costs
- Improve passenger experience

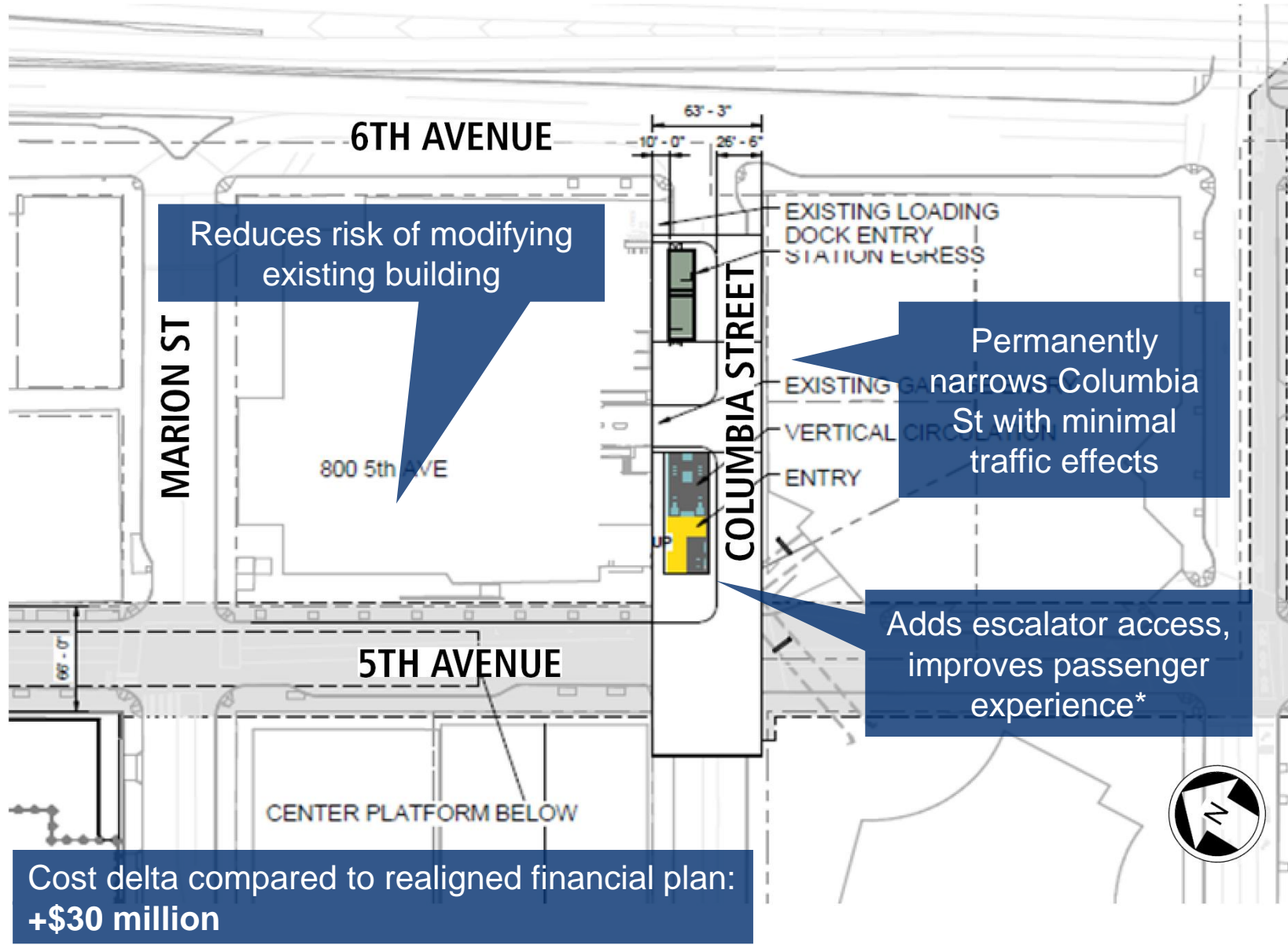


Midtown Station (DT-1): Columbia St Right-of-Way

*Shift station
entrance into public
right-of-way*

Study focus:

- Reduce costs and schedule risk
- Improve passenger experience

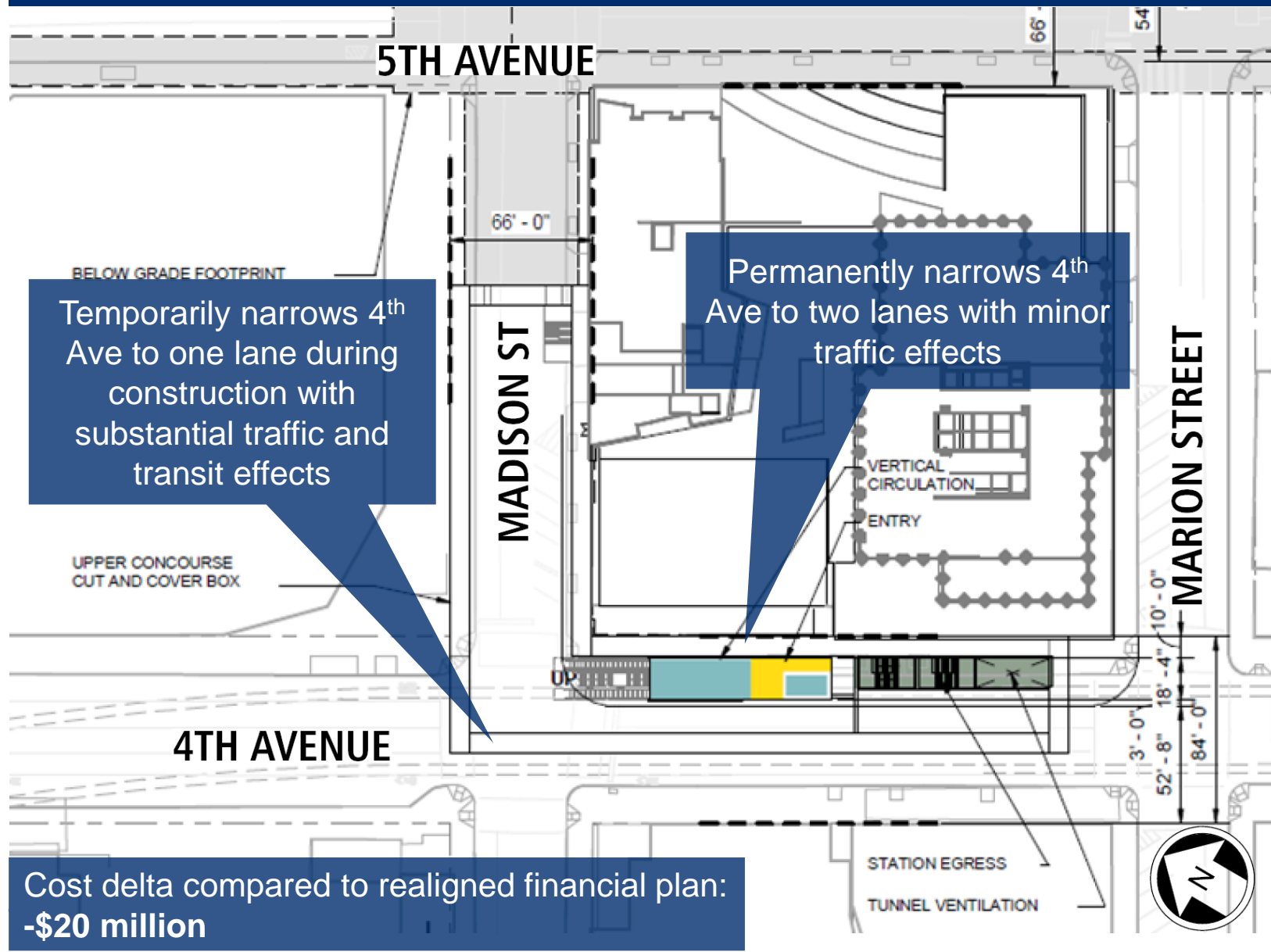


Midtown Station (DT-1): 4th Ave

Right-of-Way

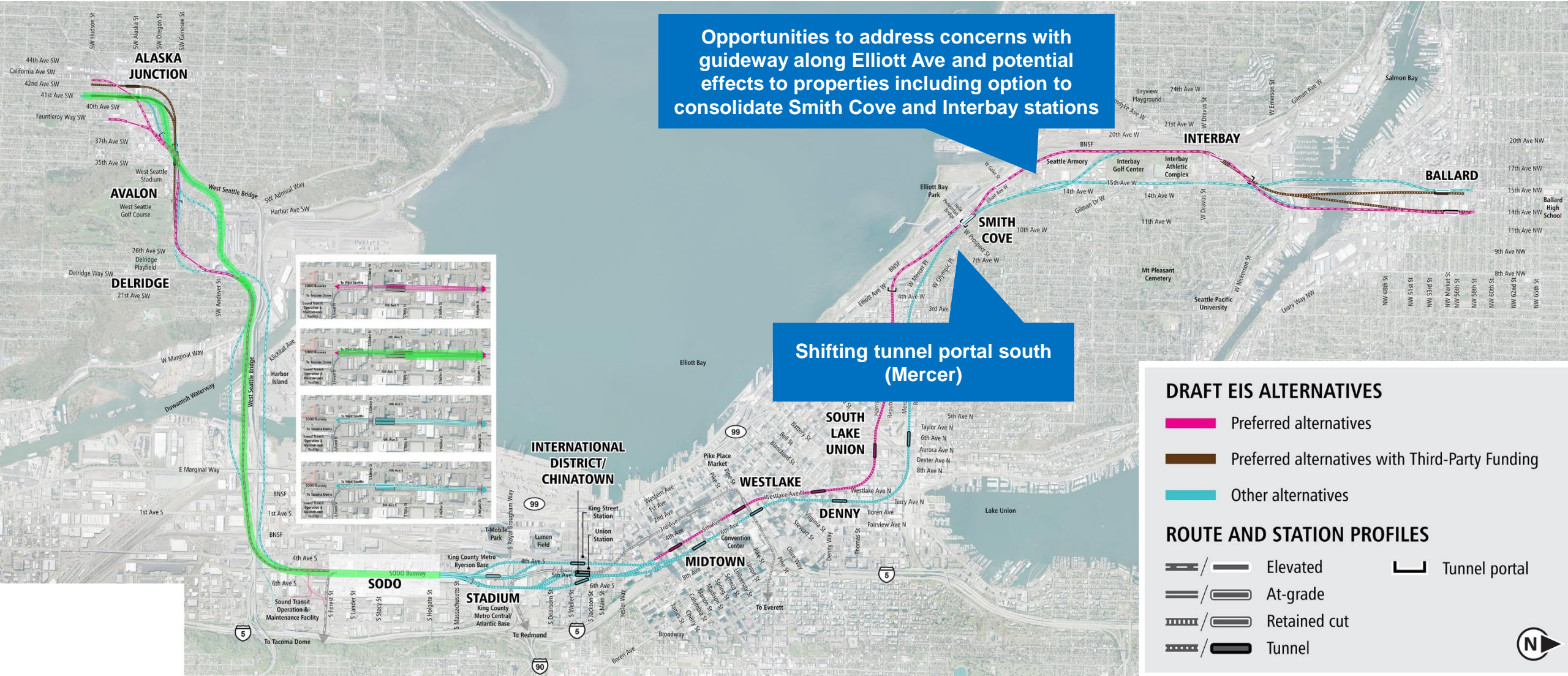
Shift station entrance into public right-of-way

Study focus:
Reduce costs and schedule risk



***Interbay-Smith Cove
Further Studies and
Community Feedback***

Ballard Link Extension: Further studies – South Interbay



Opportunities to address concerns with guideway along Elliott Ave and potential effects to properties including option to consolidate Smith Cove and Interbay stations

Shifting tunnel portal south (Mercer)

Interbay/Ballard Engagement Snapshot

Engagement activities, 7/28/22 - 2/17/23

- Workshops & open houses = 3
- Community briefings & meetings = 8+
- Online surveys = 2
- Survey responses = 700+



