AGENDA

- RECAP
- ALIGNMENT + OVERVIEW
- BRIDGE + LANDSCAPE DESIGN
- DISCUSSION

- Design input and outreach work with North Seattle College
- Design and schedule coordination with Sound Transit
- Technical and Right-of-Way coordination with WSDOT
- Traffic planning and coordination with King County Metro

RECAP | Public Outreach

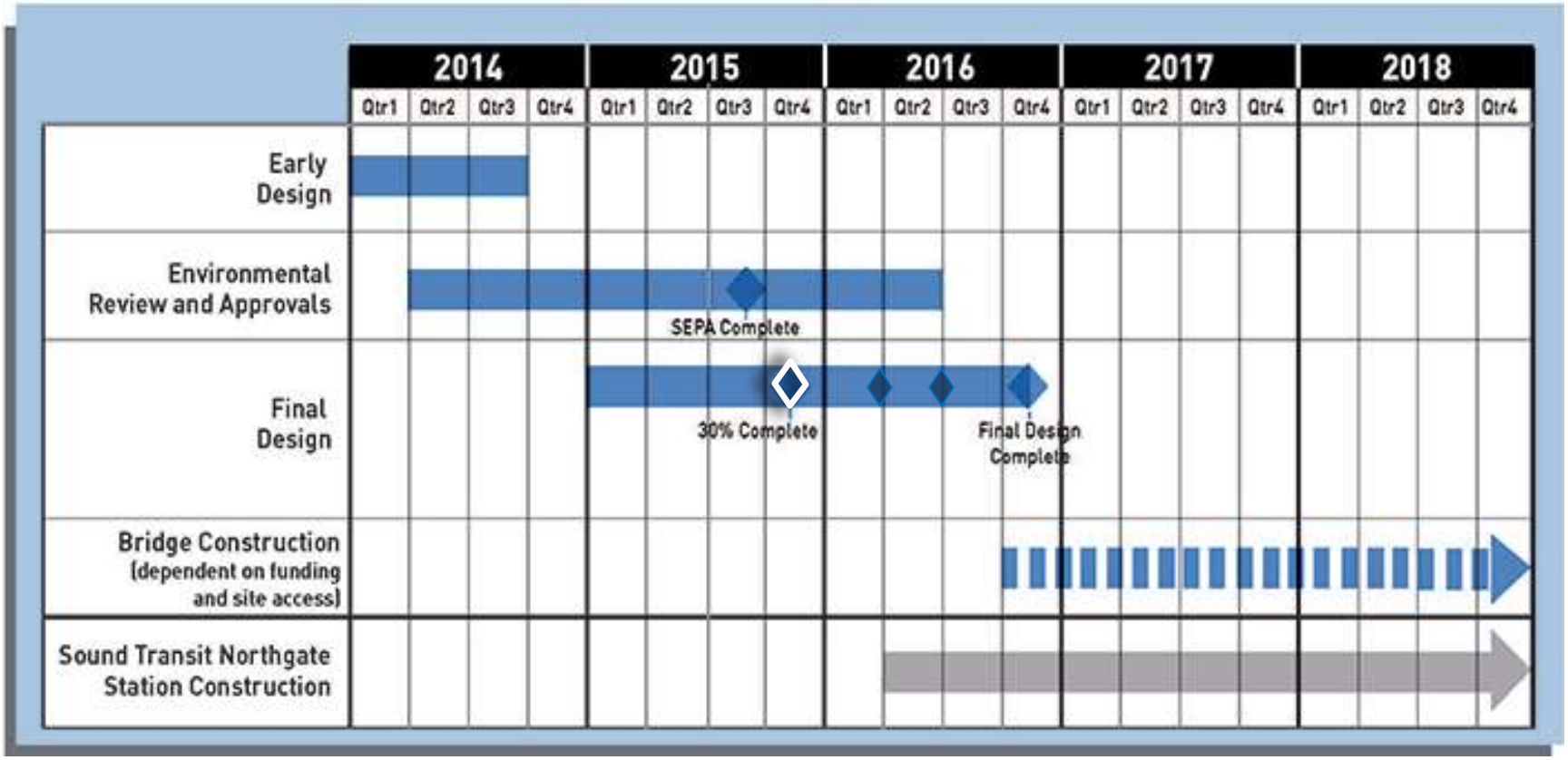
- Open House held June 2014
- Continual briefings:
  - NSC
  - modal Advisory boards (Bike and Ped)
  - stakeholders (District Councils and various advocacy/community groups
  - OCTOBER 15 OPEN HOUSE
- Final Open House will be scheduled around 90% Design

July 29, 2015	Maple Leaf Summer Social
July 15, 2015	North Seattle Chamber of Commerce
June 17, 2015	Licton Springs Community Council
June 17, 2015	Seattle Pedestrian Advisory Board
June 24, 2015	Pinehurst Community Council
May 27, 2015	Northwest District Council Briefing
May 26, 2015	Cascade Bicycle Club: Connect Northgate
May 22, 2015	Seattle Neighborhood Expo
May 12, 2015	Meadowbrook Community Council
May 2015	Seattle Pedestrian Advisory Board
April 29, 2015	Maple Leaf Community Council
April 22, 2015	North Seattle College Earth Day Symposium
October 21, 2014	North Seattle College
September 10, 2014	Public Briefing
June 3, 2014	Open House
March 2014	Sound Transit Open House

$26.3M Project Cost Estimate (planning-level)

Secured	
$5M	Sound Transit
$5M	City of Seattle
$10M	Washington State
TBD	
$25M	Federal TIGER Grant Application (combined Bridge and Bike Share application)
$15M	Move Seattle Levy

Northgate Pedestrian & Bicycle Bridge Project Schedule



This project will provide non-motorized improvements in the Northgate, North College Park and Licton Springs neighborhoods in the vicinity of Sound Transit's North Link Station and the North Seattle College.

Improvements include:

- Pedestrian/bicycle overpass over I-5
- Connections of west and east neighborhoods/businesses
- Connection of integrated transit facilities with the bridge and separated bicycle facilities

CPTED: Crime Prevention Through Environmental Design

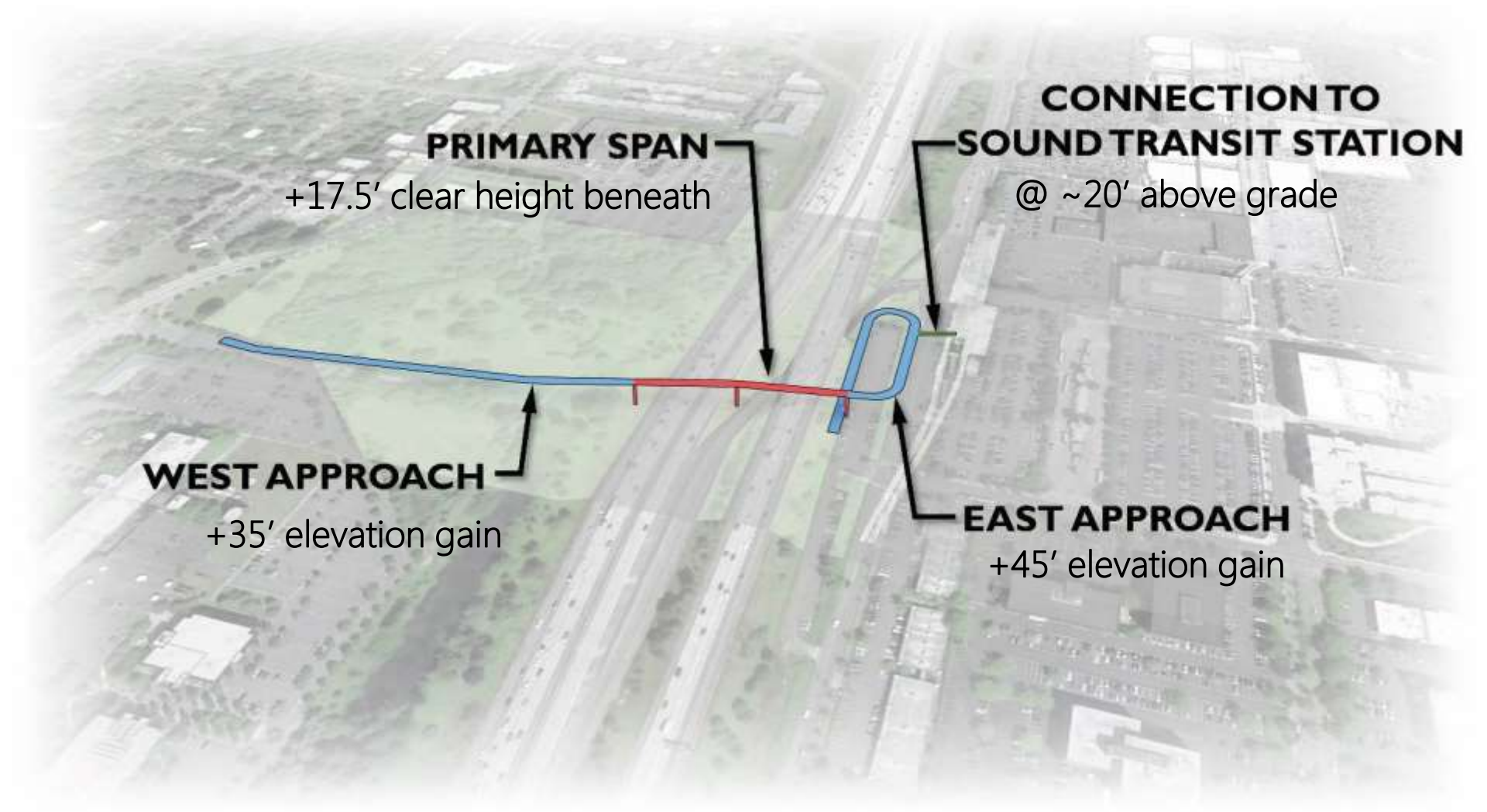
- A multi-disciplinary approach to deterring criminal behavior through environmental design.

- CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts by affecting the built, social and administrative environment.

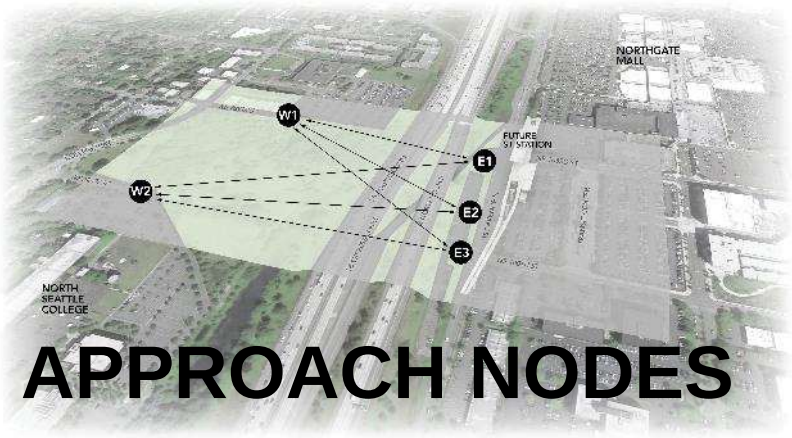
- Provide a safe and efficient link for pedestrians and bicyclists over I-5
- Inspire users to connect with their environment through a rich variety of experiences across the bridge
- Enhance local environmental systems

RECAP | Project Boundary

RECAP | Bridge Components

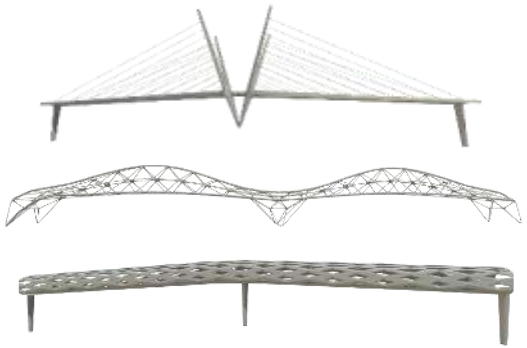


- Connectivity/Geometry
- Safety
- Visual Impact/Presence
- Environmental Impact
- Constructability
- Cost



APPROACH NODES

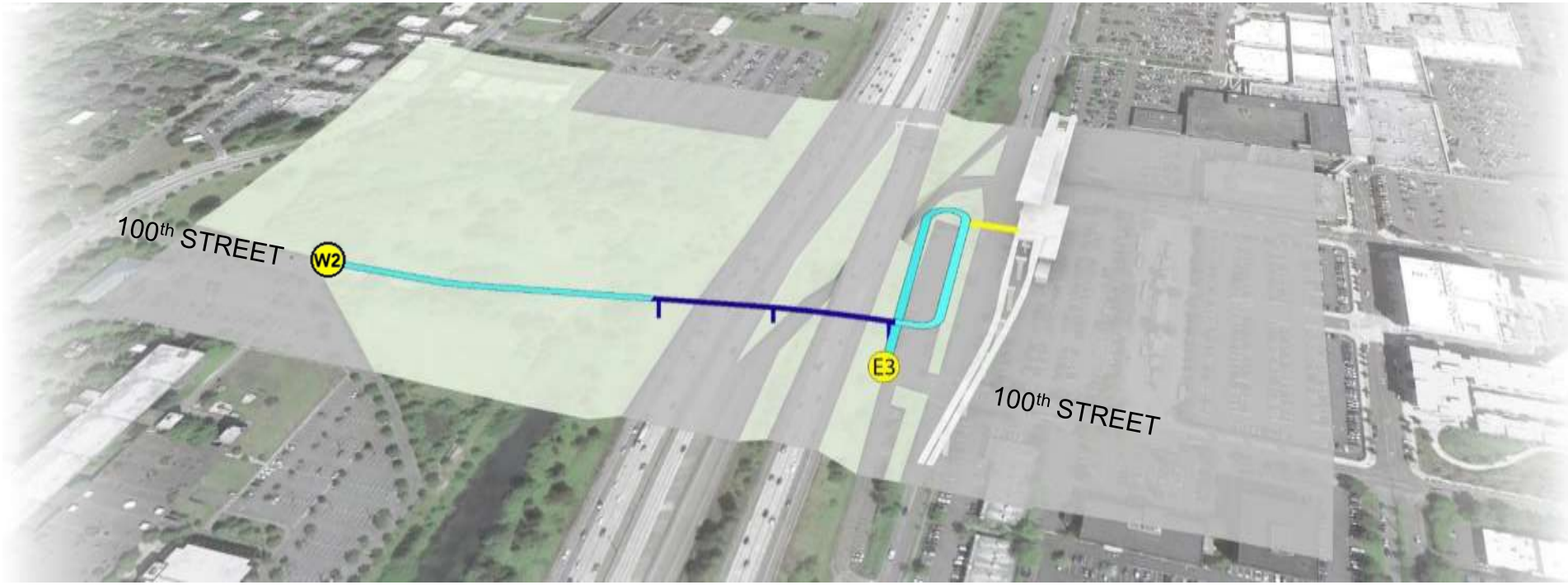
+



SPAN DESIGN

RECAP | Preferred Alignment

- Links to existing and future bike facilities
- Proximity to Campus
- Ideal elevation at connection to Sound Transit Station



