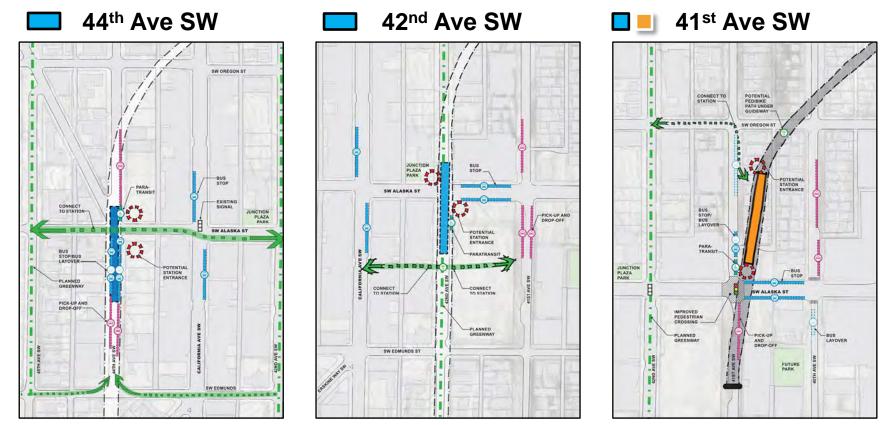


# West Seattle and Ballard Link Extensions

Phase 1 Station Planning Concepts | March 21, 2019

### Alaska Junction Station Level 3 Concepts



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

N

#### Junction Station – 44<sup>th</sup> Ave SW





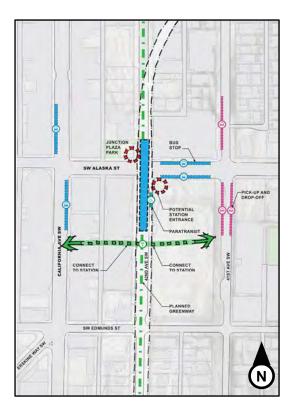
# Transit Integration and Non-motorized Access

- Allows for potential station entries within one block of Alaska Junction
- Compatible with planned bus routing and circulation
- Not directly served by existing or planned dedicated bike facility, but opportunity for new connection

- Station at edge of current Urban Village boundary
- Current zoning limits development potential to west of station
- Some potential for Agency TOD (~150 units) on property that could be acquired for staging and station entries

#### Junction Station – 42<sup>nd</sup> Ave SW





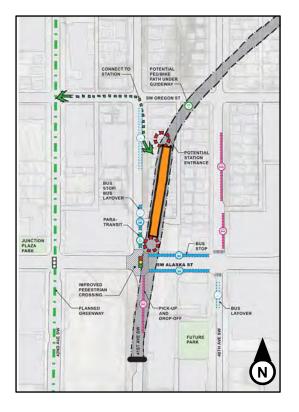
# Transit Integration and Non-motorized Access

- Potential station entries oriented toward Alaska Junction and east to Fauntleroy
- Compatible with planned bus routing and circulation
- Direct integration with planned neighborhood greenway on 42<sup>nd</sup> Ave SW

- Station located close to the center of Urban Village with high development potential
- Considerable Agency TOD potential (~350 units) on property that could be acquired for staging and station entries

#### Junction Station – 41<sup>st</sup> Ave SW



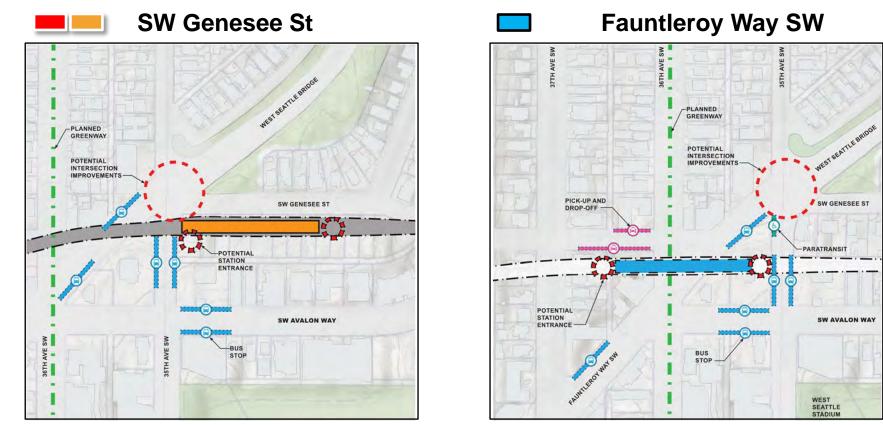


# Transit Integration and Non-motorized Access

- Potential station entries farthest from Junction
- Longest connection to station for bus transfers; could be offset with modifications to 2040 bus network
- Not directly served by existing or planned dedicated bike facility, but opportunity to connect to 42<sup>nd</sup> Ave SW greenway via SW Oregon St

- Station located close to the center of Urban Village
- Current zoning limits development potential to north of station
- Largest effect to existing neighborhood scale and fabric
- Considerable Agency TOD potential (~300 units) on property that could be acquired for staging and station entries

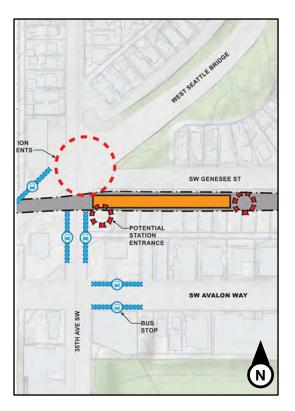
### Avalon Station Level 3 Concepts



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

#### Avalon Station – SW Genesee St





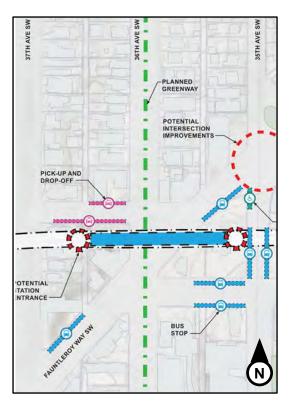
# Transit Integration and Non-motorized Access

- Potential station entries entirely east of 35<sup>th</sup> Ave SW and SW Fauntleroy Wy/West Seattle Bridge
- Challenging location for efficient transit integration and circulation
- Not directly served by existing or planned dedicated bike facility