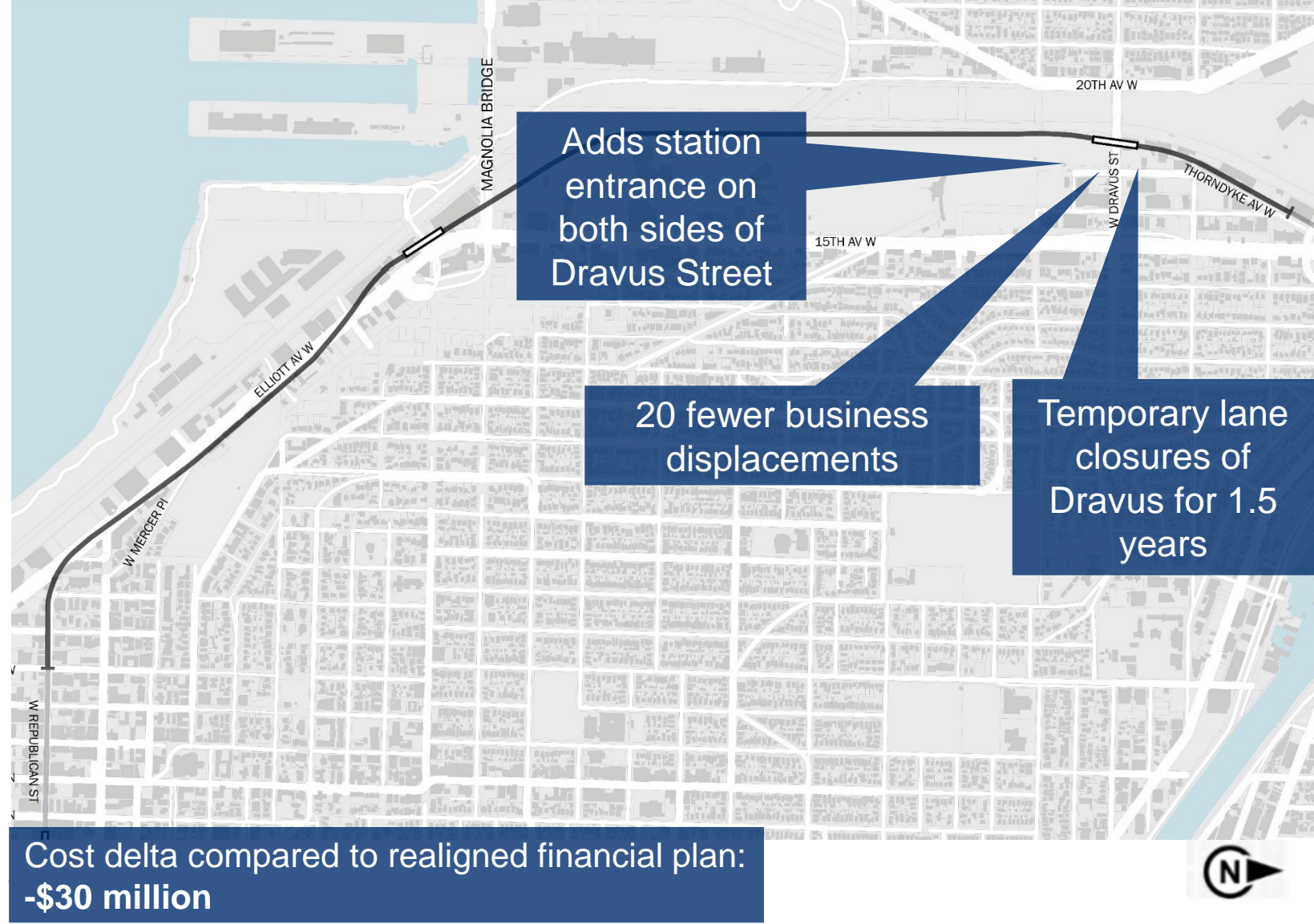
Modified SIB-1 Alignment

Shift Interbay Station south to straddle below Dravus St

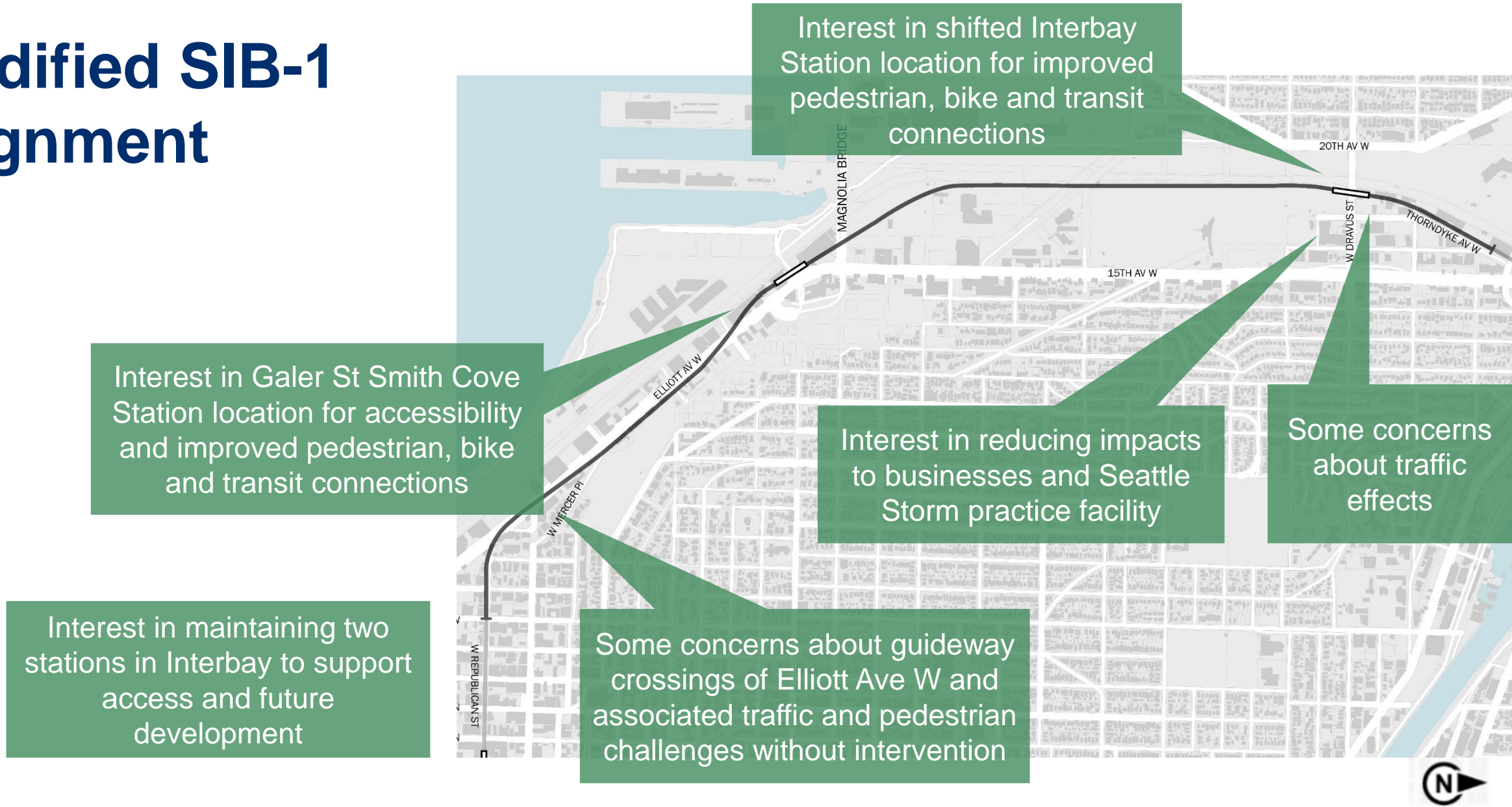
Study focus:

Avoid Seattle City Light and Seattle Storm properties

Compared to Preferred Galer Street Station/Central Interbay Alternative (SIB-1) to Preferred Tunnel 14th/15th Avenue (IBB-2a/b)



Modified SIB-1 Alignment

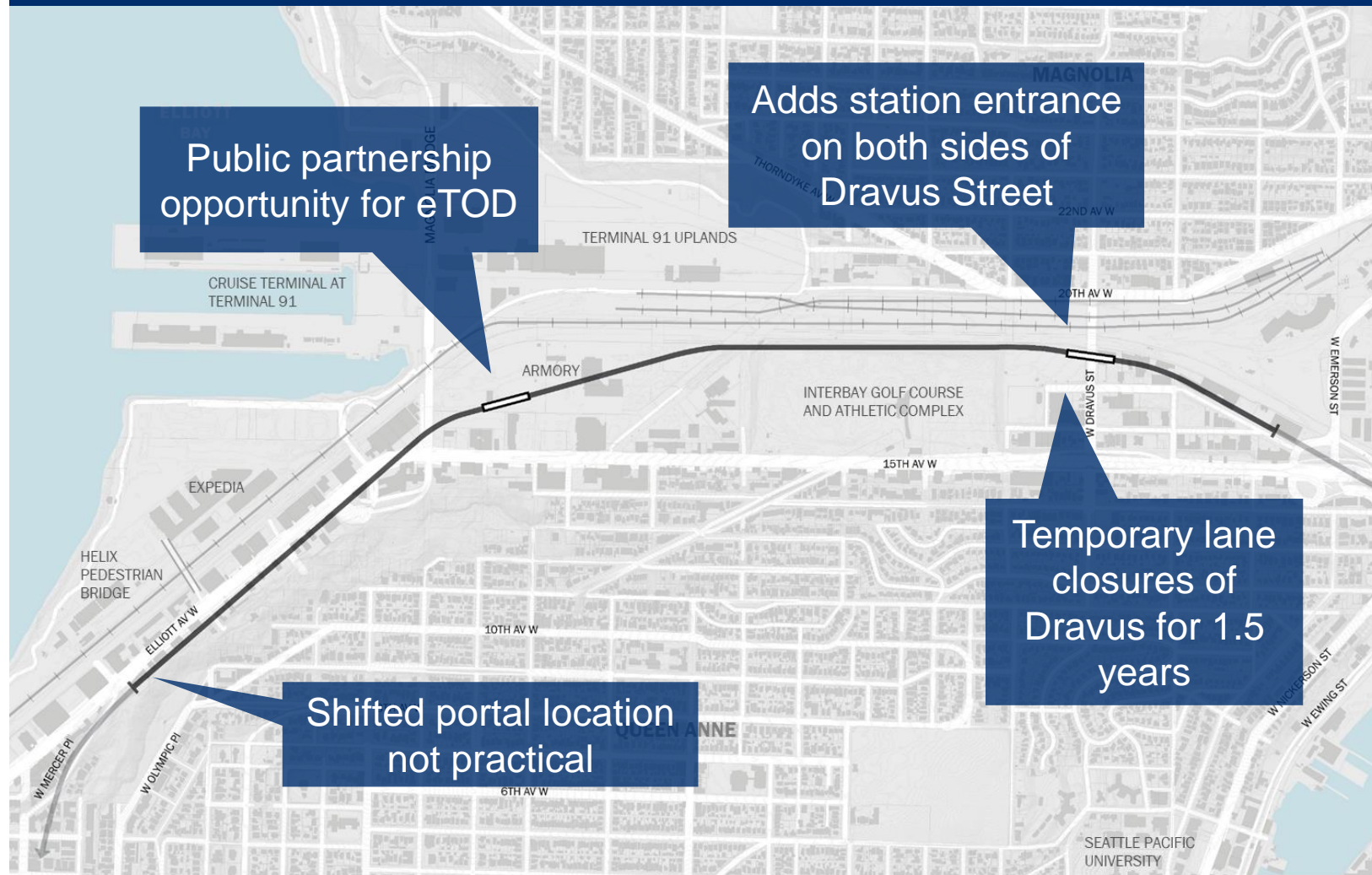


Compared to Prospect Street Station/Central Interbay Alternative (SIB-3) to Preferred Tunnel 14th/15th Avenue (IBB-2a/b)

Modified SIB-3 Alignment

Shift north portal location south and shift Smith Cove Station north of Magnolia Bridge

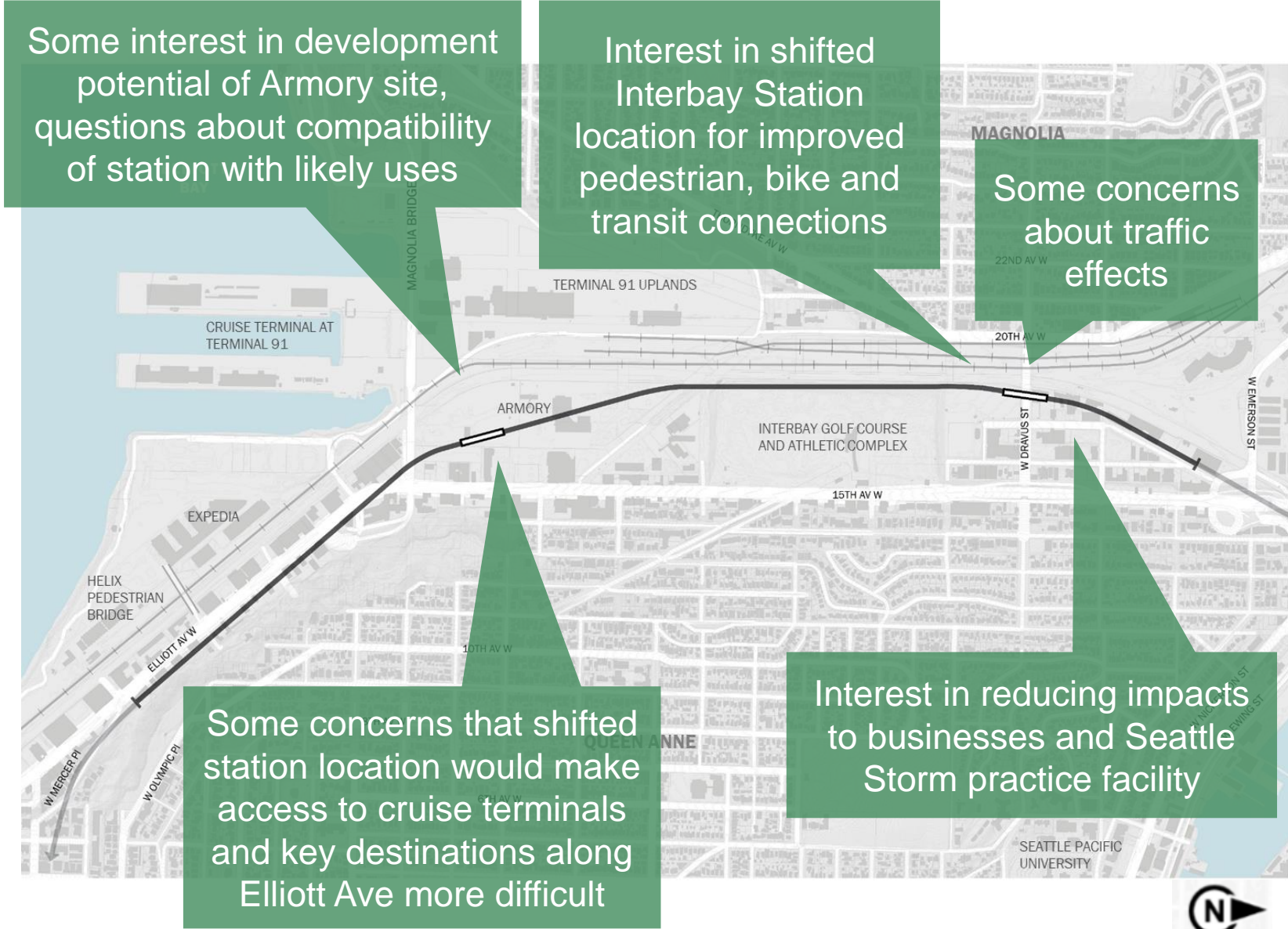
- Study focus:
- Avoid unstable slope risk on Queen Anne hillside
 - Avoid Seattle City Light and Seattle Storm properties