RECAP | Preferred Span Design: Tube/Truss

- Constructability
- Integration of railings and barriers
- Unique Aesthetic Qualities
- Community Preference

VIEW FROM NORTHEAST

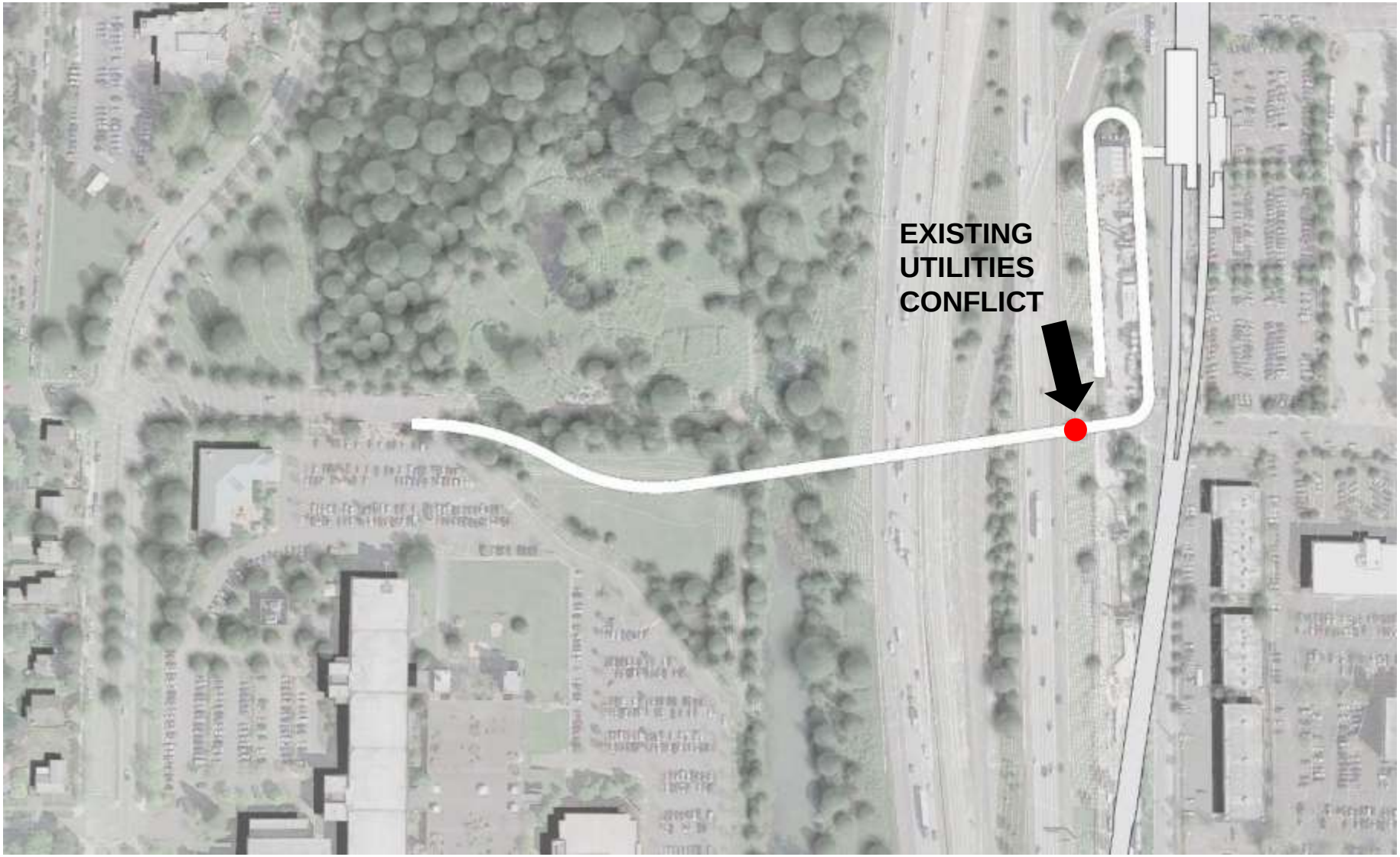
ALIGNMENT + OVERVIEW

CONTEXT | Social + Cultural: Current

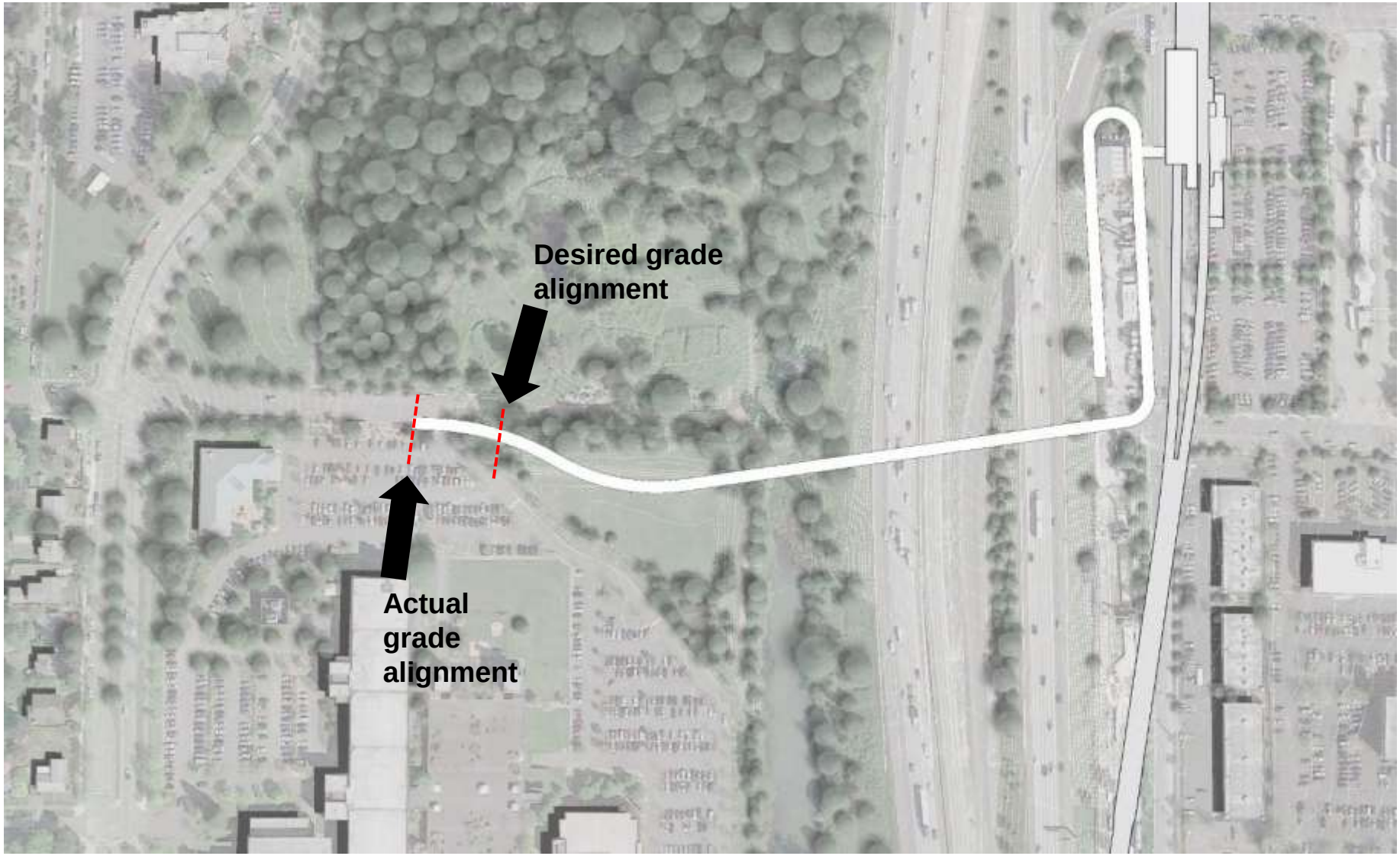
CONTEXT | Social + Cultural: Projected

CONTEXT | Existing Water Flow

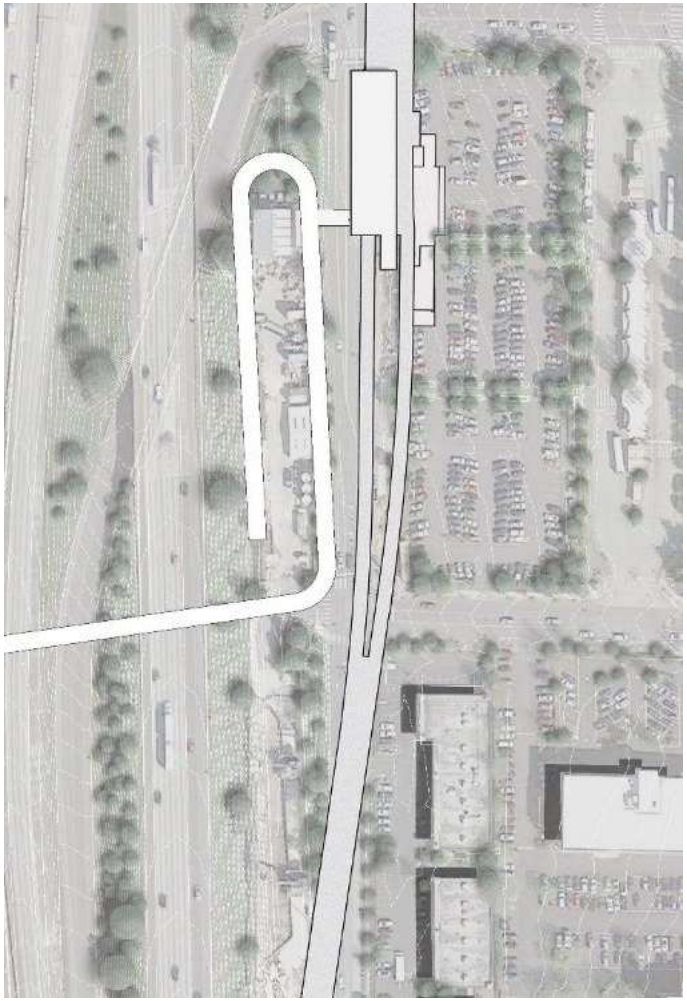
ALIGNMENT UPDATE | Concept Design Alignment



ALIGNMENT UPDATE | Post-Survey Grade Challenges



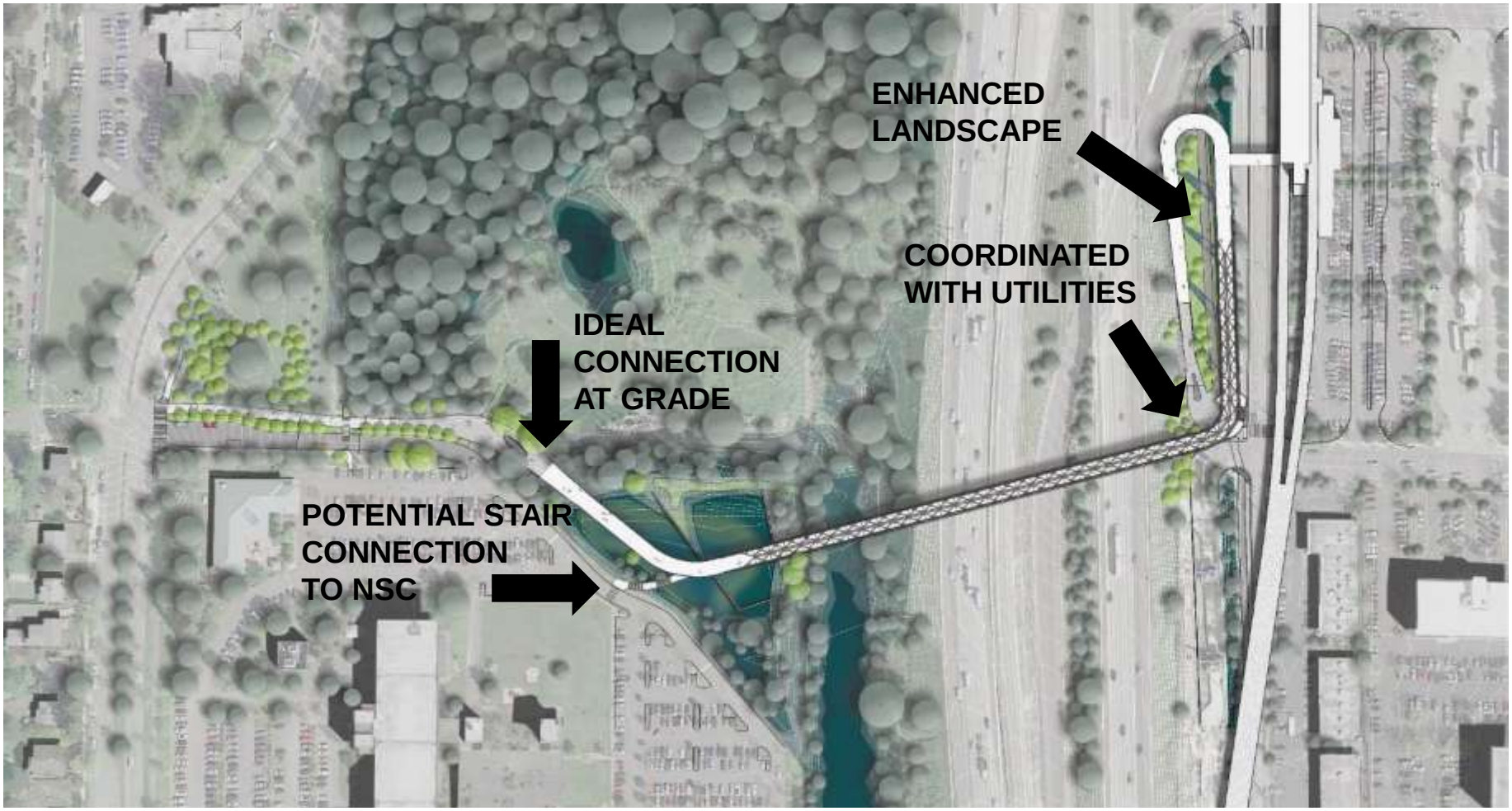
ALIGNMENT UPDATE | WSDOT Park-and-ride Lot

