

SR 520 – Portage Bay Bridge & Roanoke Lid Project

Seattle Design Commission

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June 6, 2019

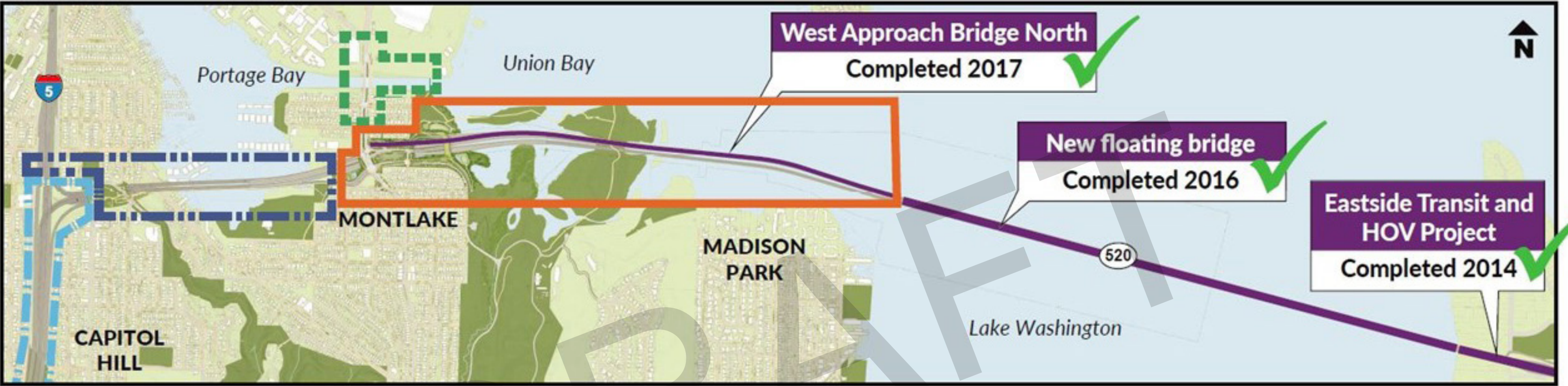
Presentation Outline

- Welcome and Introductions
- Process and Overview
- Context and Design Approach
- Design Development
 - Connections East
 - Portage Bay Bridge
 - Roanoke Lid
 - Connections West



View of the existing Portage Bay Bridge.

SR 520 Rest of the West Update



Remaining SR 520 improvements in Seattle:

SR 520/I-5 Express Lanes Connection Project
Construction estimated start: 2020
Estimated duration: 3 years

Montlake Cut Bascule Bridge Project
WSDOT will begin additional coordination in 2020 with community stakeholders and agency partners regarding project scope

Portage Bay Bridge and Roanoke Lid Project
Construction estimated start: 2023
Estimated duration: 6 years

Montlake Project
Construction start: 2019
Estimated duration: 4-5 years

Note: Project dates are estimates and subject to change

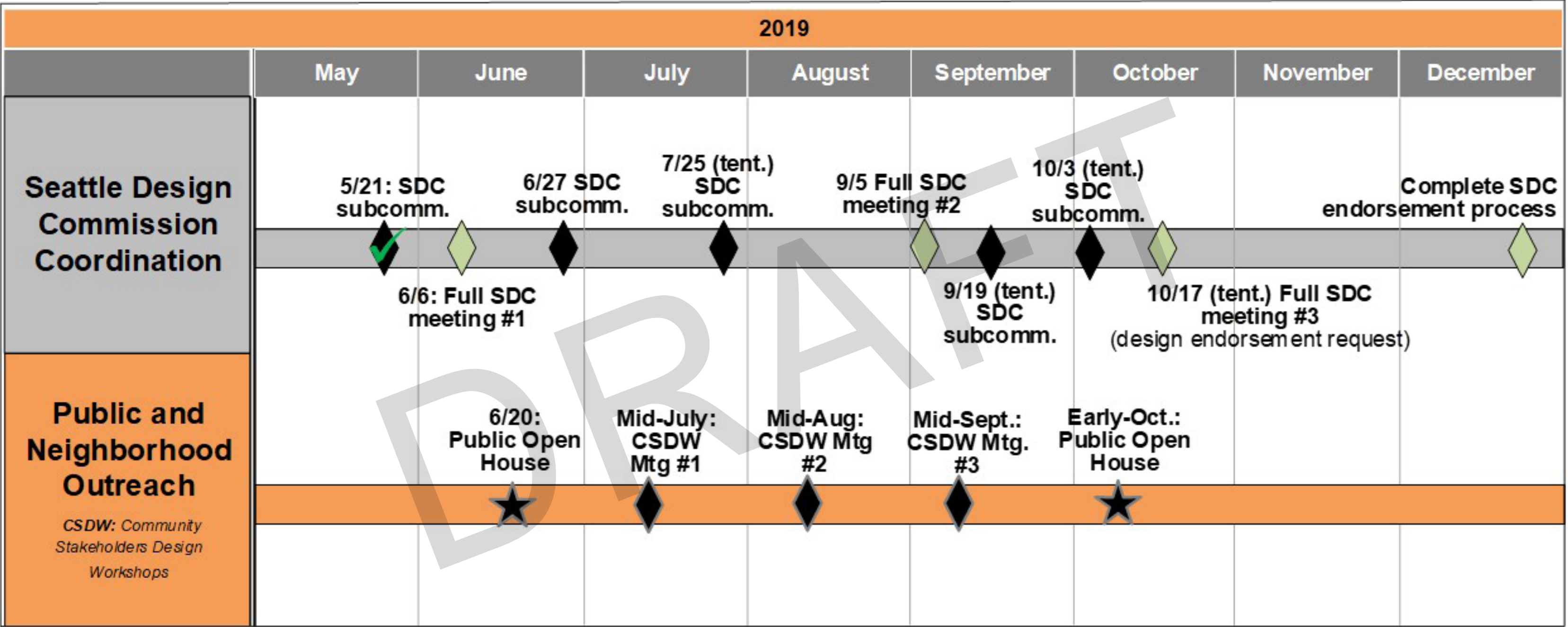
SR 520/SDC Coordination

- **SR 520, Floating Bridge**
 - **2011:** Bridge Architecture Design Principles
- **SR 520, West Approach Bridge North**
 - **2012:** WABN Design Coordination
- **SR 520, Rest of the West**
 - **2011:** Final Environmental Impact Statement
 - **2012:** Seattle Community Design Process
 - **2014:** Final Concept Design
 - **2016:** Montlake Project Design Refinements



SR 520 Floating Bridge sentinel, 2018.

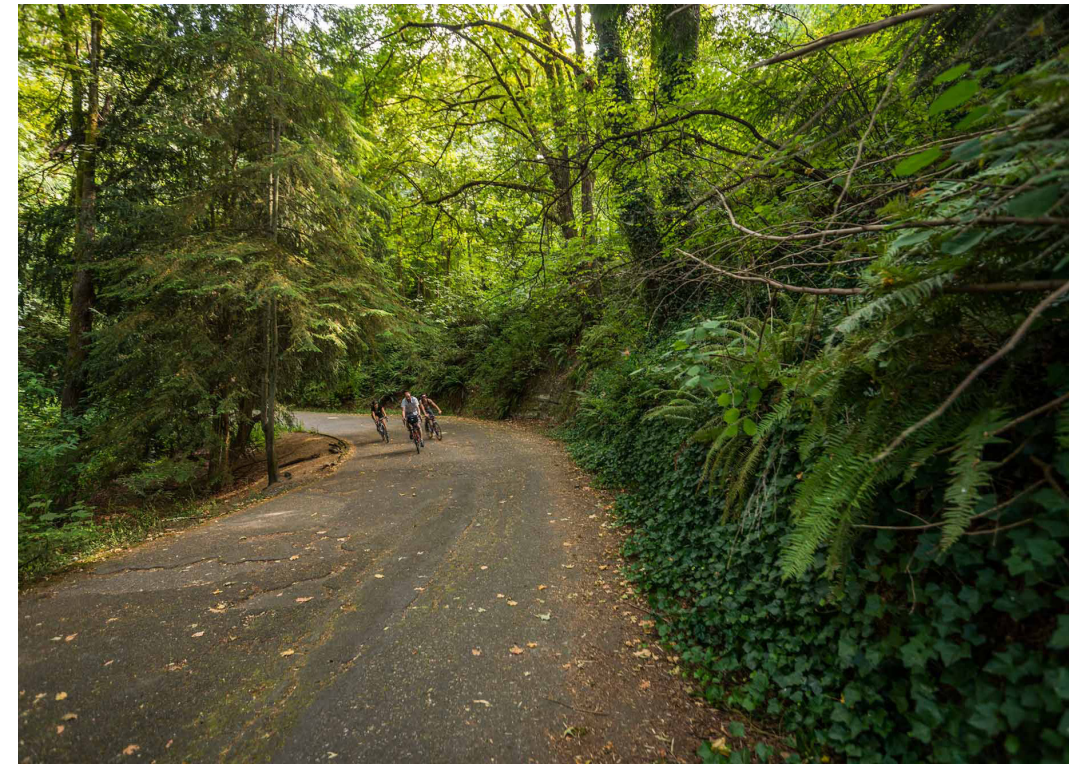
Upcoming Design Outreach Timeline



- NOTE:**
- Ongoing bi-weekly coordination meetings with SDOT, Parks, and OPCD
 - Ongoing SDC subcommittee coordination during throughout 2020.

Vision: Nature Meets City

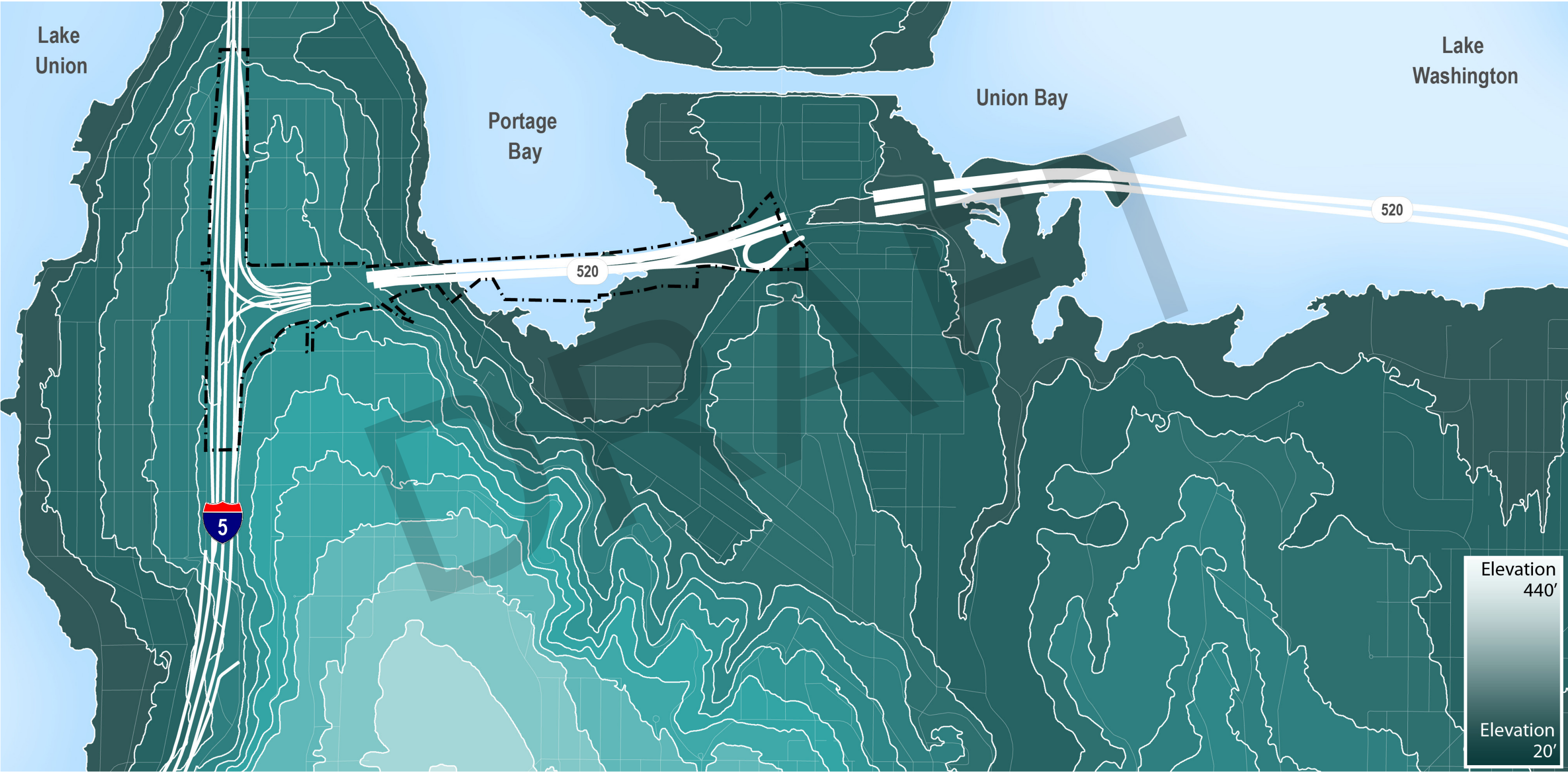
- Practical Solutions
- Sustainability
- Balance Aesthetics, Sense of Speed, and Functionality
- User Experience