Cost delta compared to realigned financial plan:
N/A



Modified SIB-3 Alignment



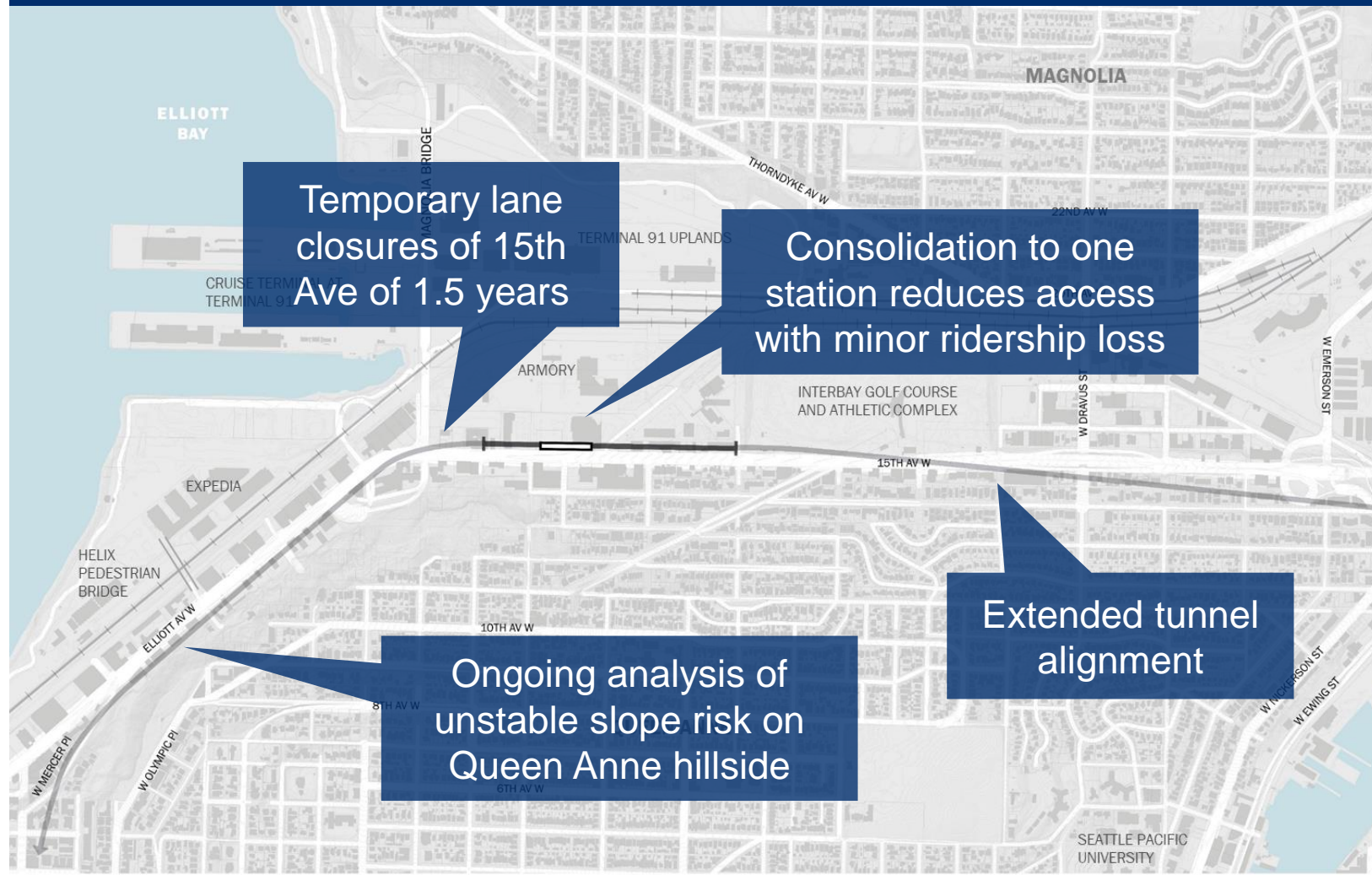
Compared to Preferred Galer Street Station/Central Interbay Alternative (SIB-1) to Preferred Elevated 14th Ave Alternative (IBB-1a)

Consolidated Alignment

Consolidate Smith Cove and Interbay Stations with below grade alignment

Study focus:

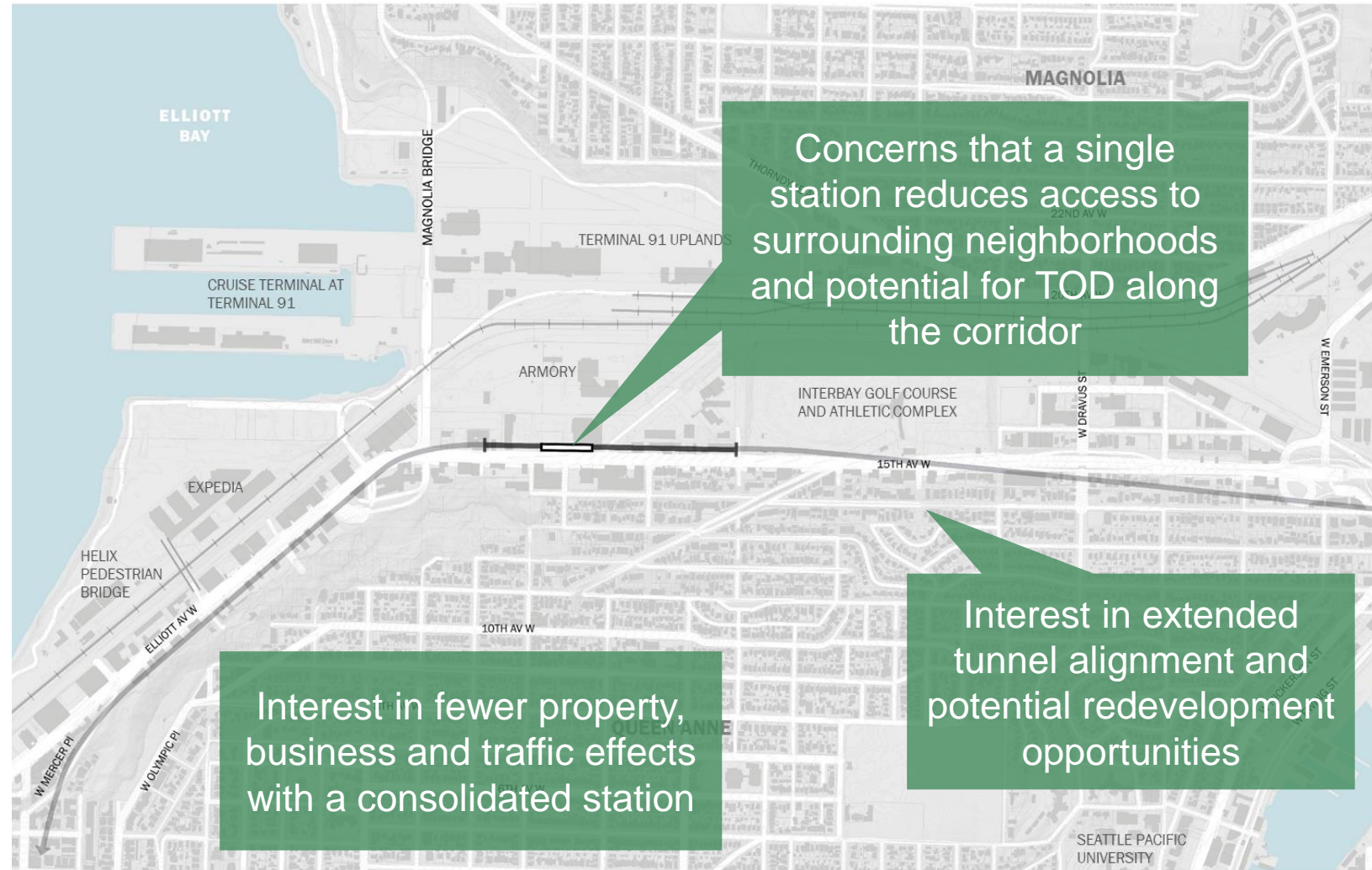
- **Avoid concerns with guideway along Elliott Ave**
- **Avoid unstable slope risk on Queen Anne hillside**
- **Avoid Seattle City Light and Seattle Storm properties**



Cost delta compared to realigned financial plan: **+\$210 million**



Consolidated Alignment

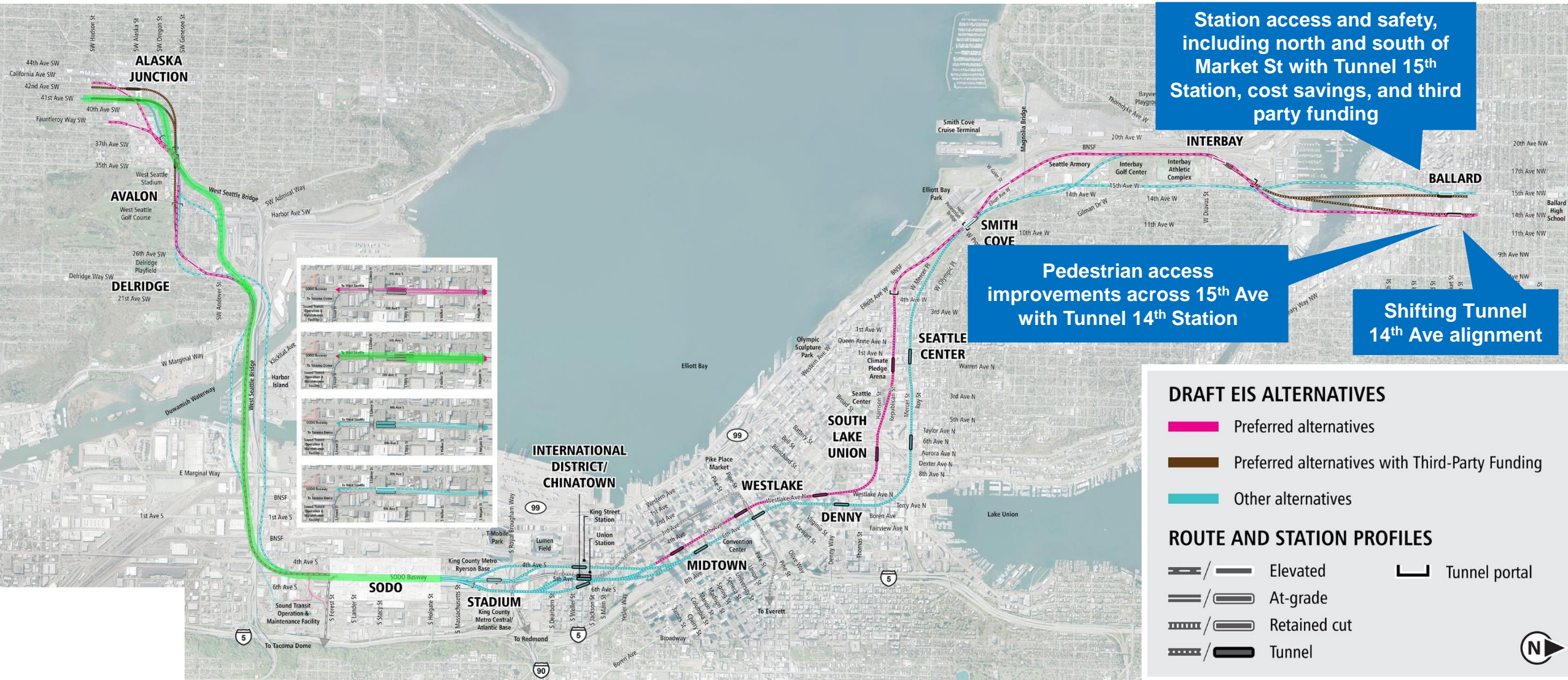


Interbay-Smith Cove: Results comparison

	Smith Cove Station at Galer Street (SIB-1)	Modified SIB-1 Alignment	Consolidated Alignment
Feasibility 	-	-	<ul style="list-style-type: none"> Ongoing analysis of unstable slope risk on Queen Anne hillside
Passenger Experience 	-	<ul style="list-style-type: none"> Adds entrances on both sides of Dravus St at Interbay Station 	-
Ridership, Access, eTOD Potential 	<ul style="list-style-type: none"> Allows some development adjacent to station 	<ul style="list-style-type: none"> Allows some development adjacent to station 	<ul style="list-style-type: none"> Reduces access due to single consolidated station in Interbay Allows development adjacent to station
Future Expansion 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude
Environmental 	<ul style="list-style-type: none"> Affects SCL, Seattle Storm, and KCWTD properties Permanent columns within Elliott Ave and park effects in Interbay 	<ul style="list-style-type: none"> Avoids SCL and Seattle Storm properties Permanent columns within Elliott Ave and park effects in Interbay Partial closure of Dravus Street for 18 months 	<ul style="list-style-type: none"> Avoids SCL, Seattle Storm, and KCWTD properties Avoids columns within Elliott Ave and park effects in Interbay Fewer residential and more business displacements than SIB-1 Partial closure of major traffic spine 15th Ave W for 18 months
Equity 	-	-	-
Cost compared to realigned financial plan in \$2019 	-	-\$30M	+\$210M

Ballard
Further Studies and
Community Feedback

Ballard Link Extension: Further studies – Interbay/Ballard



Station access and safety, including north and south of Market St with Tunnel 15th Station, cost savings, and third party funding

Pedestrian access improvements across 15th Ave with Tunnel 14th Station

Shifting Tunnel 14th Ave alignment

DRAFT EIS ALTERNATIVES

- █ Preferred alternatives
- █ Preferred alternatives with Third-Party Funding
- █ Other alternatives