- Potential station entries less convenient to planned density in West Seattle Triangle
- Largest effect to neighborhood scale and fabric
- Very limited potential for Agency TOD on property that could be acquired for staging or station entries

### **Avalon Station – Fauntleroy Way SW**



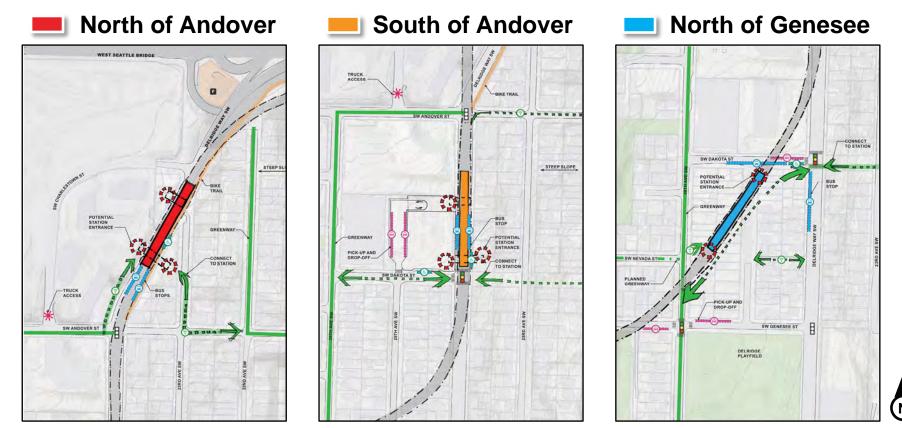


#### Transit Integration and Non-motorized Access

- Station spanning 35<sup>th</sup> Ave SW and SW Fauntleroy Wy/West Seattle Bridge allows for potential entries on both sides of busy street
- More potential to consolidate bus zones, though circulation still challenging
- Could be directly served by planned dedicated bike facility

- Potential station entries more convenient to planned density in West Seattle Triangle
- Higher development
  potential owing to smaller
  permanent footprint
- Some potential for Agency TOD on property that could be acquired for staging or station entries

#### **Delridge Station** Level 3 Concepts



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

### **Delridge Station – North of Andover St**





#### Transit Integration and Non-motorized Access

- Direct bus access to station from both sides of street
- Challenging pedestrian and bike environment due to proximity to West Seattle Bridge ramps, freight traffic
- Challenging location for passenger pick-up/drop-off
- Could be connected to greenway by new dedicated facility

- Limited redevelopment opportunities due to proximity to Nucor Steel, West Seattle Bridge ramps, and steep slopes to east
- Challenging site conditions for affordable housing as part of potential future development

### **Deridge Station – South of Andover St**





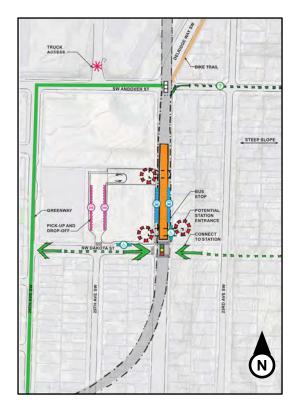
#### Transit Integration and Non-motorized Access

- Direct bus access to station from both sides of street
- Closer to neighborhood destinations
- Potential for ped/bike connection to a possible hill climb at SW Dakota St from 26<sup>th</sup> Ave SW greenway via station

- Current zoning allows transit-supportive uses and densities next to station
- Potential for smaller-scale Agency TOD near station
- Less potential to translate guideway effects to neighborhood into redevelopment opportunities

### **Delridge Station – North of Genesee St**





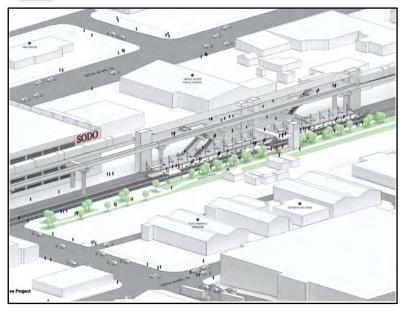
#### Transit Integration and Non-motorized Access

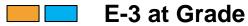
- Longer connection to station for bus transfers unless buses divert
- Potential to vacate or reprogram 25<sup>th</sup> Ave SW
- Opportunity to connect 26<sup>th</sup> Ave SW greenway into station
- Potential opportunity to span Delridge Wy SW with pedestrian bridge and tie into a hill climb on SW Dakota

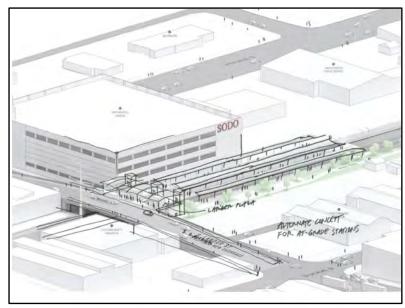
- Current zoning limits development potential adjacent to station
- Largest effect to existing residential neighborhood scale and fabric
- Highest potential for Agency TOD and redevelopment that could accommodate new affordable housing and amenities such as grocery store

### **SODO Station** Level 3 Concepts





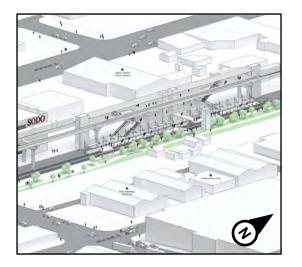






#### SODO Station – E-3 Elevated





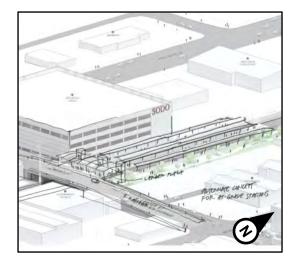
#### Transit Integration and Non-motorized Access

- Maintains grade of Lander St and current pedestrian/ vehicular circulation pattern
- Potential to shift the station closer to Lander to improve visibility, quality of connection to 1<sup>st</sup> Ave

- Current zoning and uses limit redevelopment potential adjacent to station
- Current zoning and uses not pedestrian-friendly
- Potential to connect mezzanine to adjacent development