Context



Context: Topography



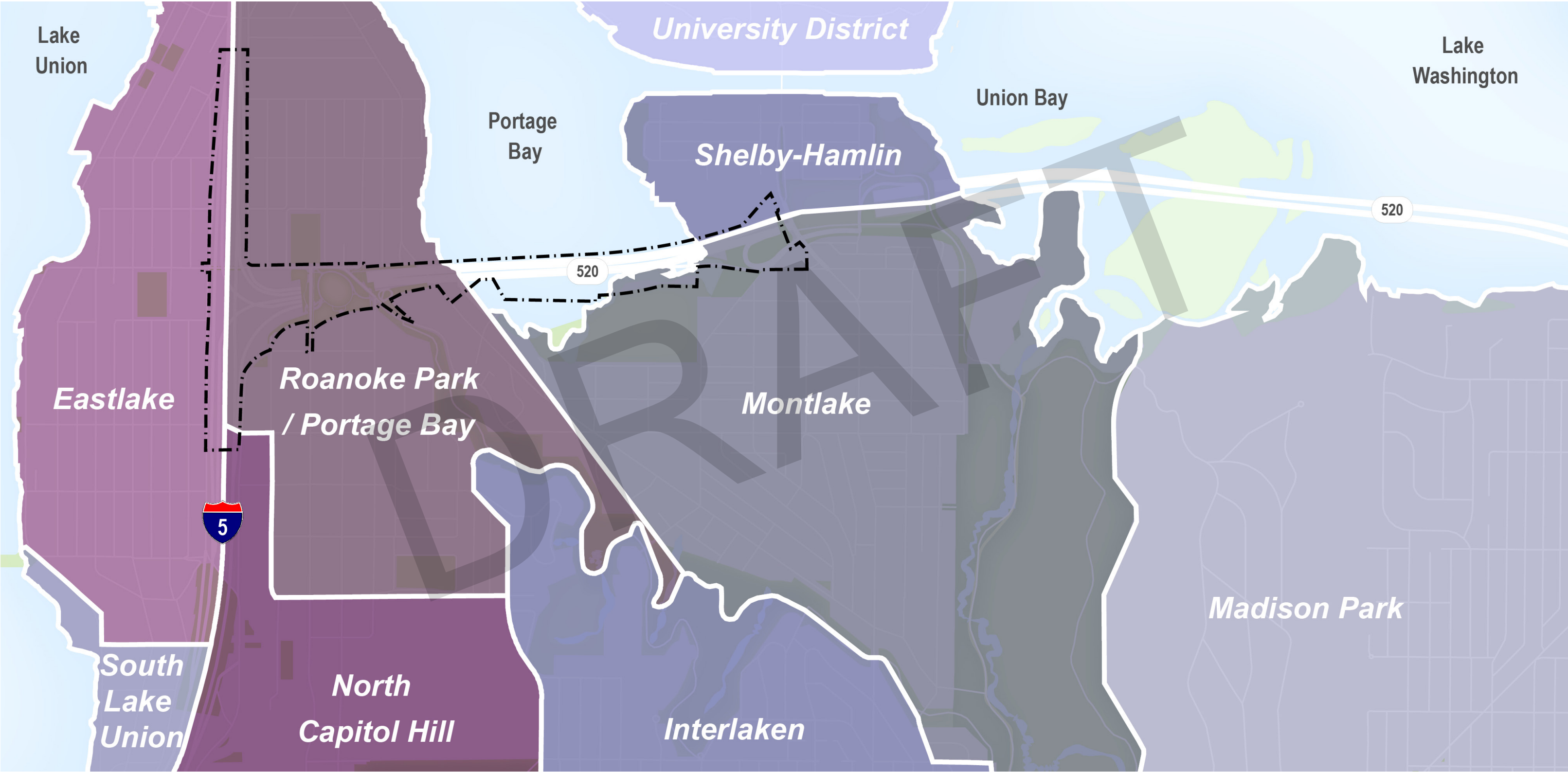
Context: Vehicular Network



Context: Bicycle and Pedestrian Network



Context: Neighborhoods



Context: Olmsted Legacy



Elements of Continuity

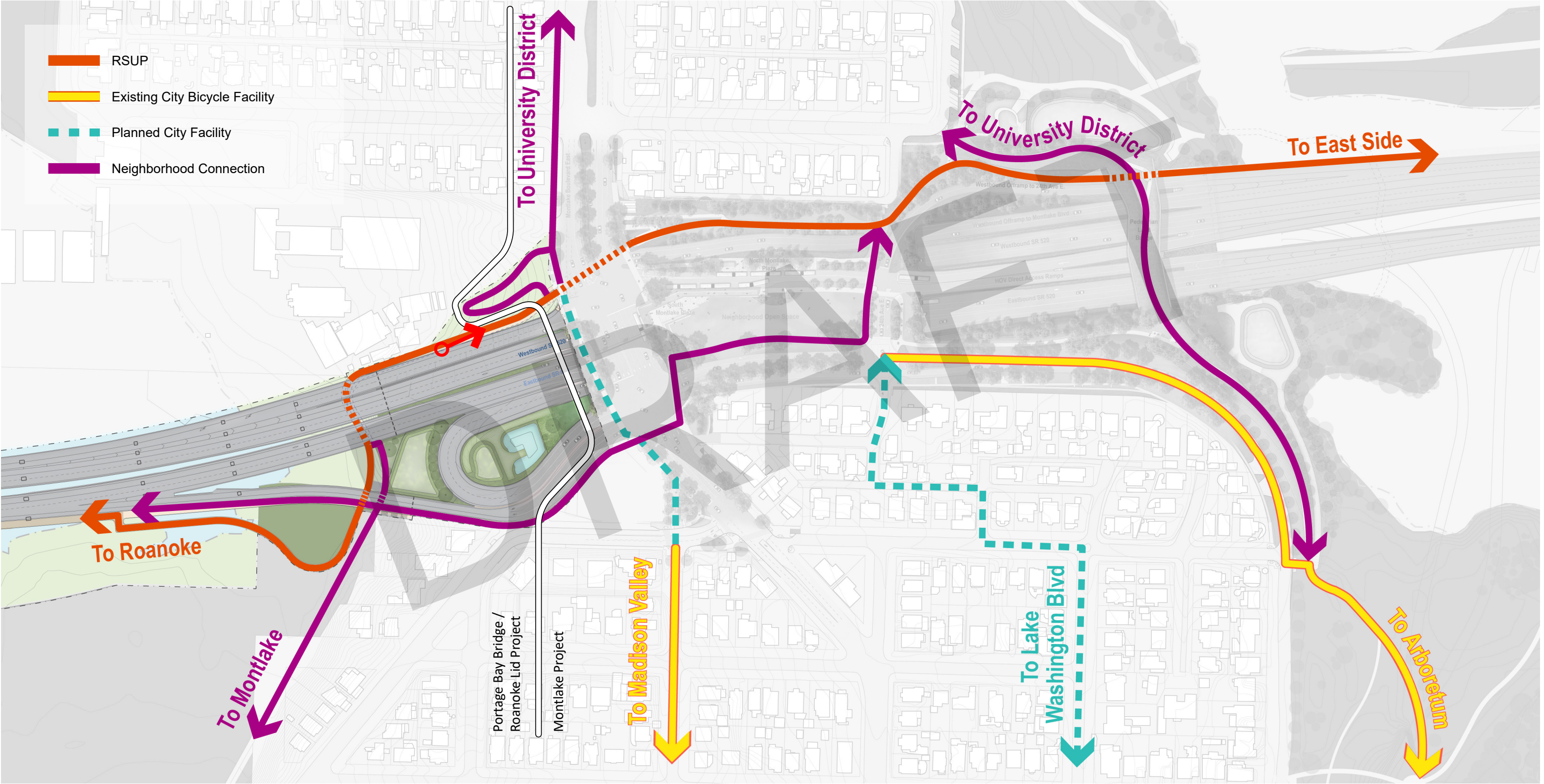
- 
- The image is an aerial rendering of a proposed transit corridor, likely a light rail or commuter rail line, passing through a suburban area. The corridor is highlighted with a red line, and the surrounding area includes residential neighborhoods, commercial buildings, and a large body of water. A large, semi-transparent 'DRAFT' watermark is overlaid on the image. The corridor starts in the upper left, curves through the center, and ends in the lower right. A red arrow points towards the start of the corridor. Blue lines indicate specific elements of continuity along the route.
- Walls and Finishes
 - **Signing**
 - Railing and Fall Protection
 - **Lighting**
 - **Bicycle and Pedestrian Facility Treatments**

Elements of Distinction



- West Approach Bridges
- Montlake Lid and Land Bridge
- Regional Shared-use Path
- Portage Bay Bridge
- Roanoke Lid
- Connections West
- 2nd Bascule Bridge

Montlake Lid Area Bike Network



Bill Dawson Trail Contextual Response



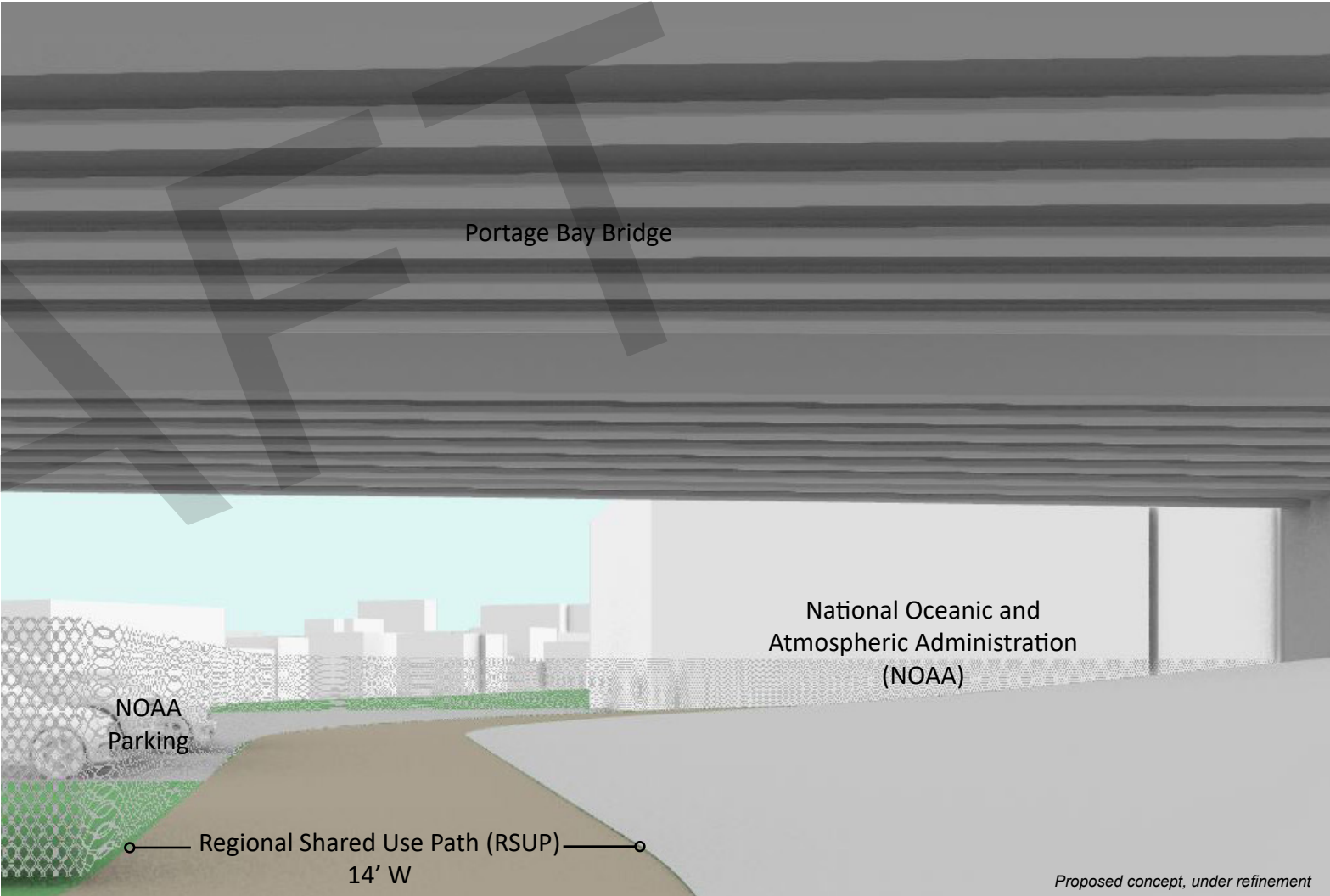
Connections East



Bill Dawson Trail Response

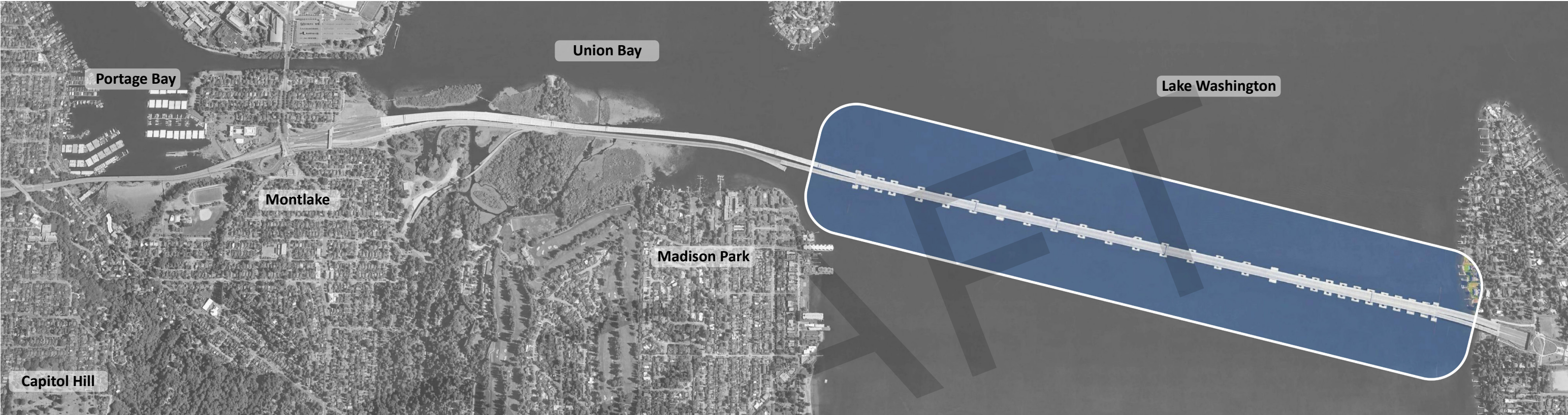


View Looking North Along the Bill Dawson Trail / RSUP



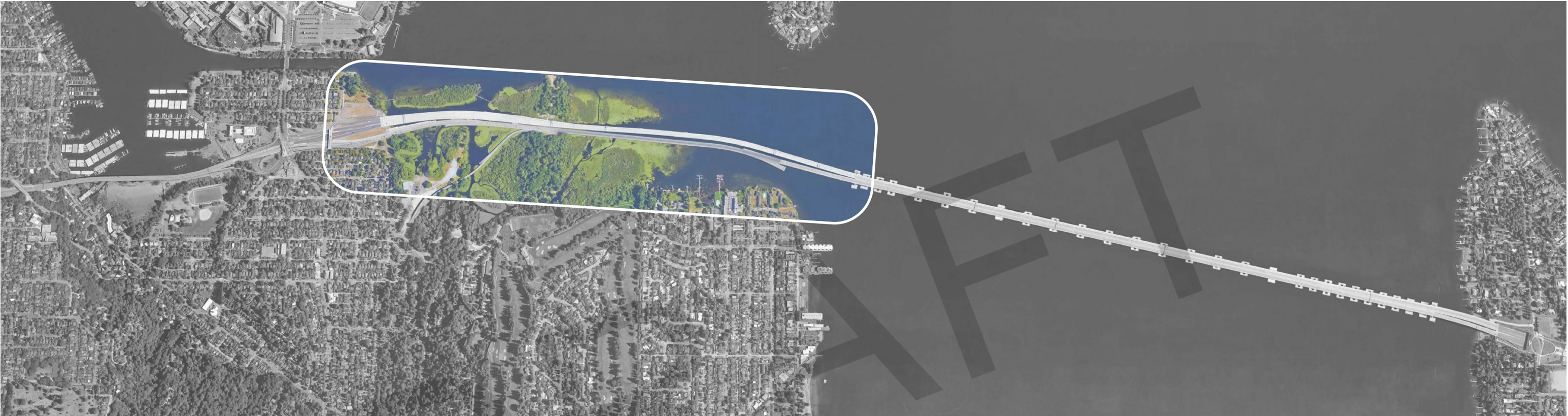
Portage Bay Bridge

Context - Floating Bridge



Portage Bay Bridge

Context - West Approach Bridge



Portage Bay Bridge

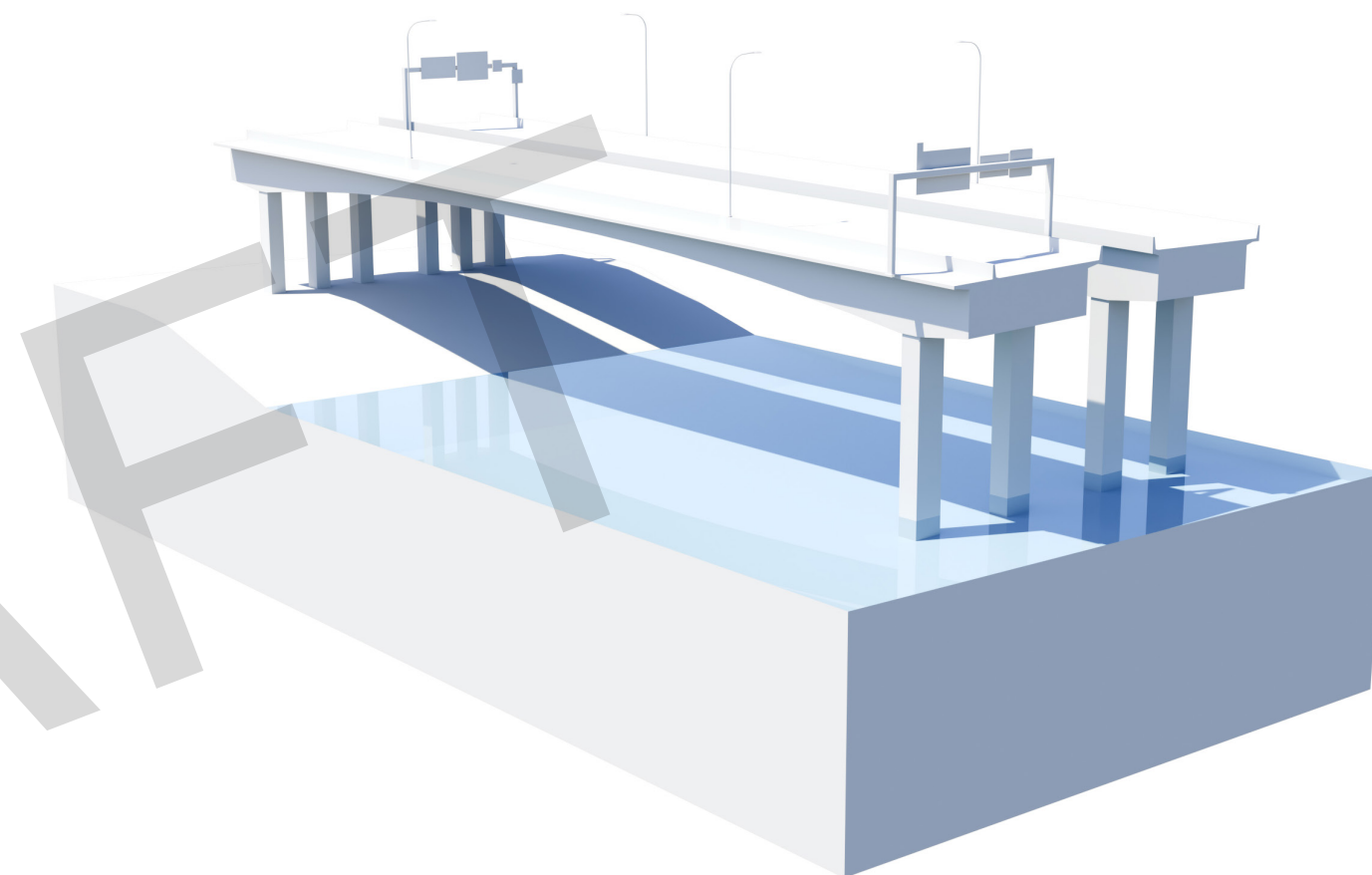
SDC 2014 WEST SIDE FINAL CONCEPT DESIGN REPORT

- “...emphasize lightness in appearance and scale and **complement its location within Portage Bay.**”
- “Bridge elements such as piers, abutments, and vertical lighting poles should **complement the context...**”
- **Maximize...natural light** that reaches the water and land.”
- **Integrate architectural elements** within the overall design of the bridge to provide aesthetic interest and follow a structural logic.”
- “Stretch the bounds of box girder design to create an **elegant bridge** that enhances its **unique location**, while achieving lightness and a contemporary appearance.”
- “...strategy for the vertical elements to add **visual interest and rhythm....**do not detract from the **horizontal character** or **contemporary expression** of the bridge.”
- “...bridge should **enhance the context without mimicking** its historical and natural elements...”