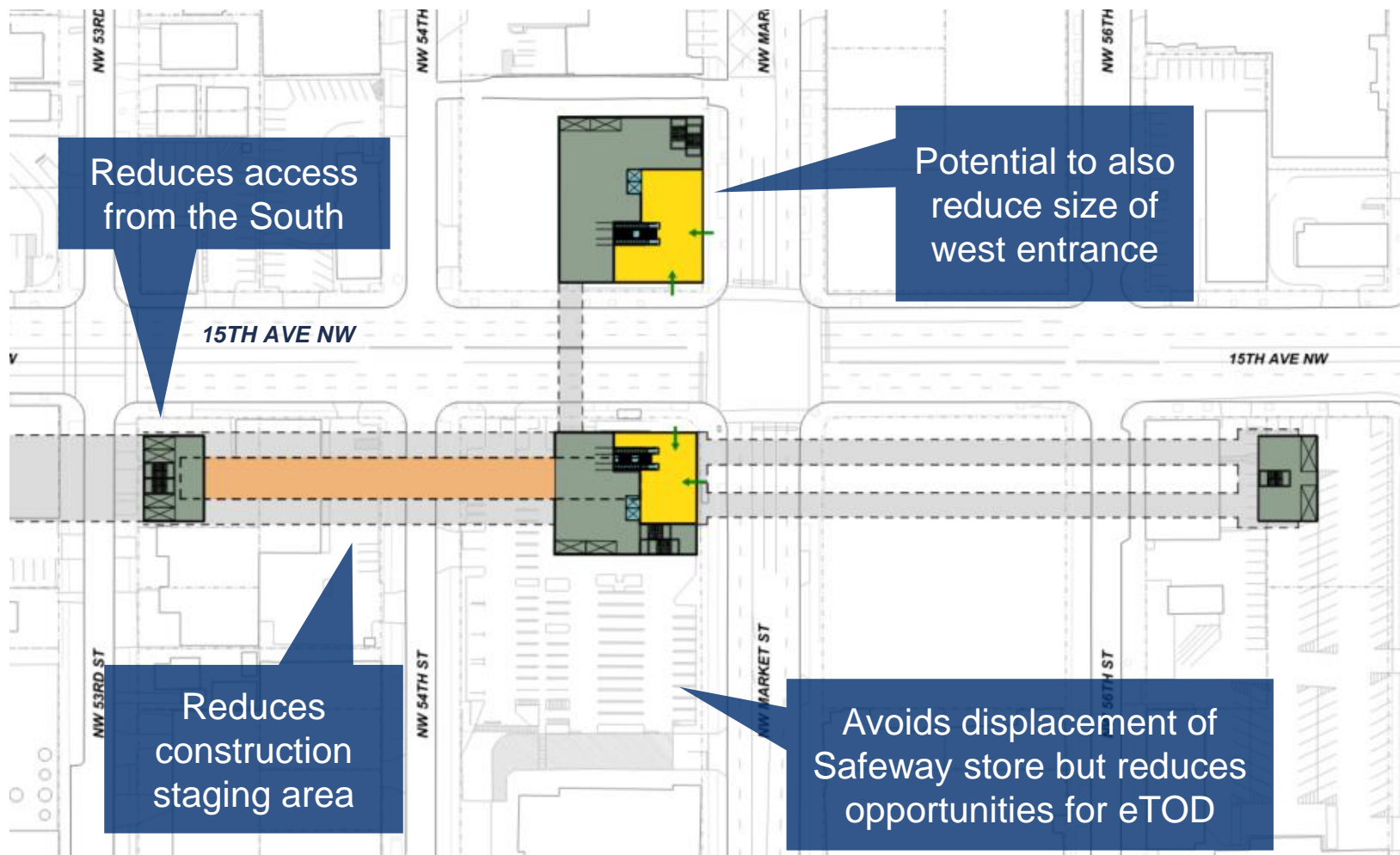
ROUTE AND STATION PROFILES

- Elevated
- At-grade
- Retained cut
- Tunnel
- Tunnel portal

Tunnel 15th Ave Cost Savings: Draft EIS Station Entrance

Refinements

Reduce size of east station entrance and eliminate south entrance

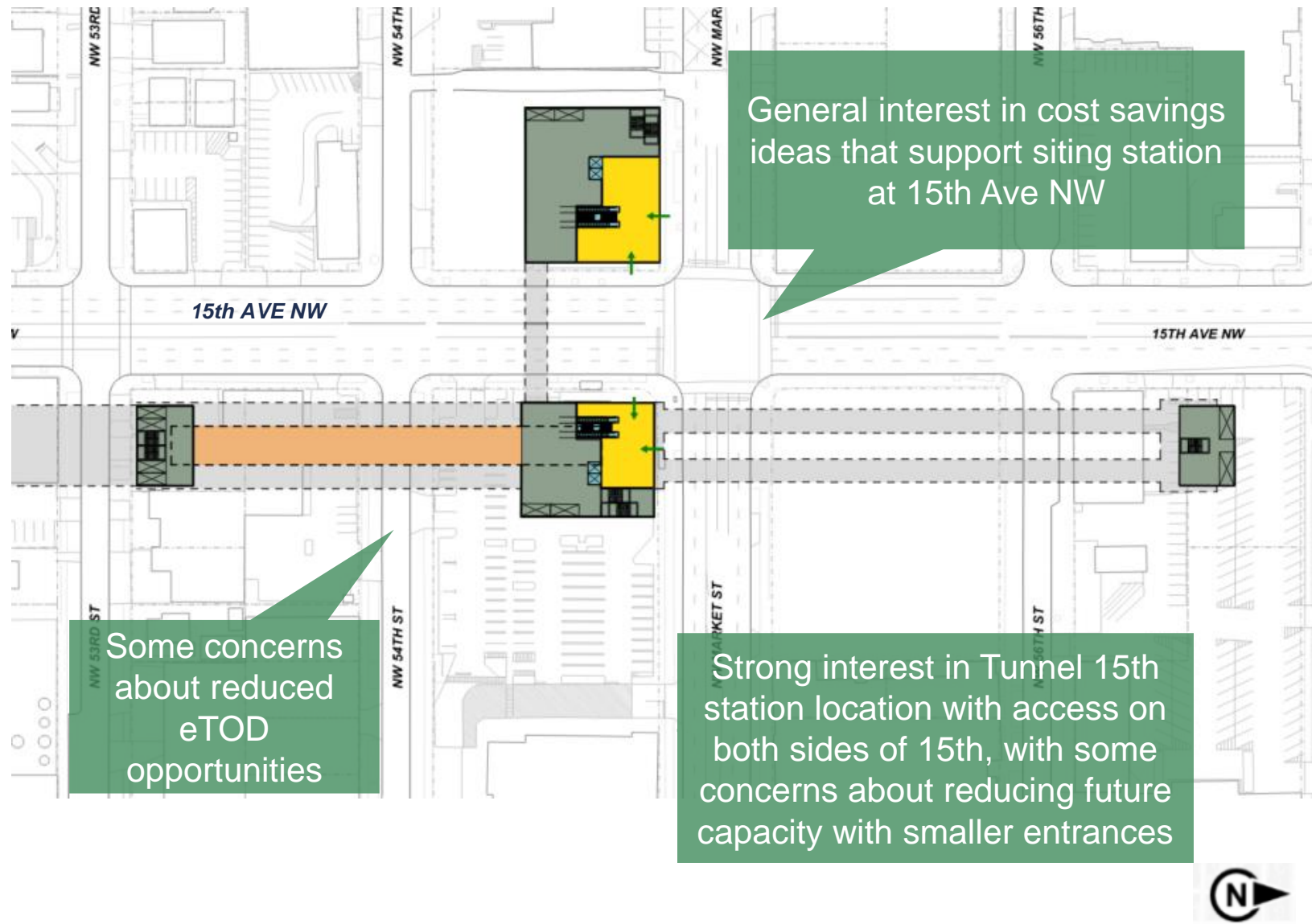


Study focus:
Reduce costs

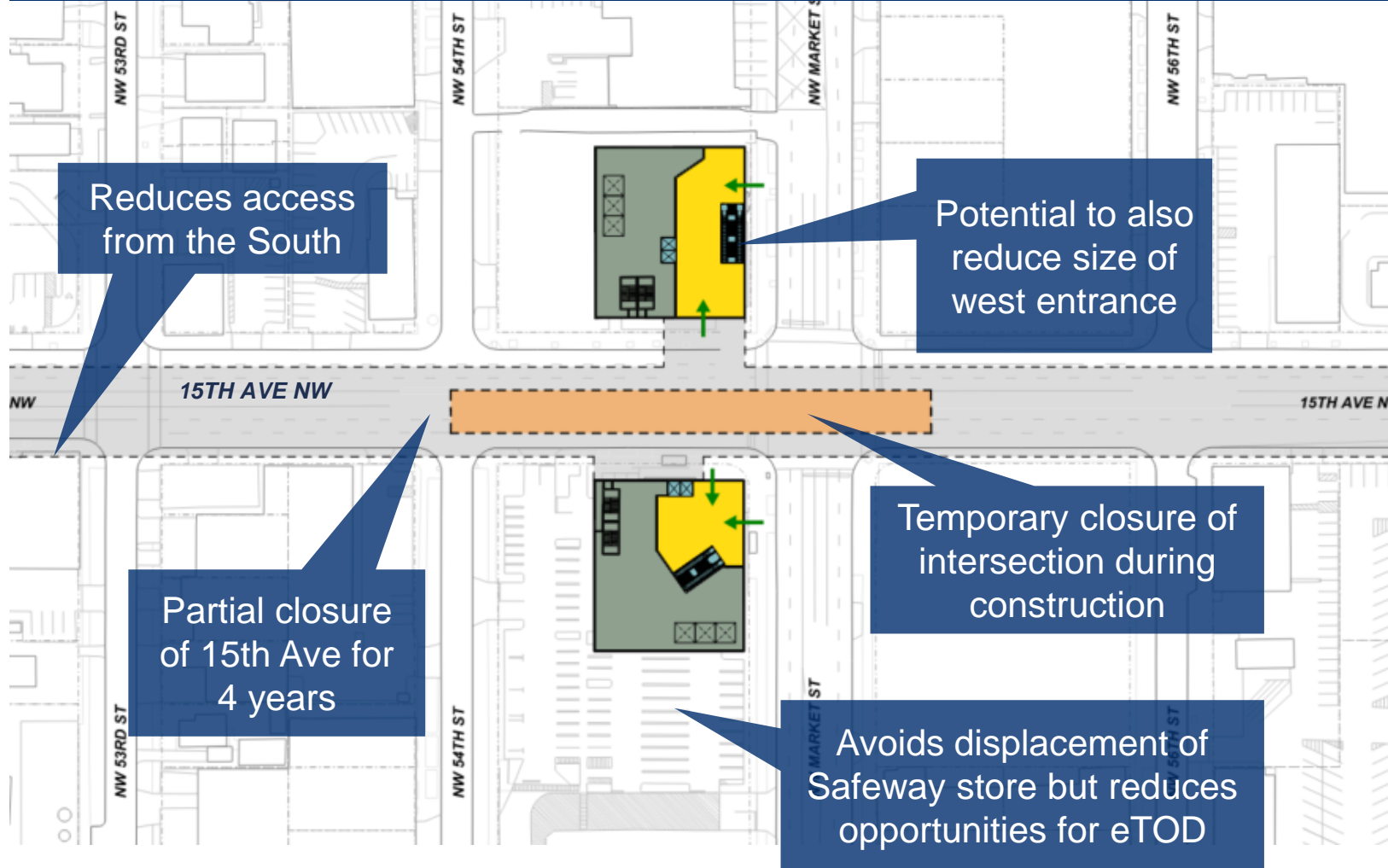
Cost delta compared to realigned financial plan:
+\$70 million (or +\$30 million with optional smaller west entrance)



Tunnel 15th Ave Cost Savings: Draft EIS Station Entrance Refinements



Tunnel 15th Ave Cost Savings: Station in Right-of-Way *Shift station construction into 15th Ave NW and eliminate south entrance*

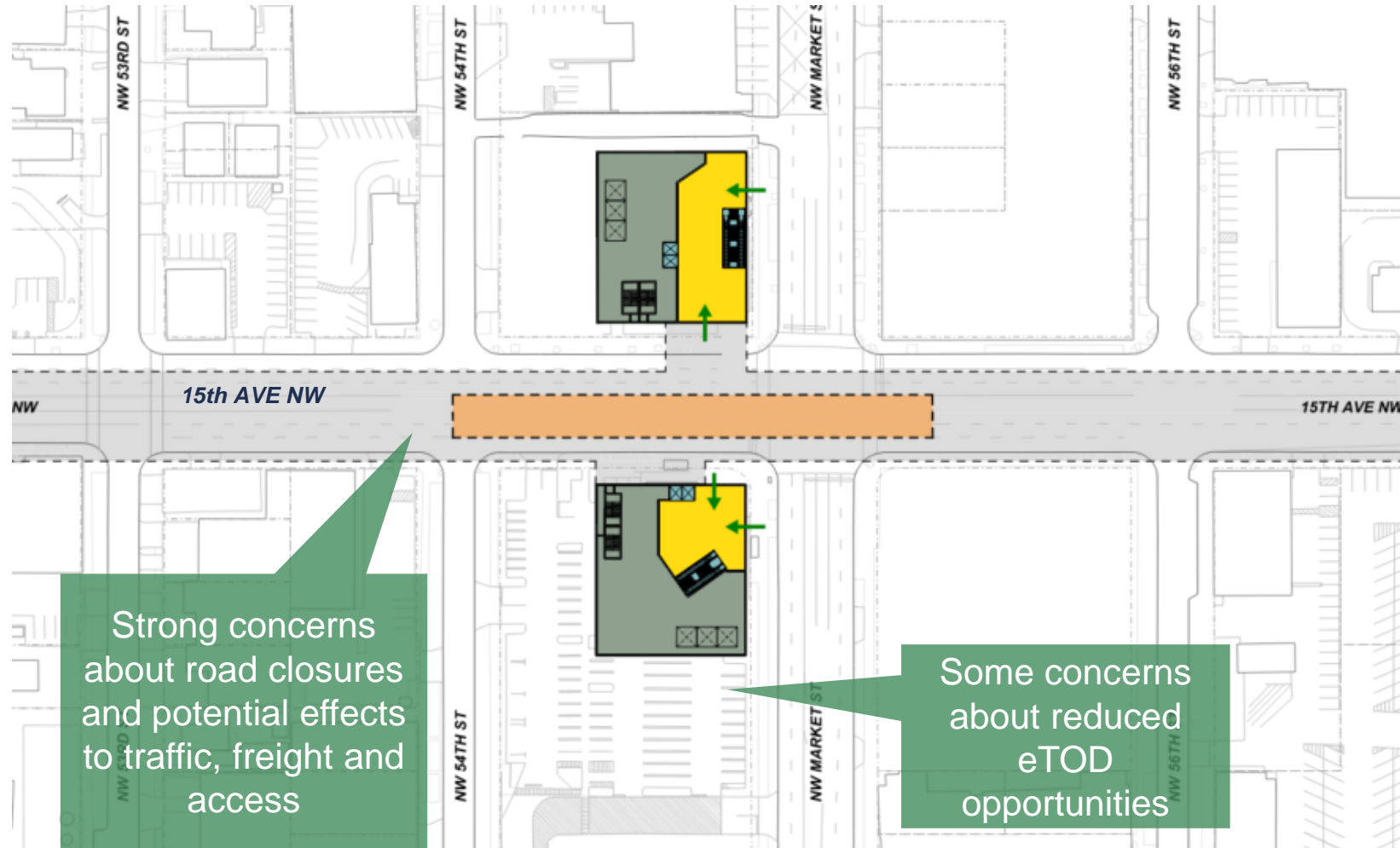


Study focus:
Reduce costs

Cost delta compared to realigned financial plan:
+\$70 million (or +\$30 million with optional smaller west entrance)