#### **SODO Station – At Grade**





# Transit Integration and Non-motorized Access

- Requires grade separation of Lander St, altering vehicular and pedestrian circulation pattern
- Potential to shift station closer to Lander and design overpass to enhance security and pedestrian access

- Current zoning and uses limit redevelopment potential adjacent to station
- Current zoning and uses not pedestrian-friendly
- Potential to connect overpass and station entry to adjacent development

### Chinatown-ID Station Level 3 Concepts

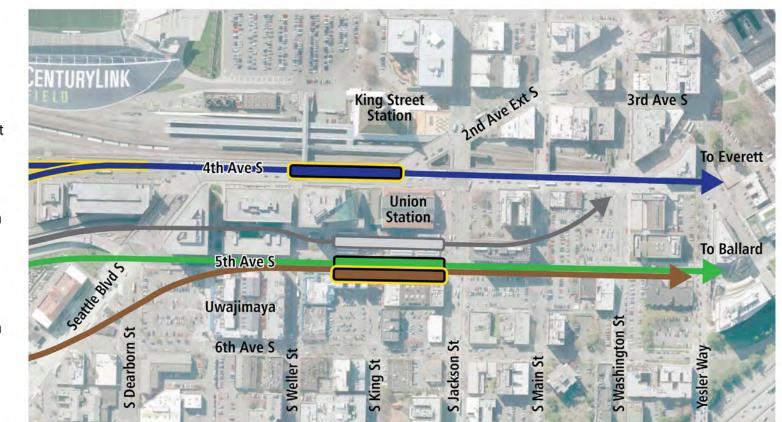
Existing Link Light Rail

ST3 Representative Project

5th Ave. S shallow station or deep station

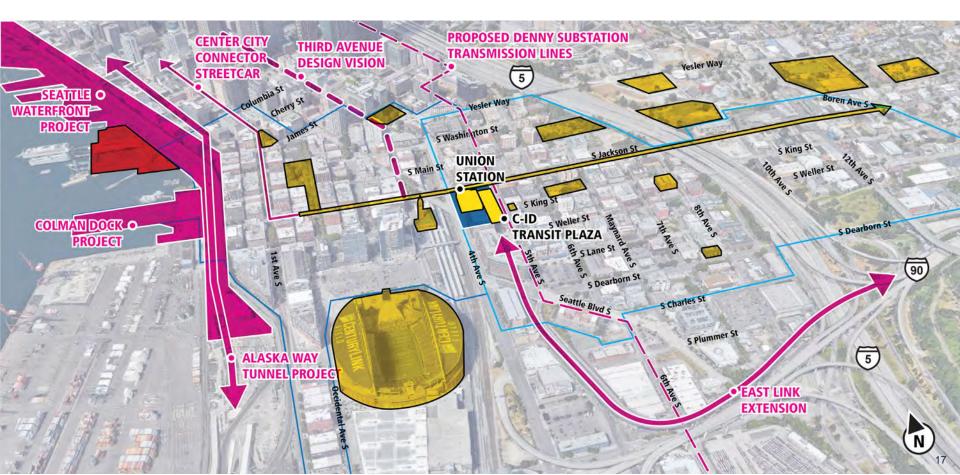
4th Ave. S shallow station or deep station