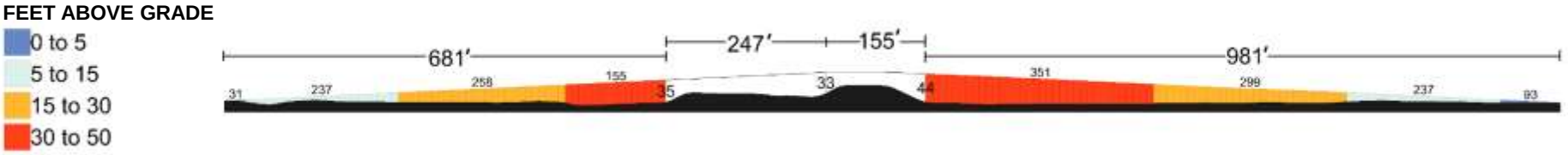


CONCEPT PHASE:
EXCLUDE PARK-AND-RIDE LOT

DESIGN PHASE:
INCLUDE PARK-AND-RIDE LOT

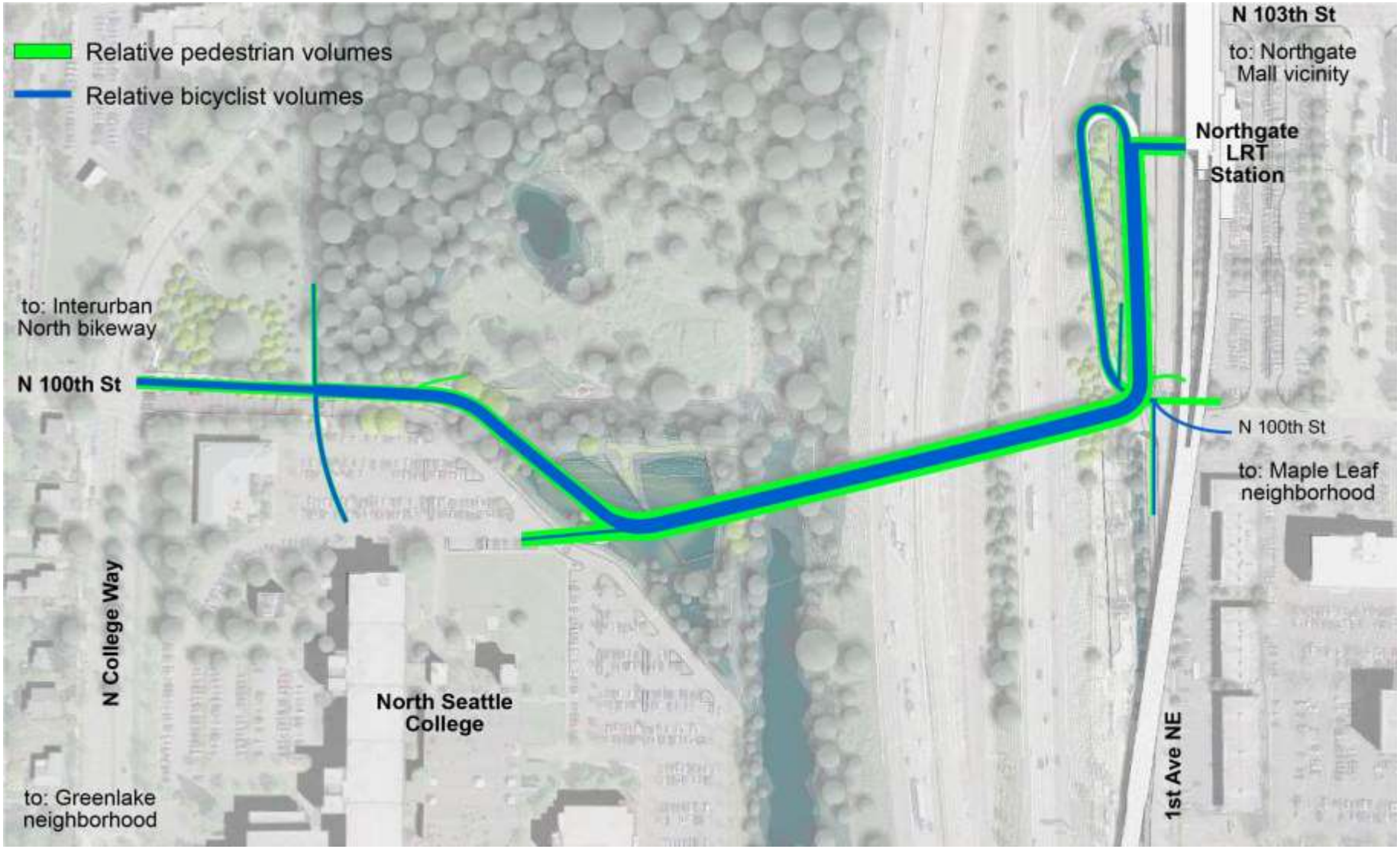
ALIGNMENT UPDATE | CPTED


ENHANCED LANDSCAPE
COORDINATED WITH UTILITIES
IDEAL CONNECTION AT GRADE
POTENTIAL STAIR CONNECTION TO NSC

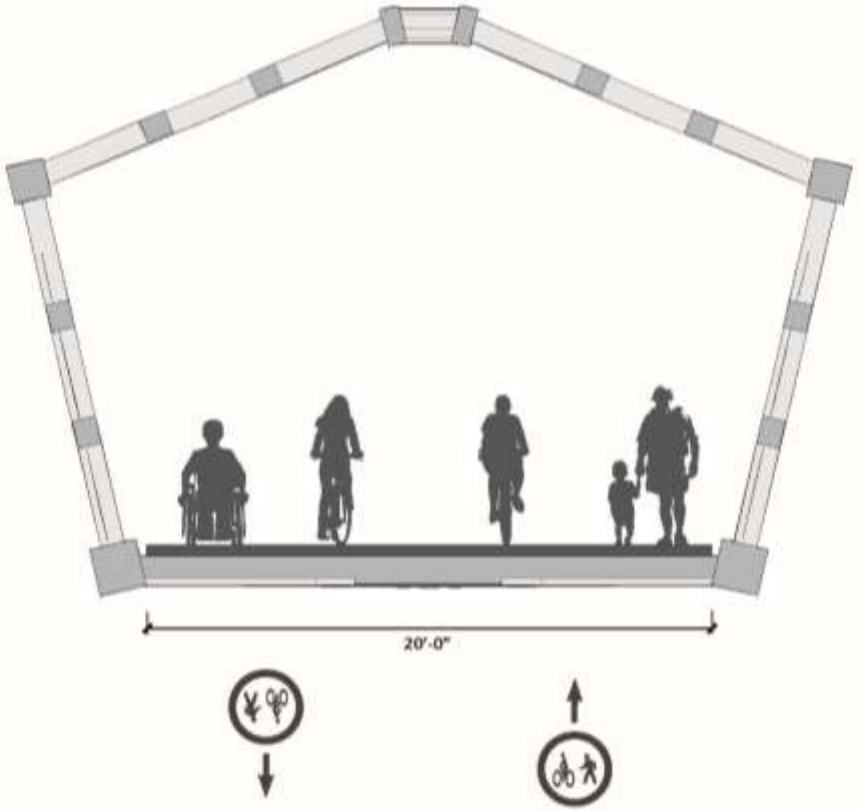

FEET ABOVE GRADE
0 to 5
5 to 15
15 to 30
30 to 50
681′
247′
155′
981′
31
237
258
155
35
33
44
351
299
237
93