Tunnel 15th Ave Cost Savings: Station in Right-of-Way

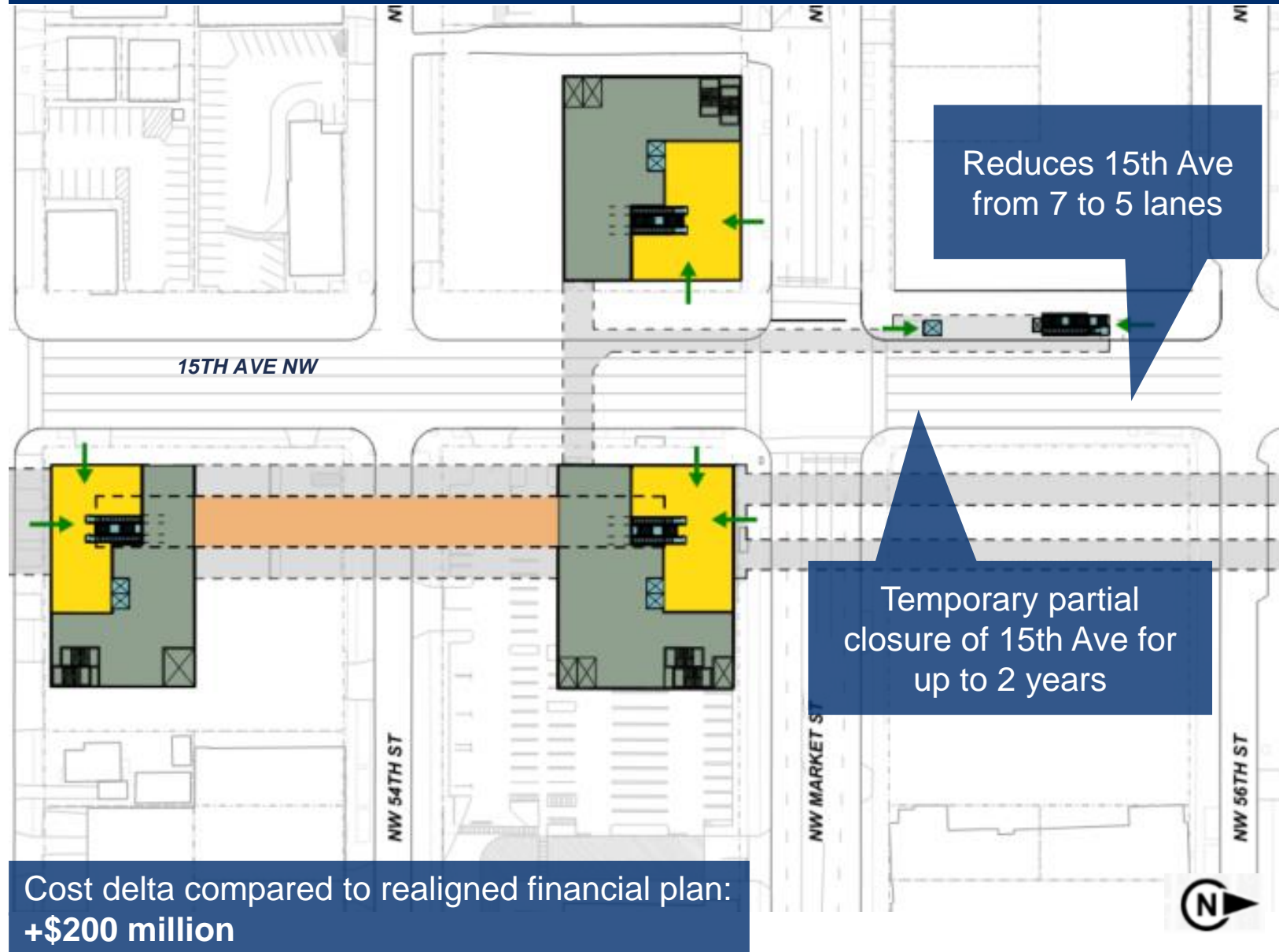


Tunnel 15th Ave Entrance North of Market

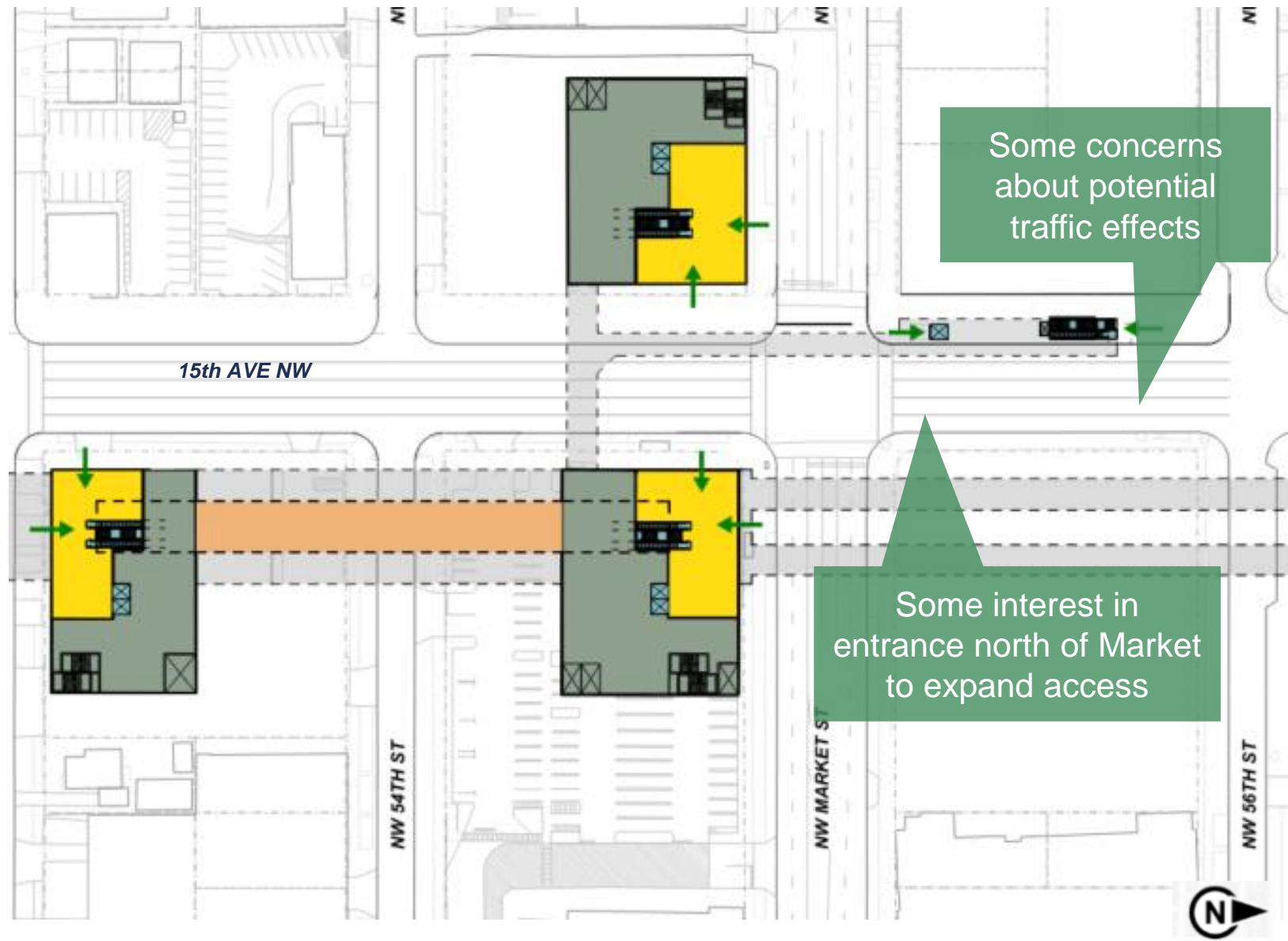
*Add station
entrance to NW
corner in public
right-of-way*

Study focus:
Improve passenger access to
the north

Compared to Preferred Tunnel 15th Avenue Station Option (IBB-2b)



Tunnel 15th Ave Entrance North of Market



Tunnel 14th Ave Station Access

Pedestrian access improvements across 15th Ave with Tunnel 14th Station

At-grade improvements may reduce pedestrian travel time, but have minor effects on traffic and transit operations

Grade-separated improvements may add travel time, but reduce passenger-vehicle interactions

Study focus:
Improve passenger access to the west



Cost delta compared to realigned financial plan:
+\$0.5-1 million for at-grade improvements
+\$20-100 million for grade-separated improvements (+ O&M costs)

Tunnel 14th Ave Station Access

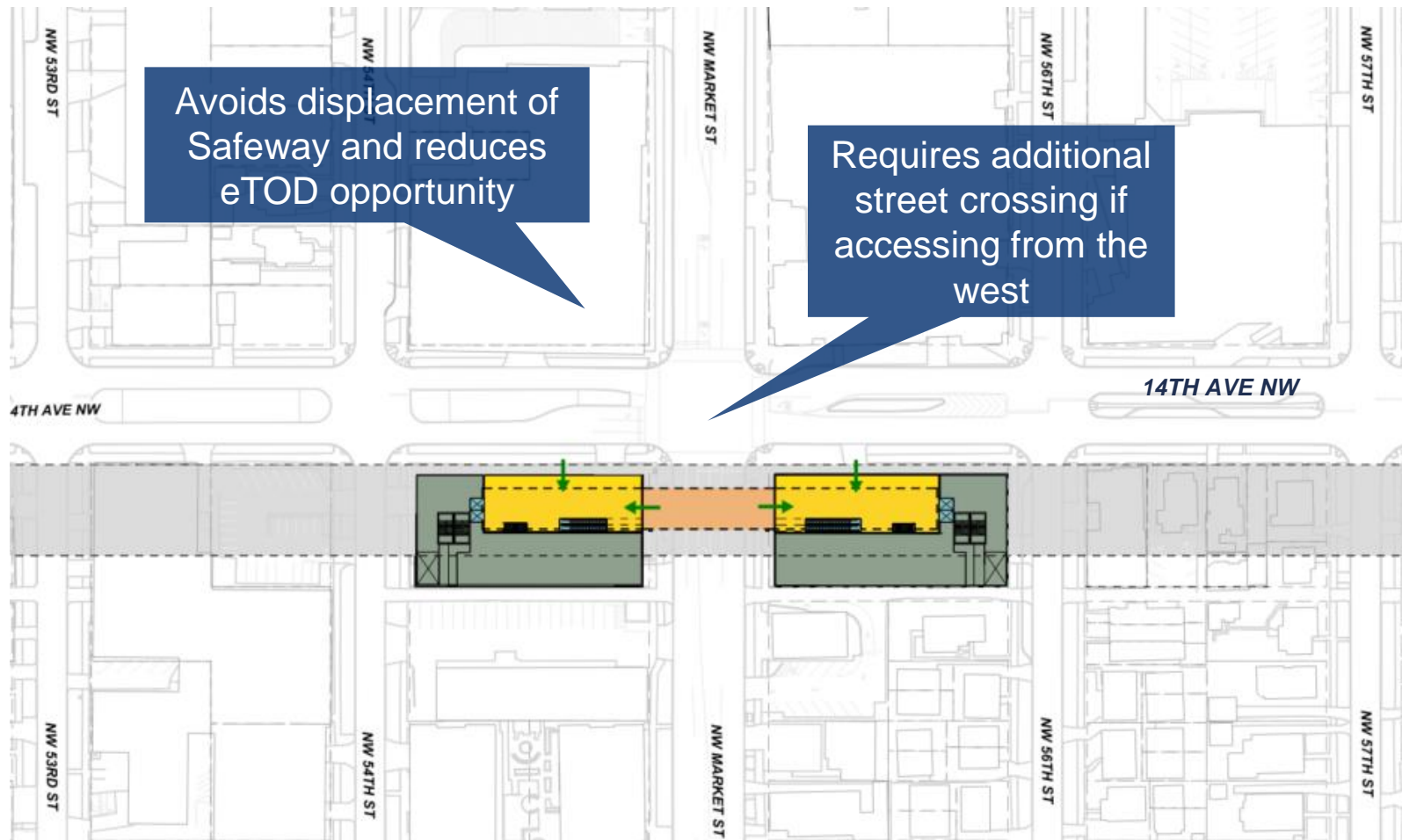
*Pedestrian access
improvements across 15th
Ave with Tunnel 14th Station*

Some interest in grade-separated improvements to reduce passenger-vehicle interactions; others prefer at-grade improvements for sense of safety



