Multnomah County Bicycle and Pedestrian Citizens Advisory Committee

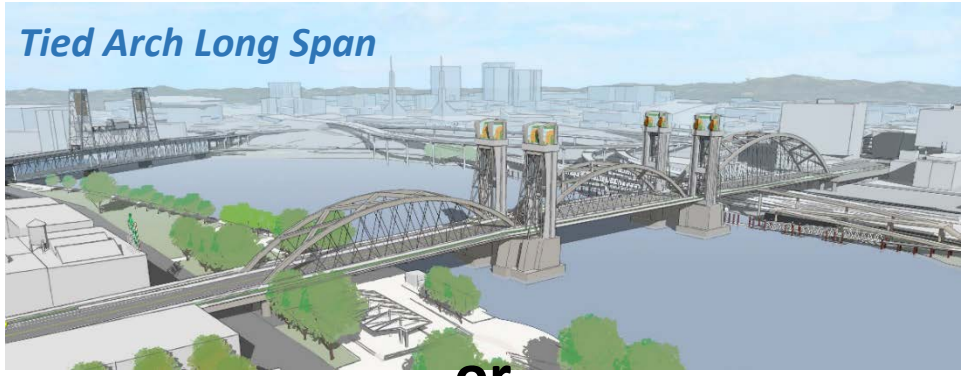
Multi-use Path Connections

Department of Community Services
Transportation Division

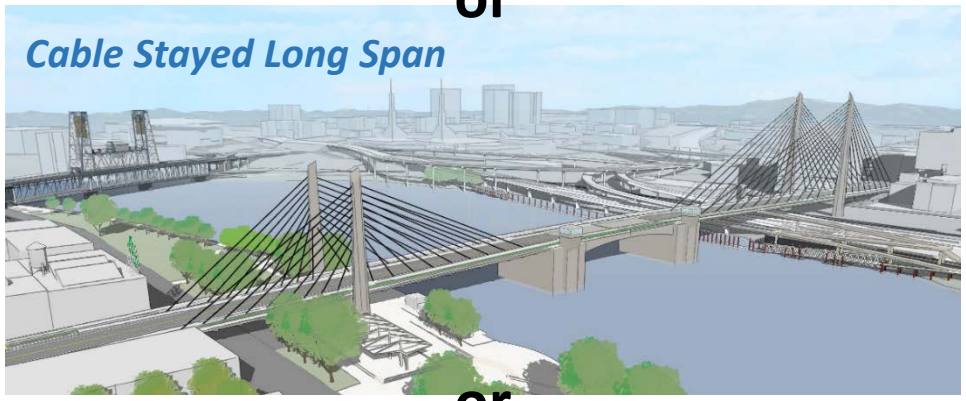
December 9, 2020

A New Burnside Bridge: Long-span Alternative

Examples of Bridge Types Under Consideration



or



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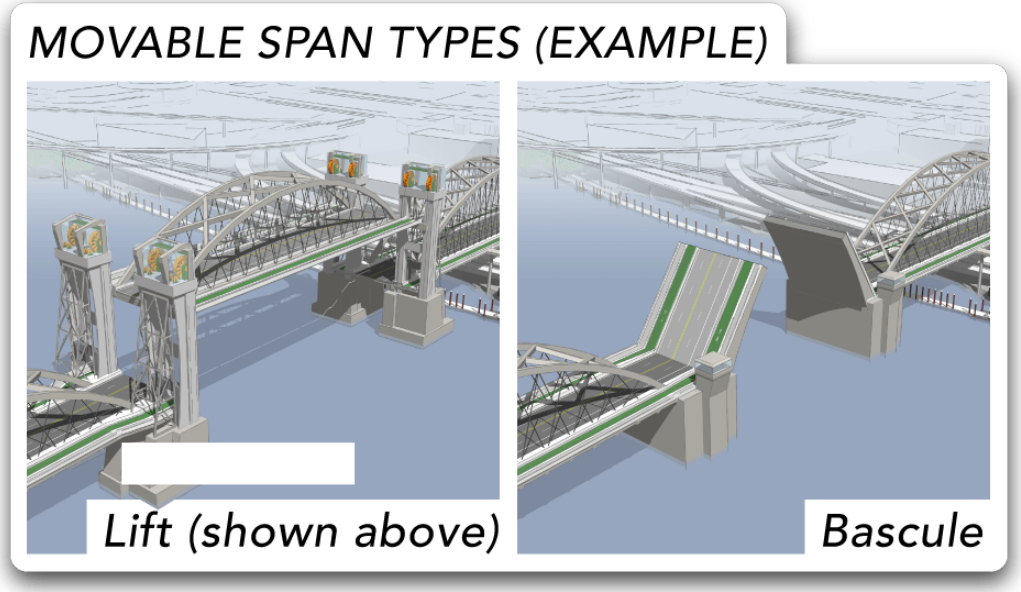
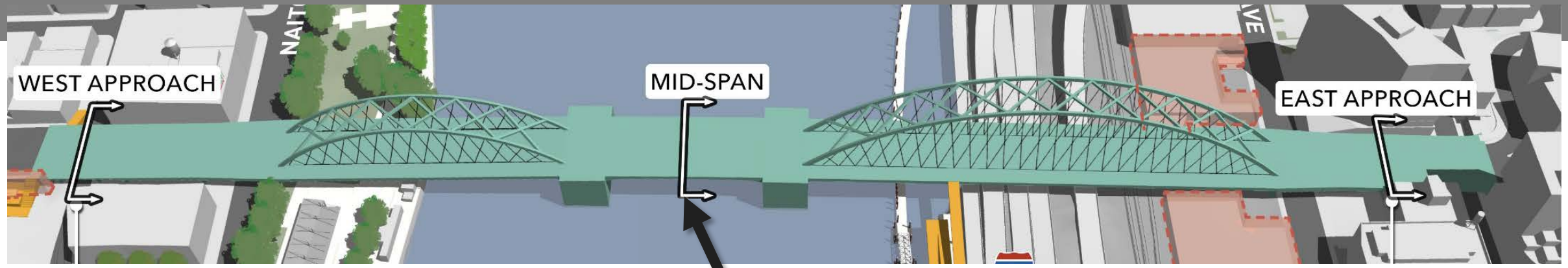
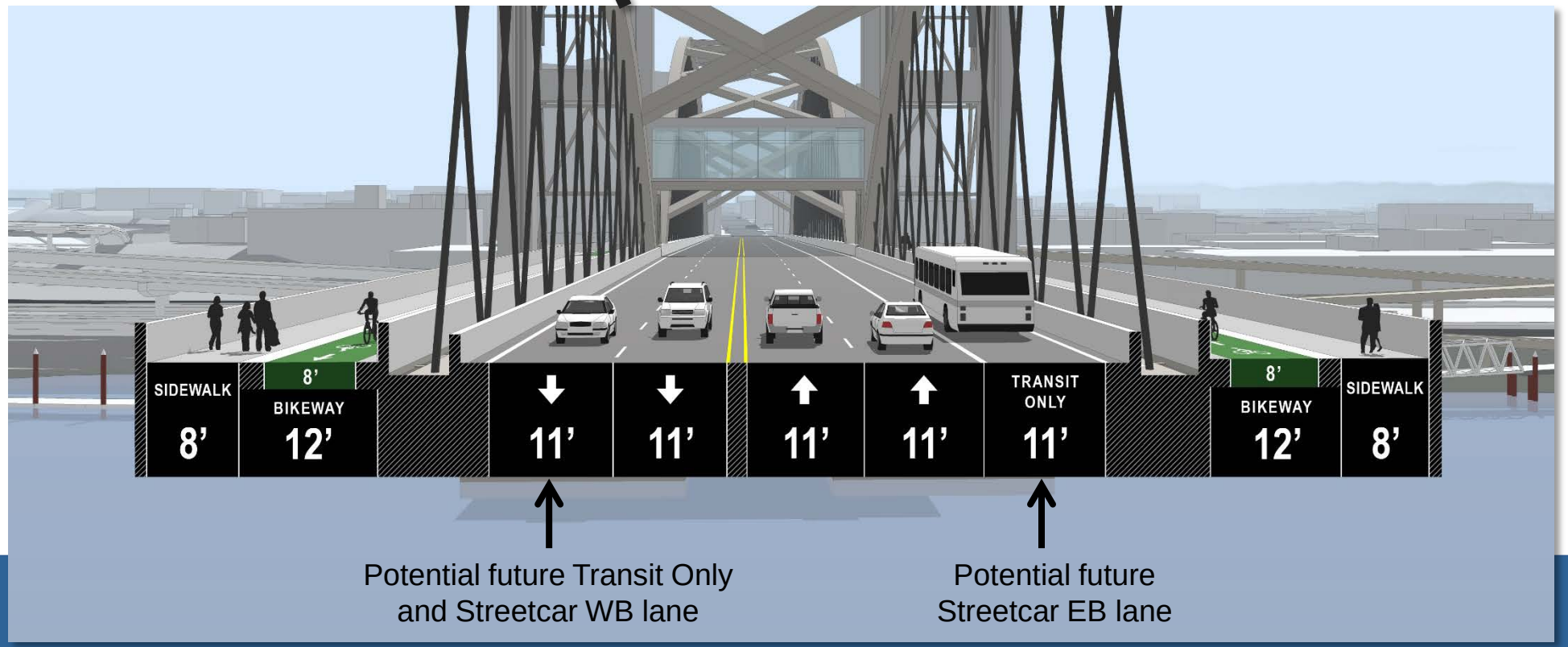