OUR TAKE AWAY

- Good neighbor to natural and built context
- Appropriate architecture and scale
- User experience at bridge under crossings
- Well integrated connections to city and regional non-motorized networks

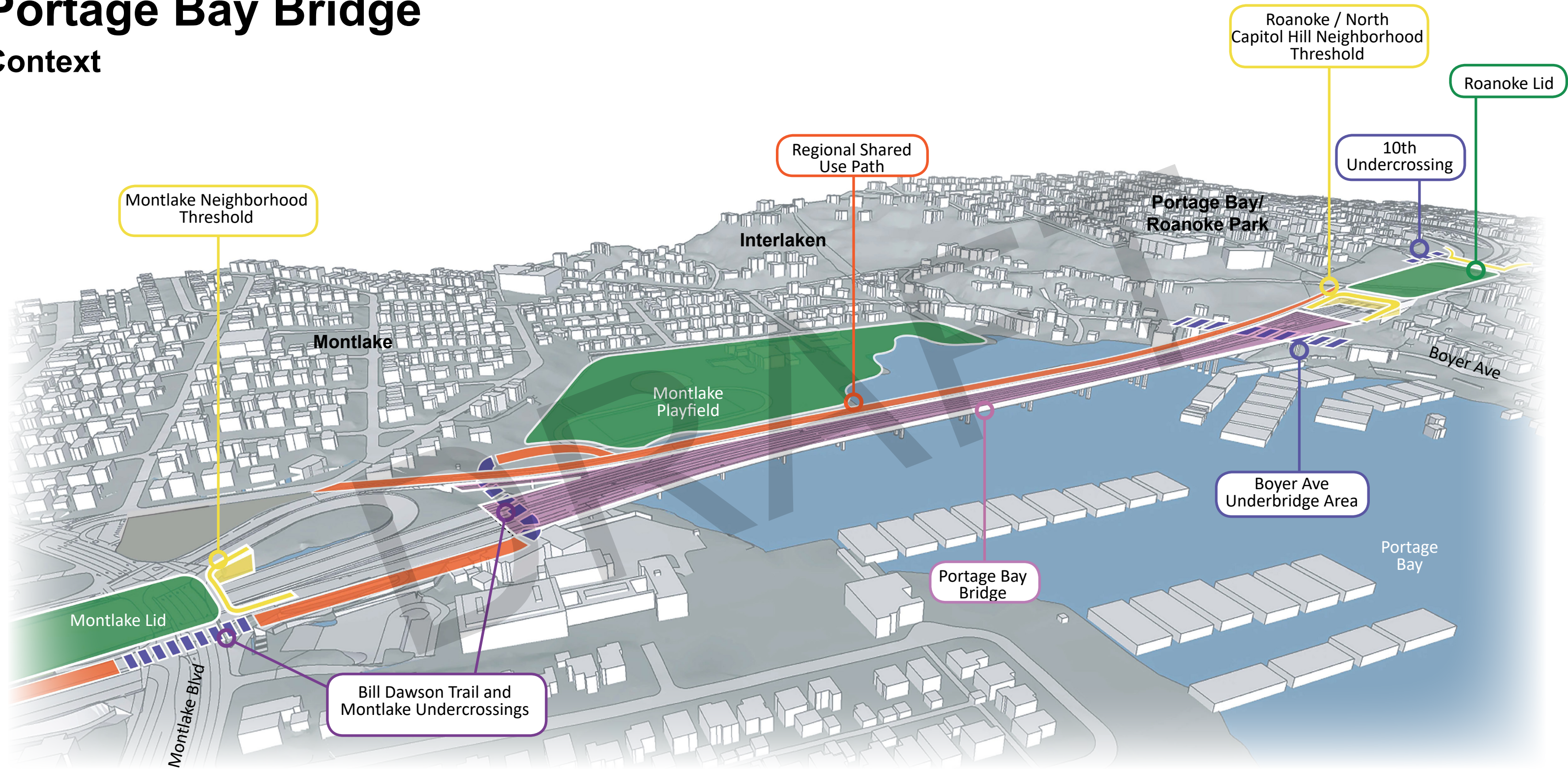
PIER BASELINE STRUCTURE



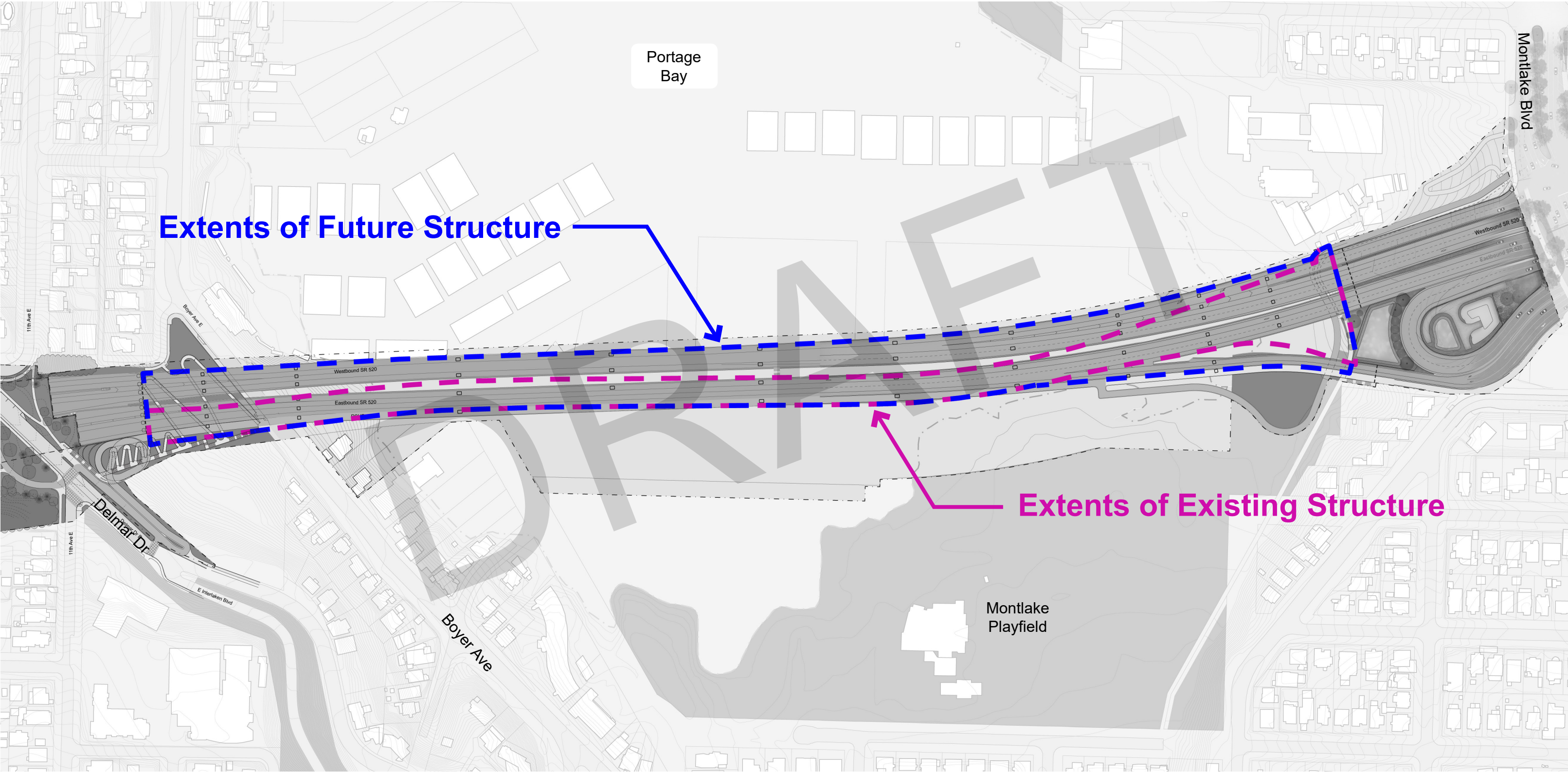
Proposed concept, under refinement

Portage Bay Bridge

Context

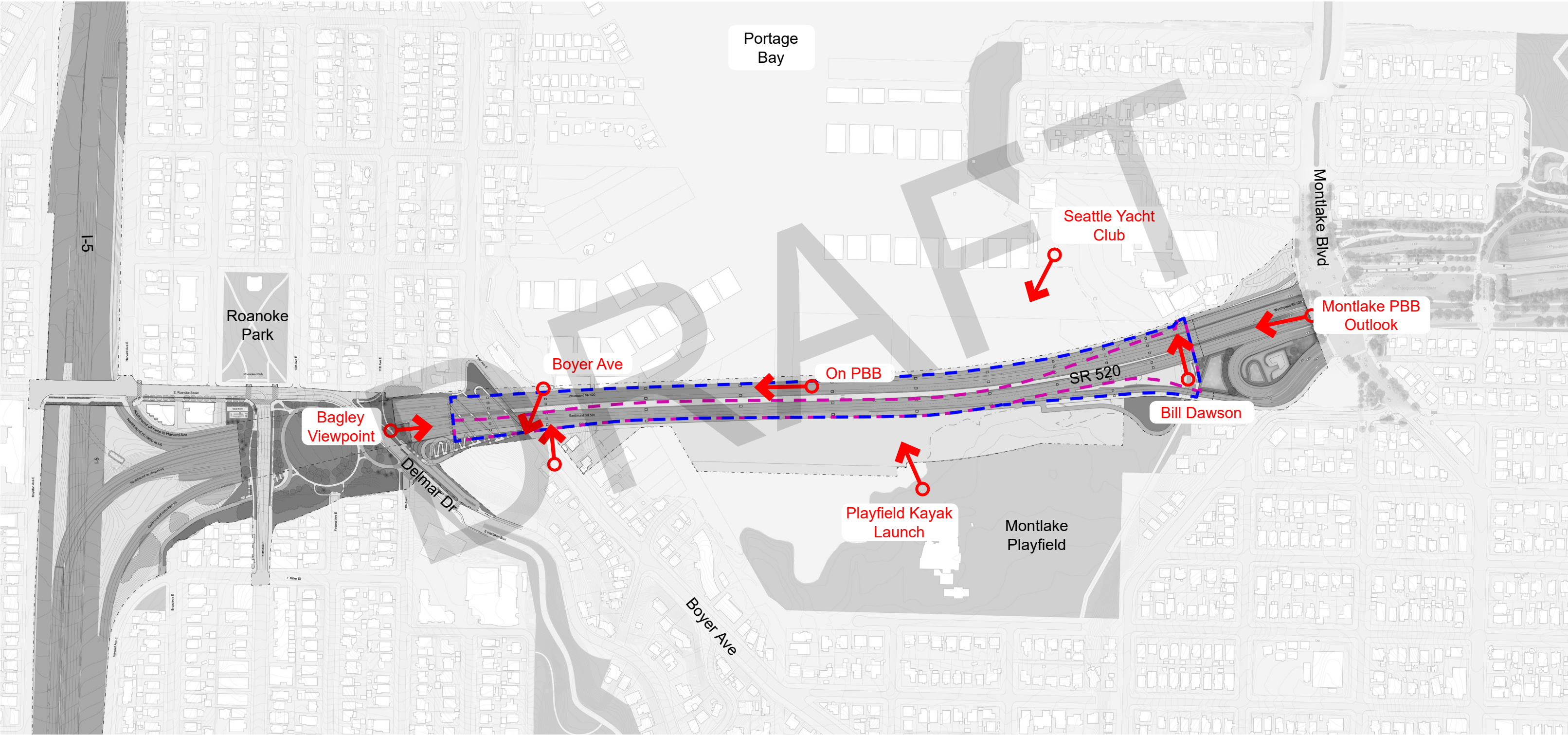


Portage Bay Bridge



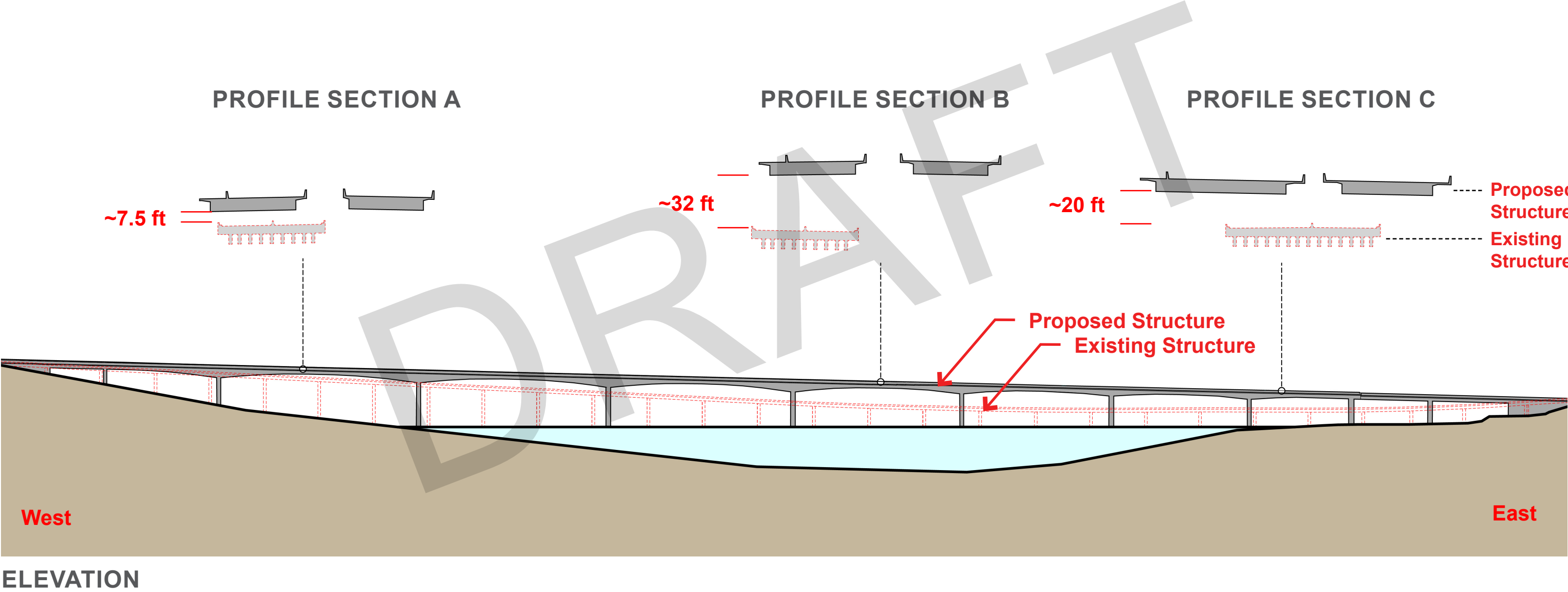
Portage Bay Bridge

Viewsheds & Experience



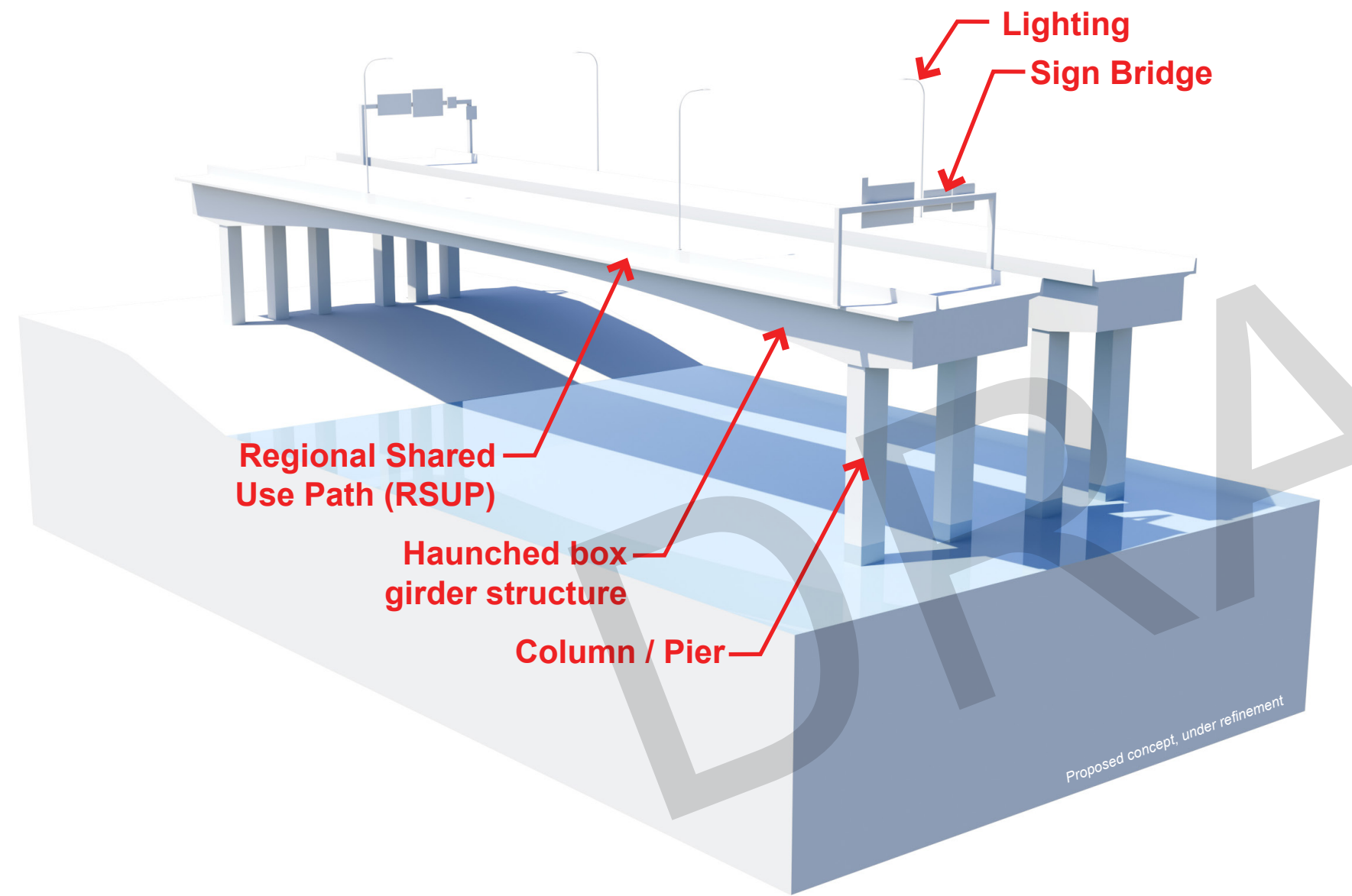
Portage Bay Bridge

Elevation / Profile Sections



Portage Bay Bridge

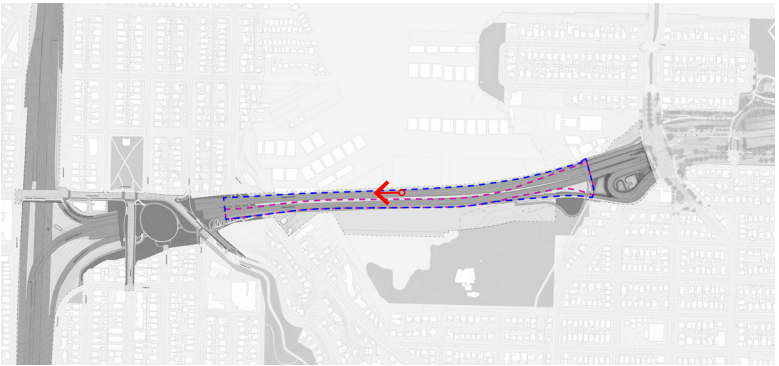