Shifted Tunnel 14th Ave Station

*Shift tunnel
alignment to the
east and eliminate
western station
entrance*

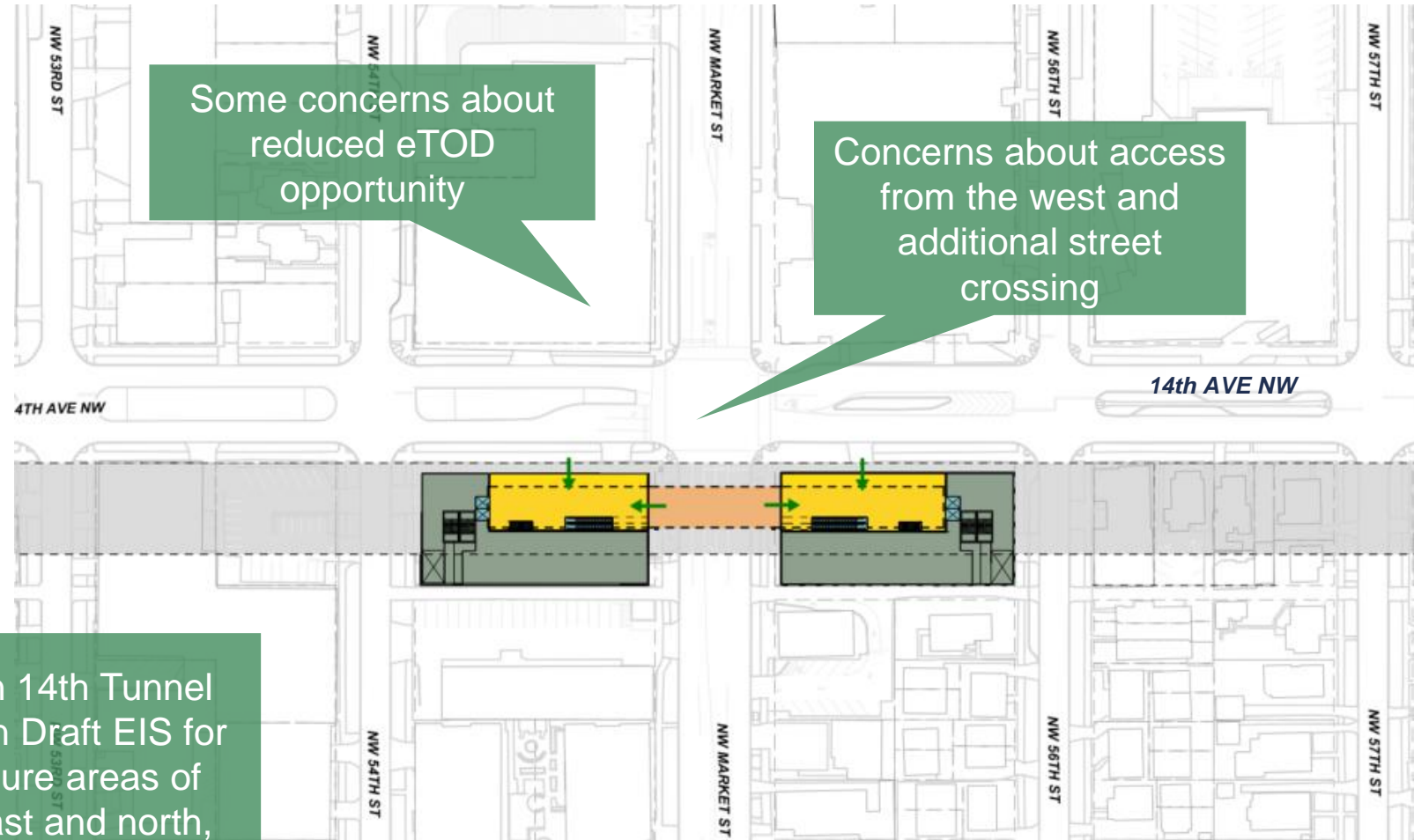


Study focus:
Reduce costs

Cost delta compared to realigned financial plan:
-\$140 million










Shifted Tunnel 14th Ave Station



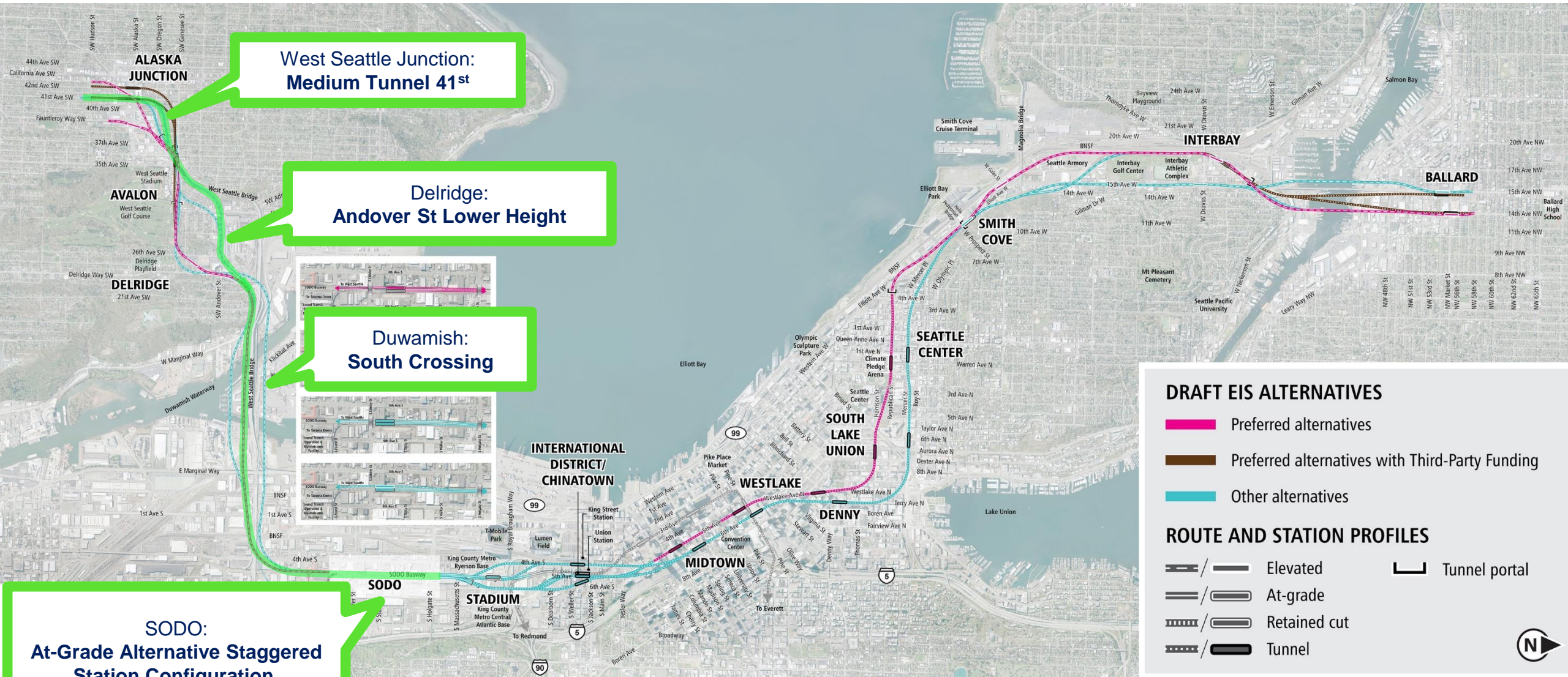
Some interest in 14th Tunnel station location in Draft EIS for access from future areas of growth to the east and north, and to avoid impacts around 15th Ave NW

Ballard Tunnel 15th Ave: Results comparison

	Tunnel 14th Ave (IBB-2a)	Tunnel 15th Ave (IBB-2b)	Tunnel 15th Ave Cost Savings
Feasibility 	-	-	-
Passenger Experience 	<ul style="list-style-type: none"> Convenient bus transfer 	<ul style="list-style-type: none"> Less convenient bus transfer 	<ul style="list-style-type: none"> Less convenient bus transfer Optional smaller west entrance could limit vertical circulation capacity
Ridership, Access, eTOD Potential 	<ul style="list-style-type: none"> 15-min walk to Ballard core with crossing of 15th Ave W eTOD potential on Safeway and other sites 	<ul style="list-style-type: none"> 10-min walk to Ballard core eTOD potential on Safeway and other sites 	<ul style="list-style-type: none"> 10-min walk to Ballard core Reduces access from southeast Reduces eTOD opportunity
Future Expansion 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Does not preclude 	<ul style="list-style-type: none"> Optional smaller west entrance may not accommodate future ridership growth
Environmental 	<ul style="list-style-type: none"> Displaces Safeway store Full closure of 14th Ave NW btw 52nd and 58th for 3 years Partial closure of NW Market St at 14th Ave NW for 9 mo. 	<ul style="list-style-type: none"> 7 more residential and 2 more business displacements than IBB-2a Partial closure of NW Market St at 15th Ave NW for 3 years 	<ul style="list-style-type: none"> 7 more residential displacements than IBB-2a Partial closure of NW Market St at 15th Ave NW for 3 years Avoids Safeway store displacement
Equity 	-	-	-
Cost compared to realigned financial plan in \$2019 	+\$0M	+\$200M	+\$70M (or +\$30m with optional smaller west entrance)

***West Seattle Extension
Further Studies and
Community Feedback***

West Seattle Link Extension: Preferred Alternative



**West Seattle Junction:
Medium Tunnel 41st**

**Delridge:
Andover St Lower Height**

**Duwamish:
South Crossing**

**SODO:
At-Grade Alternative Staggered
Station Configuration**

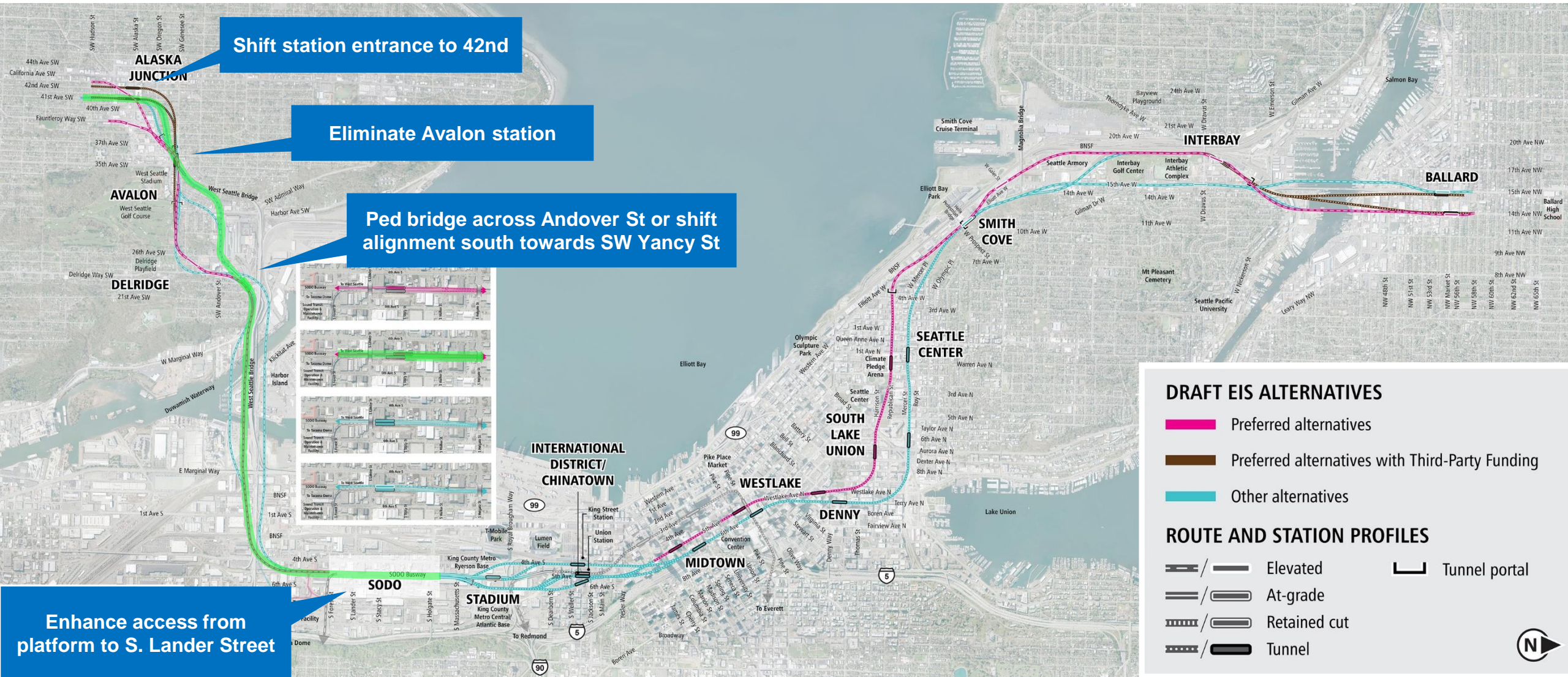
DRAFT EIS ALTERNATIVES

- Preferred alternatives
- Preferred alternatives with Third-Party Funding
- Other alternatives