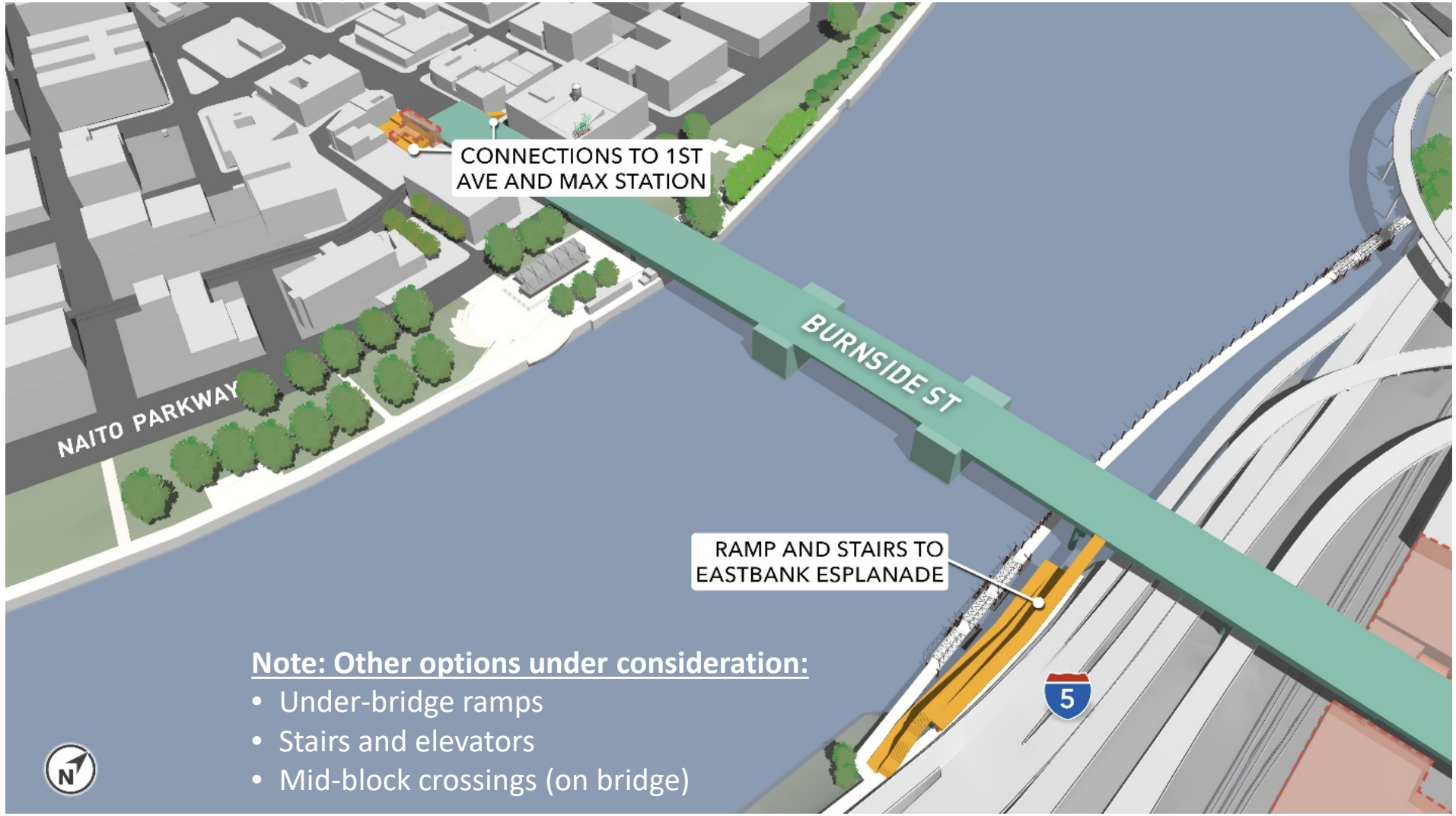
Mid-span Typical Section





Multi-use Path Connections

Current Locations

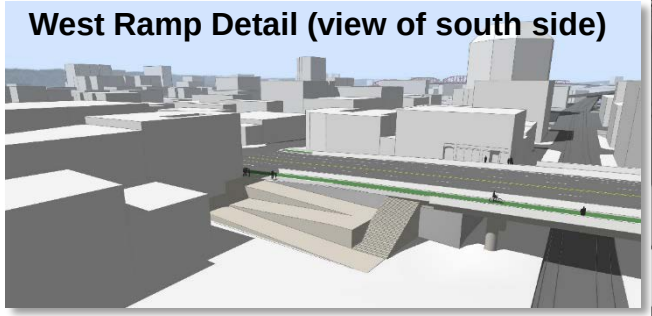


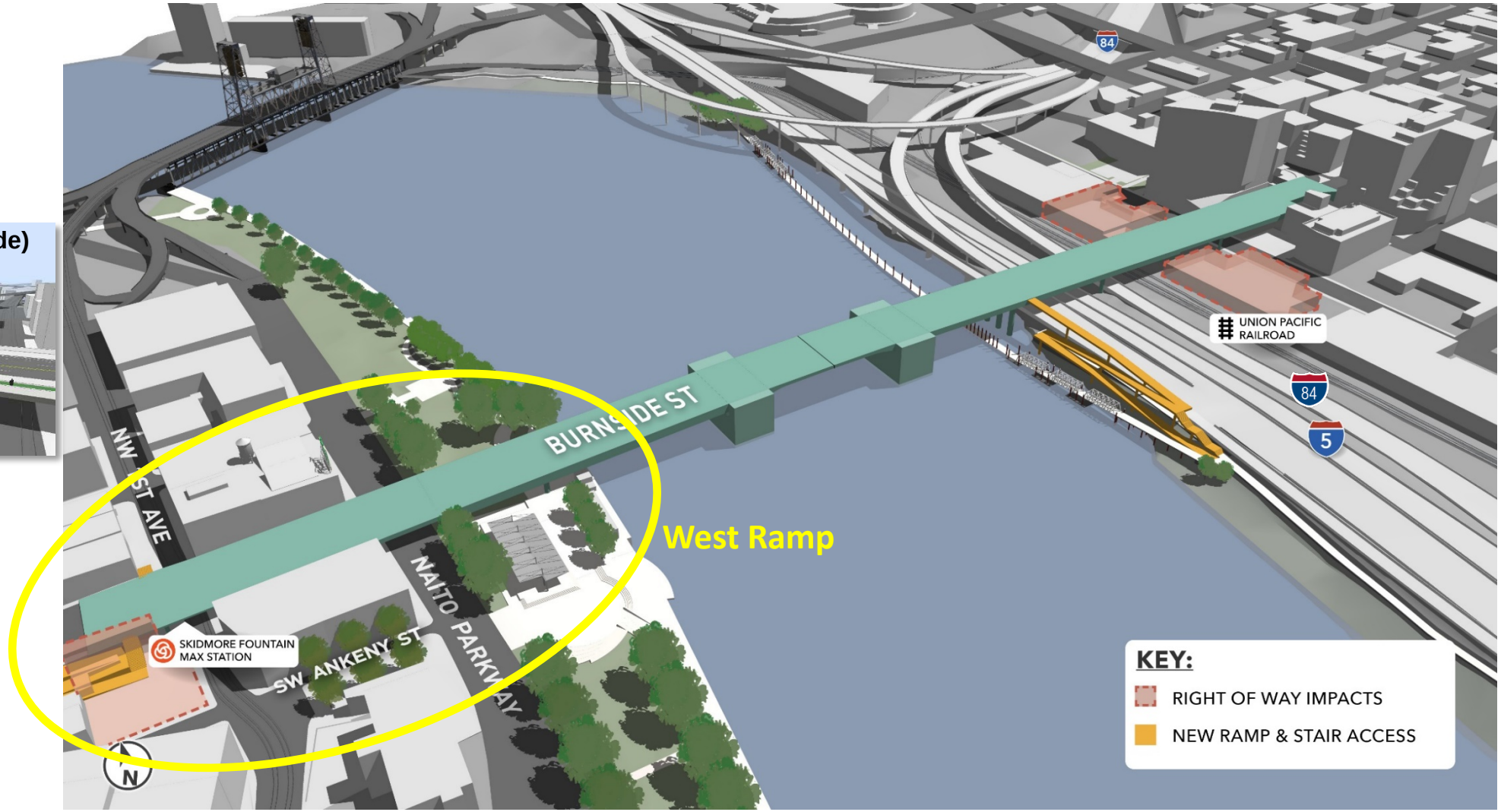
Note: Other options under consideration:

- Under-bridge ramps
- Stairs and elevators
- Mid-block crossings (on bridge)

Multi-use Path Connections

West Connection

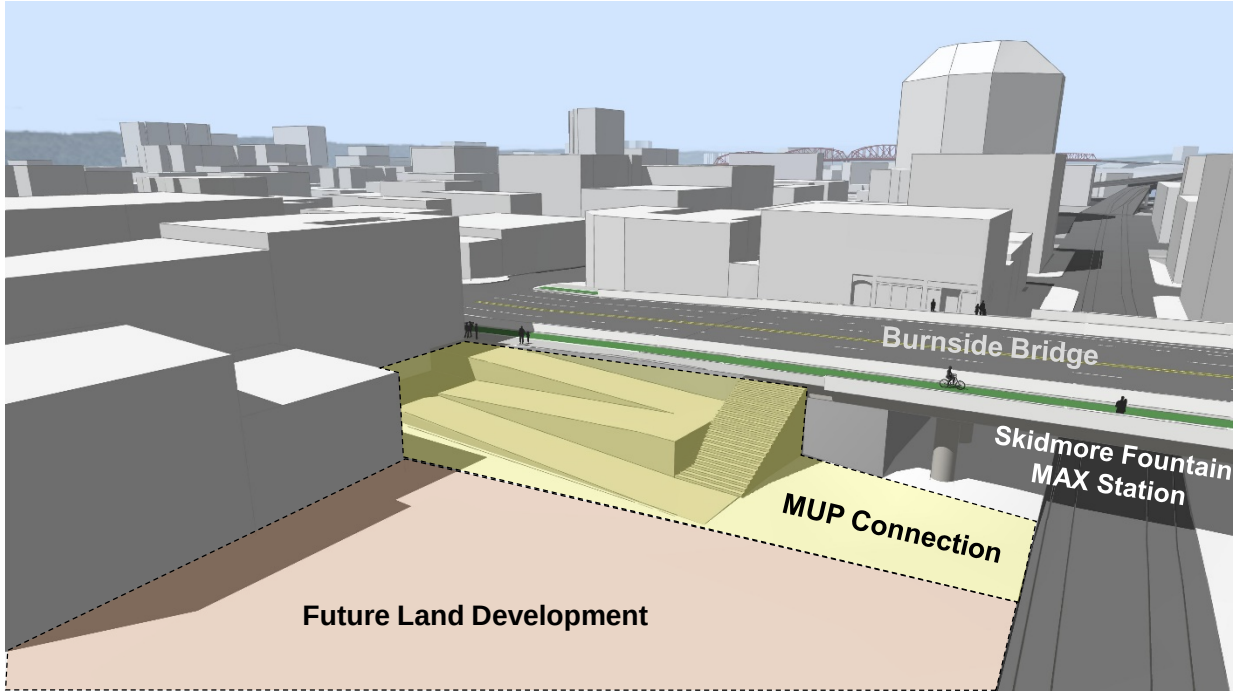




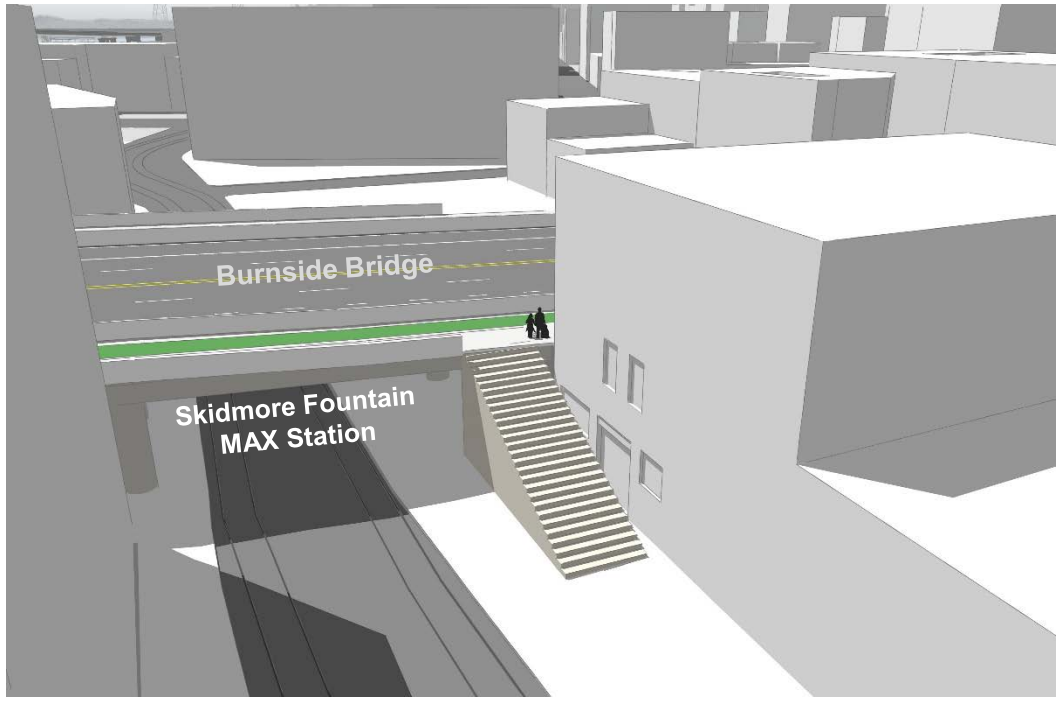
West Connection

Current Concept

South Side: Ramp + Stairs (View Looking North)