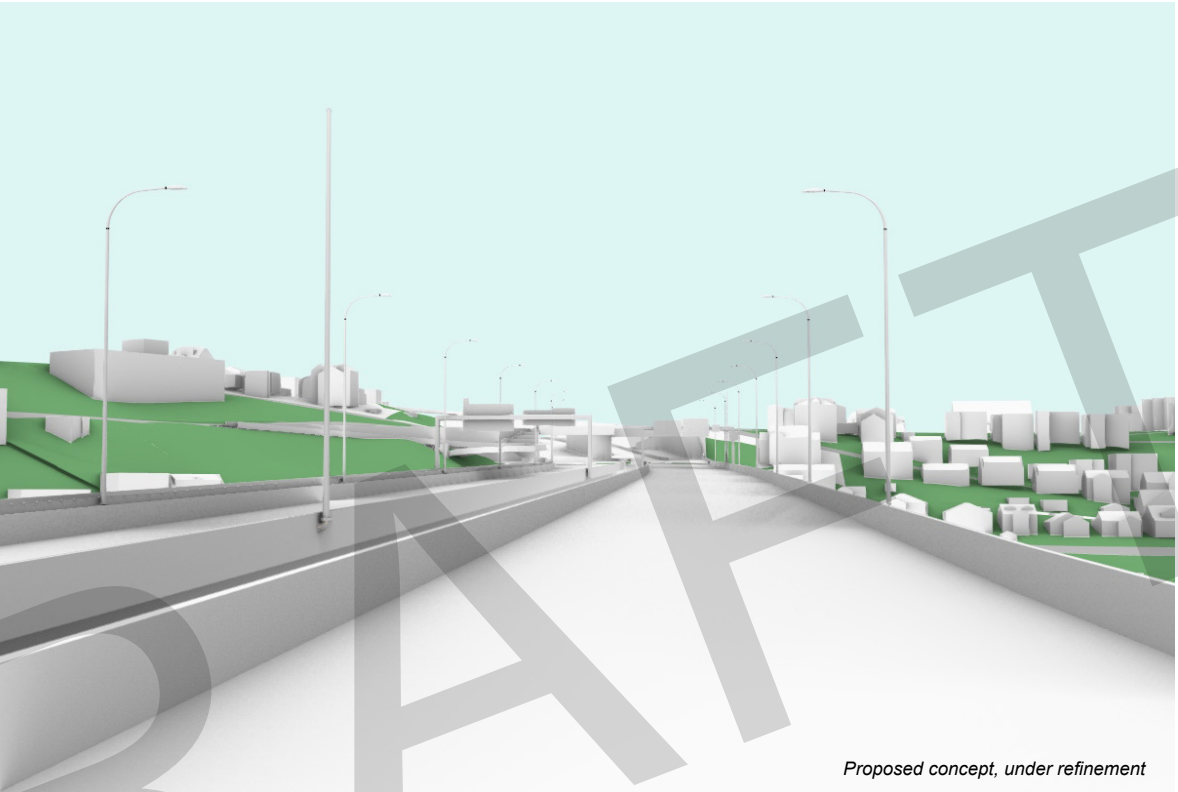
Baseline Structure Components



EXAMPLE STRUCTURAL SYSTEM: I-90 EAST CHANNEL

Portage Bay Bridge

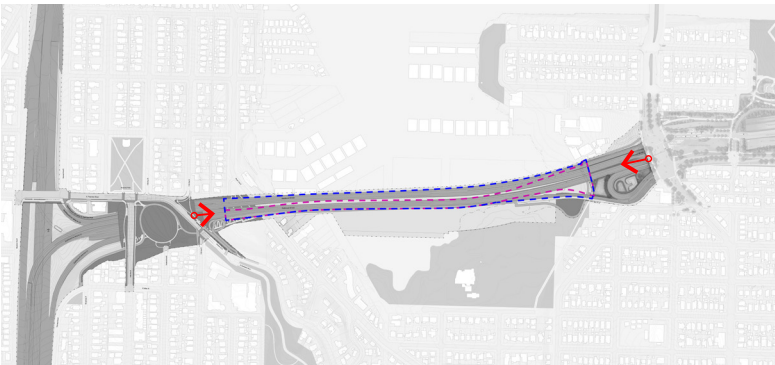
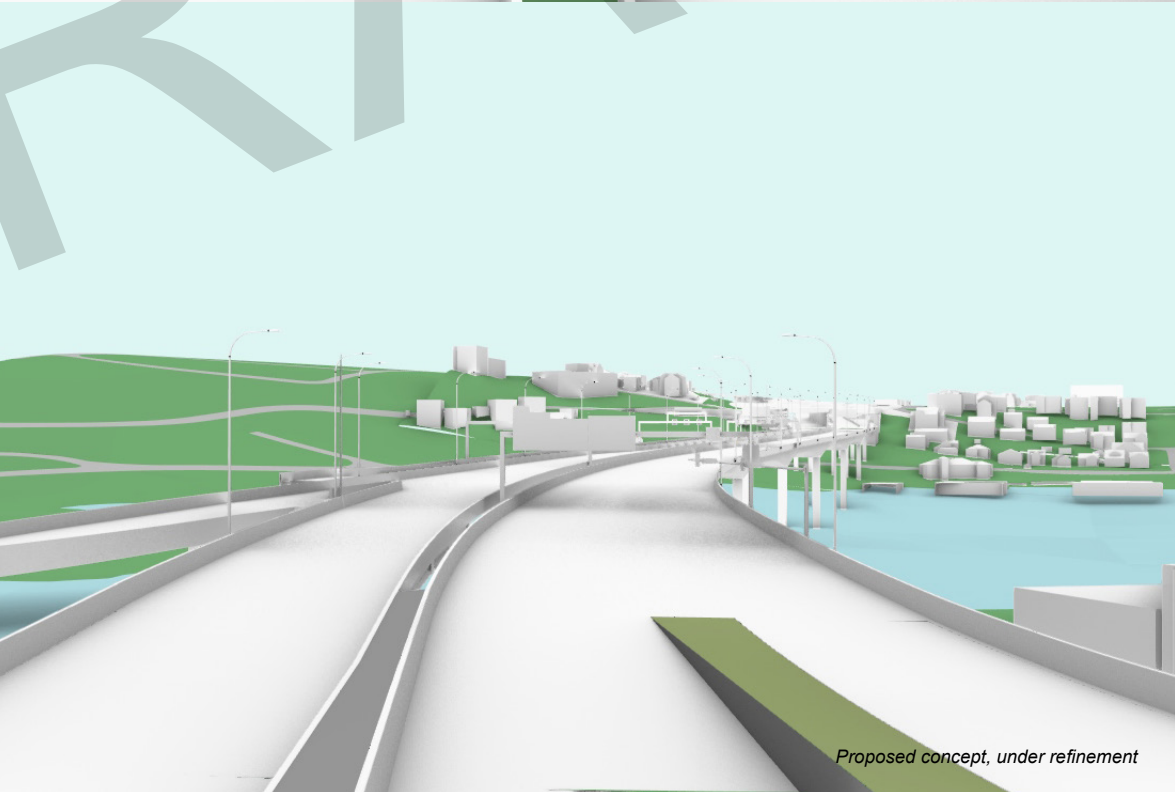
Viewsheds & Experience



Mid-span on Portage Bay Bridge looking West

Portage Bay Bridge

Viewsheds & Experience

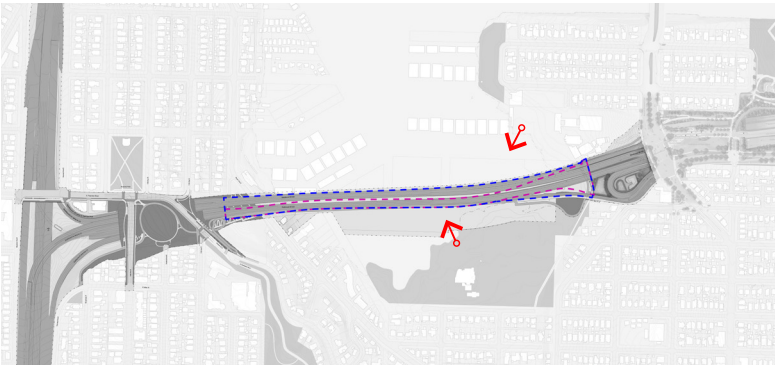
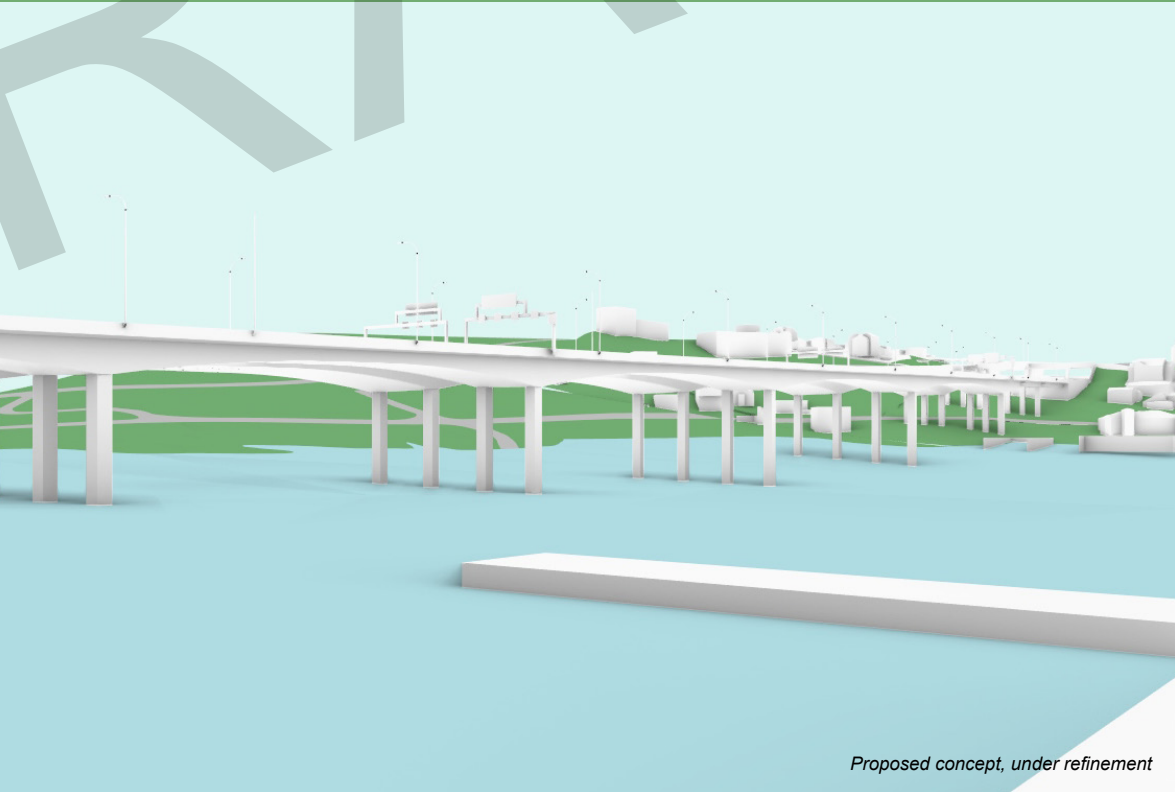
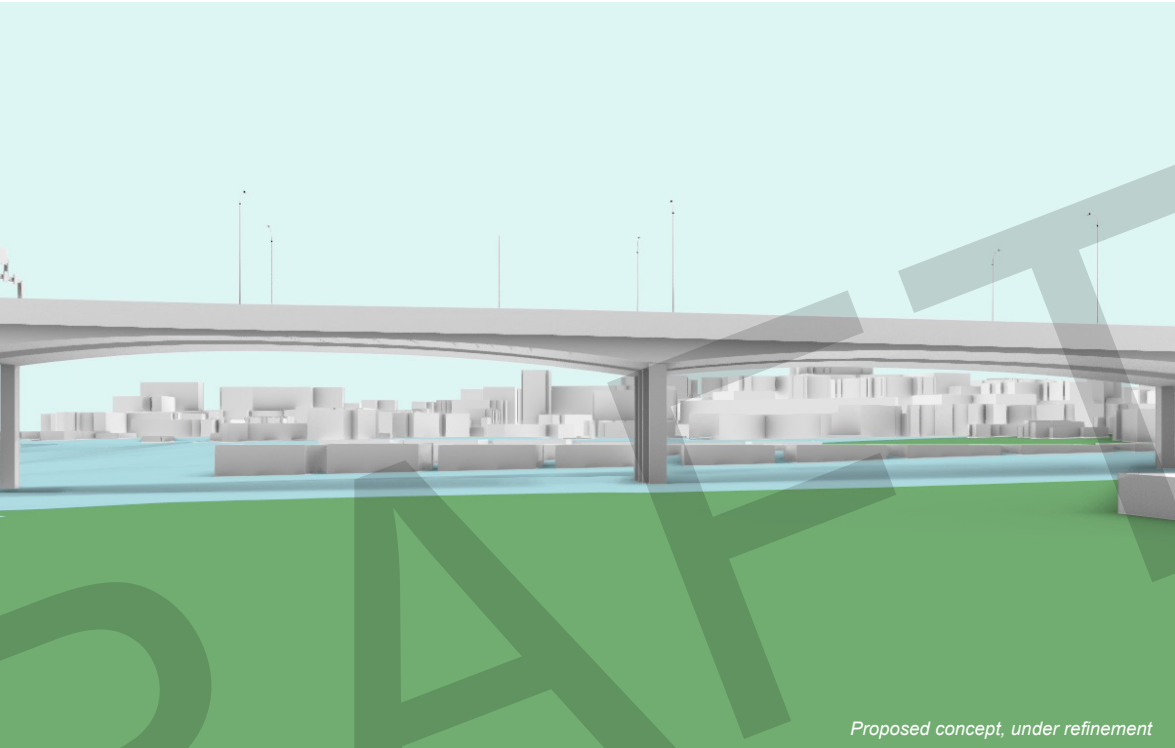


Looking East from Bagley Viewpoint

Looking West from Montlake PBB Outlook

Portage Bay Bridge

Viewsheds & Experience

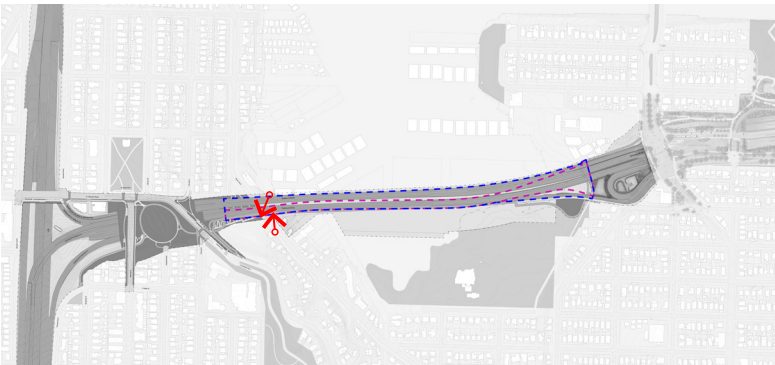
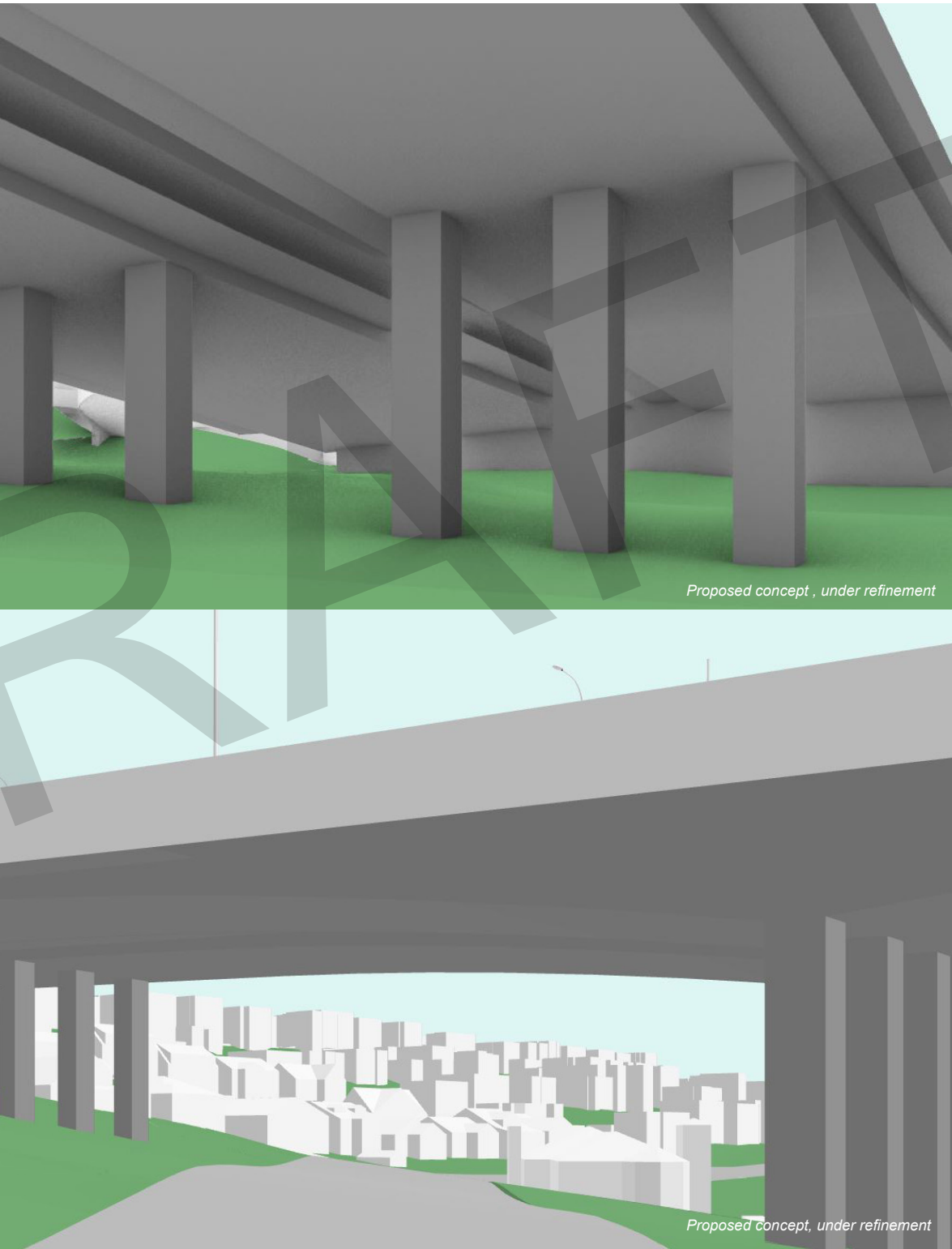