PROJECT OVERVIEW | Bridge Access

PROJECT OVERVIEW | Bridge Access



All Users Keep Right



Northgate Bicycle and Pedestrian Bridge
Bridge Section
September 17, 2015

PROJECT OVERVIEW | Mixing Zones

DISTANCE: 833 FT

WALK: 3.0 min

RUN: 1.5 min

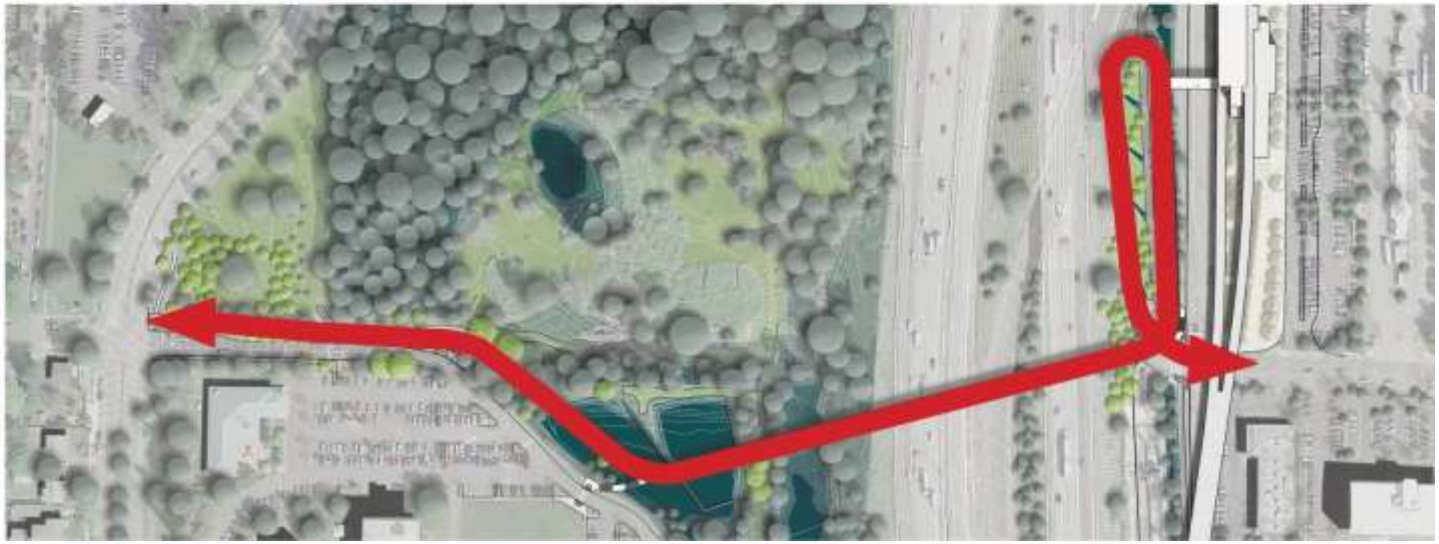
DISTANCE: 2,584 FT

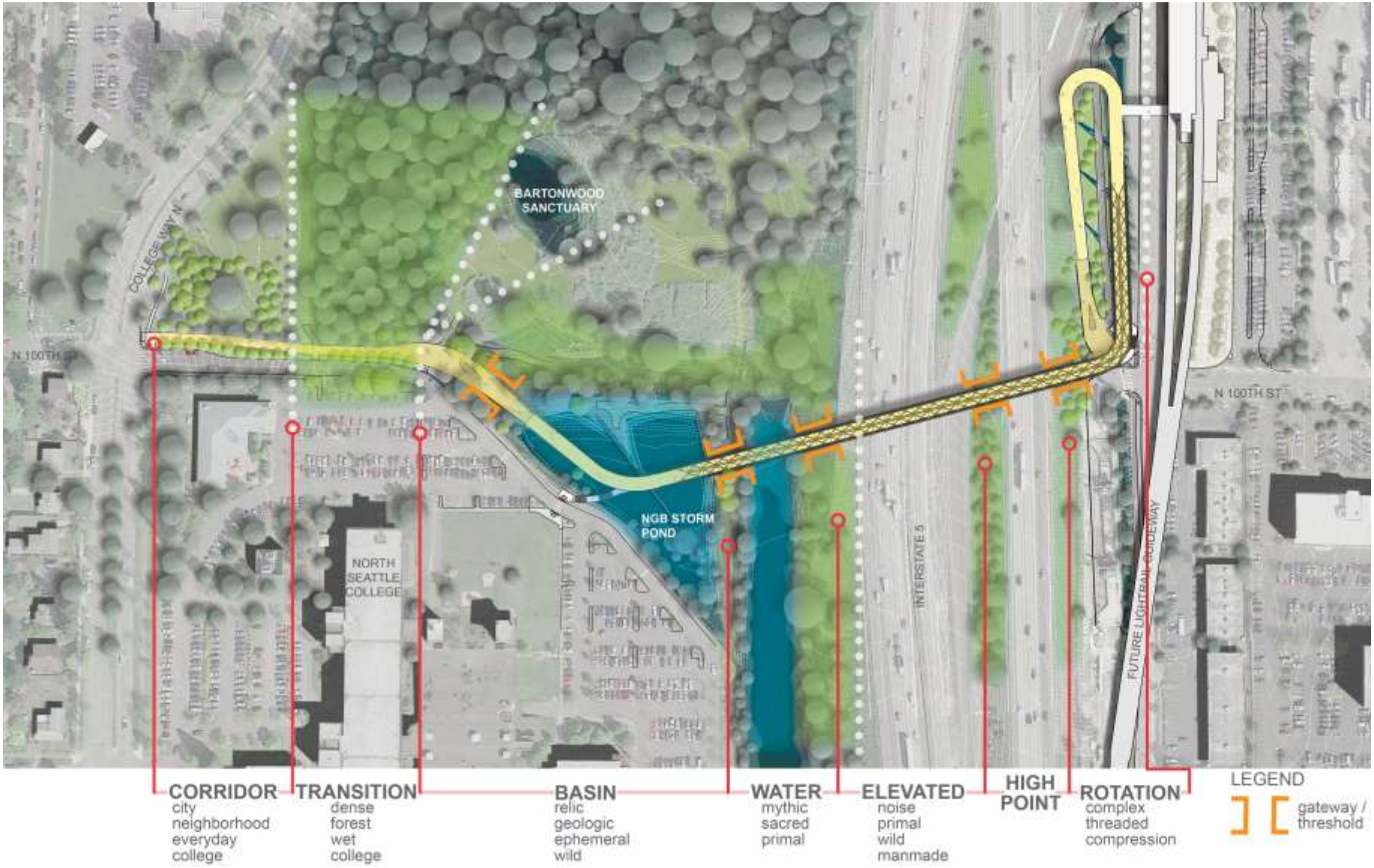
WALK: 10.0 min

RUN: 5.0 min

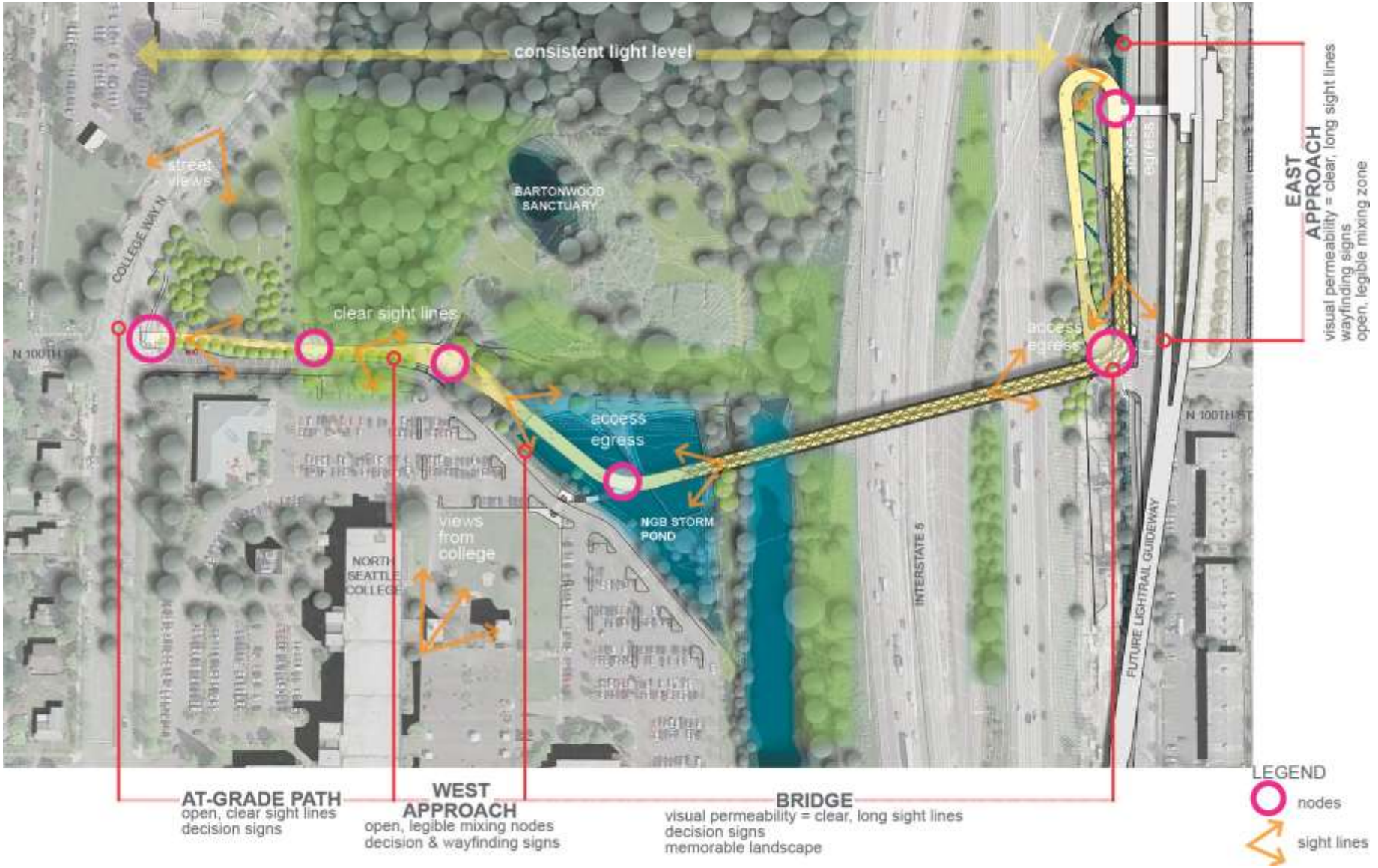
WHEELCHAIR: 15 min

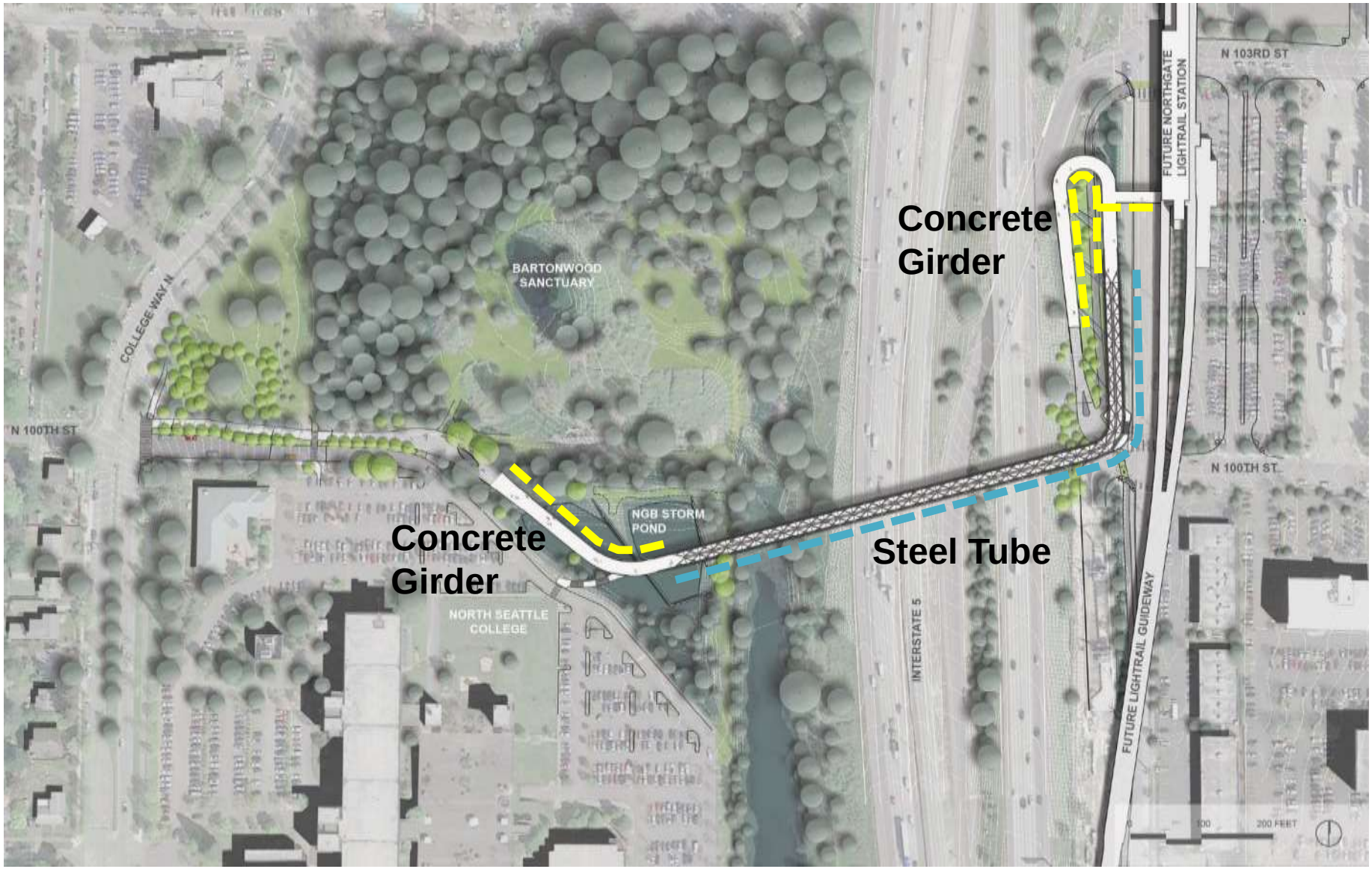
SKATE/BIKE: 3.5 min

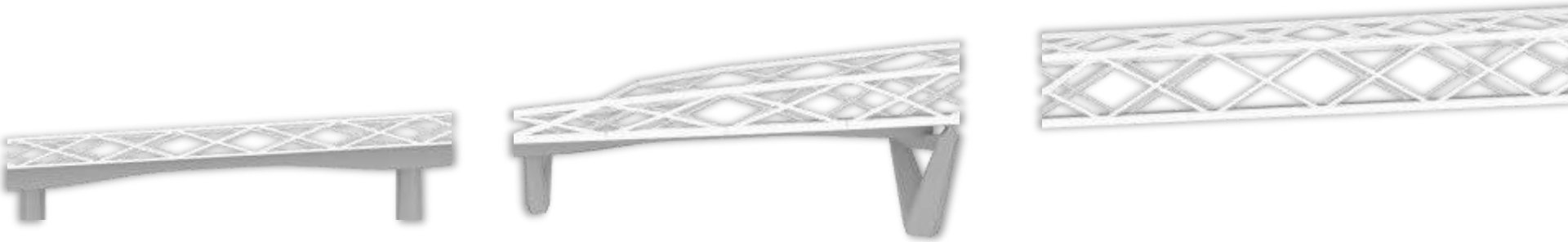



BARTONWOOD SANCTUARY
COLLEGE WAY N
N 100TH ST
NGB STORM POND
NORTH SEATTLE COLLEGE
INTERSTATE 5
FUTURE LIGHTRAIL GUIDEWAY
N 100TH ST
CORRIDOR
city
neighborhood
everyday
college
TRANSITION
dense
forest
wet
college
BASIN
relic
geologic
ephemeral
wild
WATER
mythic
sacred
primal
ELEVATED
noise
primal
wild
manmade
HIGH POINT
ROTATION
complex
threaded
compression
LEGEND
gateway / threshold

PROJECT OVERVIEW | Experience



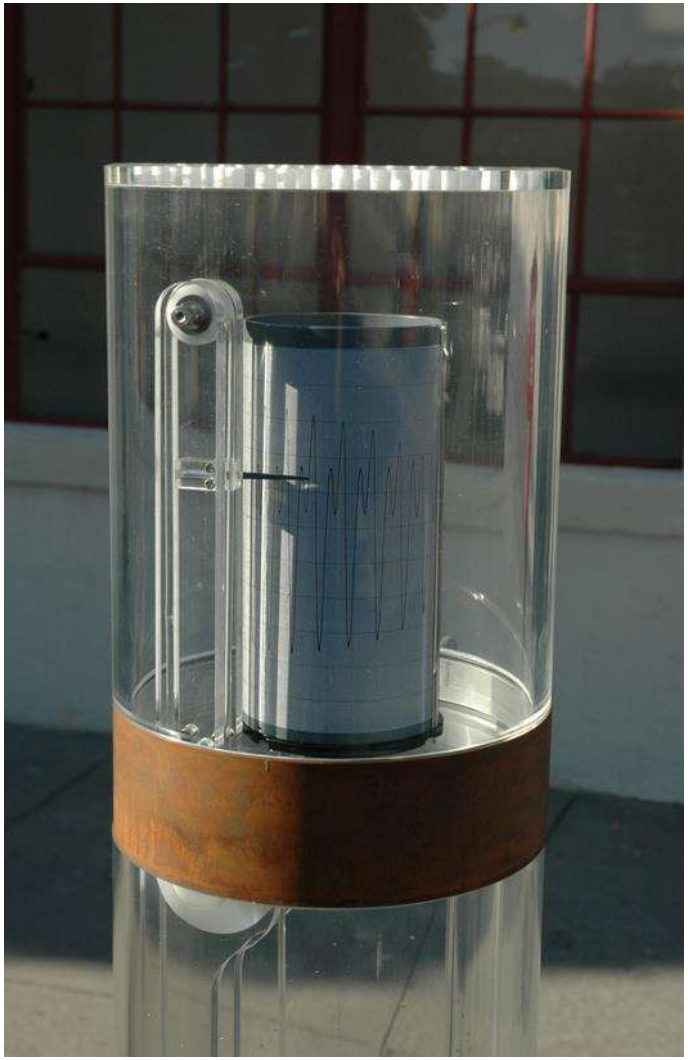

Concrete Girder
Concrete Girder
Steel Tube
BARTONWOOD SANCTUARY
COLLEGE WAY N
N 100TH ST
NGB STORM POND
NORTH SEATTLE COLLEGE
INTERSTATE 5
FUTURE LIGHTRAIL GUIDEWAY
FUTURE NORTHGATE LIGHTRAIL STATION
N 103RD ST
N 100TH ST
100
200 FEET