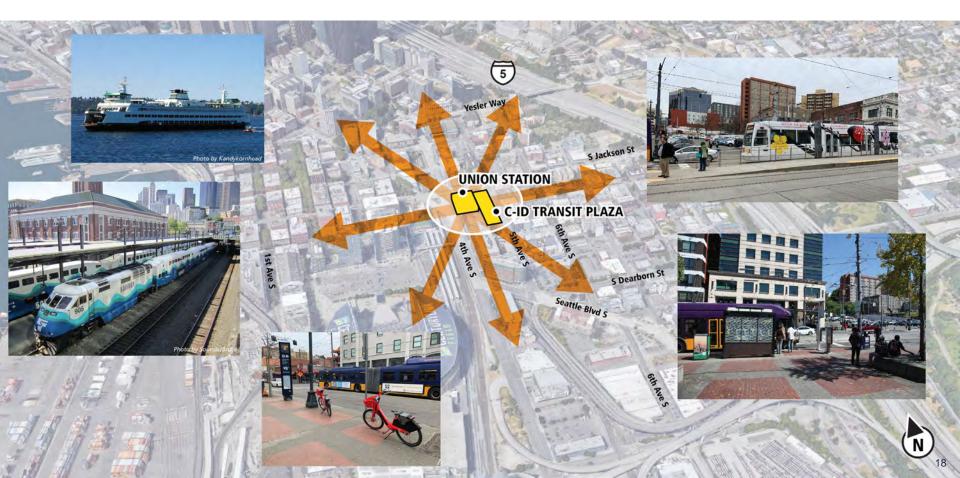


Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

#### **Imagining the Future**



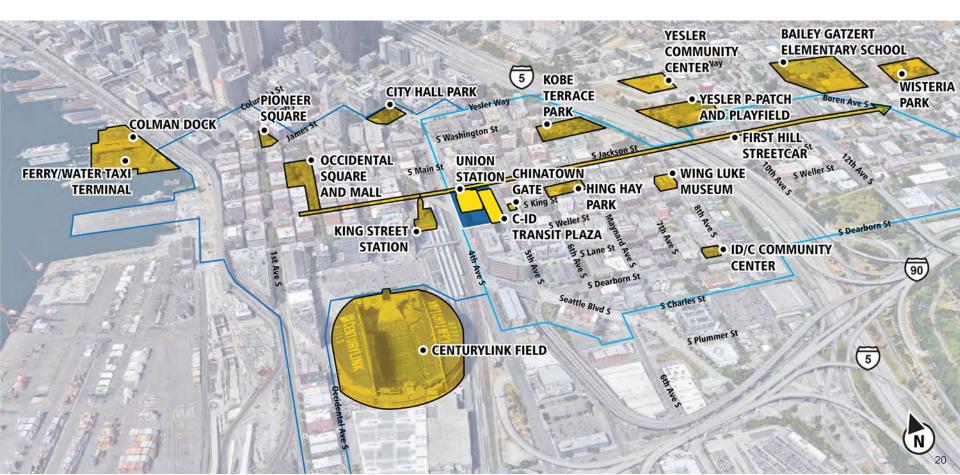
#### **Intermodal Connections**



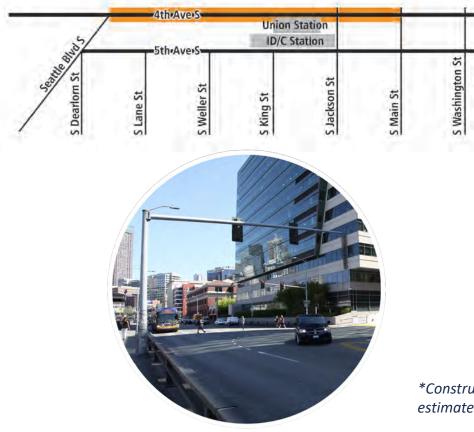
#### **Intermodal Connections**



#### **Connections to Key Destinations**



#### Chinatown/ID Station – 4<sup>th</sup> Ave Shallow

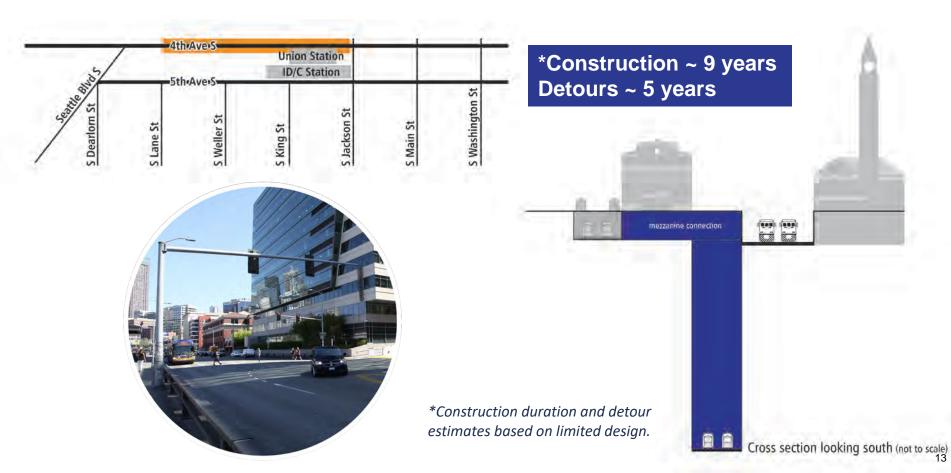


#### \*Construction ~ 10 years Detours ~ 7.5 years

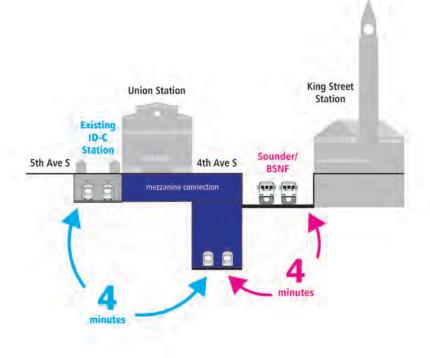


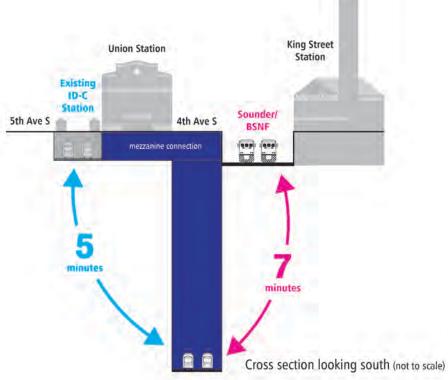
\*Construction duration and detour estimates based on limited design.

#### Chinatown/ID Station – 4<sup>th</sup> Ave Deep

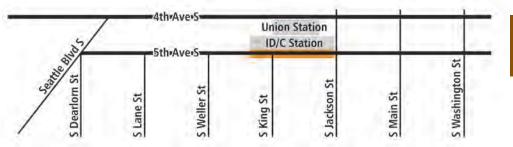


#### 4<sup>th</sup> Ave Stations – Transfer Times





#### Chinatown/ID Station – 5<sup>th</sup> Ave Shallow





\*Construction ~ 6 years Detours ~ 4 months

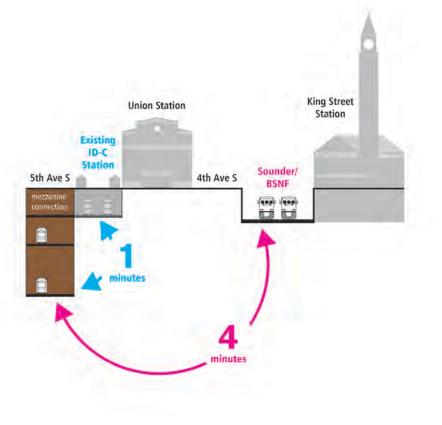
#### \*Construction duration and detour estimates based on limited design.

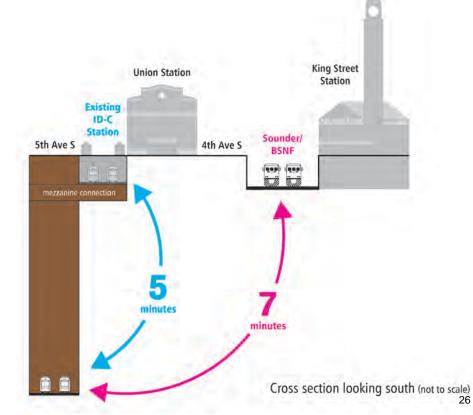
Cross section looking south (not to scale) 24

#### Chinatown/ID Station – 5<sup>th</sup> Ave Deep



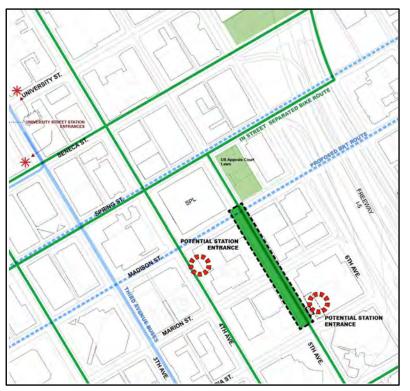
#### 5<sup>th</sup> Ave Stations – Transfer Times