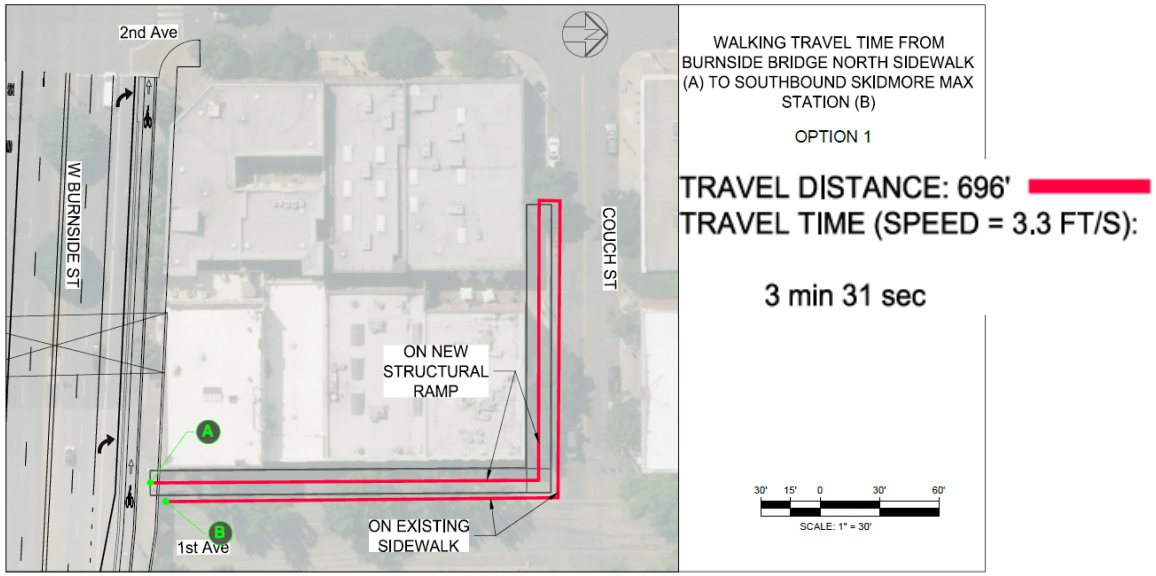


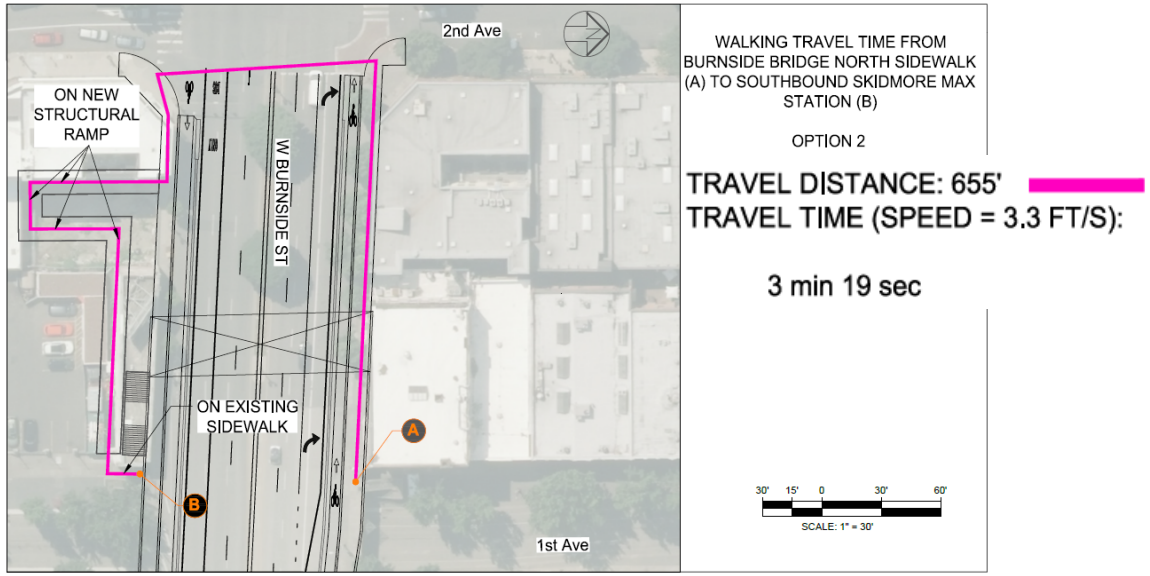
North Side: Stairs (View Looking South)



West Connection

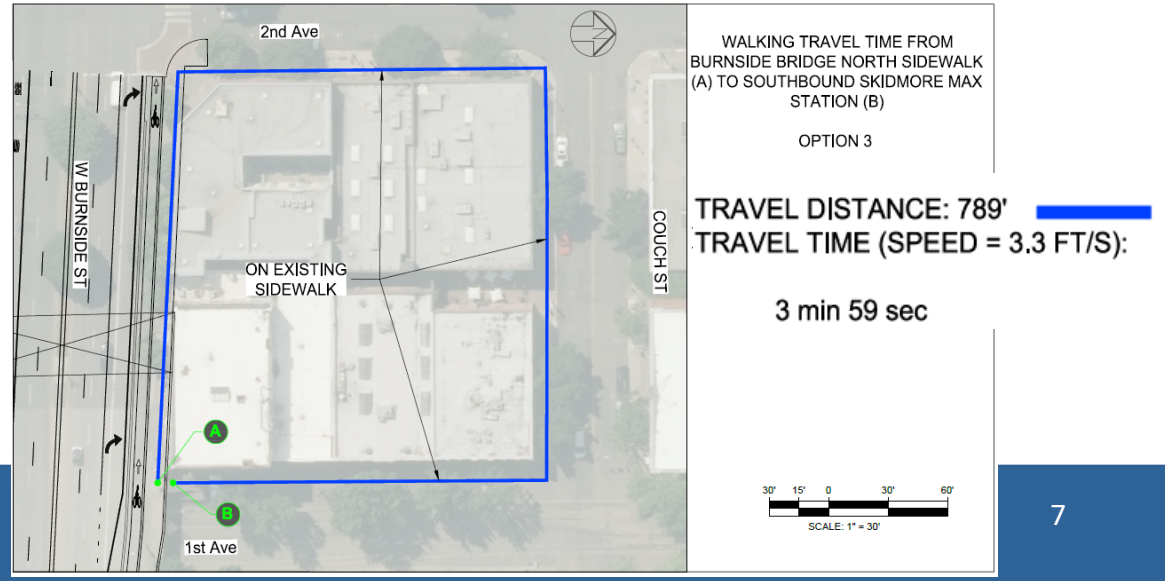
North Side Connection: Origin-Destination Analysis (Performed Dec 2019))





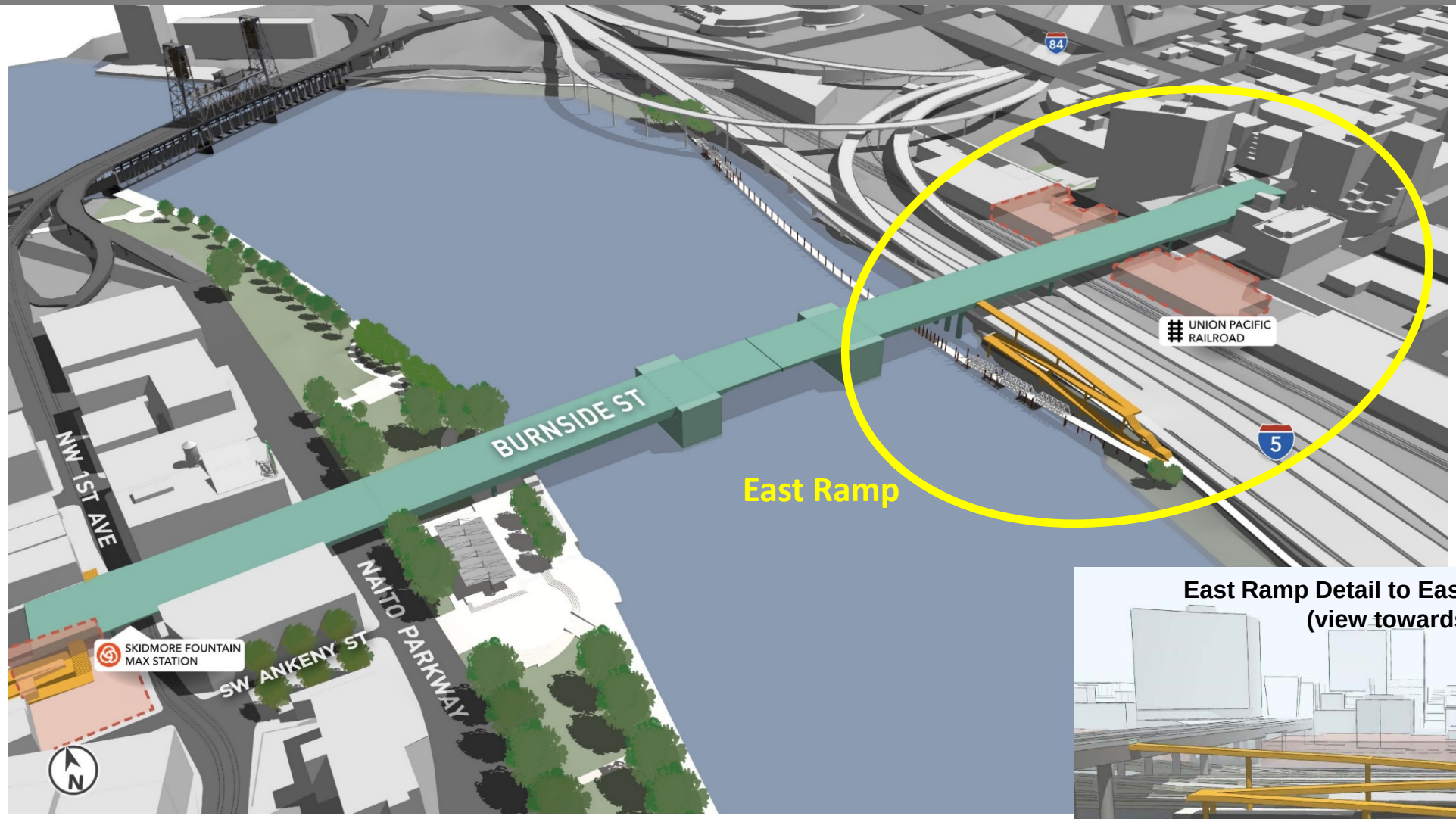
Notes:

- Even if ramp is steepened to 8.3% (not advisable), it still requires wrapping onto Couch by at least 30’ to 40’.
- All ramps create many conflicts with doors, trees, OCS poles, sidewalk flow, CPTED, etc.



Multi-use Path Connections

East Connection: Current Assumption



East Ramp Detail to Eastbank Esplanade
(view towards east)

Eastbank Esplanade to Waterfront Park

EARTHQUAKE READY BURNSIDE BRIDGE

Challenge: How do you get to/from the Eastbank Esplanade?

SE Ankeny to Eastbank Esplanade

EARTHQUAKE READY BURNSIDE BRIDGE

Challenge: How do you get to/from the Eastbank Esplanade?

Central Eastside to Eastbank Esplanade

EARTHQUAKE READY BURNSIDE BRIDGE

Challenge: How do you get to/from the Eastbank Esplanade?

Eastside Connection Routes to Esplanade Ramp

EARTHQUAKE READY BURNSIDE BRIDGE

Alternatives to access Eastbank Esplanade

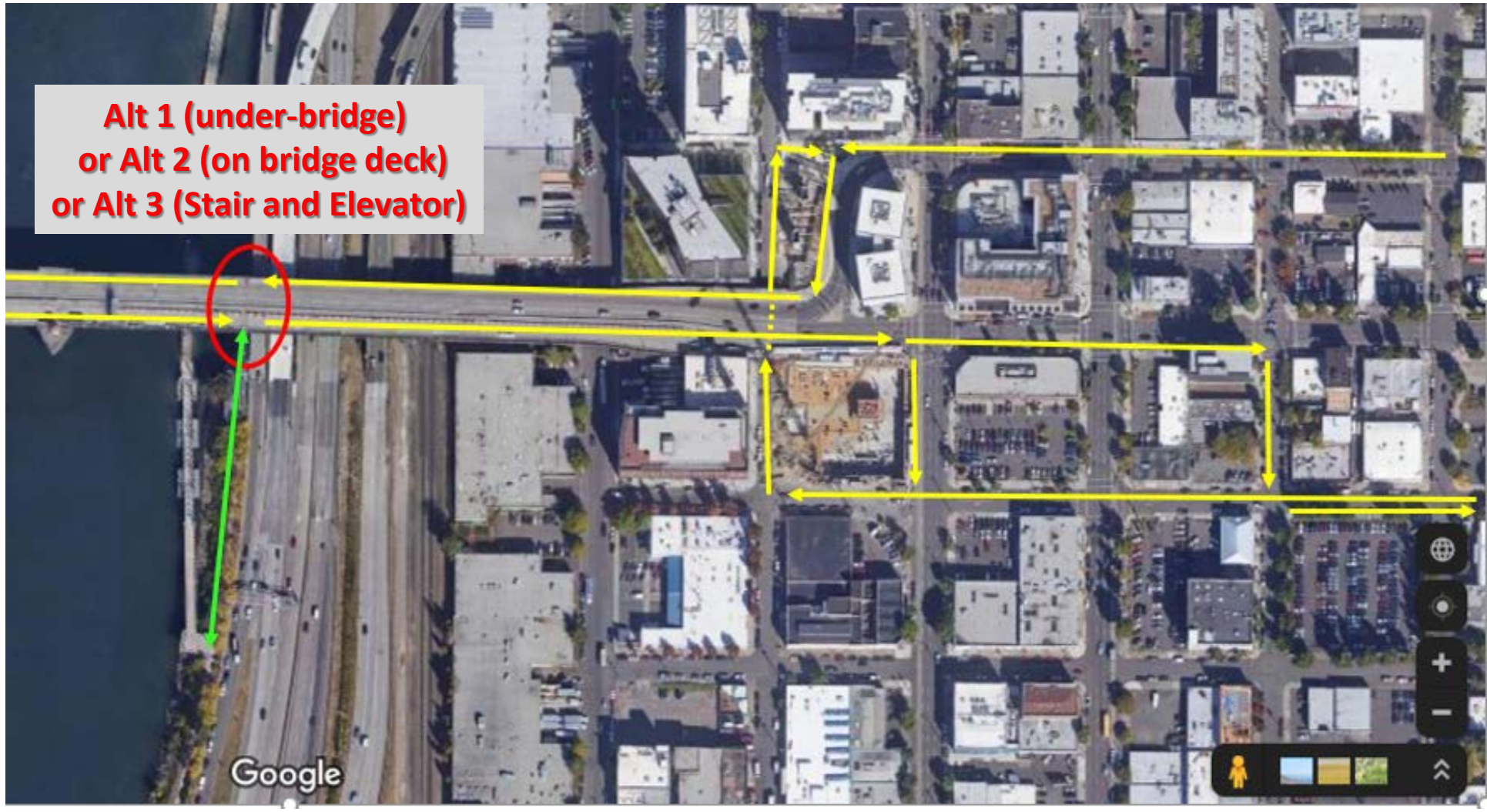
Alt 1: Passage under bridge between south and north sides?

… or …

Alt 2: Signalized crossing of vehicle lanes on bridge deck?

… or …

Alt 3: Stairs and Elevator?