**View looking North from
Montlake Playfield kayak launch**

**View looking Southwest from
Seattle Yacht Club**

Portage Bay Bridge

Viewsheds & Experience

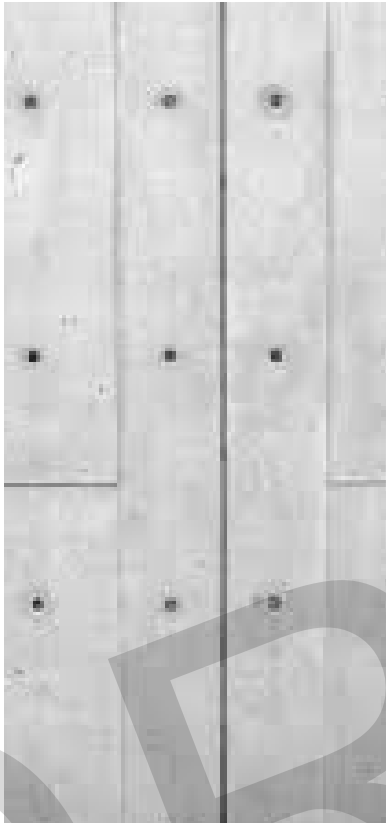


View from Boyer Ave looking West

Boyer Ave Looking North

Portage Bay Bridge

Concrete Detailing at Undercrossings

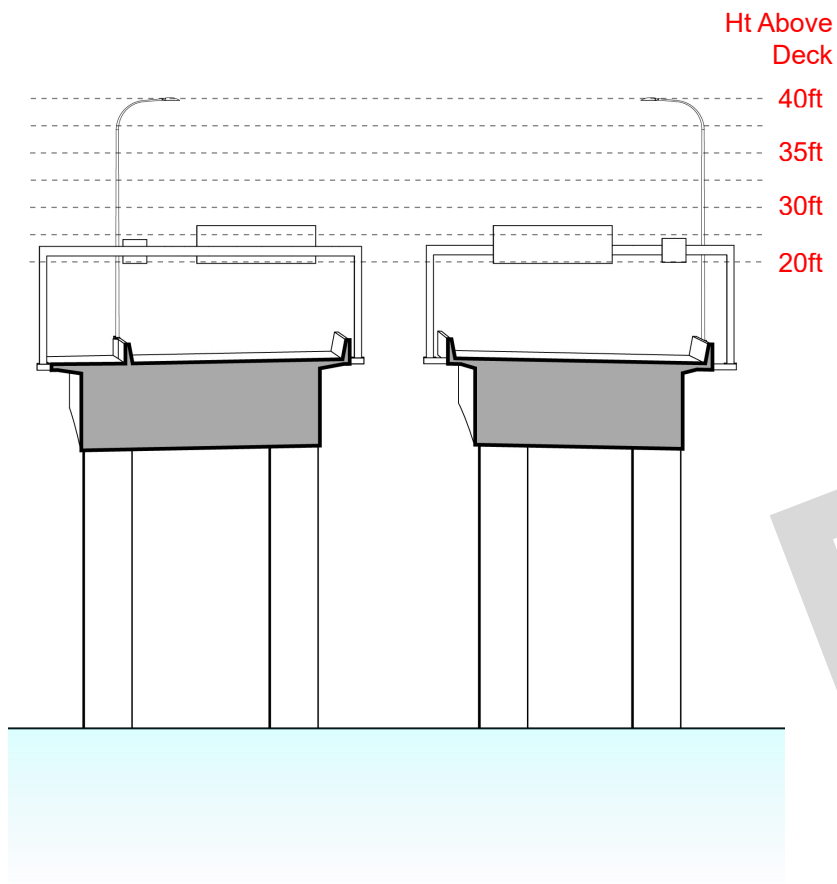


PEDESTRIAN SCALE
TACTILE FINISHES
SPEED



Portage Bay Bridge

City Street Effect



BASELINE SECTION

Roanoke Lid

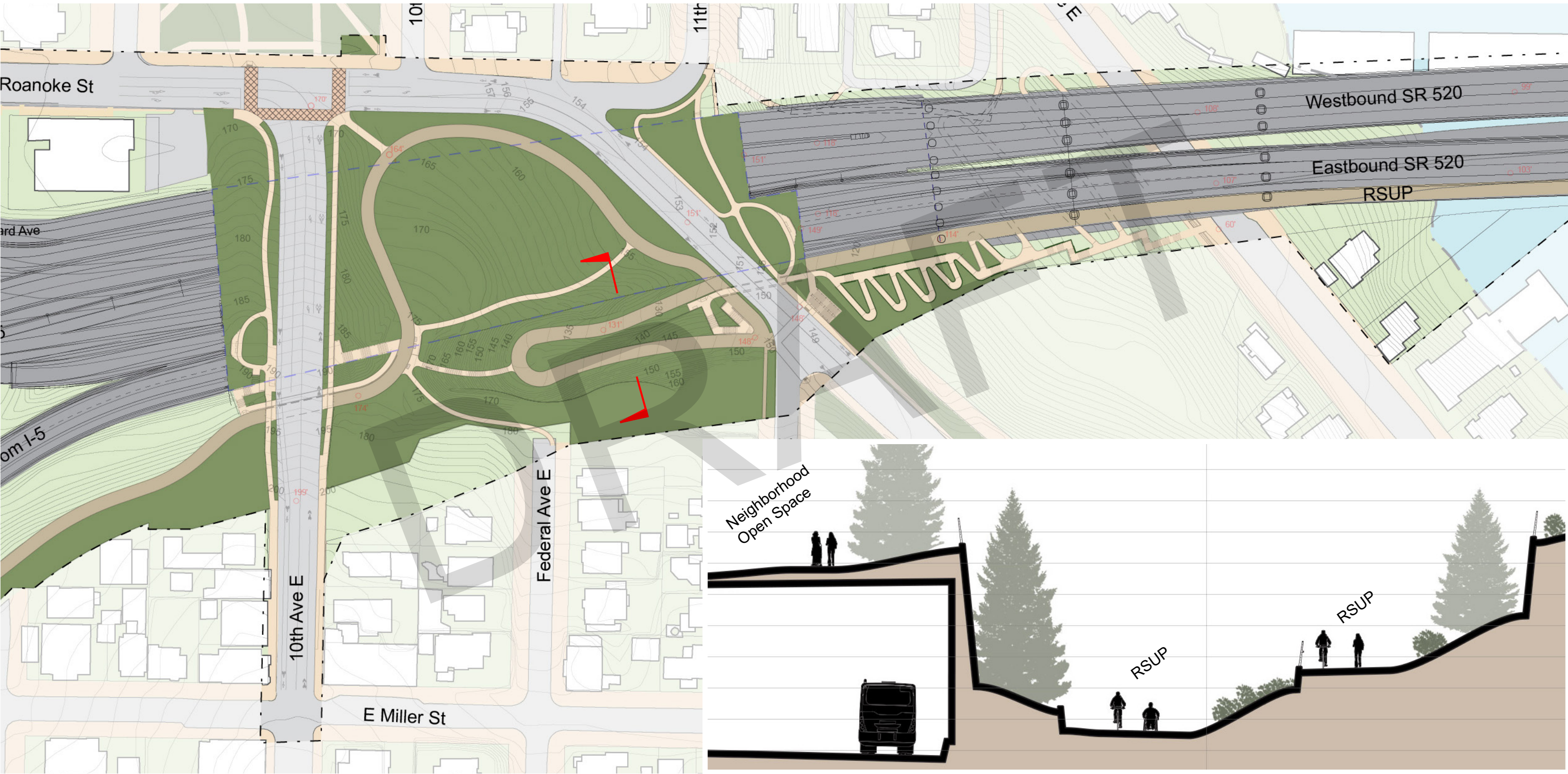
SDC LETTER TO THE 2012 SEATTLE COMMUNITY DESIGN FINAL REPORT

- The east side of the park should “**connect as seamlessly as possible to the shared-used path** on the Portage Bay Bridge.”
- “On the west side of the park, we support the design preference to **extend a path under 10th Ave E** and connect it to the north end of Broadway
- “The final design for Delmar Ave should have a **safe crossing for pedestrians and bicycles** moving between Portage Bay Bridge and the park.”
- “The **intersection of 10th Ave E and E Roanoke St** deserves a special treatment, because it’s the ‘knot’ that ties the new park and the existing Roanoke Park together.”
- The south edge “should be designed to **establish clear physical and social relationships between the public and private realms.**”