### Midtown Station Level 3 Concepts





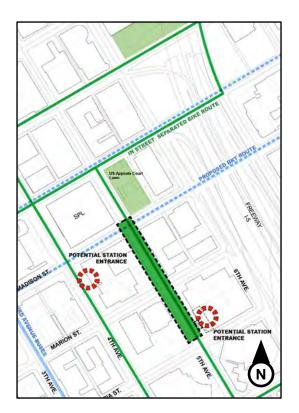


Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

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#### Midtown Station – 5<sup>th</sup> Ave





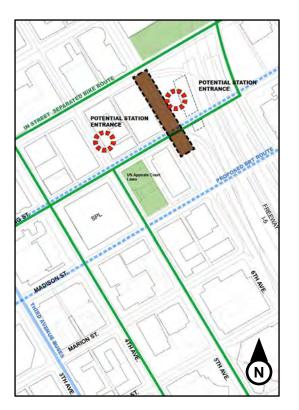
#### Transit Integration and Non-motorized Access

- Potential primary station entries on both 4<sup>th</sup> and 5<sup>th</sup> Aves enable access from significant pedestrian flows at different grades
- Good integration with planned BRT service on Madison and Spring Sts
- Potential to optimize integration with platformto-platform transfers

- Station area fully built-out
- Potential to integrate entries into existing development
- Opportunity to tie into concourse connecting Columbia Tower and Municipal Tower

#### Midtown Station – 6<sup>th</sup> Ave





#### Transit Integration and Non-motorized Access

- Walkshed constrained by I-5 ROW and grades
- Challenging integration with planned BRT service on Madison and Spring Sts
- Less potential to optimize integration with Madison BRT via platform-toplatform transfers

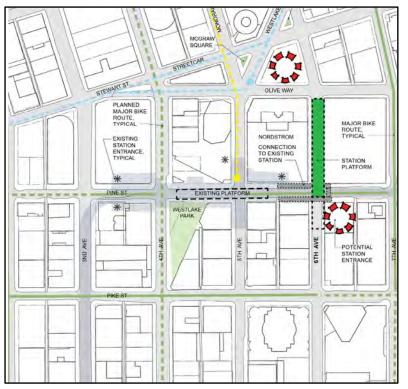
- Station more accessible to new development in lower First Hill, though still separated by I-5
- Station area built out
- Potential to integrate entries into existing development

### Westlake Station Level 3 Concepts

5<sup>th</sup> Ave





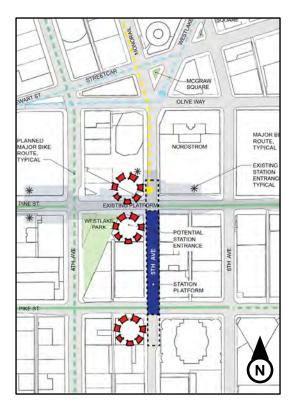


Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

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#### Westlake Station – 5<sup>th</sup> Ave





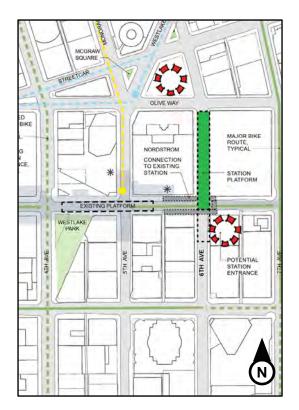
# Transit Integration and Non-motorized Access

- Potential to site station entries to capture bus transfers from major corridors on Third and Fourth Aves
- Opportunity to site entry directly on Westlake Park
- Could be served directly by planned dedicated bike facilities

- Station area built out
- Potential to integrate entries into existing development or future redevelopment

#### Westlake Station – 6<sup>th</sup> Ave



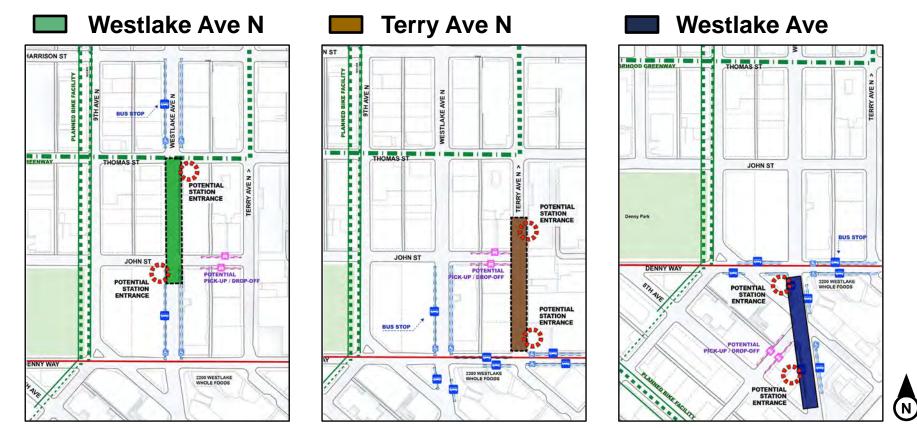


#### Transit Integration and Non-motorized Access

- Potential station entries farther from bus transfers on 3<sup>rd</sup> and 4<sup>th</sup> Avenues
- Less opportunity to integrate directly with major public spaces like Westlake Park
- Farther from major northsouth non-motorized connections

- Station area built out
- Potential to integrate entries into existing development

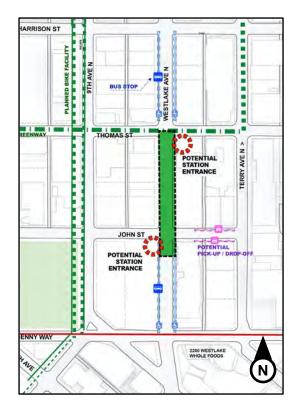
#### **Denny Station** Level 3 Alternative Concepts