Eastside Connection Routes to Esplanade Ramp

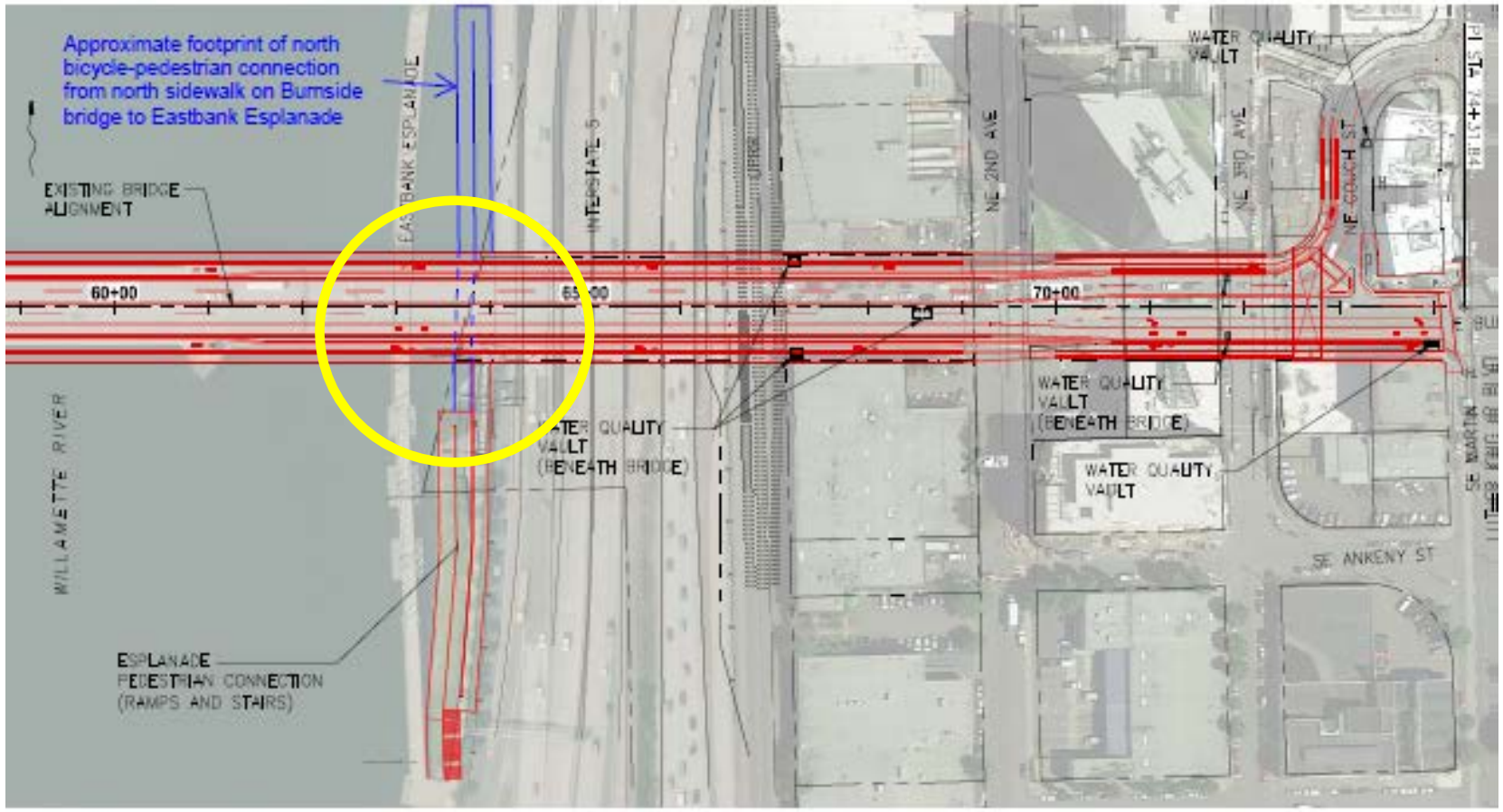
Alt 1: Passage under bridge between south and north sides

Pros:

- Provides “escape” during bridge openings
- Avoids traffic delays

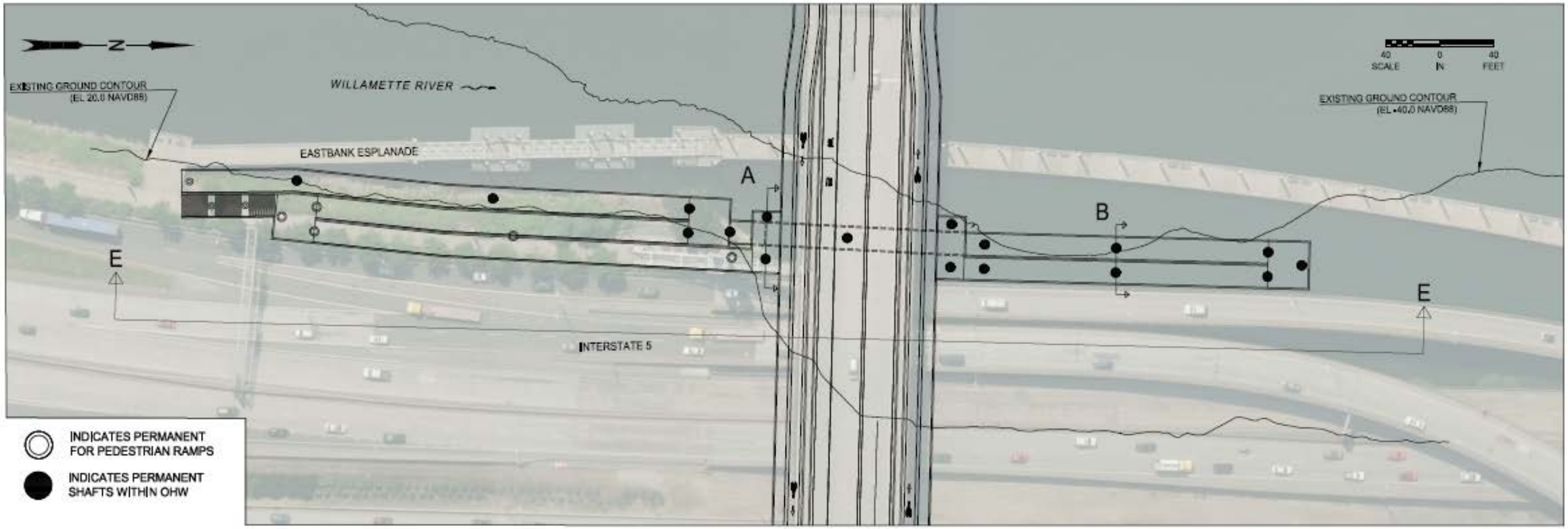
Cons:

- Indirect route / not intuitive
- Has a larger visual impact
- Could have negative personal safety issues due to “out-of-sight” from roadway
- More natural resource impacts
- More expensive to build
- Higher maintenance costs
- Not currently supported by Portland Parks



Eastside Connection Routes to Esplanade Ramp

Alt 1: Passage under bridge between south and north sides



PLAN

Eastside Connection Routes to Esplanade Ramp

EARTHQUAKE READY BURNSIDE BRIDGE

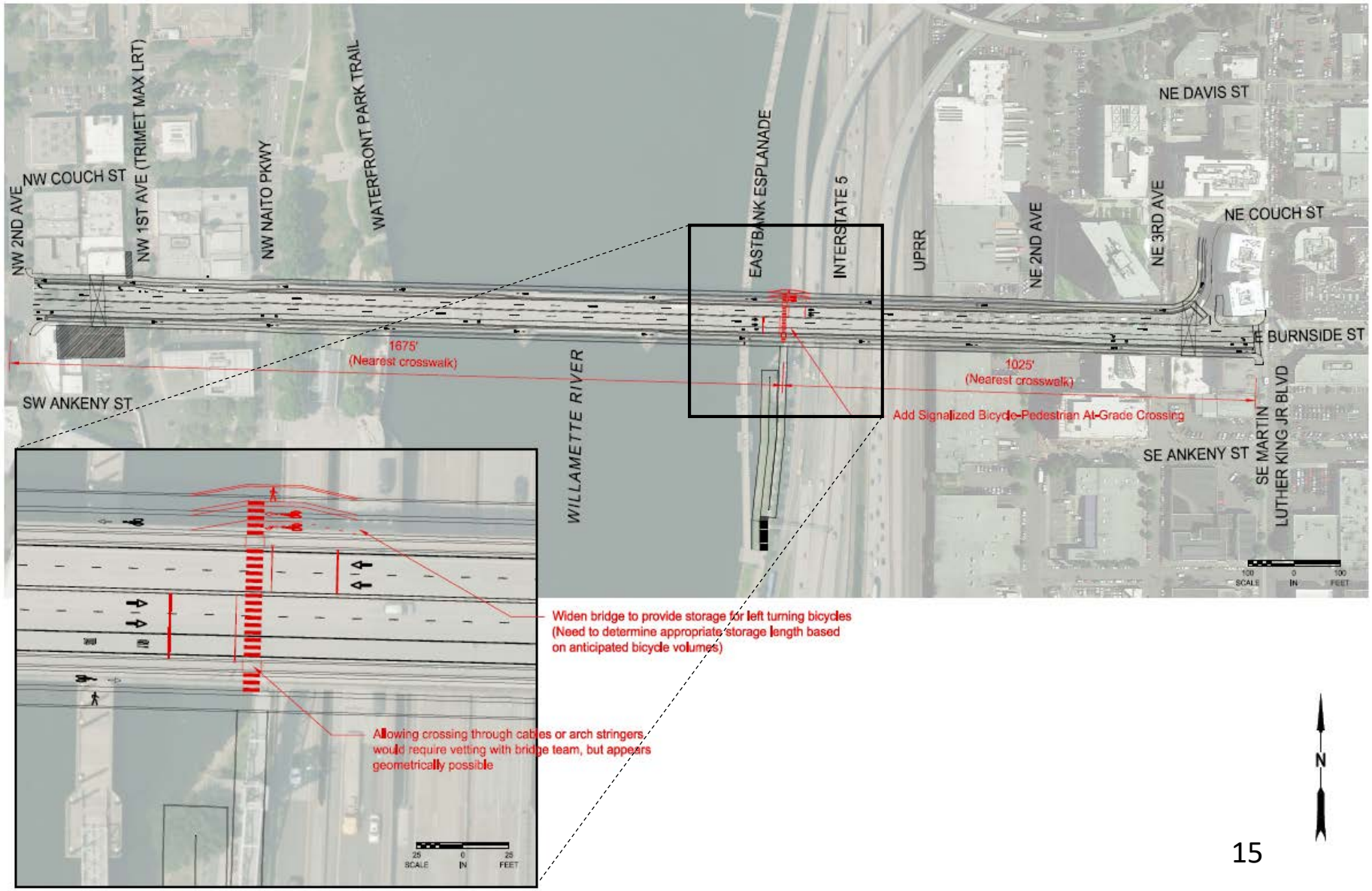
Alt 2: Signalized crossing of vehicle lanes on bridge deck