Concrete Girder ⟷ **Transitional Truss** ⟷ **Structural Steel Tube**

WAVE WALL: LIGO, Livingston, LA

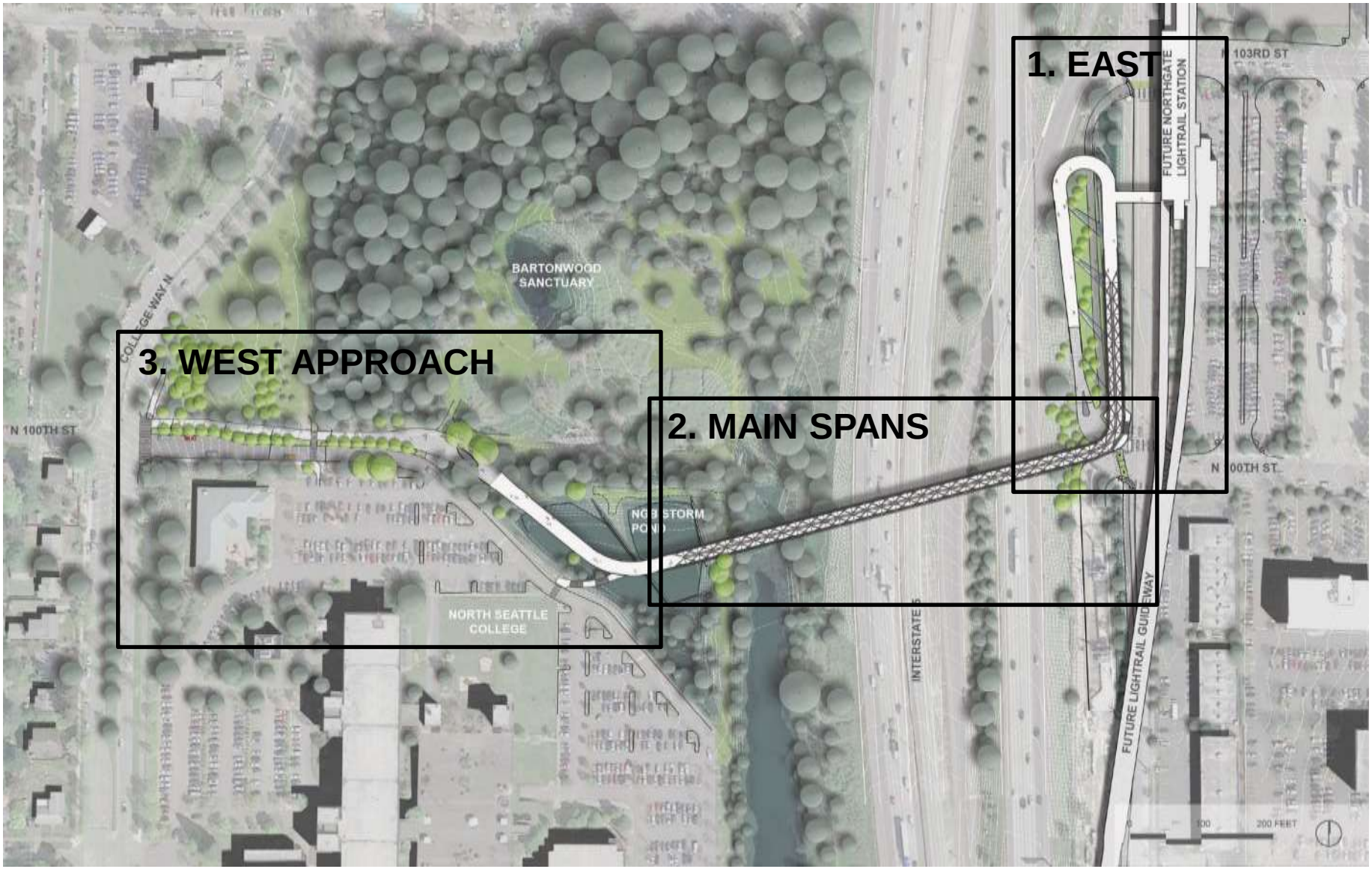
WINDSWEPT: Randall Museum, San Francisco, CA



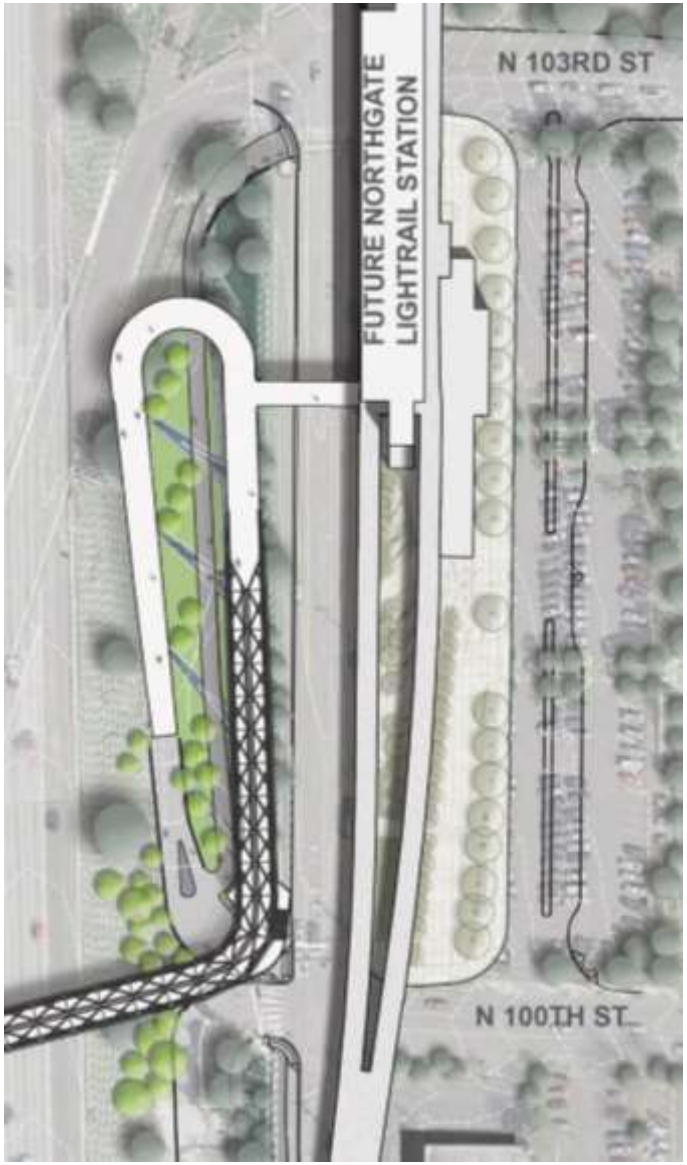
UNDERGROUND ESTUARY: Real-time graphing of sub-surface tidal fluctuations.

BRIDGE AND LANDSCAPE DESIGN

DESIGN | Three Segments



DESIGN | East Approach



1. Context
2. Access
3. Landscape Design
4. Sound Transit Connection
5. Stairs

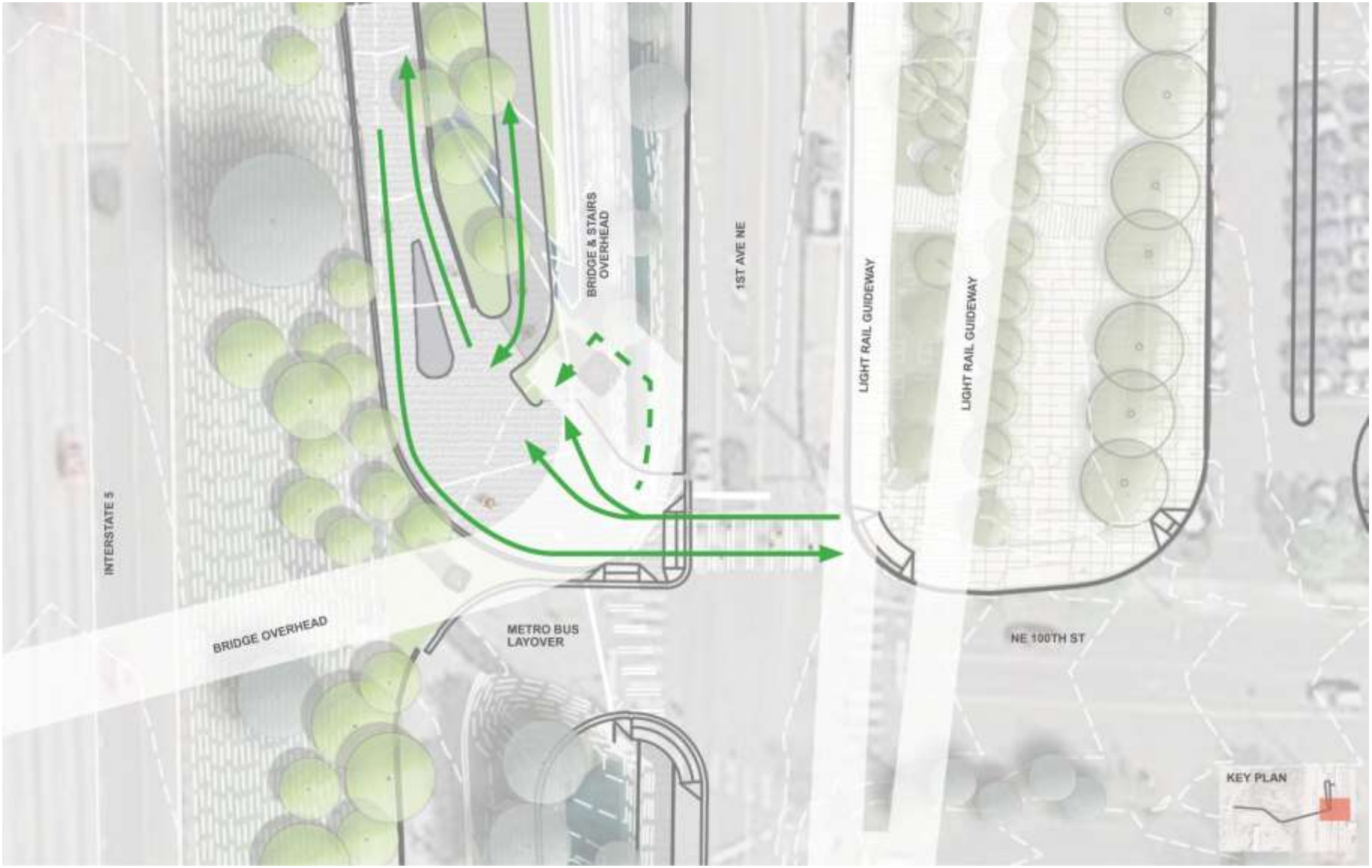
EAST APPROACH | Vegetation

EAST APPROACH | Water + Topography

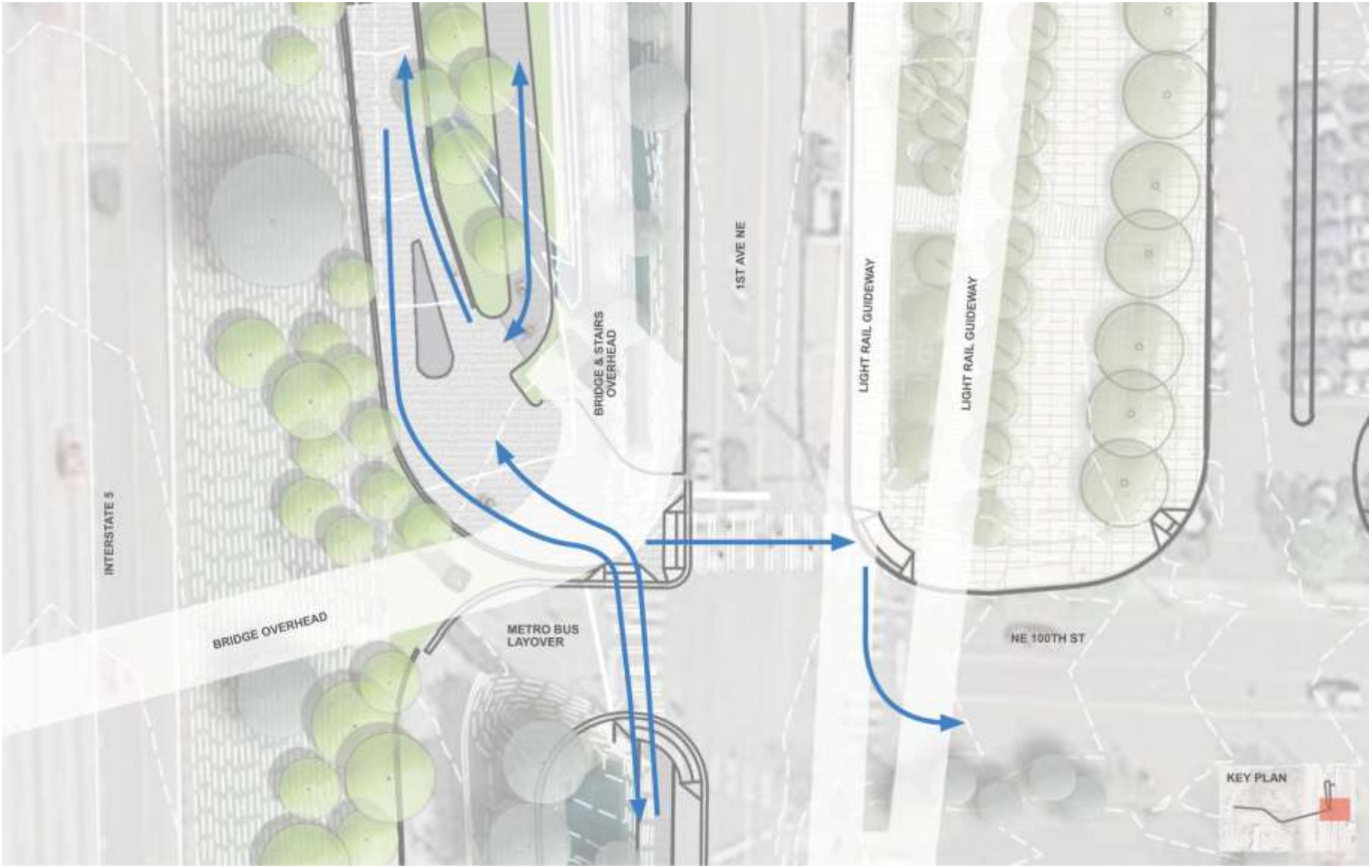
EAST APPROACH | Sound Transit Northgate Station