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

#### **Denny Station – Westlake Ave North**





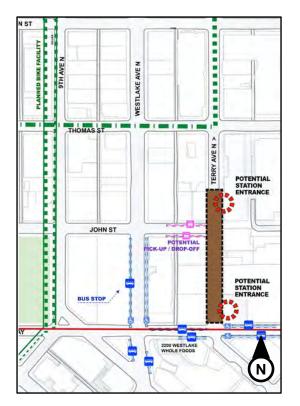
# Transit Integration and Non-motorized Access

- Potential station entries more removed from major bus corridors on Denny and Harrison Streets
- Slightly longer transfer to SLU Streetcar
- Could be served directly by planned greenway on Thomas St

- Station area built out
- Potential to integrate entries into existing development

### **Denny Station – Terry Ave**





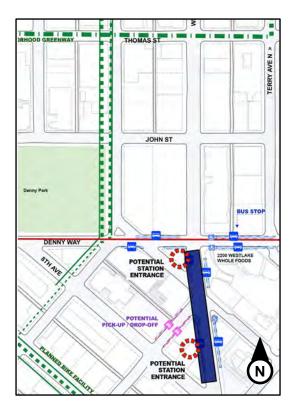
# Transit Integration and Non-motorized Access

- Potential for station entries on both sides of Denny
- Slightly longer transfer for westbound buses on Denny and potentially more challenging wayfinding
- Opportunity to negotiate grade on Denny Way

- Station area built out
- Potential to integrate entries into existing or future development
- Could serve Cascade neighborhood better with a higher-elevation entry

#### **Denny Station – Westlake Ave**



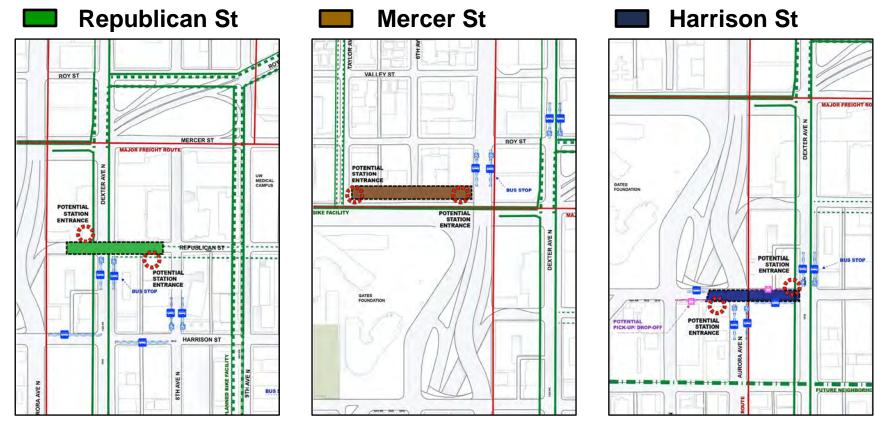


#### Transit Integration and Non-motorized Access

- Potential for station entries on both sides of Denny and Westlake
- Better integration with buses, streetcar operating on Denny and Westlake in all directions
- More distant from planned greenway on Thomas St

- Station area built out
- Potential to integrate entries into existing development
- Could serve Amazon HQ, existing and planned density in Denny Triangle better

### South Lake Union Station Level 3 Alternative Concepts

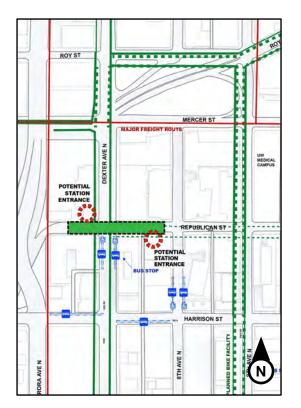


Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

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## **SLU Station – Republican St**





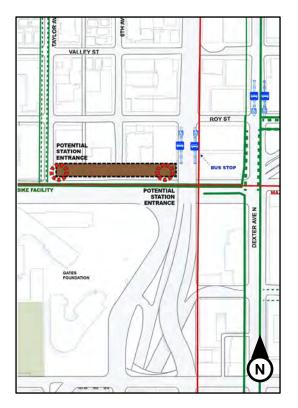
#### Transit Integration and Non-motorized Access

- Potential station entries focused on Dexter
- Challenging pedestrian and bike environment due to SR-99 off ramps
- Less opportunity to integrate with planned bus service on SR-99 and Harrison St

- Less potential for additional development and density
- SR-99 forms physical barrier to important destinations to West (Gates Foundation, Seattle Center)

### **SLU Station – Mercer St**





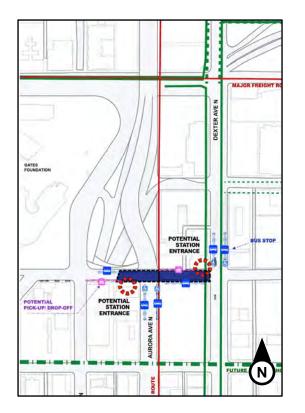
#### Transit Integration and Non-motorized Access

- Potential station entries focused on Dexter
- Less opportunity to integrate with planned bus service on SR-99 and Harrison St
- Directly served by existing dedicated bike facilities on Dexter, Mercer, Roy

- Moderate potential for additional development and density
- Closer to emerging density at north end of South Lake Union, including new Google campus

## SLU Station – Harrison St



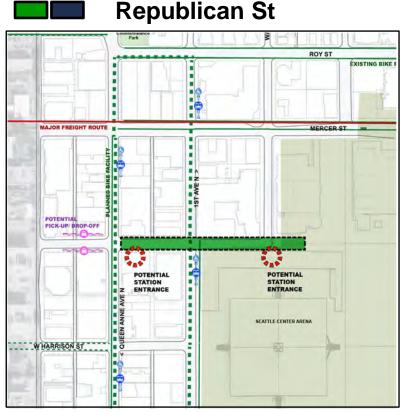


# Transit Integration and Non-motorized Access

- Excellent pedestrian access to South Lake Union and east edge of Uptown
- Excellent integration with planned bus service on SR-99 and Harrison St
- Directly served by dedicated bike facility on Dexter, could be served by planned facility on Thomas