Pros:

- Direct / intuitive route
- Maintains above deck visibility
- Provides “escape” during bridge openings
- Lower cost
- Reduces Esplanade and natural resource impacts

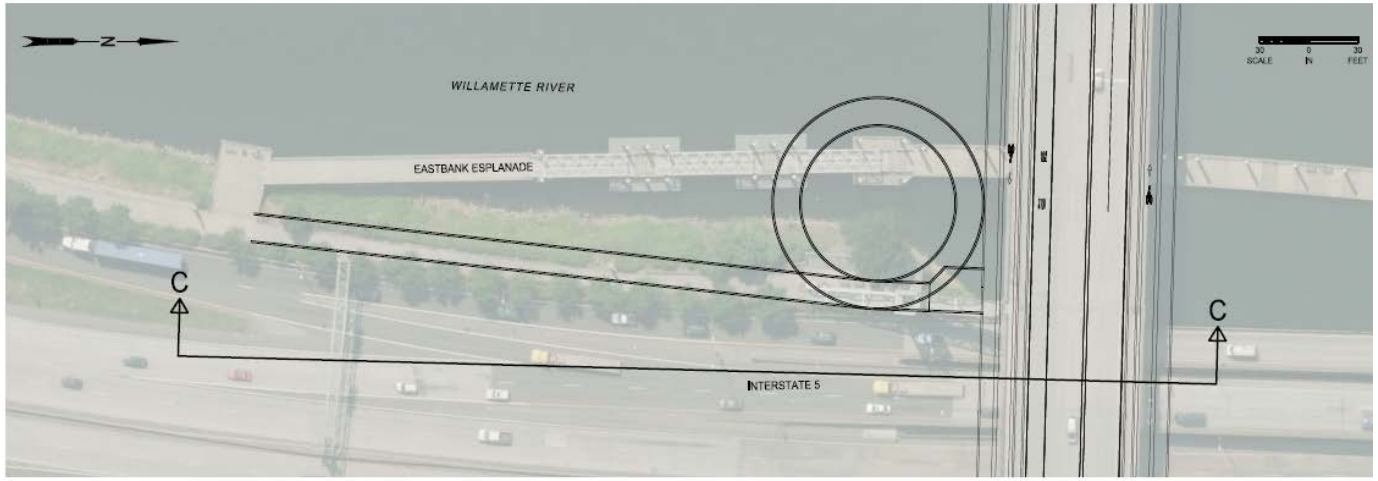
Cons:

- Potential traffic delays (requires signals timed with intersections)
- Perpendicular crossing conflicts (for users of mid-block crossing)
- Requires belvedere for bike / pedestrian storage

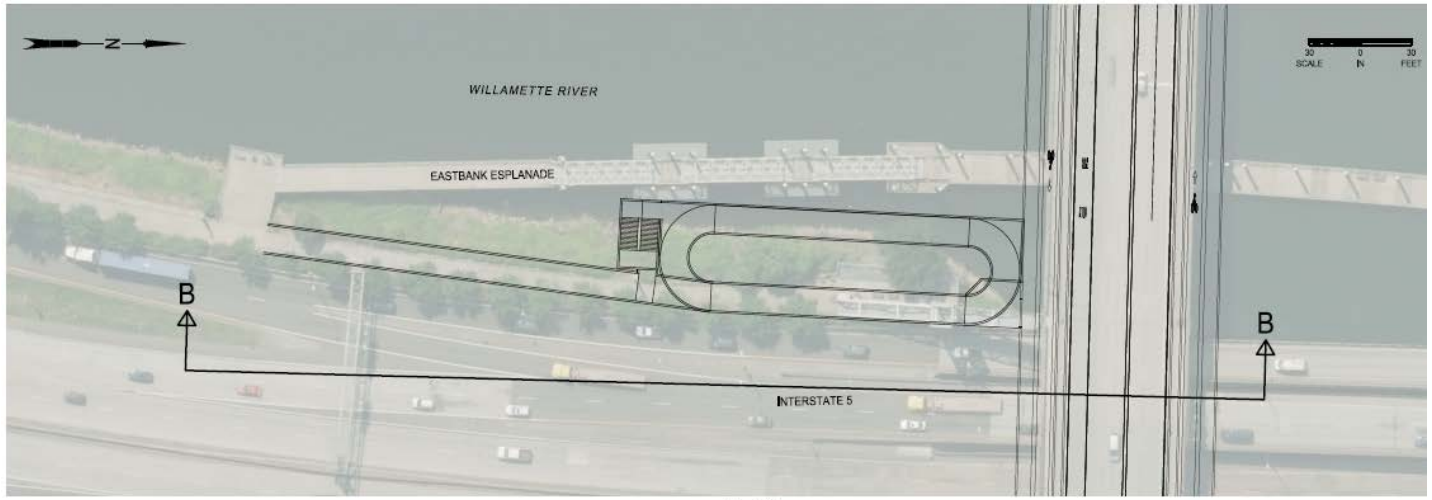


Eastside Connection Routes to Esplanade Ramp

Alt 2: Sample ramp options with signalized crossing of vehicle lanes



PLAN



PLAN

Eastside Connection Routes to Esplanade Ramp

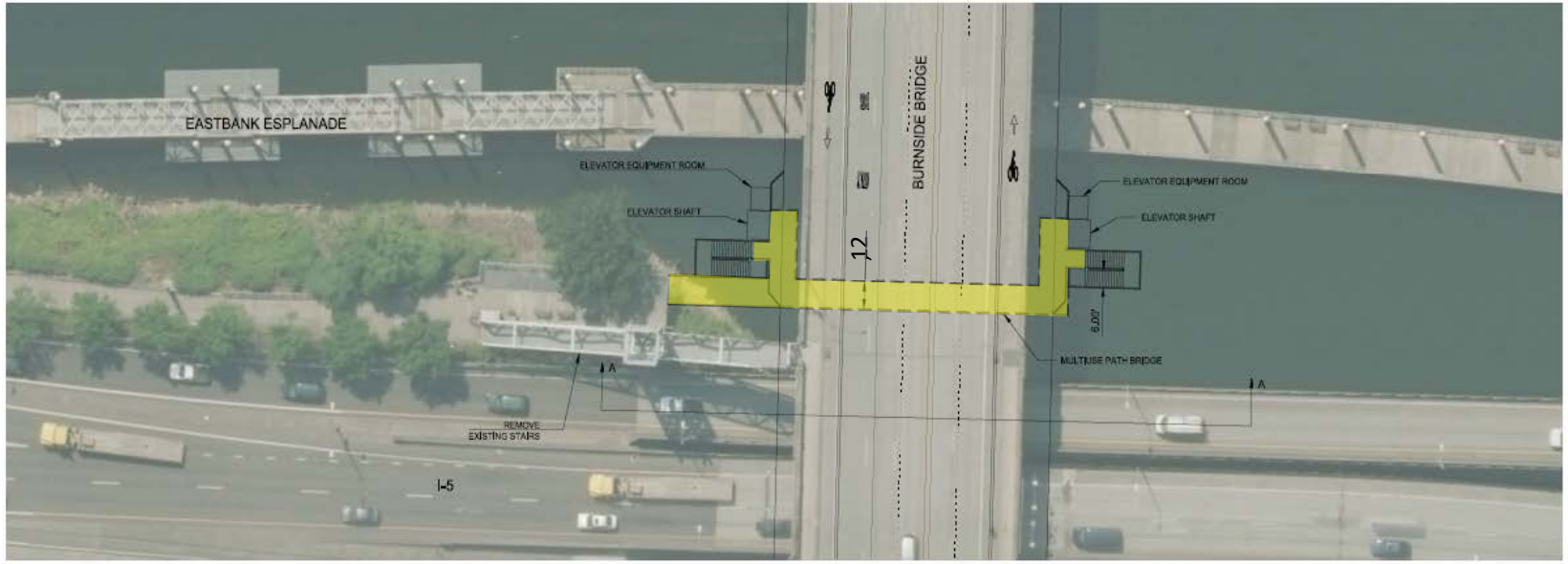
Alt 3: Stairs and Elevators

Pros:

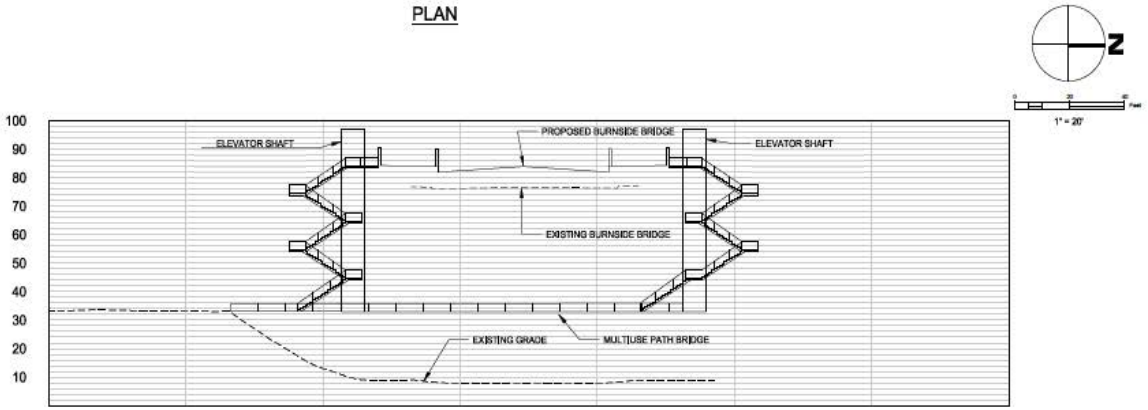
- Direct / intuitive route
- Maintains above deck visibility
- Provides “escape” during bridge openings
- Least cost
- Minimizes Esplanade and natural resource impacts

Cons:

- Enclosed Public Elevator (CEPTED issues)
- Limited Capacity during Peak Periods of Use



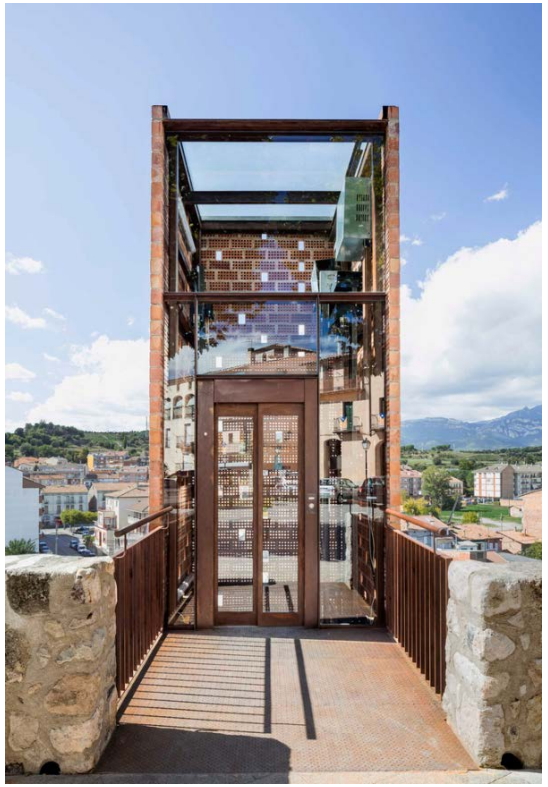
PLAN

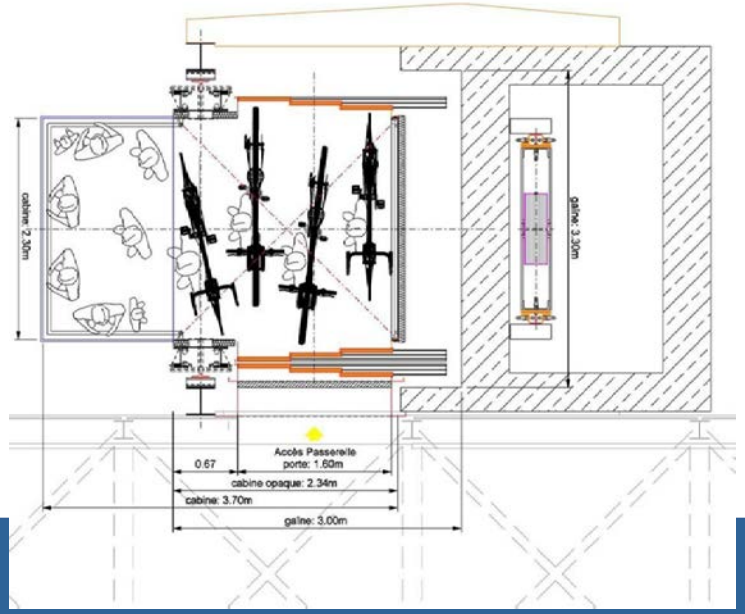


ELEVATION A

Eastside Connection Routes to Esplanade Ramp

Alt 3: Stairs and Elevators





… How will a decision be made?

EARTHQUAKE READY BURNSIDE BRIDGE

Critical Success Factors + Plus Stakeholder Input

Key Objective:
Where the bike/ped connections intersect with the bridge, bikes/peds need to make decisions for direction, safety, and comfort when traveling in any direction. The selected facility should strive to have the highest standard of safety, comfort, and convenience based on City policy.

A. Technical Feasibility
- Design and Construction Viability and Ease
- Permitting Viability and Ease (Including Design Commission; 4f impacts, etc)

B. General Functionality
- Ability to satisfy the Key Objective

C. Traffic Operations
- On-demand operability for ship navigation
- Minimized travel delays for motorized vehicles (transit and vehicles)

D. Bike / Ped Safety
- Apply a Safety Vision Zero lens for how the connections interact with traffic
- Feels safe and comfortable through enhanced visibility and open space
- Safe access with sufficient space for all rider types and abilities, including:
  - Crossings between the EB and WB Active Transportation spaces
  - Connection options and operations at east and west bridgeheads

E. Bike / Ped Network Connectivity
- Full network connectivity (all directions)
- Easy to understand and find; intuitive to users without “back-tracking”
- Convenient access from neighborhoods across the bridge and to adjacent destinations, such as Waterfront Park, the Eastbank Esplanade, and other bridgehead sites

F. Personal Safety
- General personal safety (i.e., does the option promote or detract from personal safety)
- Reduce risk of deviant behavior

G. Eastbank Esplanade Design and User Experience
- Complements / enhances the Esplanade user’s experience and convenience, including unimpeded connection with the river (place-making implied here)
- Complements the visual experience of and to/from the Eastbank Esplanade

H. Burnside Bridge Design and User Experience
- Complements / enhances the Bridge user’s experience and convenience (place-making implied here)
- Complements the visual experience of and to/from the Burnside Bridge

I. Environmental / Permitting
- Minimizes impacts to shallow water habitat restoration
- Supports river use and natural environment goals

J. Land Uses
- Promotes key redevelopment opportunity(ies) for this site
- Constructs something respectful of the historic districts (particularly on west side)
- Does not make users feel wedged in between current / future buildings (particularly on west side)

K. Cost
- Least direct Project cost (inclusive of Construction, PE, CE, ROW, and Utility Relocation)

L. Maintenance and Operations
- Least long-term maintenance and operating costs