EAST APPROACH | Existing

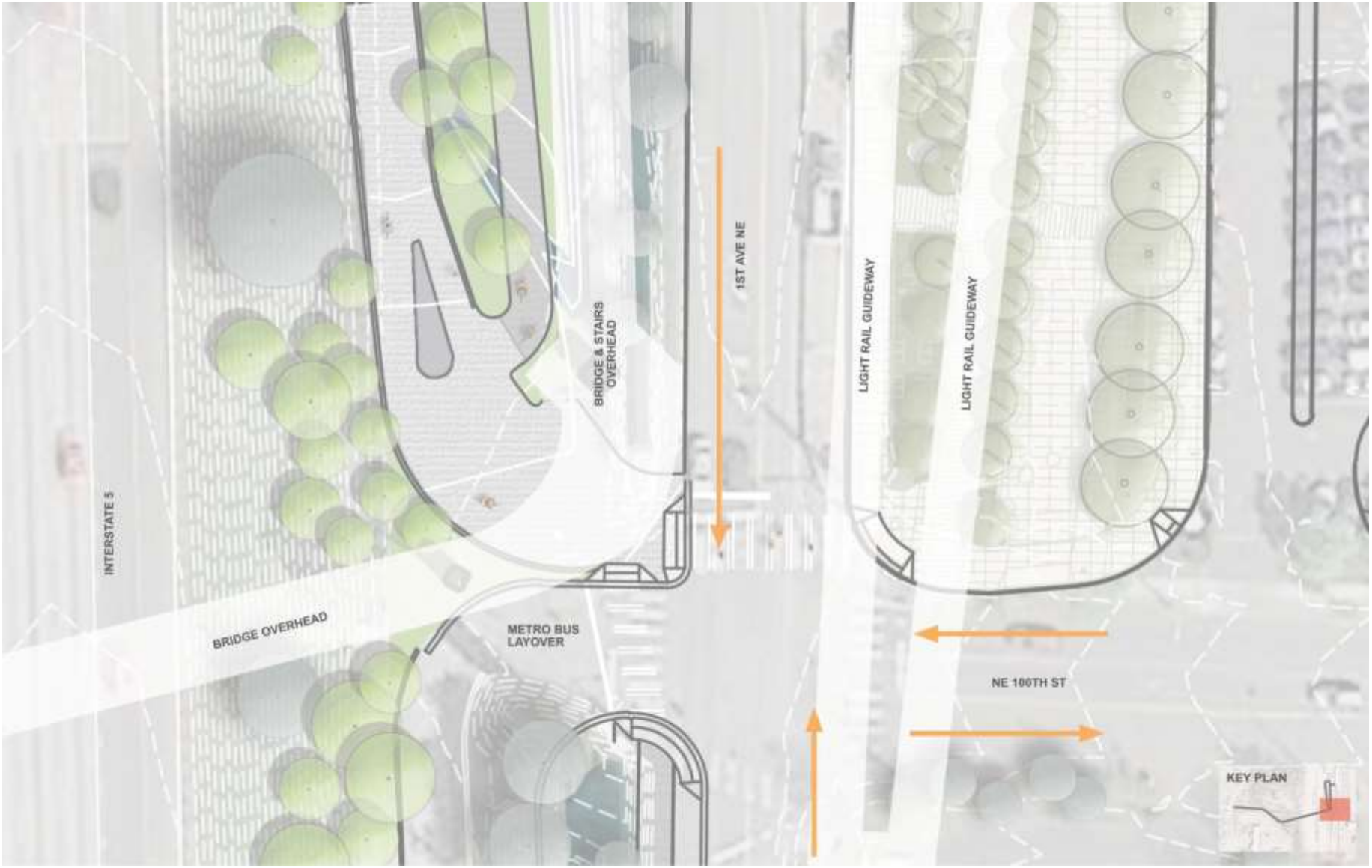
EAST APPROACH | Access: Pedestrians



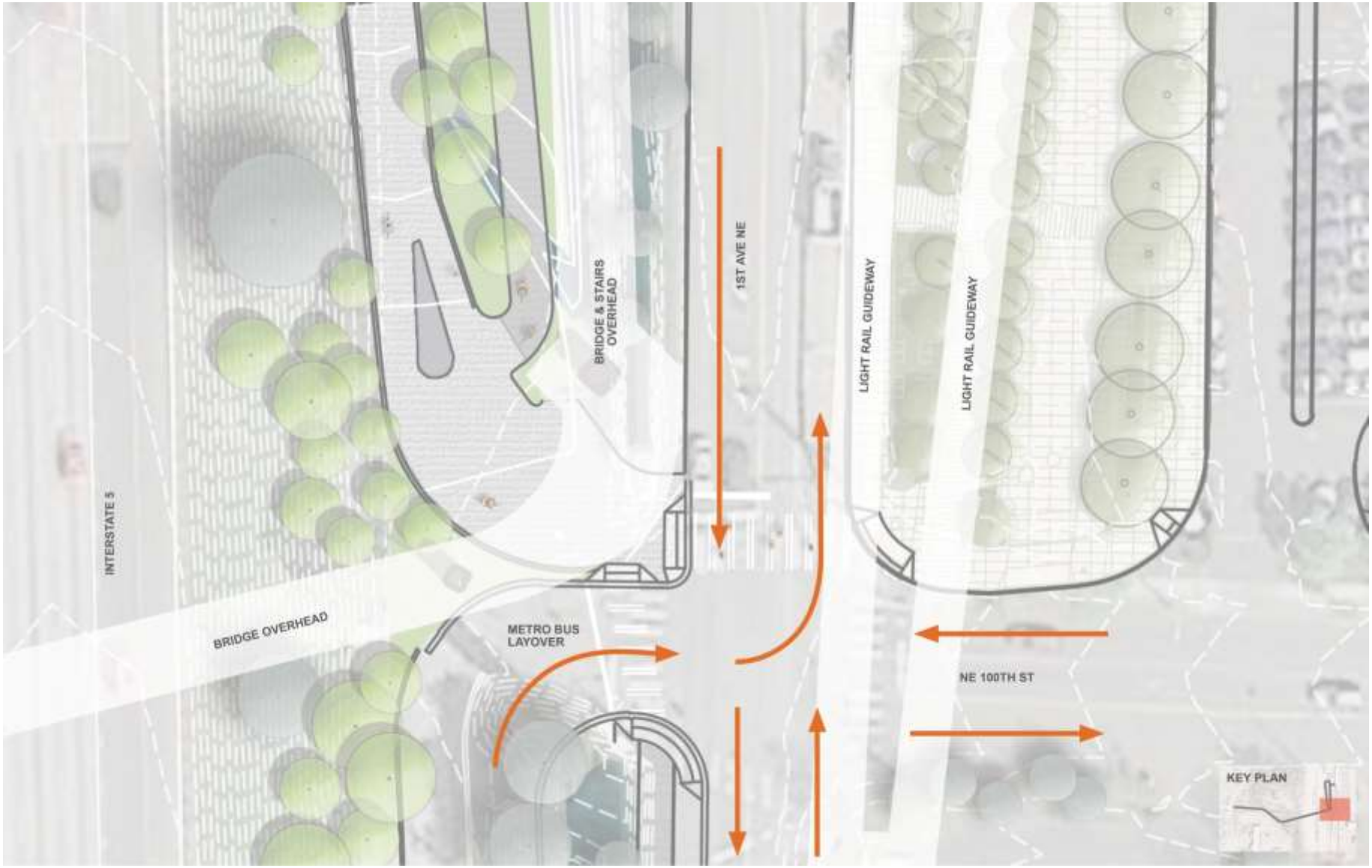
EAST APPROACH | Access: Bikes



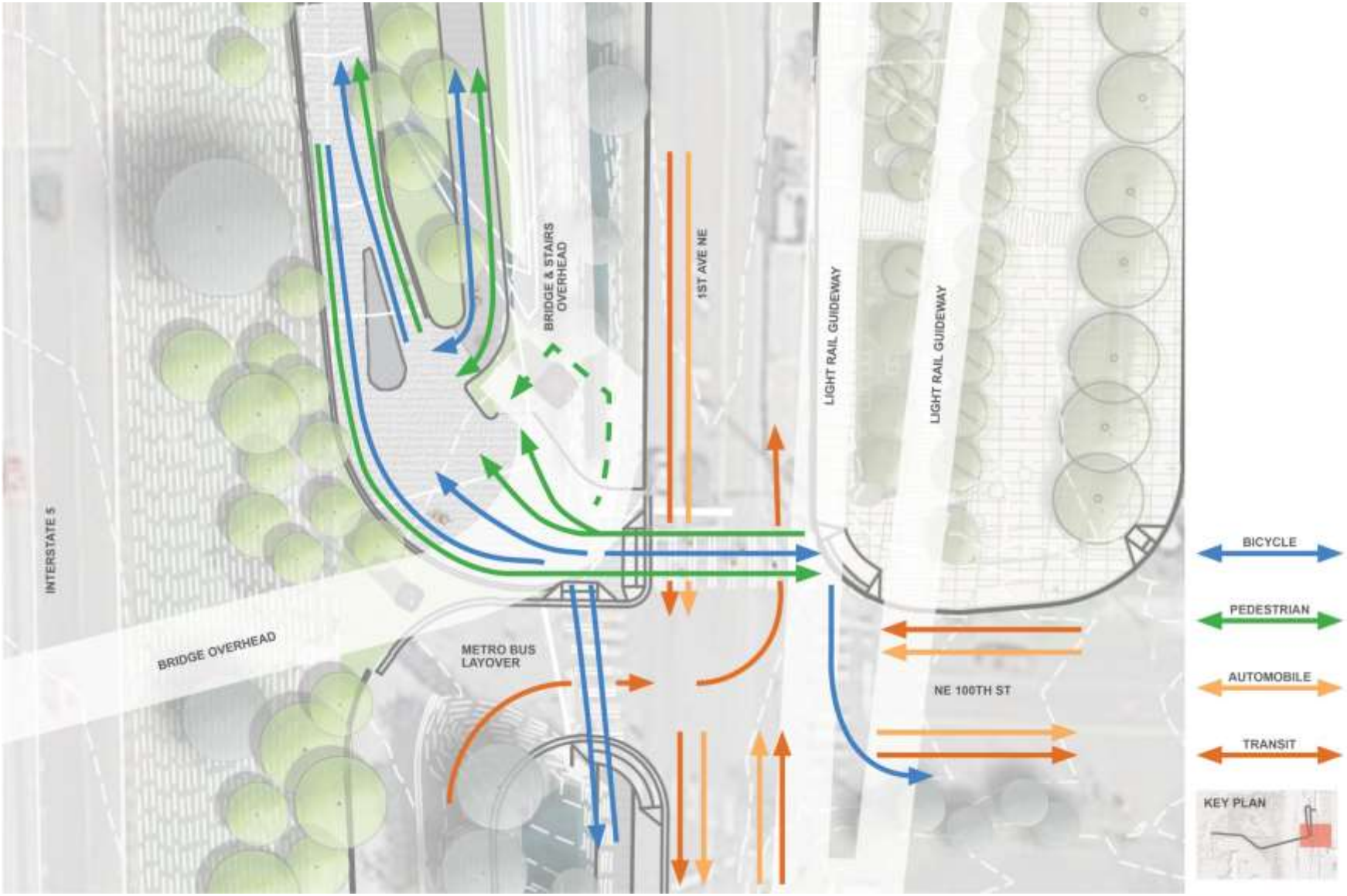
EAST APPROACH | Access: Adjacent Automobile Movement 46