LID BASELINE DESIGN



Roanoke Lid Baseline



1936 Aerial



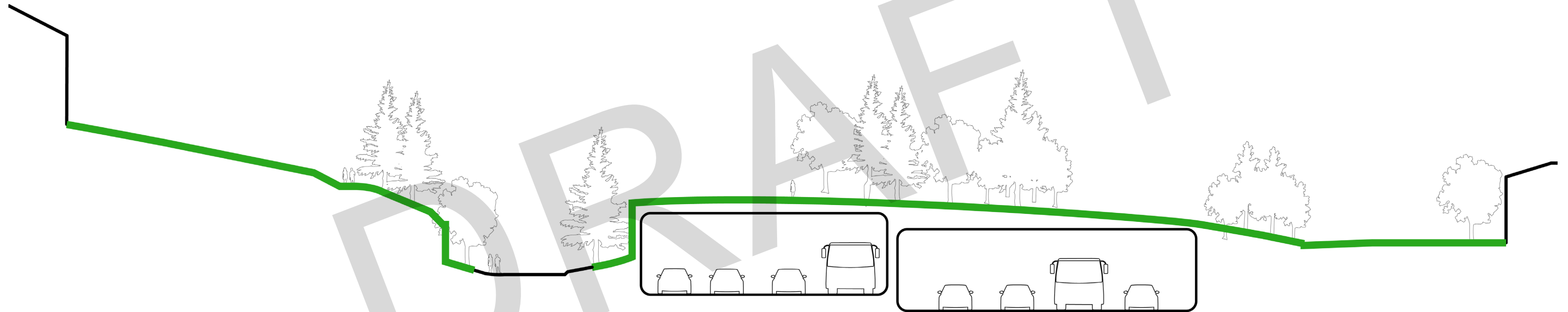
2019 Aerial



Existing

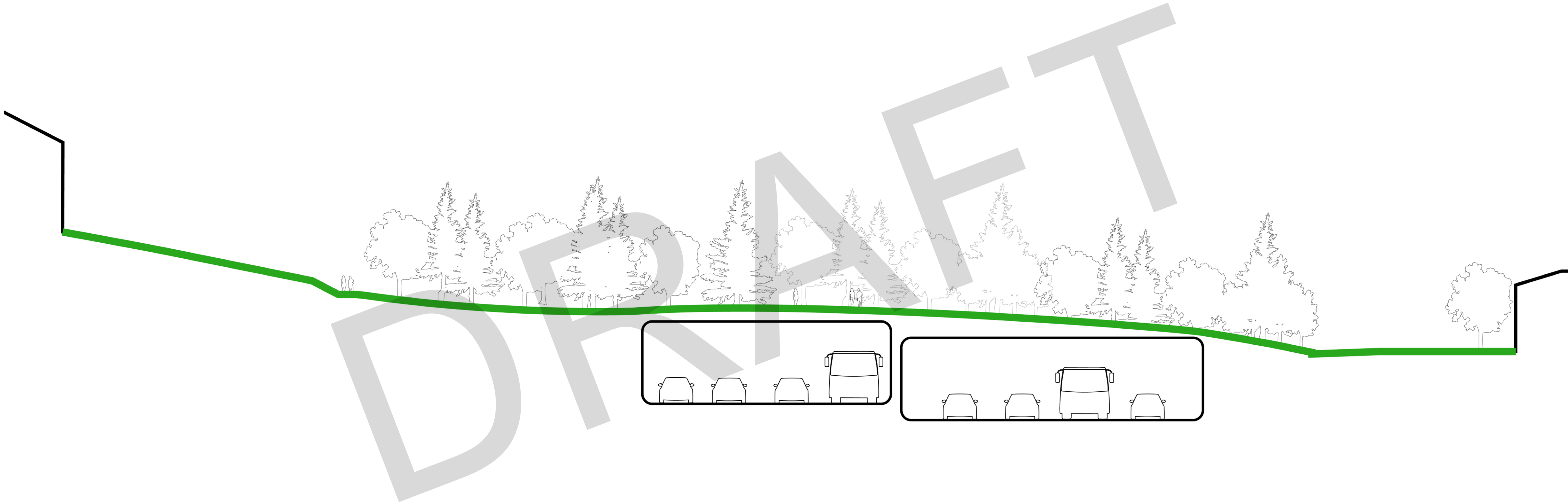


Baseline

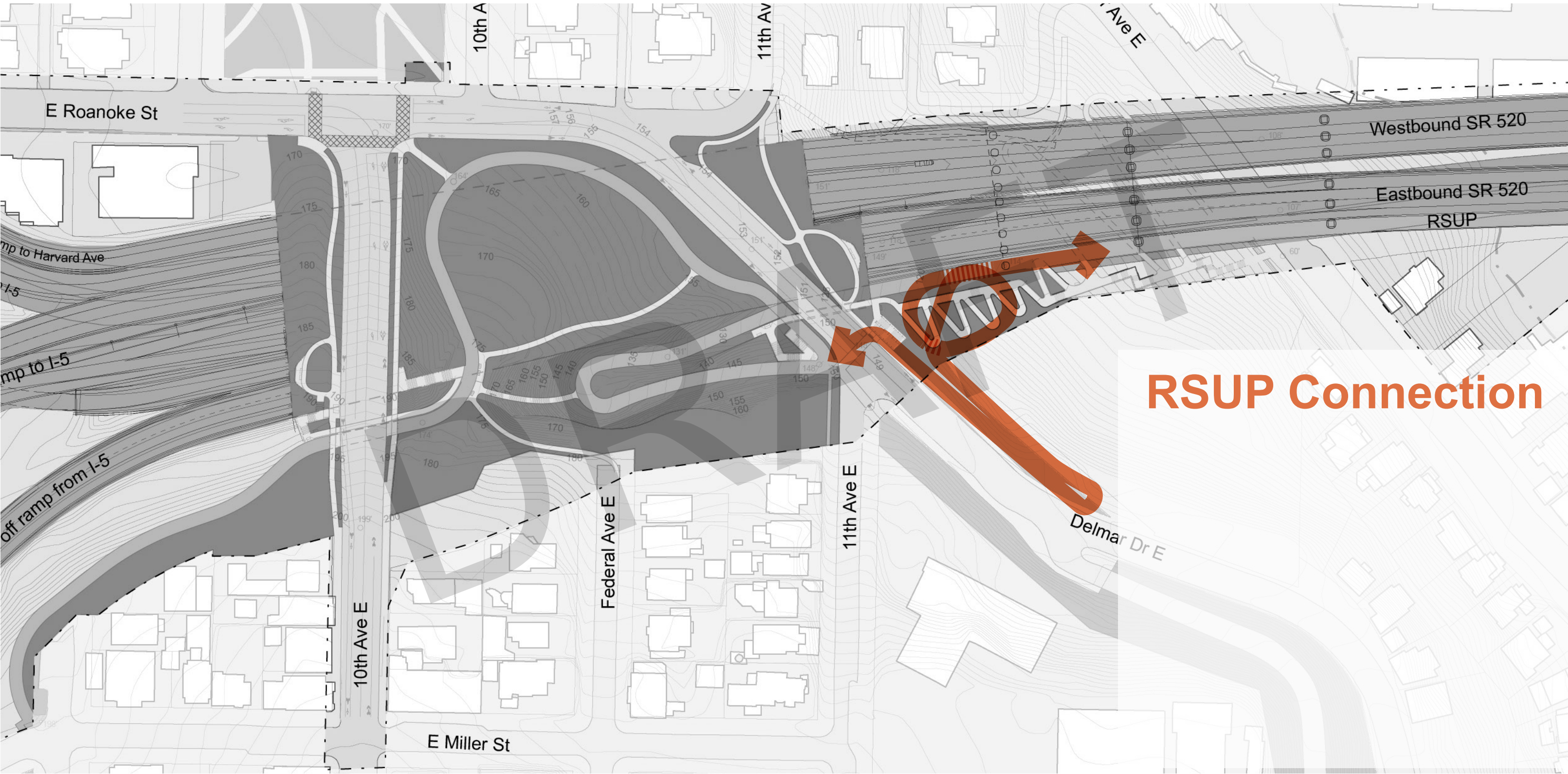


“Repairing the Wound” ~ Sam Assefa, Director OPCD

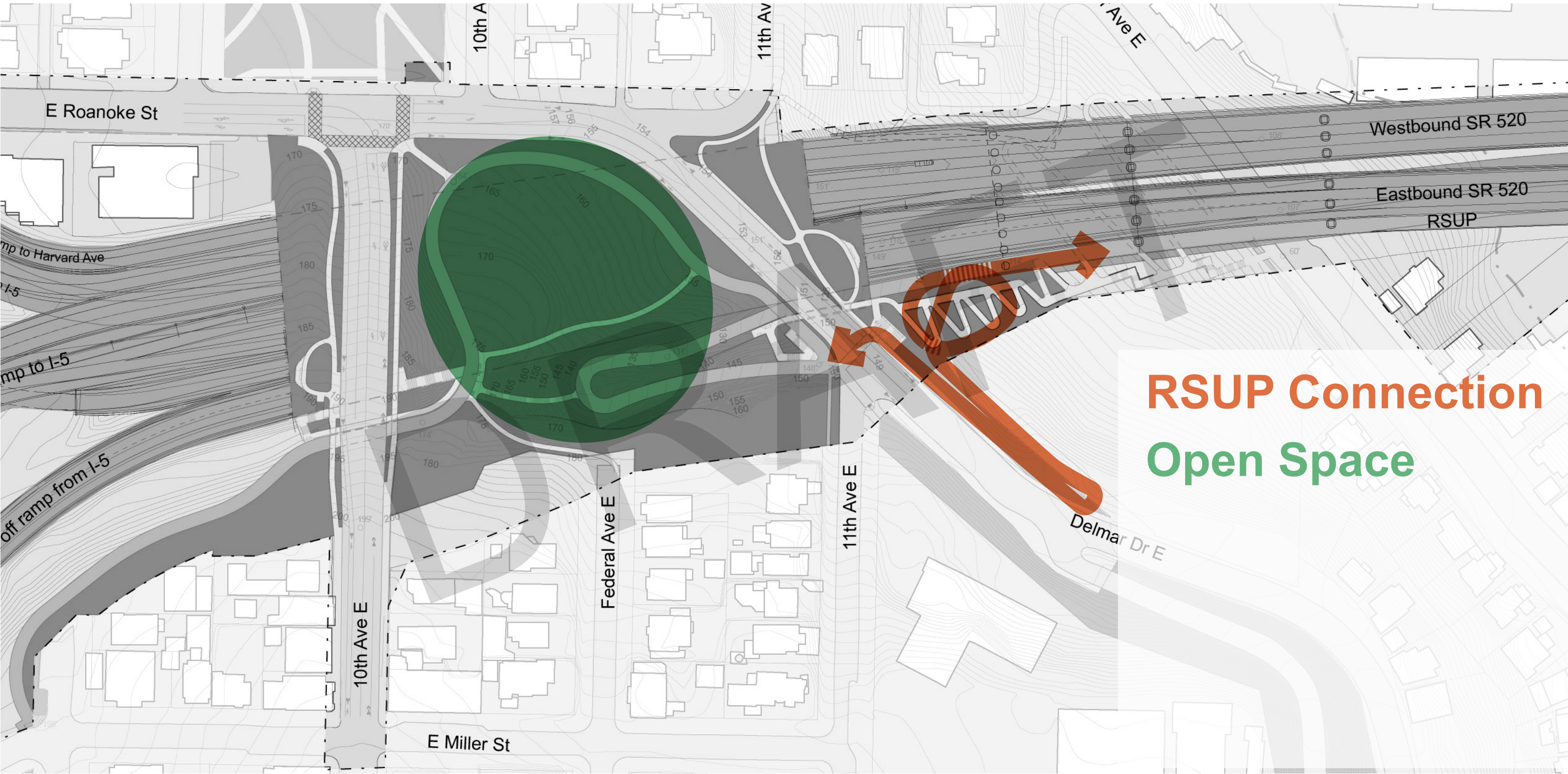
Refined Concept



Roanoke Lid: Opportunities

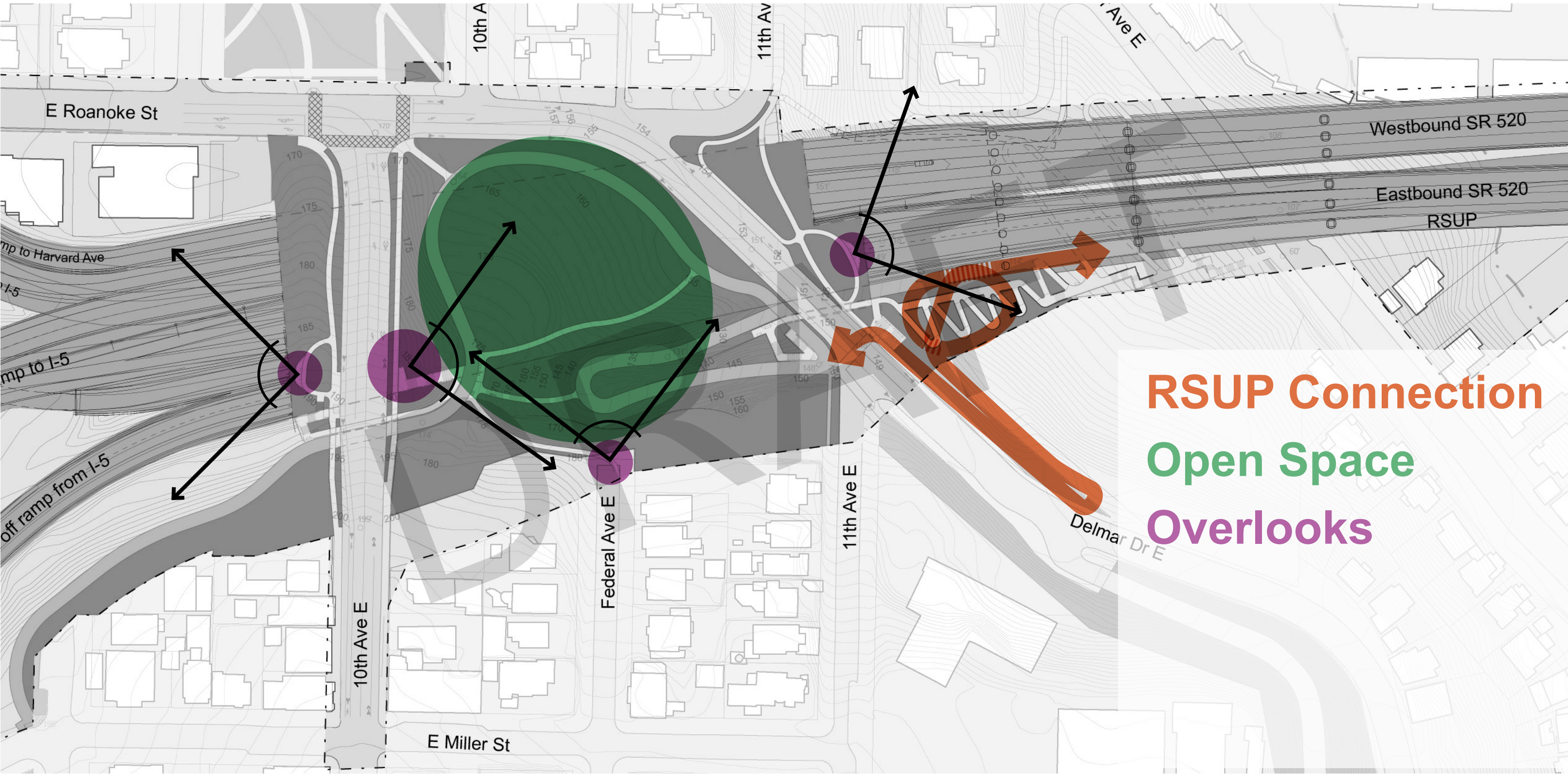


Roanoke Lid: Opportunities



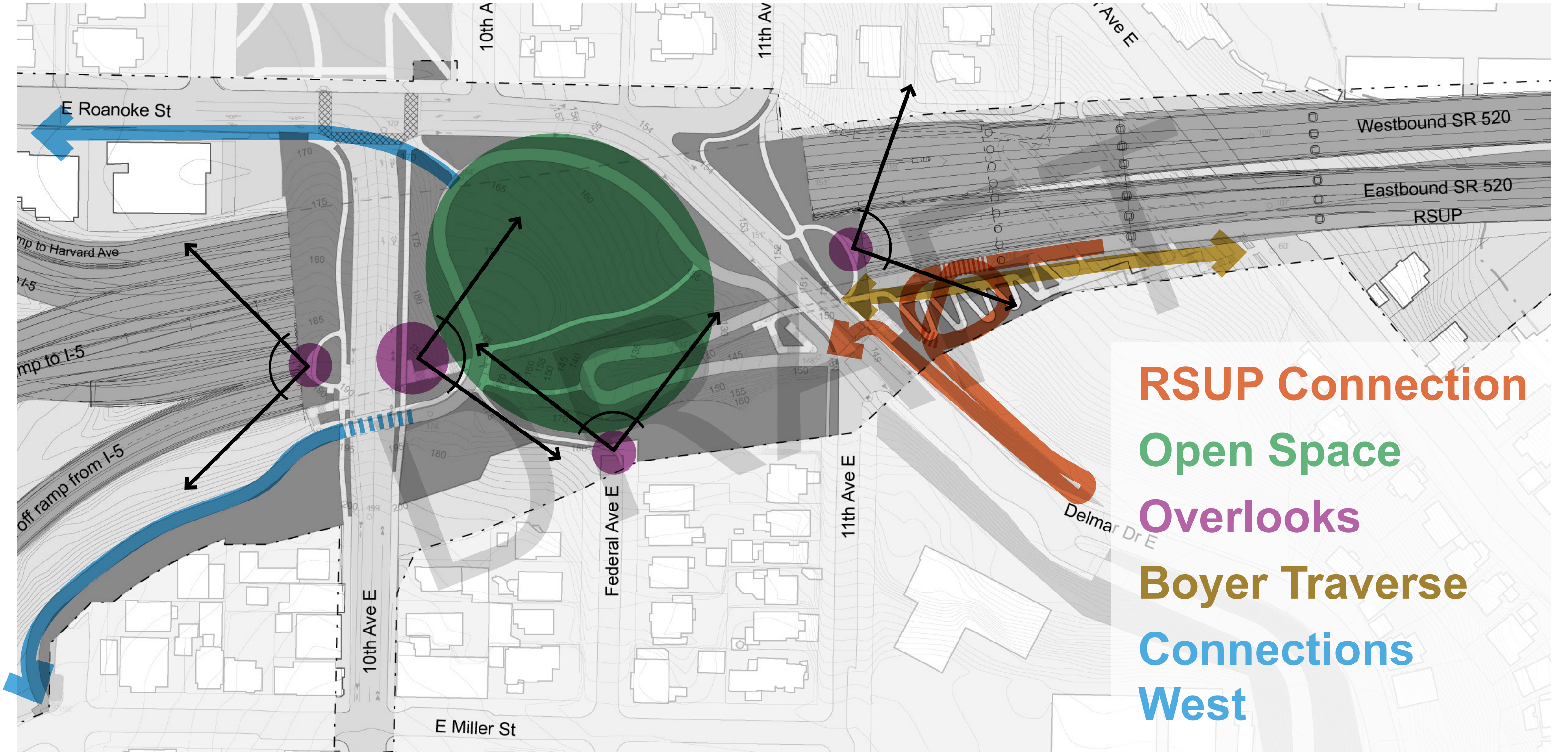
RSUP Connection
Open Space

Roanoke Lid: Opportunities



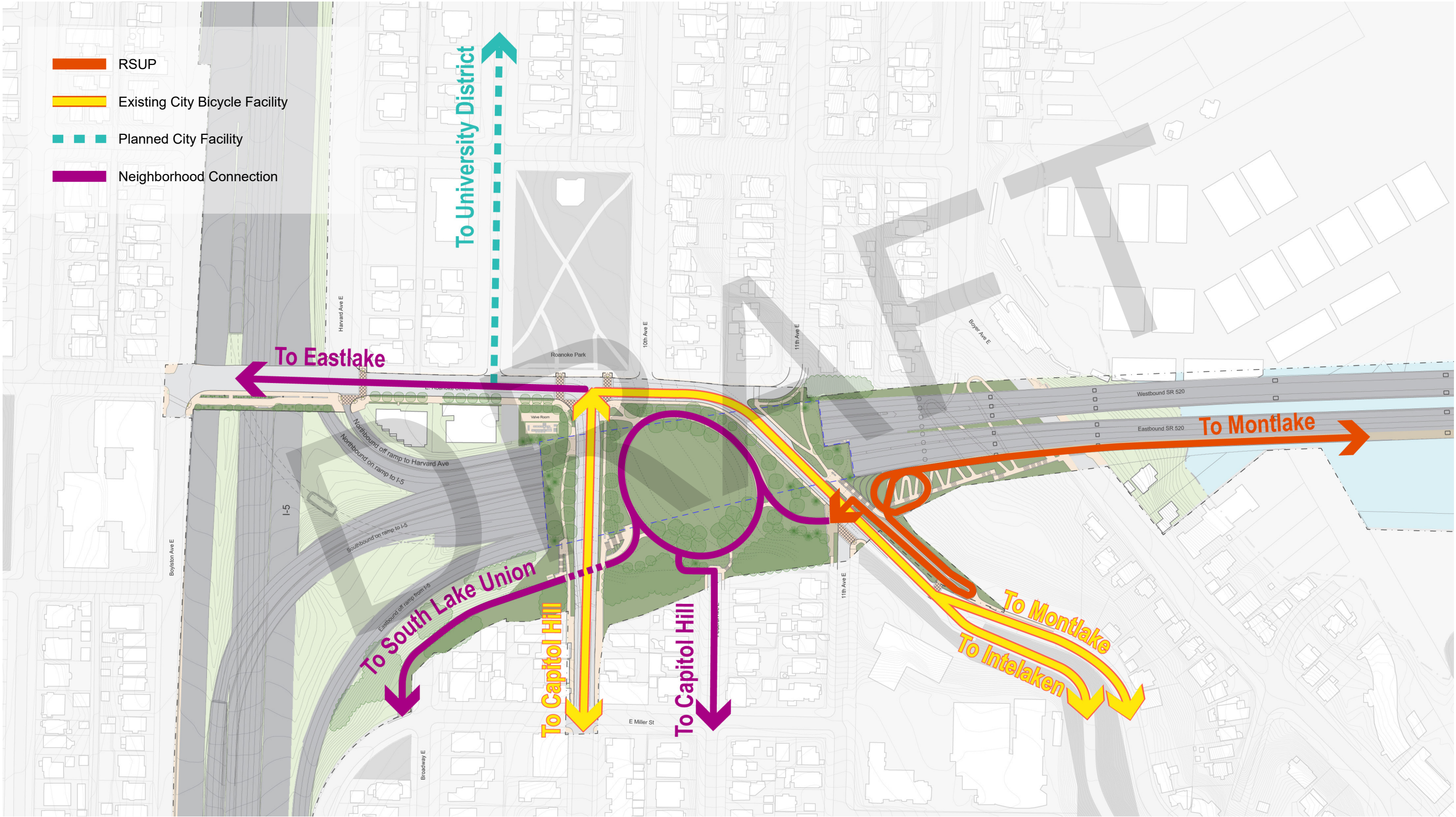
The map illustrates the Boyer Traversal area, highlighting key features and infrastructure. A large green area represents the 'Open Space'. A network of purple lines and arrows indicates the 'RSUP Connection'. A yellow line with arrows shows the 'Boyer Traverse'. A red line with arrows indicates the 'Overlooks'. The map includes labels for 'E Roanoke St', '10th Ave E', '11th Ave E', 'Federal Ave E', 'E Miller St', 'Delmar Dr E', 'Westbound SR 520', 'Eastbound SR 520', 'RSUP', 'mp to Harvard Ave', 'mp to I-5', and 'off ramp from I-5'. A legend in the bottom right corner defines the colors: RSUP Connection (red), Open Space (green), Overlooks (purple), and Boyer Traverse (yellow).