ROUTE AND STATION PROFILES

- Elevated
- At-grade
- Retained cut
- Tunnel
- Tunnel portal

West Seattle Link Extension: Further studies

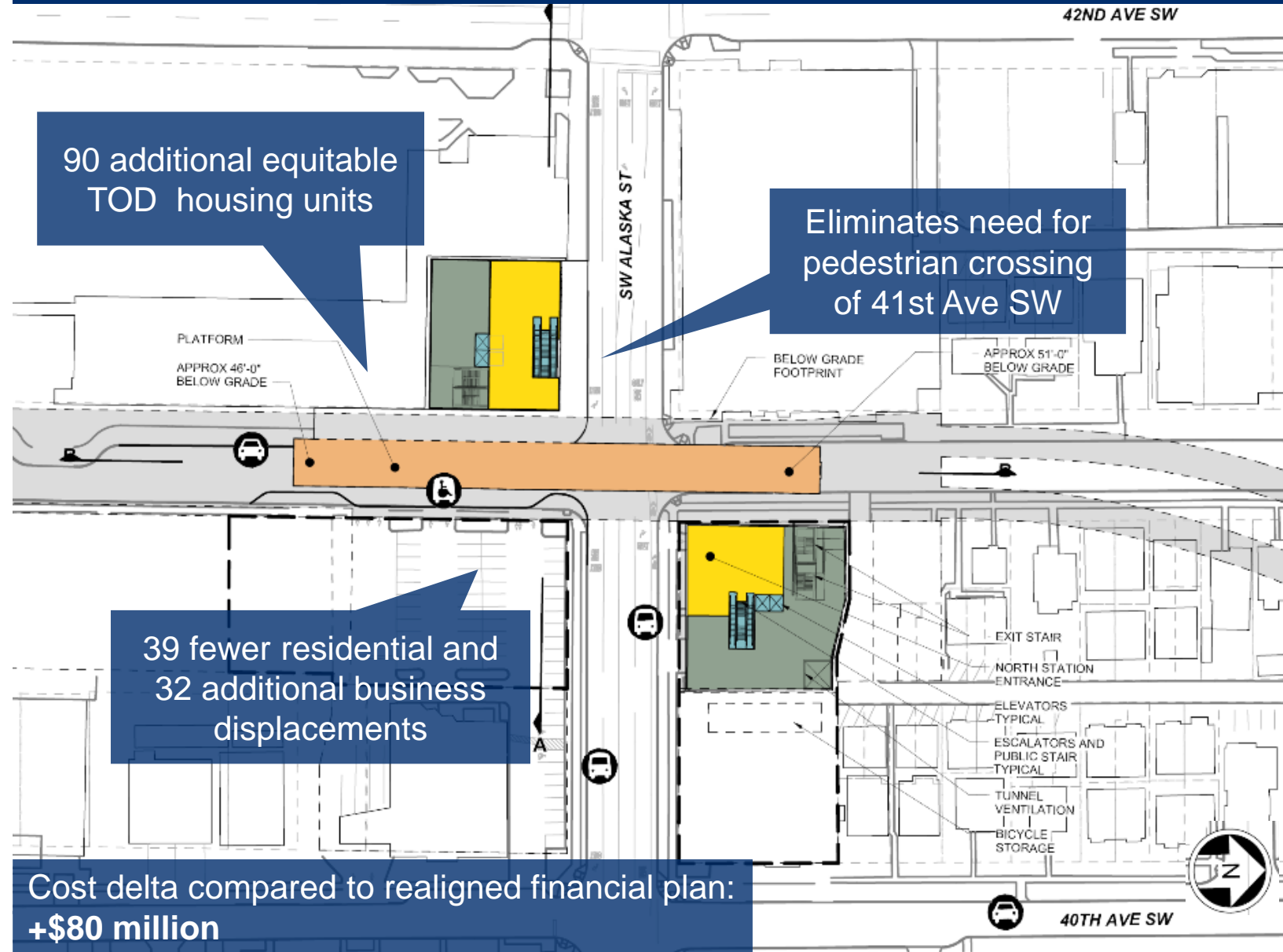


Alaska Junction Station Access Refinement

Shift station entrance to 42nd Ave SW

Study focus:
Improve passenger access

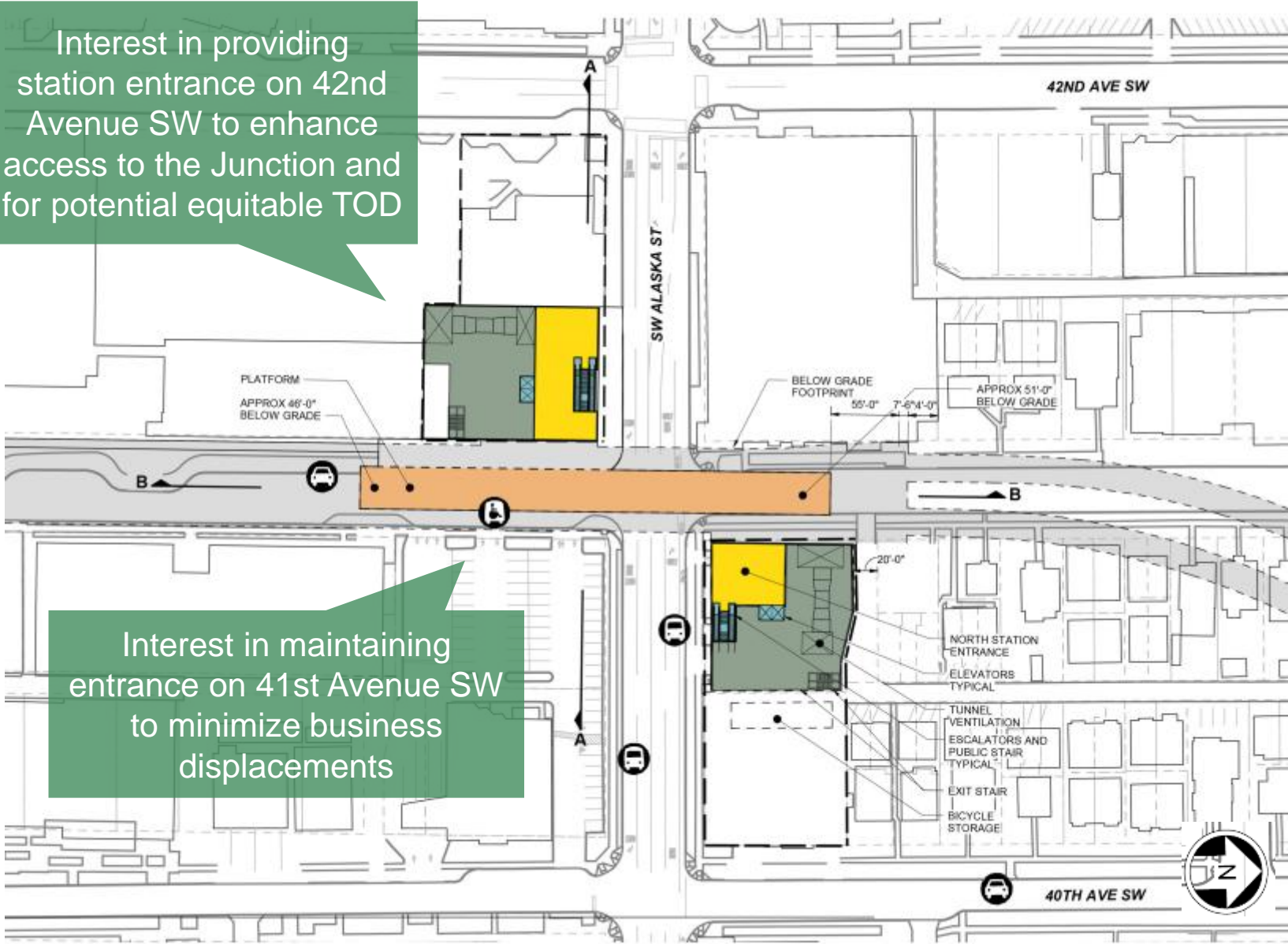
Compared to Medium Tunnel 41st Avenue Station (WSJ-5)



Alaska Junction Station Access Refinement

*Shift station entrance
to 42nd Ave SW*

Interest in providing station entrance on 42nd Avenue SW to enhance access to the Junction and for potential equitable TOD



Interest in maintaining entrance on 41st Avenue SW to minimize business displacements

Compared to Andover Street Station Lower Height Alternative (DEL-6) and Medium Tunnel 41st Avenue Station Alternative (WSJ-5)

Eliminate Avalon Station

Eliminate station and optimize alignment

(assumes shifting alignment south towards SW Yancy St)

Study focus:
Reduce costs

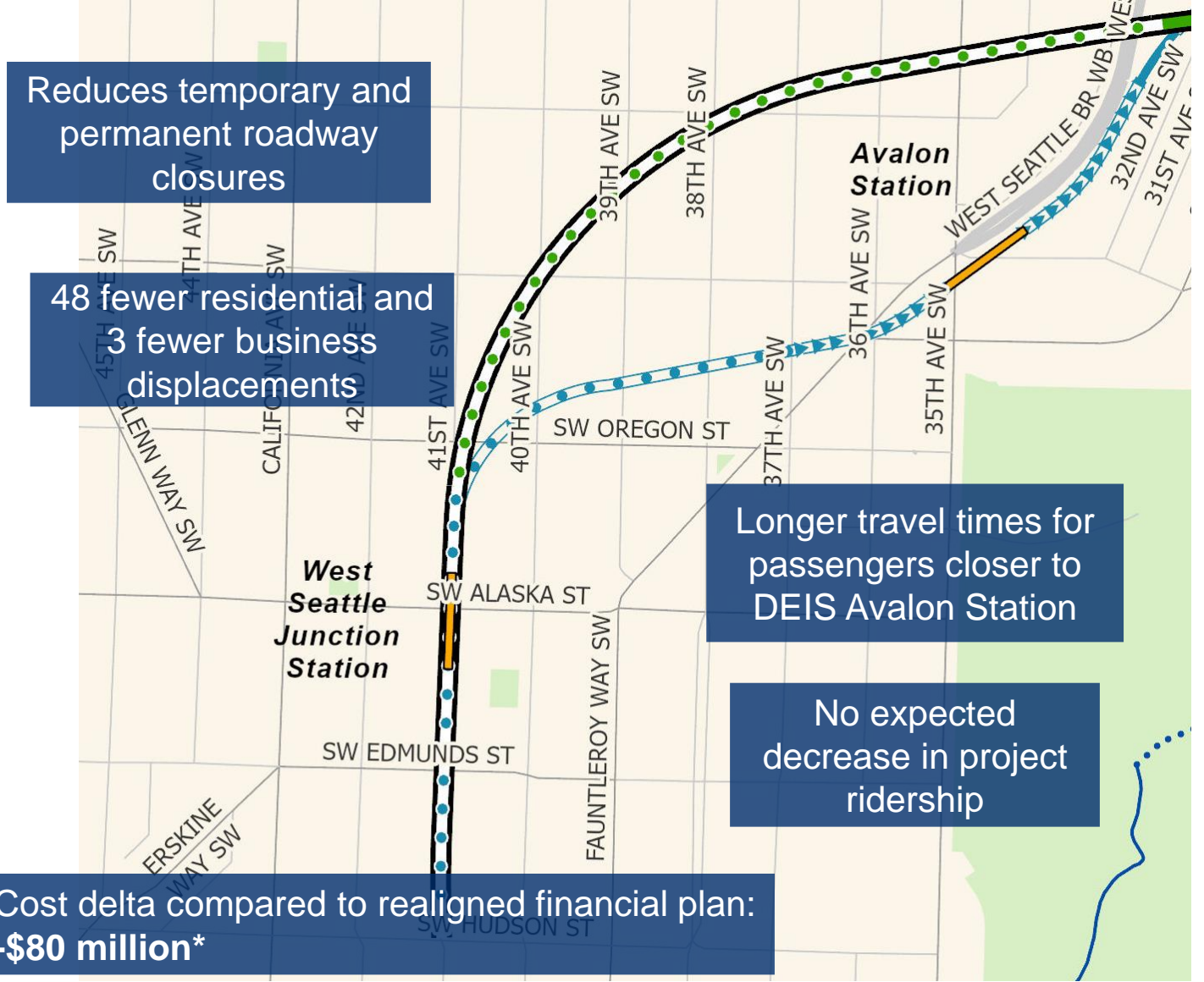
Reduces temporary and permanent roadway closures

48 fewer residential and 3 fewer business displacements

Longer travel times for passengers closer to DEIS Avalon Station

No expected decrease in project ridership

Cost delta compared to realigned financial plan:
-\$80 million*

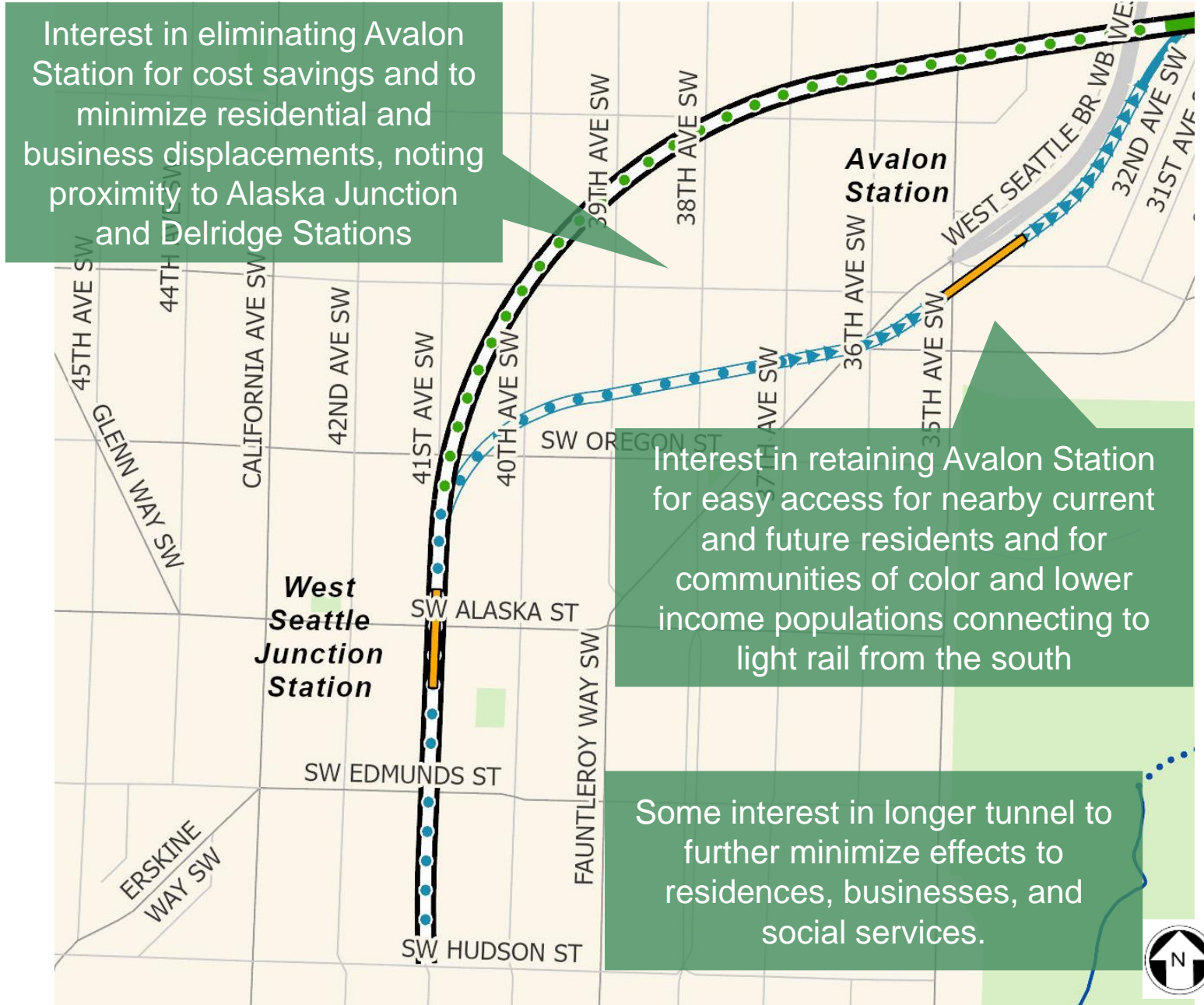


*Does not include additional cost of Delridge Station access, integration and alignment refinement

Eliminate Avalon Station

Eliminate station and optimize alignment

(assumes shifting alignment south towards SW Yancy St)



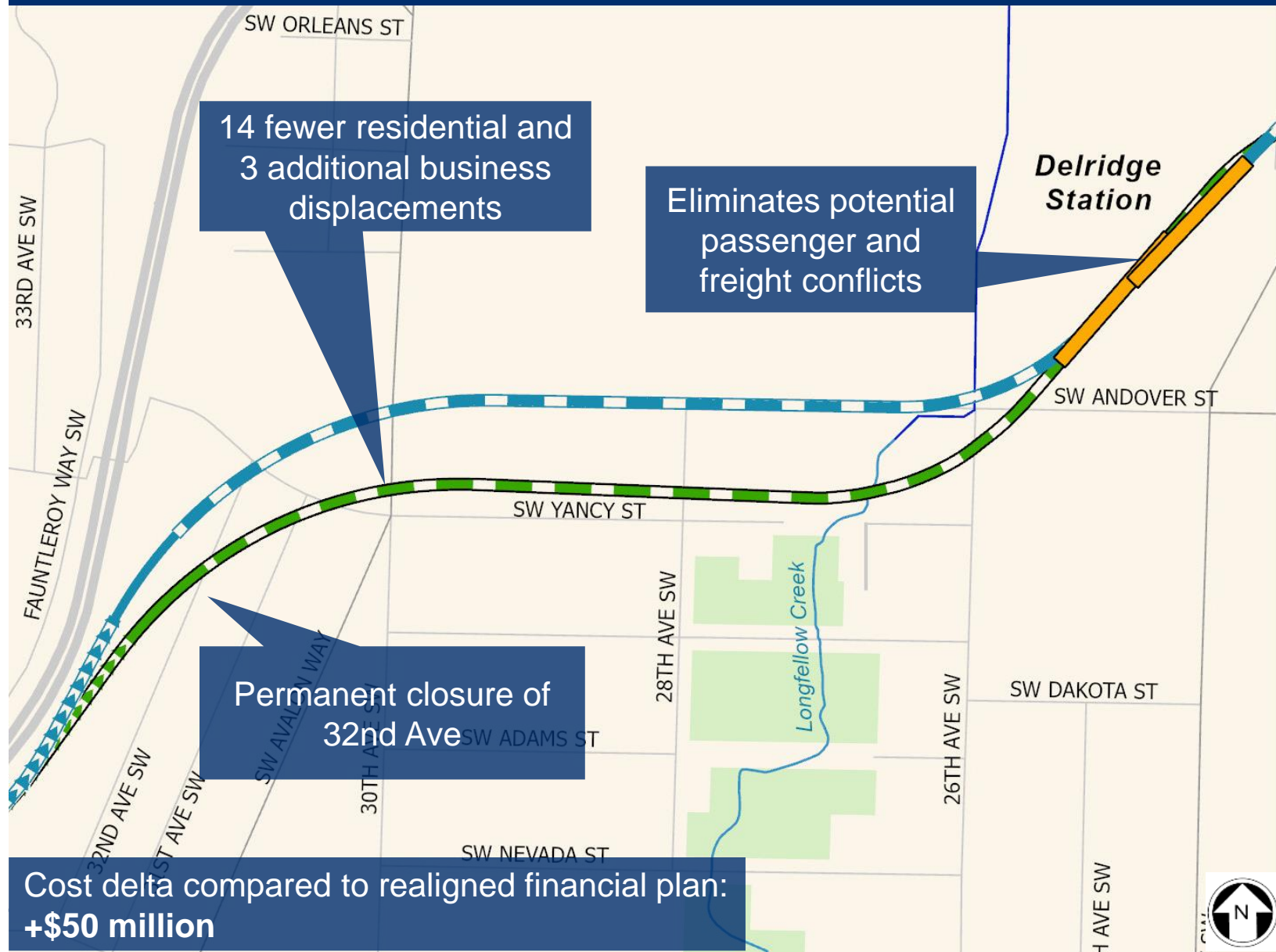
Delridge Access, Integration, and Alignment Refinement