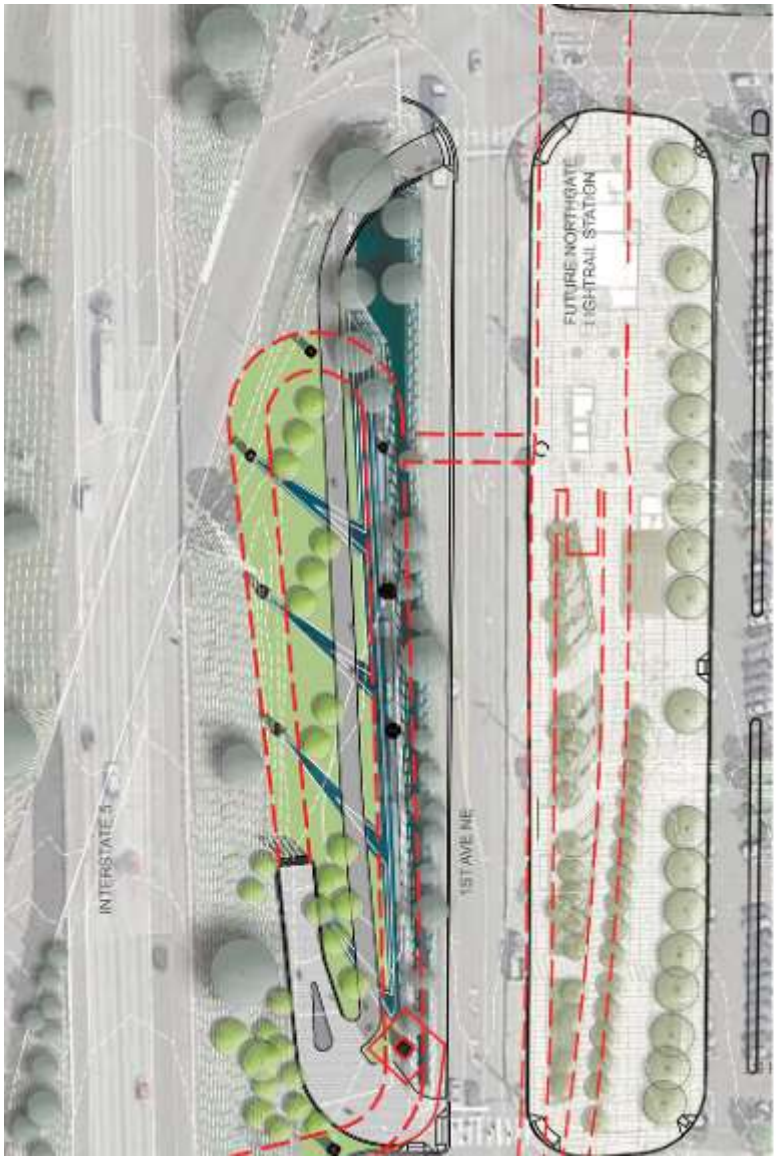
EAST APPROACH | Access: Transit

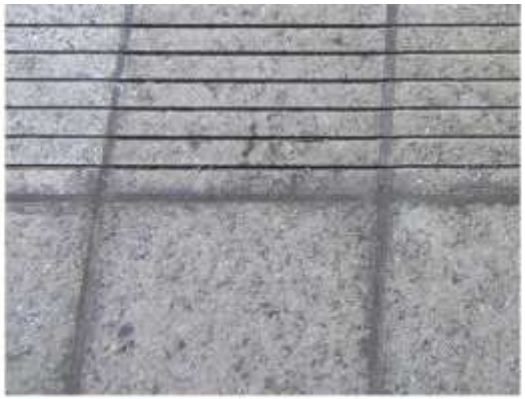


EAST APPROACH | Access: All Users

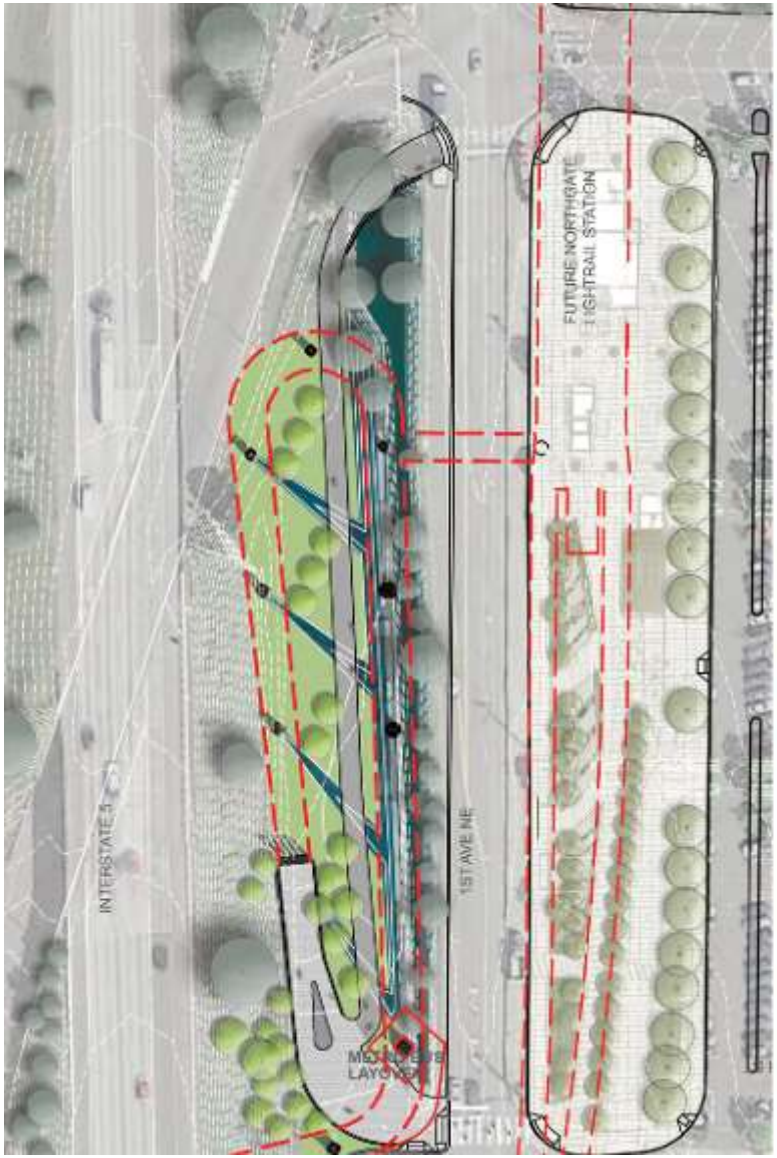


EAST APPROACH | Materials

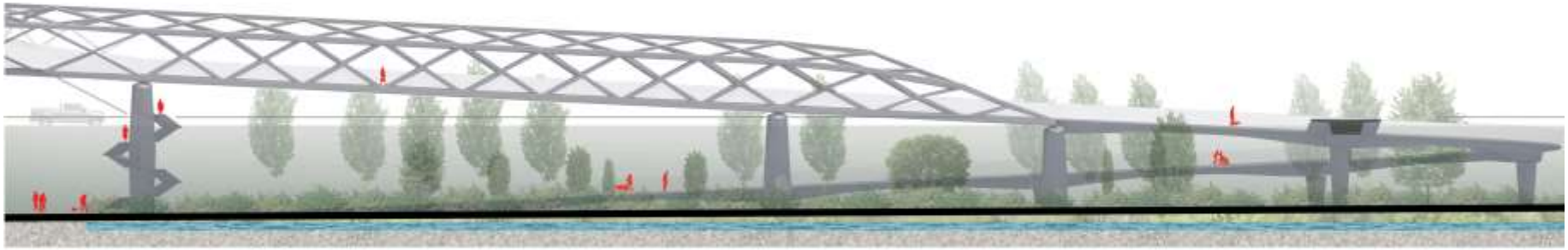




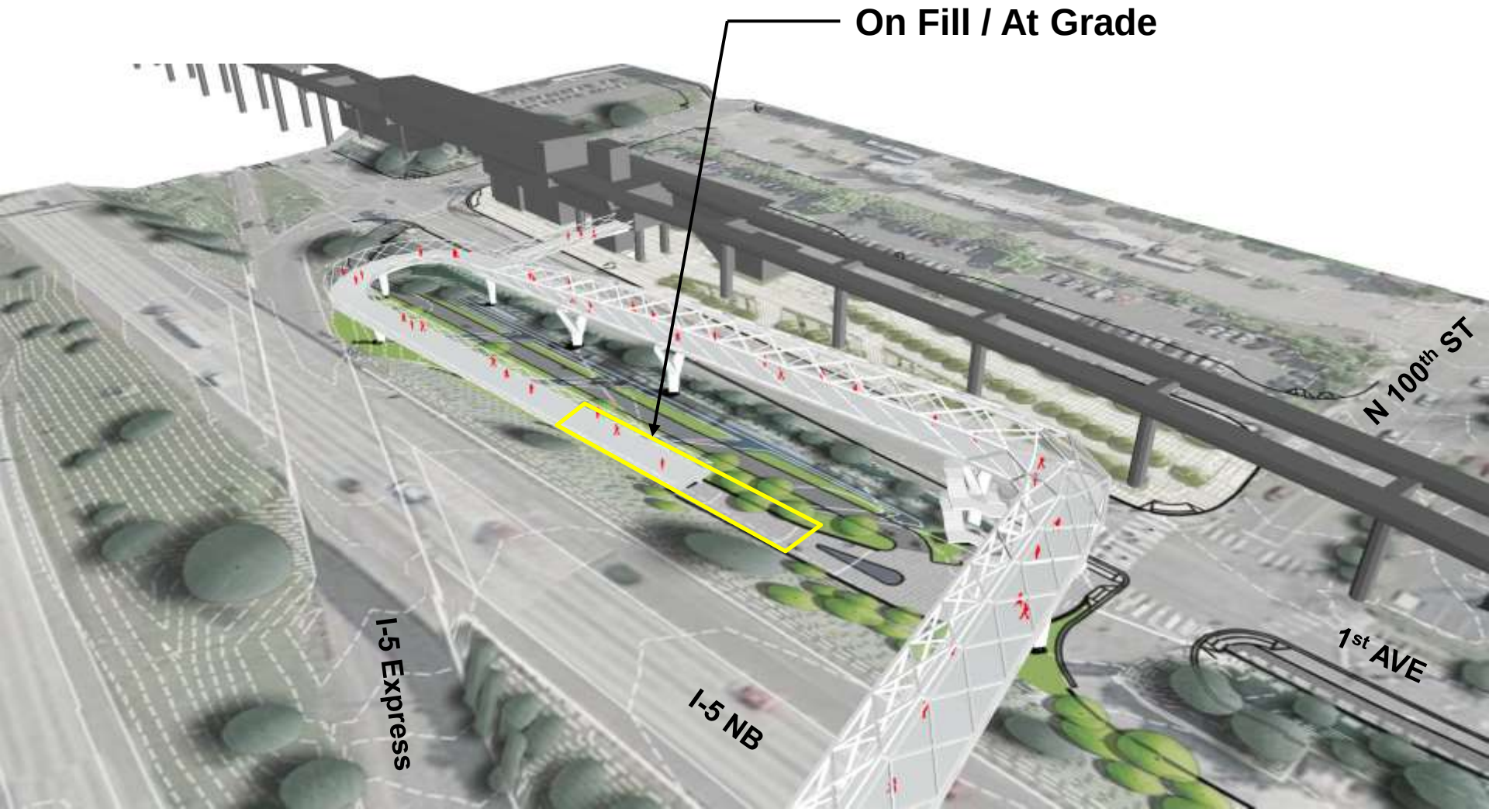
EAST APPROACH | Vegetation



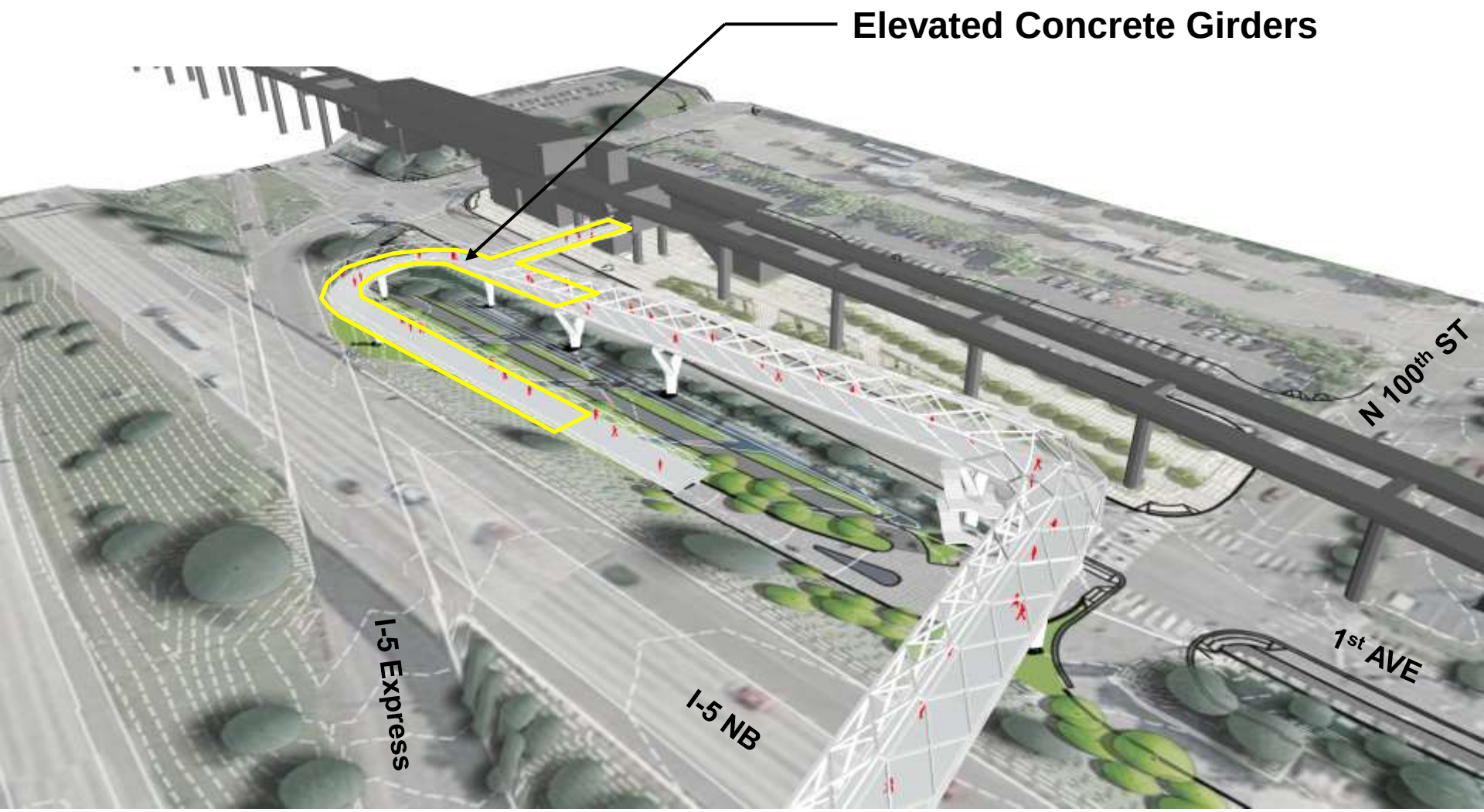
EAST APPROACH | Elevation Looking West



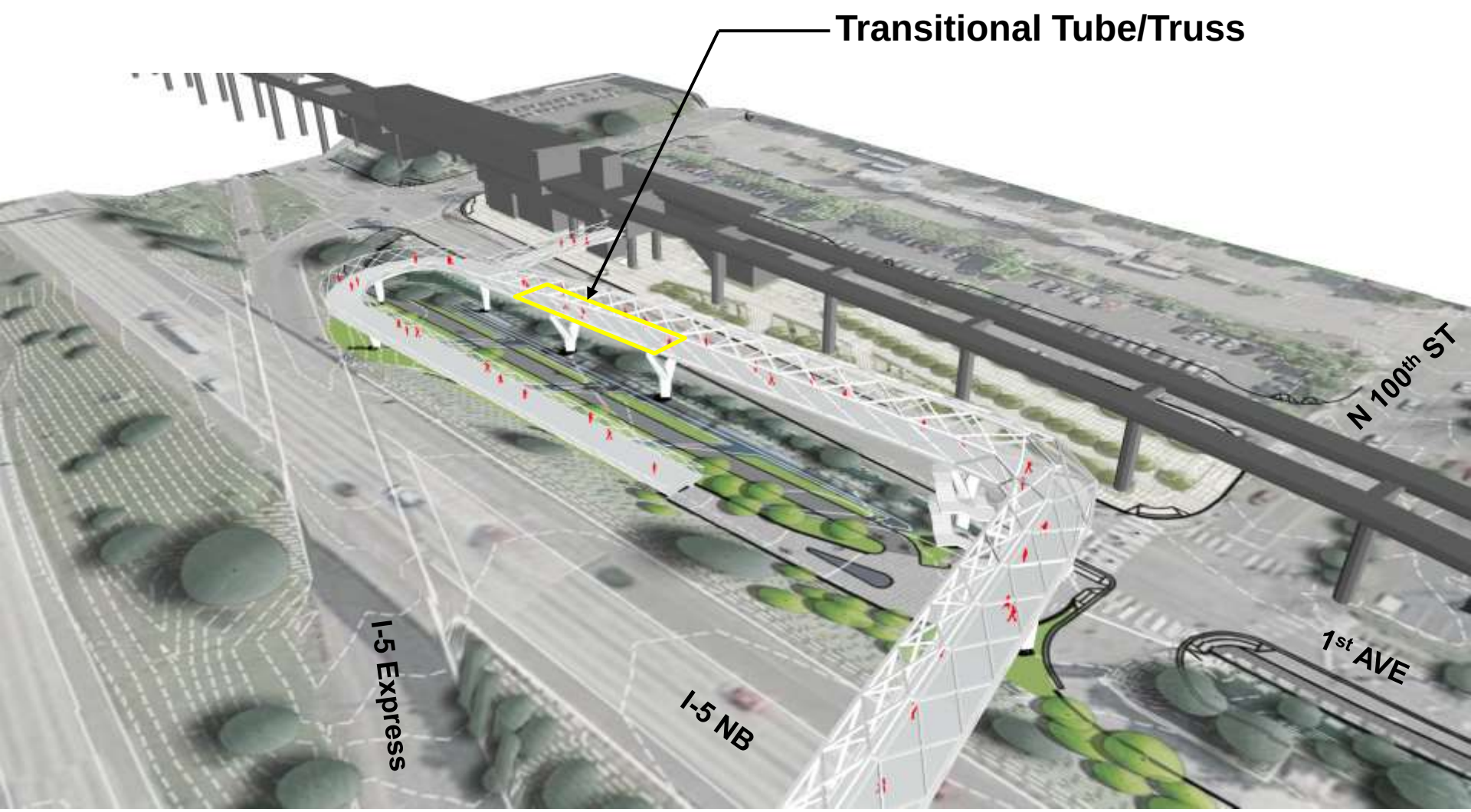
EAST APPROACH | Bridge Components