Roanoke Lid: Opportunities



- RSUP Connection
- Open Space
- Overlooks
- Boyer Traverse
- Connections West

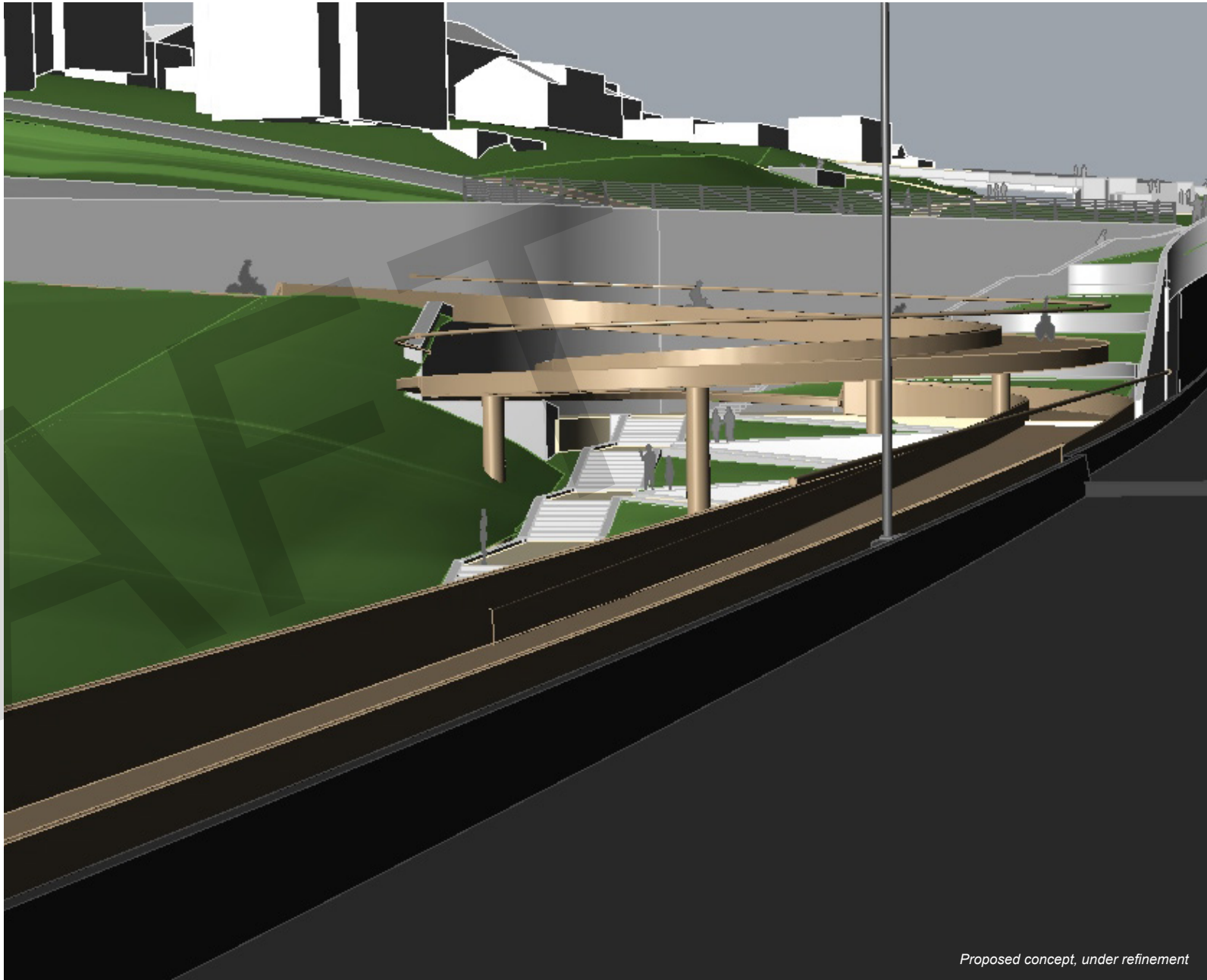
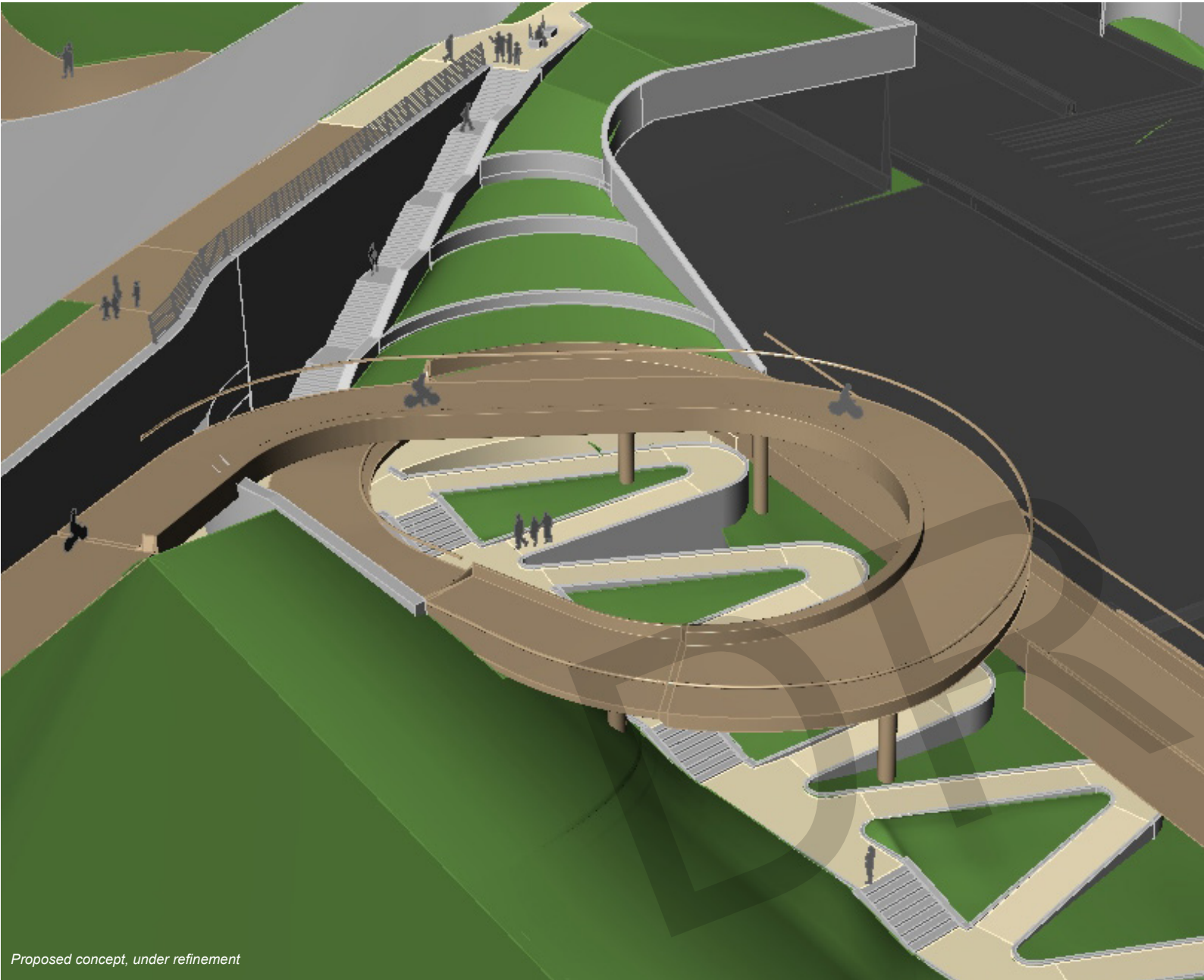
Roanoke Lid Area Bike Network