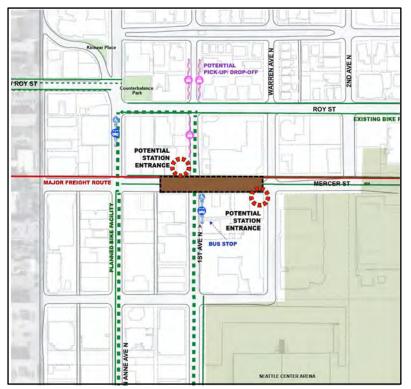
- Strong potential for additional development and density in recently upzoned neighborhood east of Seattle Center
- Excellent location to serve Gates Foundation, eastern edge of Seattle Center and upzoned neighborhood

## Seattle Center Station Level 3 Concepts





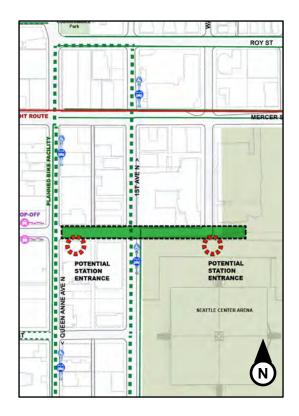
#### **Mercer St**



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

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### Seattle Center Station – Republican St

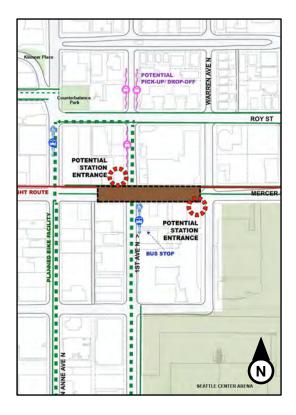


# Transit Integration and Non-motorized Access

- Excellent pedestrian access to Seattle Center and Uptown neighborhood
- Excellent integration with buses on 1<sup>st</sup> Ave N and Queen Anne Ave N
- Directly served by existing and planned dedicated bike facilities

- Land Use and Development
- Some potential for additional development and density
- Excellent location to provide iconic entry to Seattle Center and serve the heart of recently upzoned Uptown neighborhood

### Seattle Center Station – Mercer St

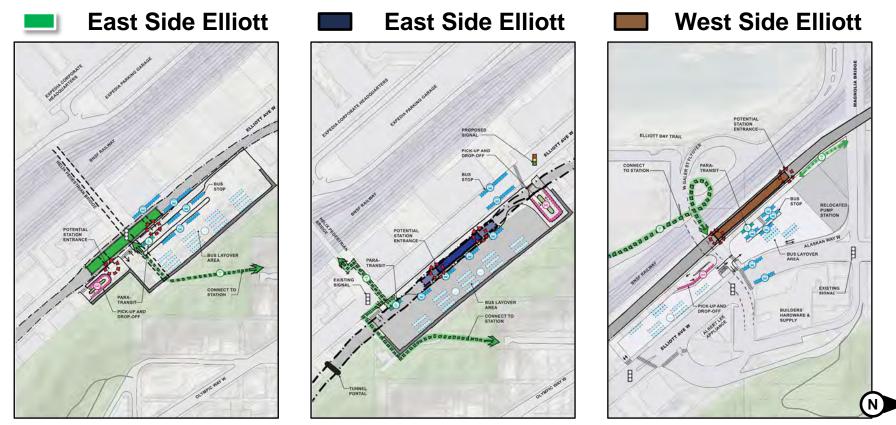


#### Transit Integration and Non-motorized Access

- Good pedestrian access to Uptown neighborhood; slightly longer walk to Seattle Center
- Excellent integration with buses on 1<sup>st</sup> Ave N and Queen Anne Ave N
- Could be served by existing dedicated bike facilities

- Some potential for additional development and density
- Less opportunity for iconic entry to Seattle Center campus
- Potential for Agency TOD on property acquired for construction staging or station entries

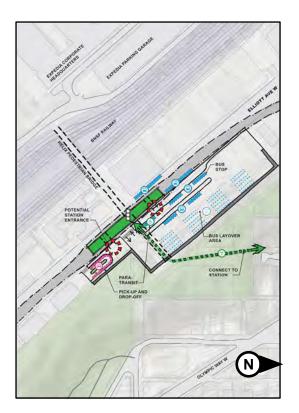
## Smith Cove Station Level 3 Concepts



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

### Smith Cove Station – East Side Elliott





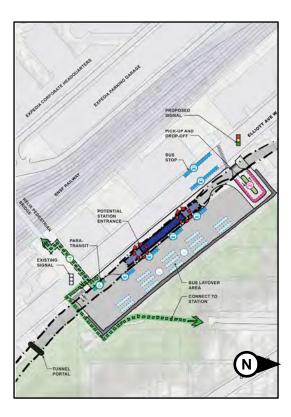
#### Transit Integration and Non-motorized Access

- Opportunity to extend Helix Bridge across Elliott to tie in directly to station mezzanine, providing access to all bus zones
- Walkshed greatly limited by Queen Anne Hill grade
- Aerial structure over Elliott would affect existing ROW and experience of ground plane

## Land Use and Development

 Limited potential for Agency TOD and overall redevelopment, though some development capacity could be recovered if bus layover is overbuilt

### Smith Cove Station – East Side Elliott



#### Transit Integration and Non-motorized Access

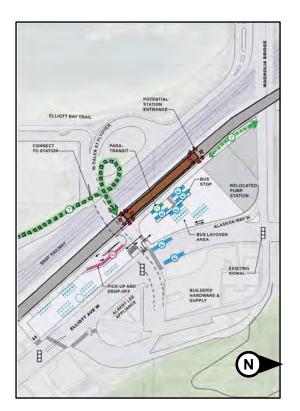
- Profile and location of station complicates potential Helix Bridge extension and landing
- Requires crossing of Elliott to access southbound bus zones
- Walkshed greatly limited by Queen Anne Hill grade

## Land Use and Development

 Limited potential for Agency TOD and overall redevelopment; profile and location of station reduces efficiency of potential overbuilding of bus layover

### Smith Cove Station – West Side Elliott





# Transit Integration and Non-motorized Access

- Opportunity to tie into existing Galer flyover for cyclists and pedestrians
- Opportunity for direct connection to nearby Armory site
- Provides good bus circulation utilizing existing signals