Shift alignment south towards SW Yancy St

Study focus:

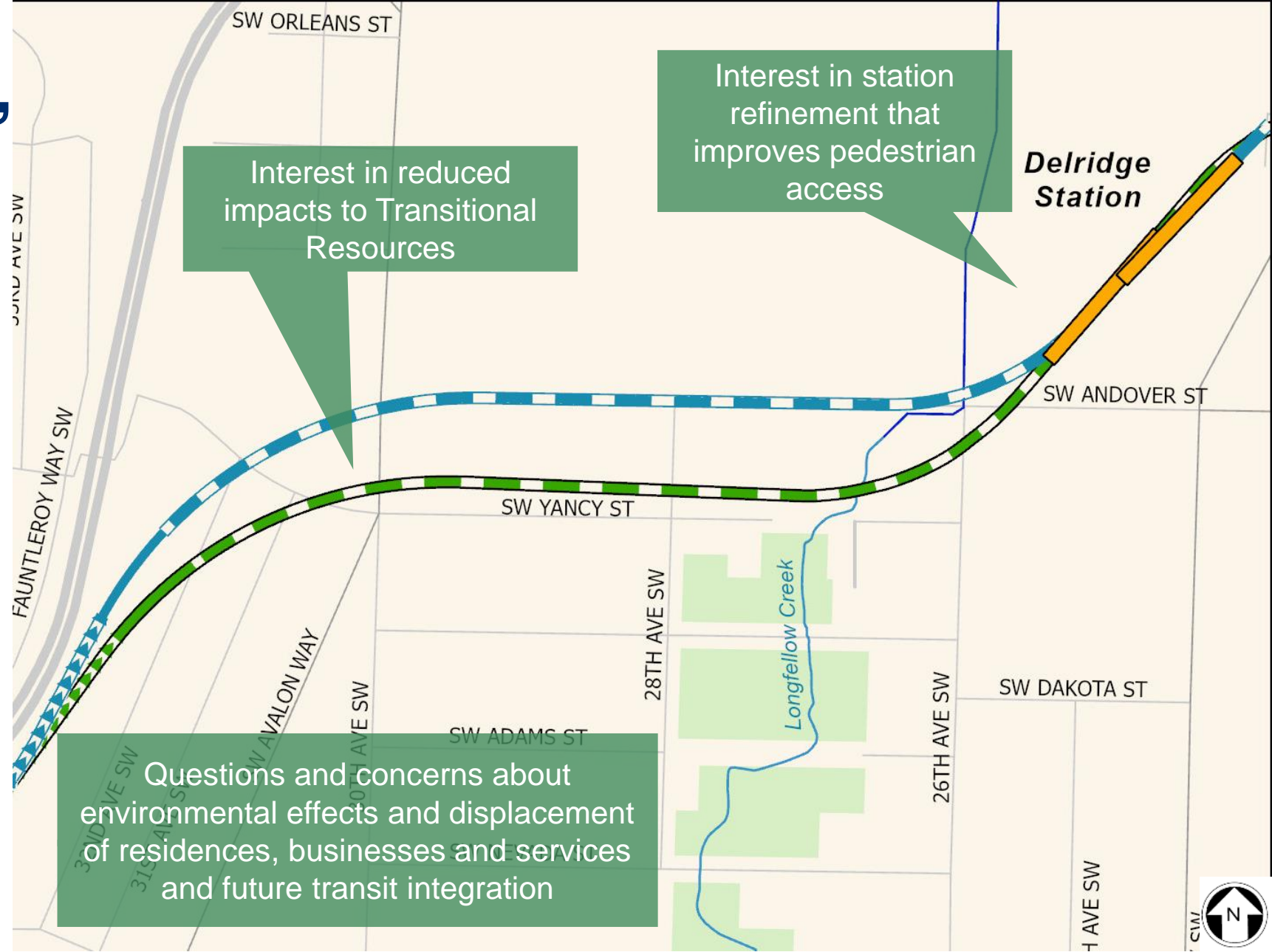
- Improve passenger access and transit integration
- Reduce effects to organizations serving low-income and communities of color

Compared to Andover Street Station Lower Height Alternative (DEL-6)



Delridge Access, Integration, and Alignment Refinement

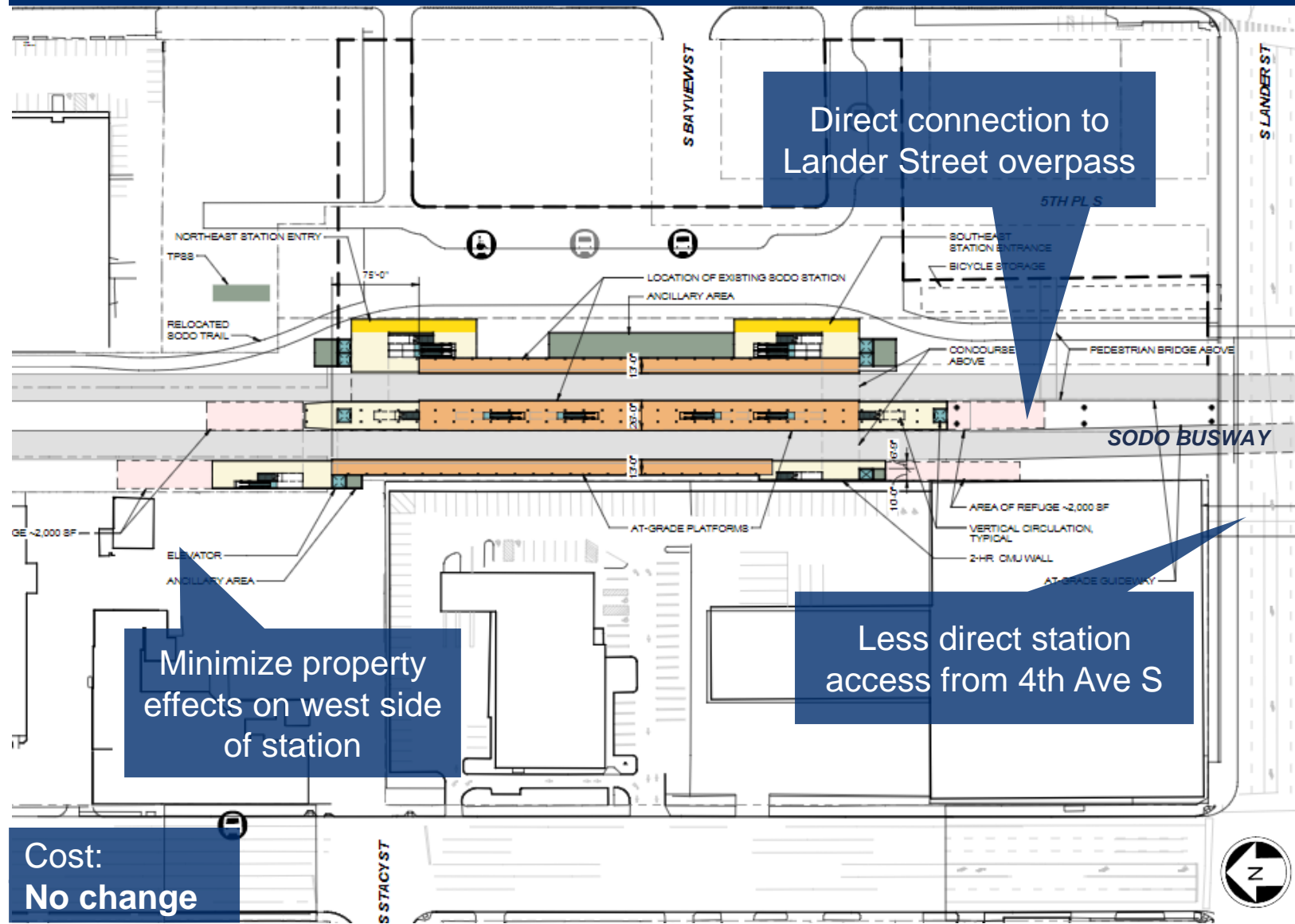
Shift alignment south towards SW Yancy St



Compared to At-Grade Alternative (SODO-1a) Staggered Station Configuration

SODO Access to S Lander Street

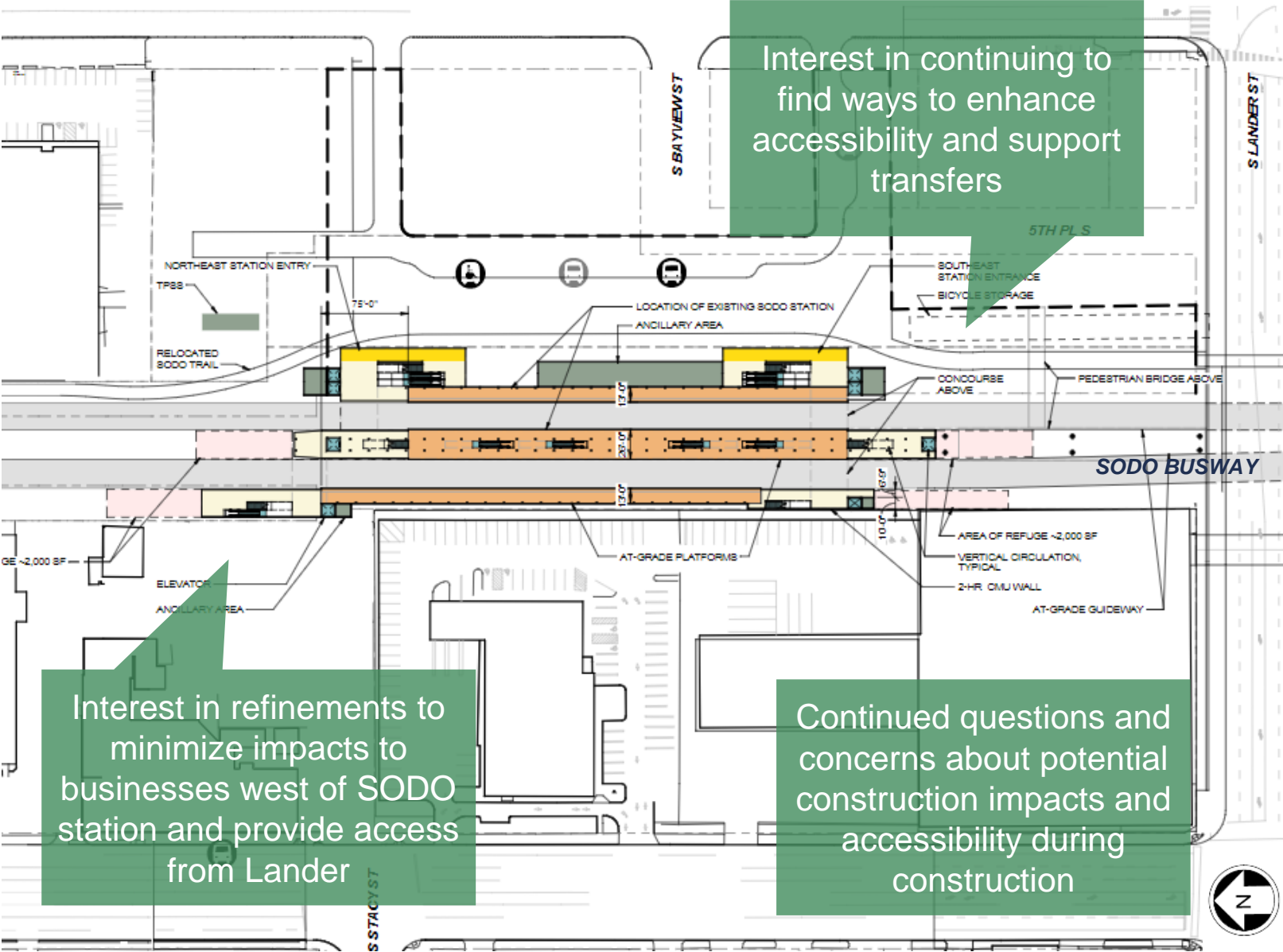
Enhance access from platform to S Lander Street



- Study focus:
- Minimize property effects on west side of station
 - Add connection to Lander Street

Cost:
No change

SODO Access to S Lander Street



Cost and schedule

Comparative estimates

- To *inform comparison* of further study concepts and end-to-end scenarios
- Consistent methodology to Draft EIS (2019\$), based on limited design
- *Project budget* established during realignment: \$12.2 billion

Schedule implications

Environmental phase:

- Additional environmental review is likely under any end-to-end scenario (~1 yr on top of already-incurred 10-month further studies delay)

Design phase:

- Scenarios including South Lake Union mix-and-match and CID 4th Shallow(er) will require additional time for coordination with third parties

Construction phase:

- Scenarios including CID 4th Shallow(er) will require additional time for construction (~2 yrs) due to 4th Ave viaduct reconstruction, traffic detour phasing, etc.
- Potential risk of additional delay for CID 4th Shallow(er) due to poor ground conditions, deep Midtown station, proximity to BNSF and existing downtown transit tunnel, phasing of Link closures

Q&A / Discussion

Next steps

Board process

- Jan 26, Board:** Further Studies results overview
- Jan 26 – Feb 17:* *Gather additional community feedback*
- Feb 9, SEC:** Further Studies results deeper dive
- Feb 23, Board:** Community feedback summary
- Mar 9, SEC:** Recommendation to Board
- Mar 23, Board:** Board identifies preferred alternative for Ballard Link Extension

Thank you.



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