RSUP Connection



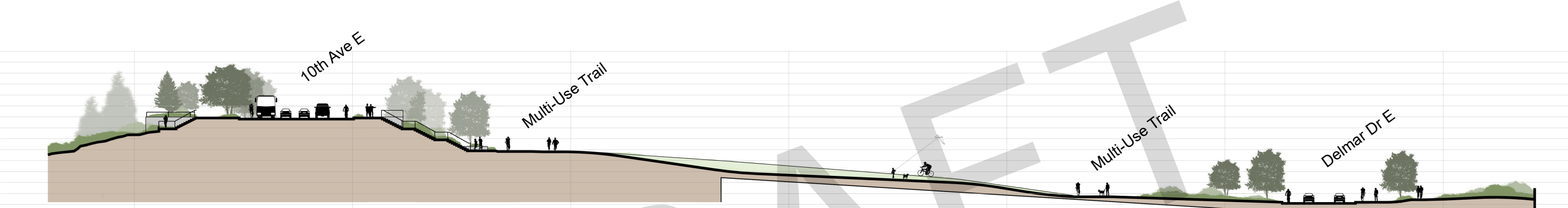
RSUP Connection



Neighborhood Open Space



Neighborhood Open Space: Longitudinal Section



West

East

Neighborhood Open Space: Seattle Park Comparisons



Delmar Lid

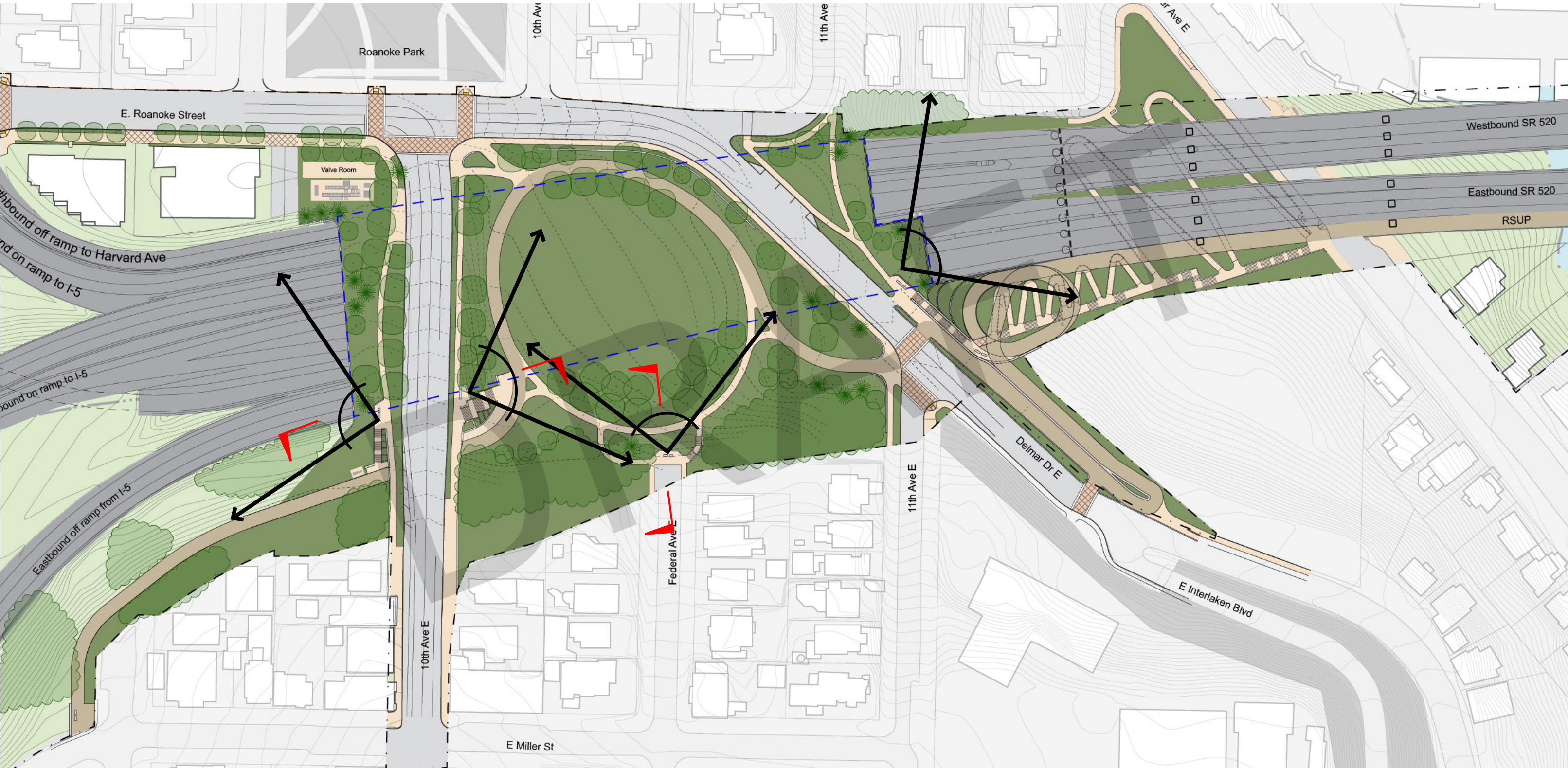


Ella Bailey Park



Cal Anderson Park

Overlooks

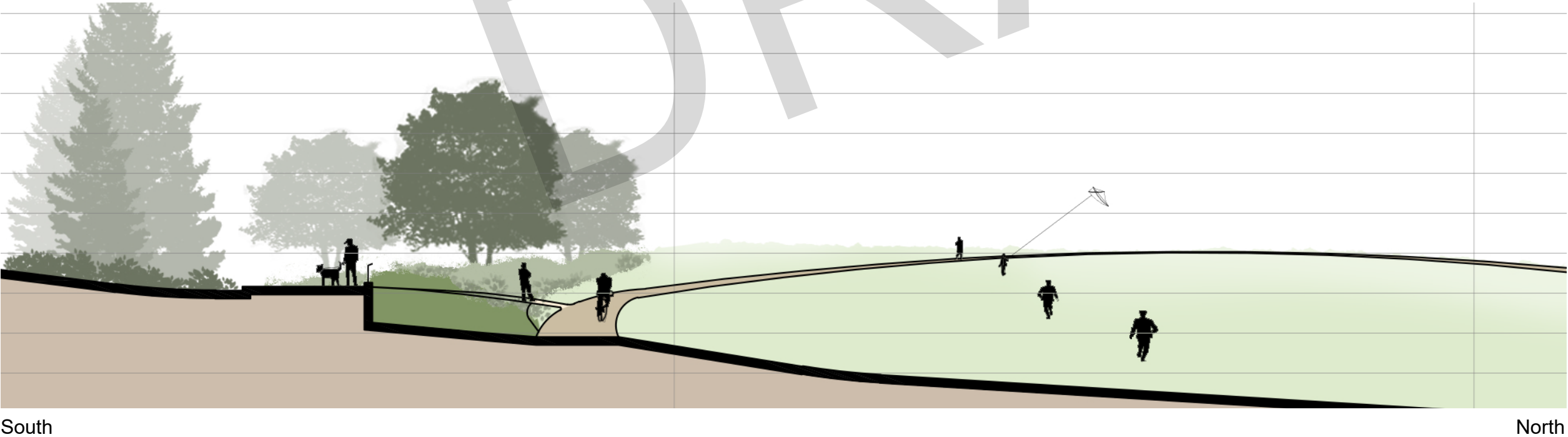


Overlooks

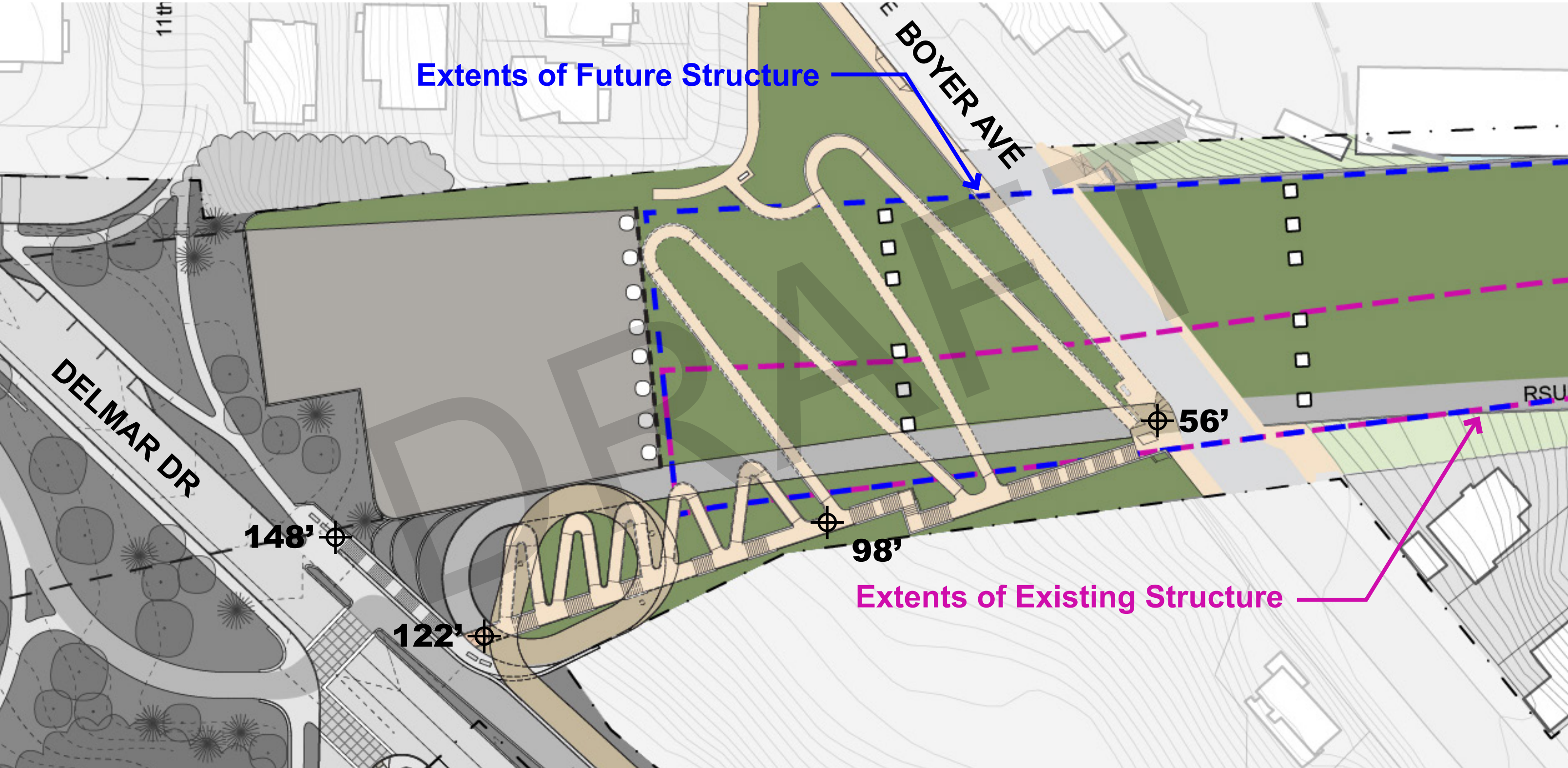
10th Ave Outlooks



Federal Ave Outlook



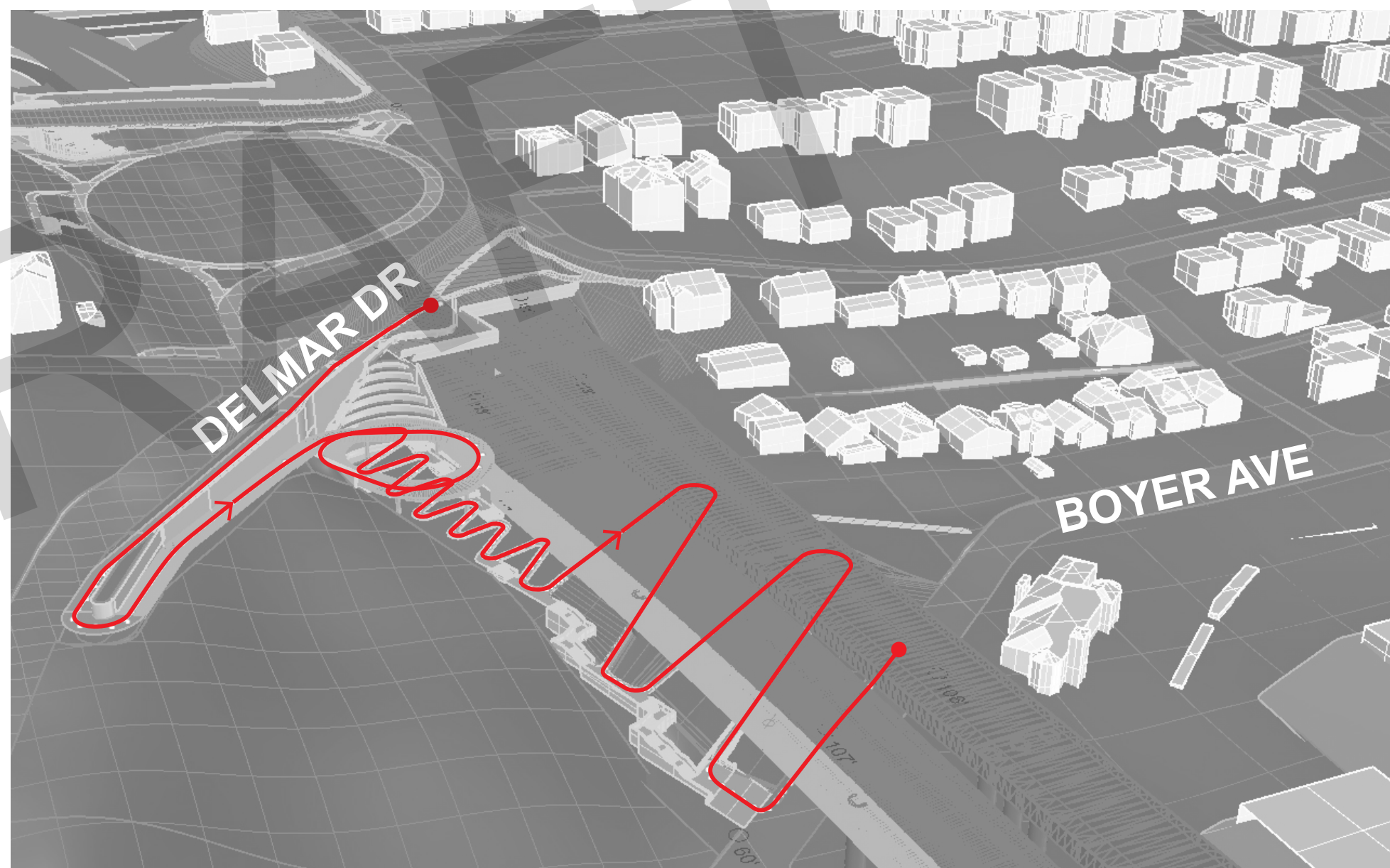
Boyer Traverse



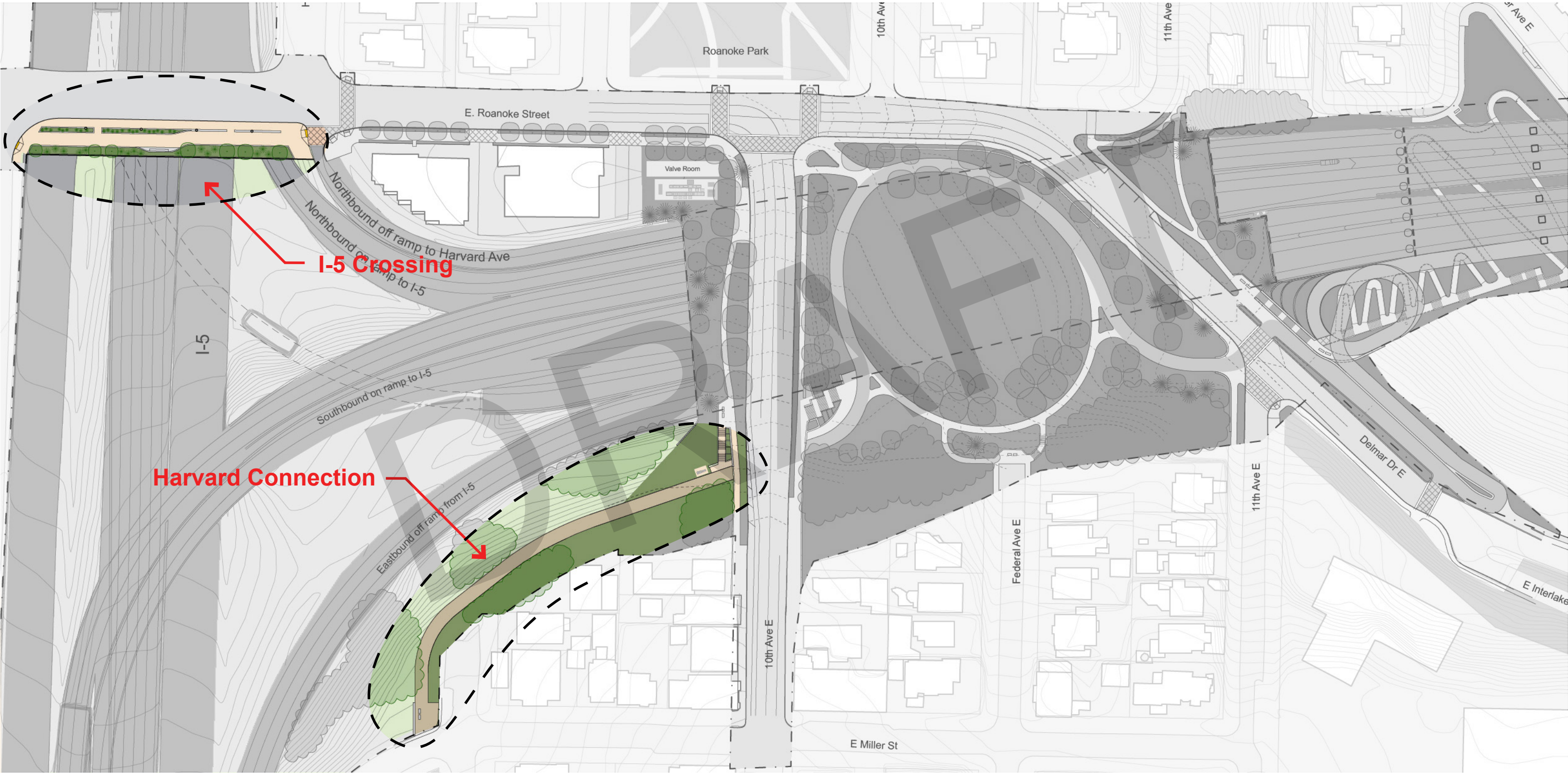
Boyer Traverse



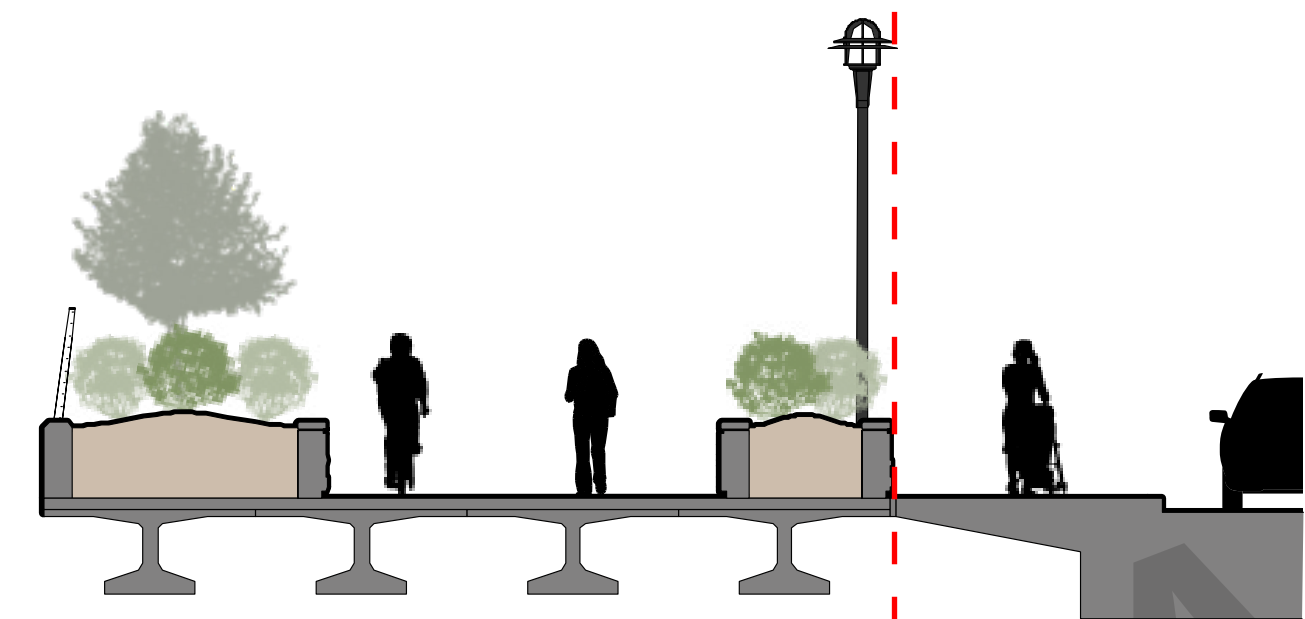
- VERTICAL CHANGE BETWEEN BOYER AND DELMAR: **92'**
- ACCESSIBLE PATH LENGTH : **2,696 FT**
- MIN CLEAR UNDER STRUCTURE: **+/-12'**



Connections West



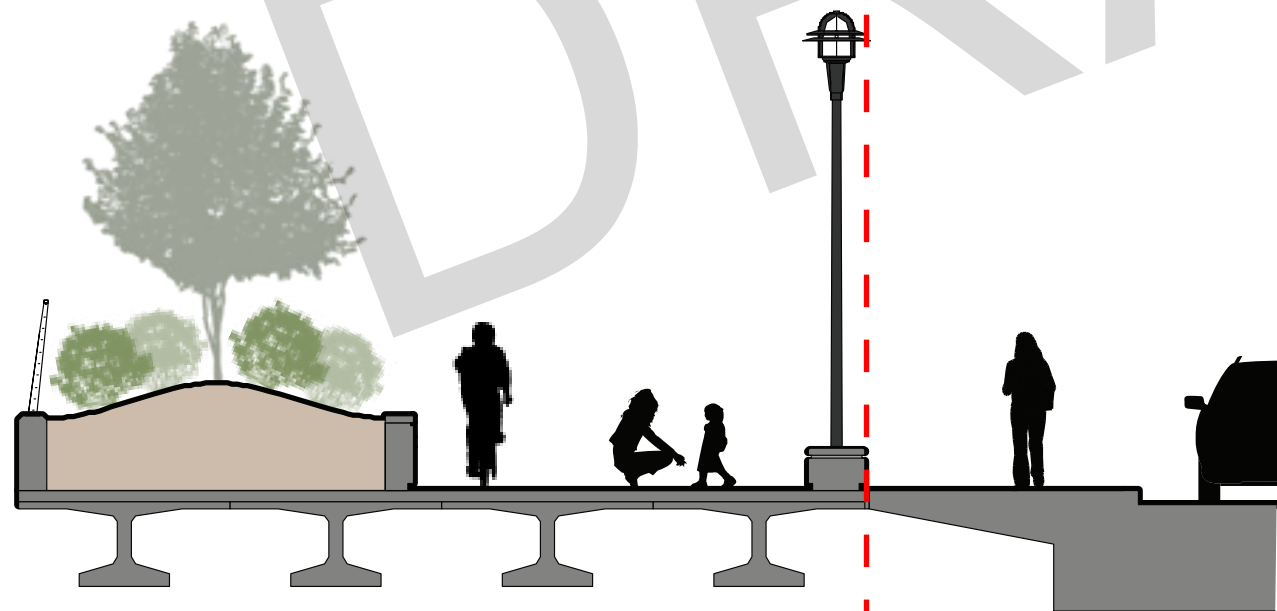
I5 Crossing Enhanced Bicycle and Pedestrian Bridge



A

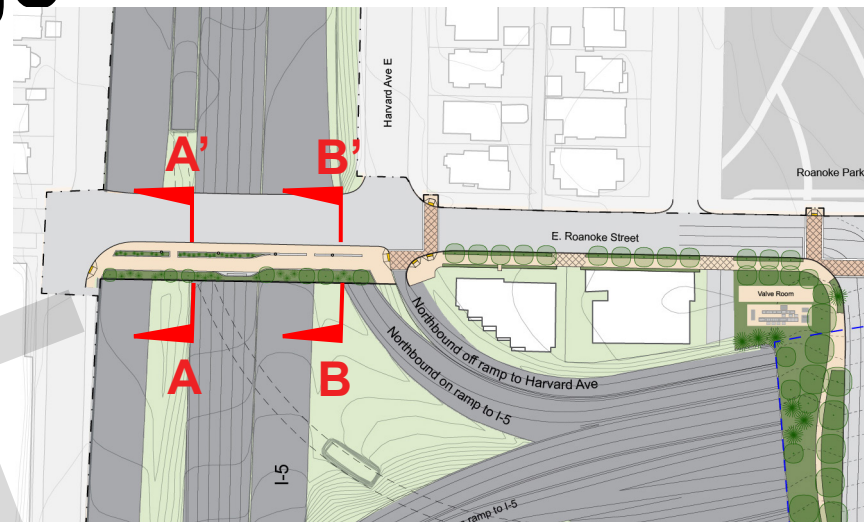
A'

New Structure — ✕ — Existing Structure

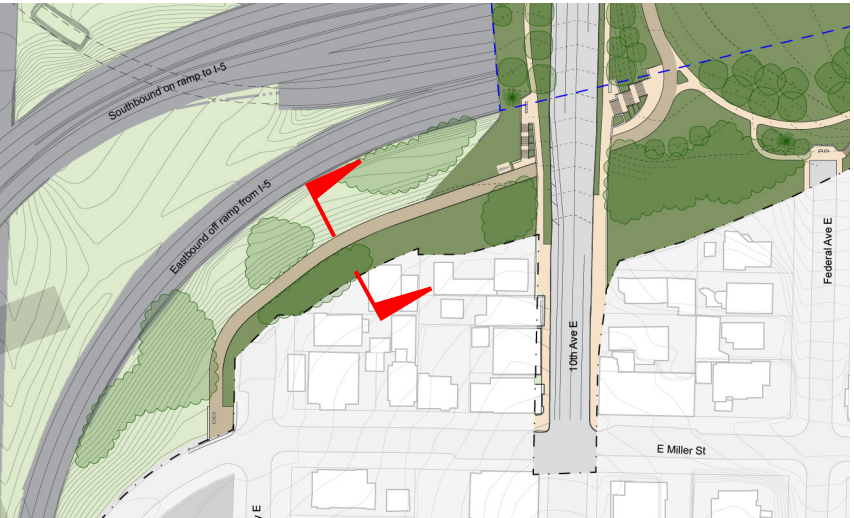
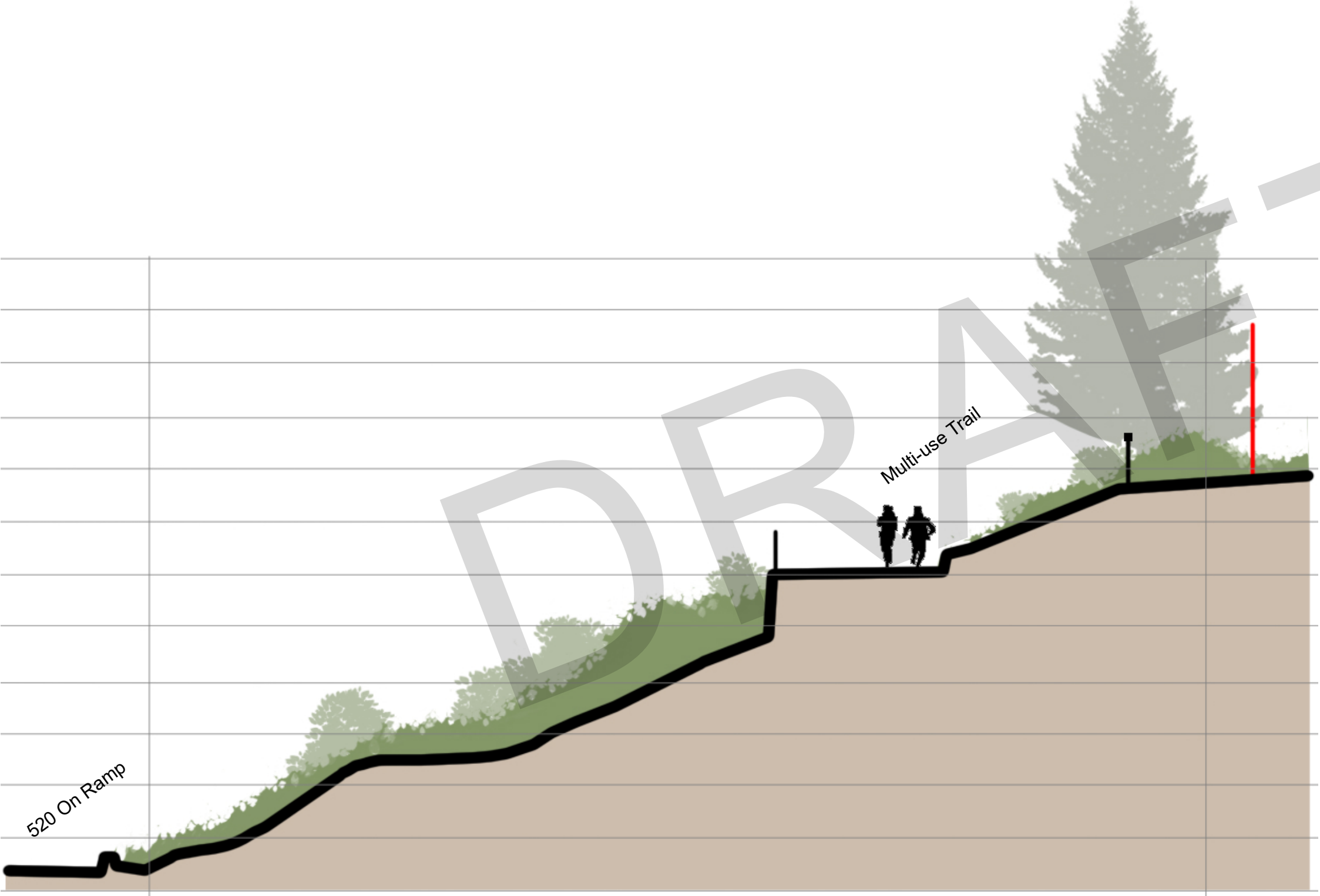


B

B'



Harvard Connection



Discussion: Context and Design Approach

- Montlake Lid Area Bike Network
- Bill Dawson Trail
- Connections East
- Portage Bay Bridge
- Roanoke Lid
 - Baseline
 - Opportunities
 - Roanoke Lid Area Bike Network
 - RSUP Connection
 - Neighborhood Open Space
 - Overlooks
- Boyer Traverse
- Connections West
 - 15 enhanced bike/ped connection
 - Harvard

Roanoke Lid



SR 520 Rest of the West



Connections East