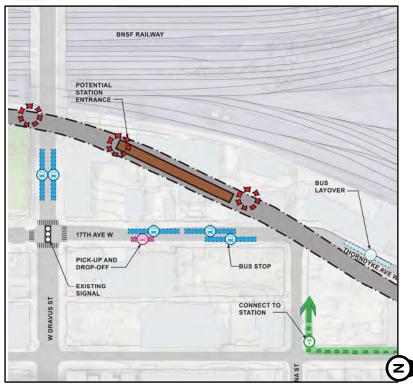
- Location serves the greatest number of existing and potential future destinations
- Station location and profile yields considerable Agency TOD potential (equivalent ~600 units) if station/guideway and bus facility are overbuilt

## Interbay Station Level 3 Concepts

15<sup>th</sup> Ave W 17TH AVE W BUS LAYOVER 16TH AVE W PARA-TRANSIT POTENTIAL STATION ENTRANCE 15TH AVE BUS STOP

14TH AVE W

#### 17<sup>th</sup> Ave W



Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

PICK-UP AND

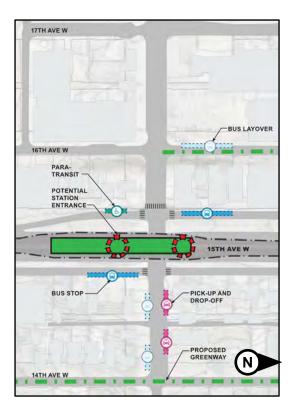
DROP-OFF

PROPOSED

GREENWAY

### Interbay Station – 15<sup>th</sup> Ave W





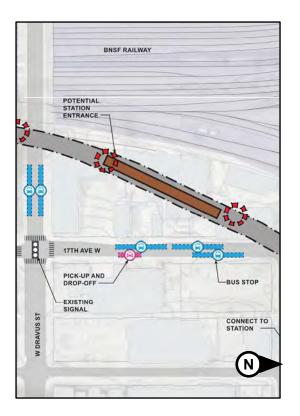
#### Transit Integration and Non-motorized Access

- Good location for pedestrian access from west slope of Queen Anne
- Challenging pedestrian and cycling environment
- Good integration with buses operating on 15<sup>th</sup>, but slightly more challenging for buses serving Magnolia

- Some potential for redevelopment
- Close to area currently zoned for mixed-use development
- Concern about freight use and access from 15<sup>th</sup> Ave W

## Interbay Station – 17<sup>th</sup> Ave W



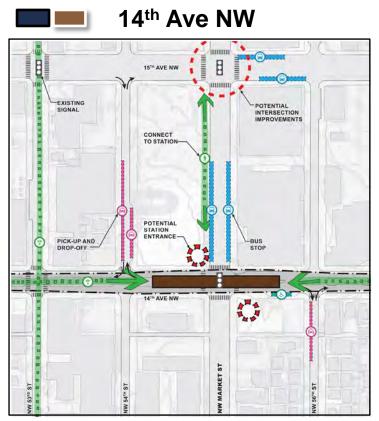


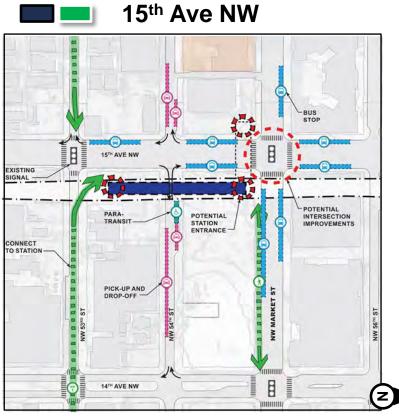
#### Transit Integration and Non-motorized Access

- Good location for pedestrian access from Magnolia
- Opportunity to enhance pedestrian and bike connections to and through station area
- Good integration with buses serving Magnolia; opportunity to enhance bus circulation with new Thorndyke/Nickerson connection

- Good potential for redevelopment to east – strongest with retained cut station that could be overbuilt
- Sited in area currently zoned for industrial development, but also close to areas zoned for mixed-use development
- Strong potential for Agency TOD/codevelopment at station

## **Ballard Station** Level 3 Concepts

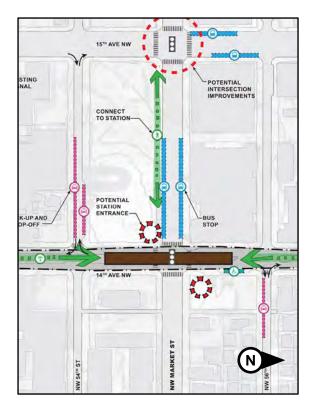




Guideway and station concepts depicted reflect limited design and shown for illustration and discussion purposes.

### Ballard Station – 14<sup>th</sup> Ave NW





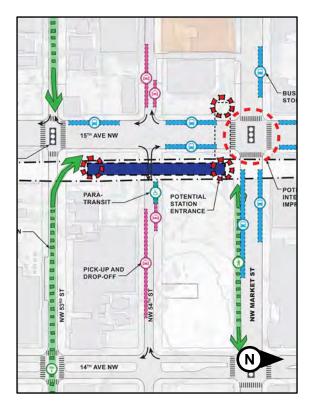
#### Transit Integration and Non-motorized Access

- Potential entries to station on both sides of NW Market St
- Requires crossing 15<sup>th</sup> Ave NW to access current Ballard core
- Opportunity to consolidate most bus zones for more legible transfers
- Opportunity to improve bike and ped access through reconstruction of 14<sup>th</sup> Ave NW

- Farthest from historic Ballard core
- Closer to MIC boundary and edge of current Urban Village
- Considerable potential for redevelopment and Agency TOD in station area (~1,600 units)

### Ballard Station – 15<sup>th</sup> Ave NW





# Transit Integration and Non-motorized Access

- Potential entries to station on both sides of 15<sup>th</sup> Ave NW via mezzanine
- Results in more diffuse bus zones
- Concern about effects of on freight and general traffic operations on 15<sup>th</sup> Ave NW
- Opportunity to tie directly into existing greenway on NW 53<sup>rd</sup> St

- Marginally closer (~500 feet) to historic Ballard core
- Considerable potential for redevelopment and Agency TOD in station area (~1,500 units)

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