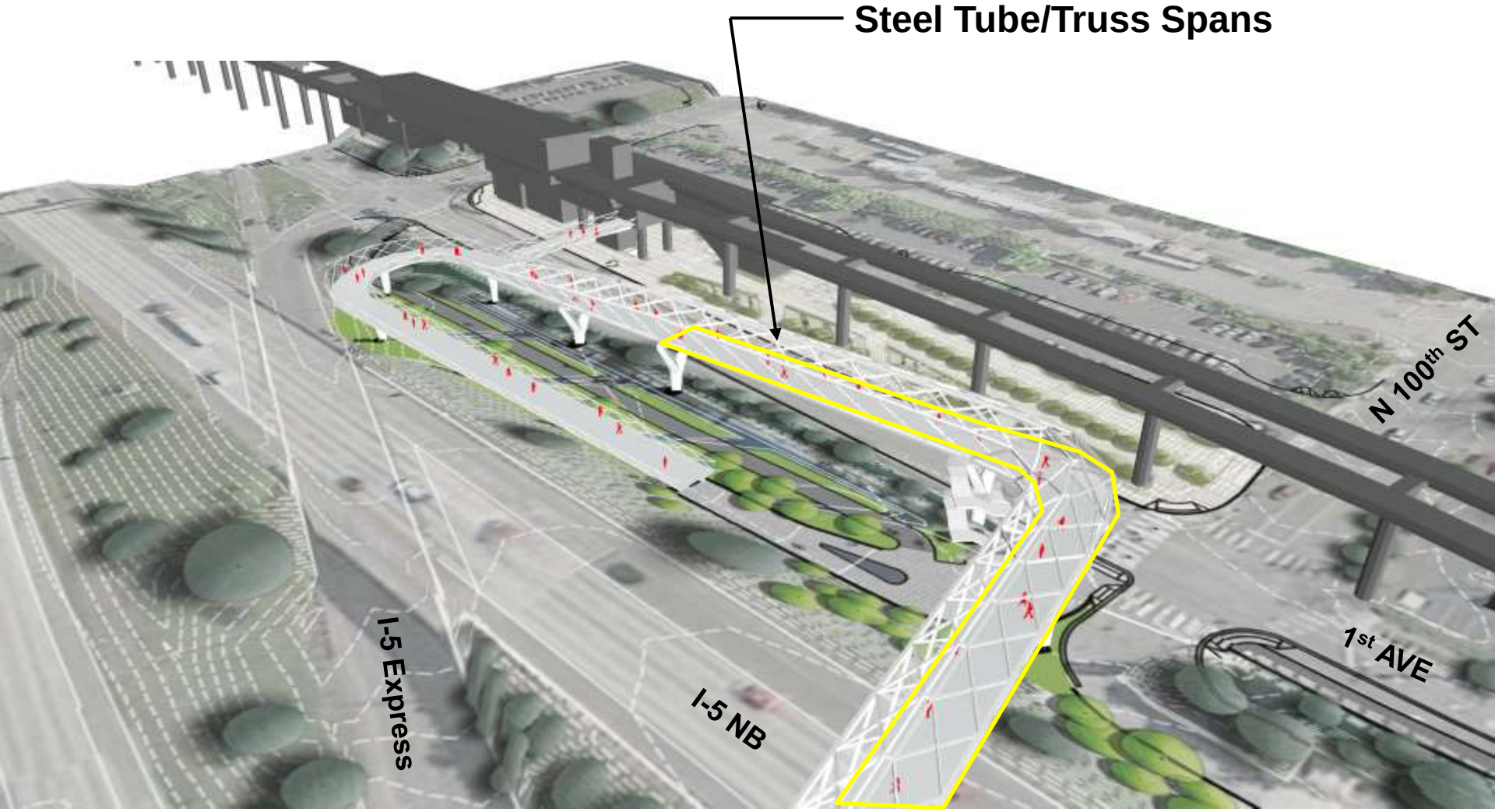
EAST APPROACH | Bridge Components



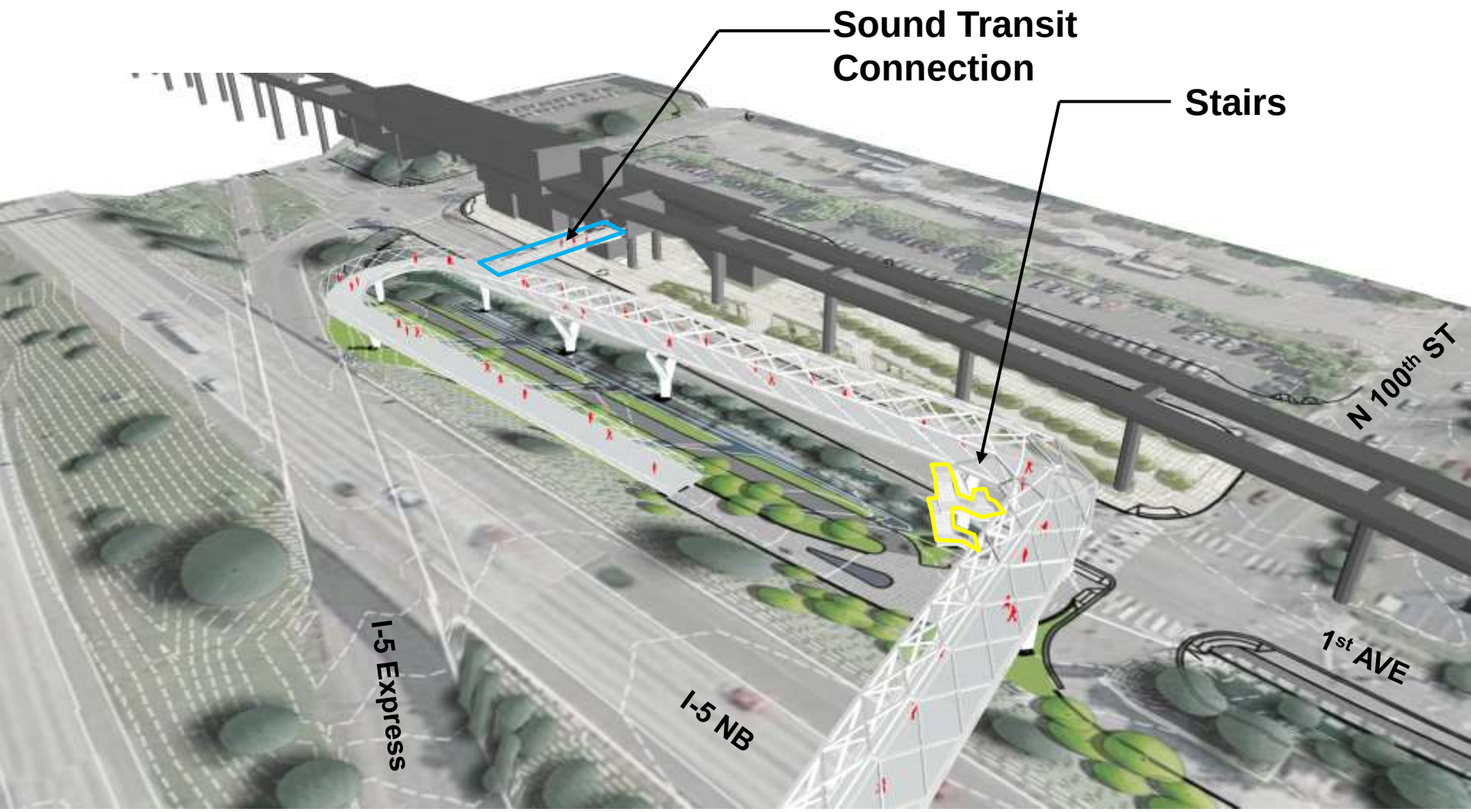
EAST APPROACH | Bridge Components



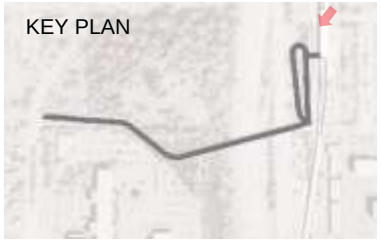
EAST APPROACH | Bridge Components



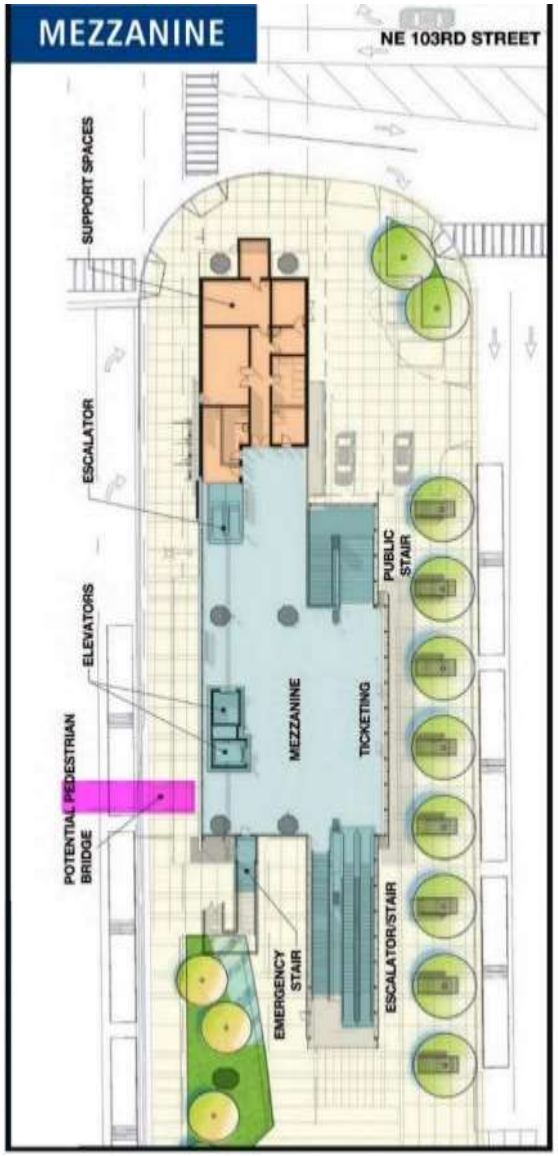
EAST APPROACH | Bridge Components

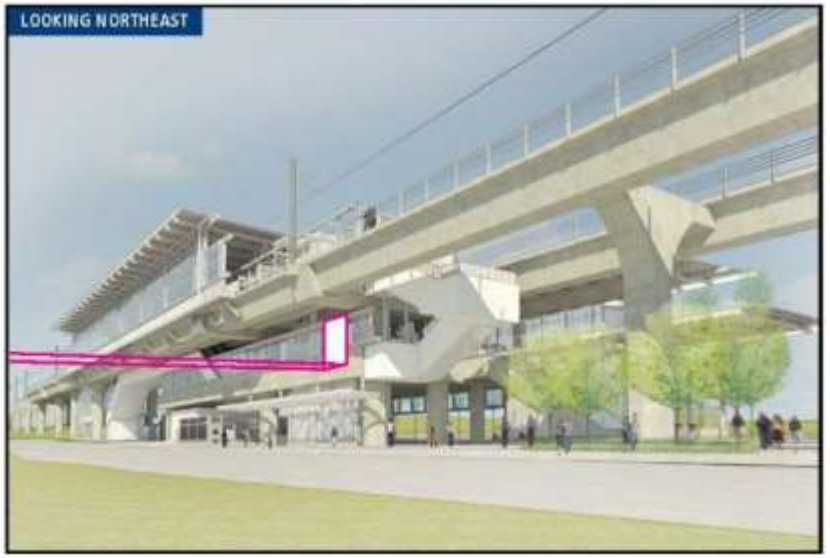


EAST APPROACH | Aerial View from North

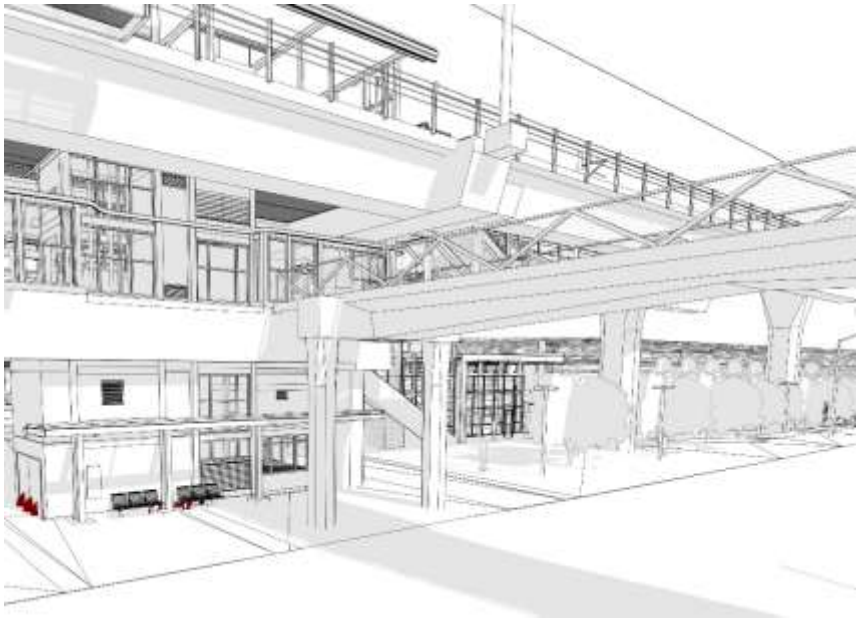


EAST APPROACH | Sound Transit Connection

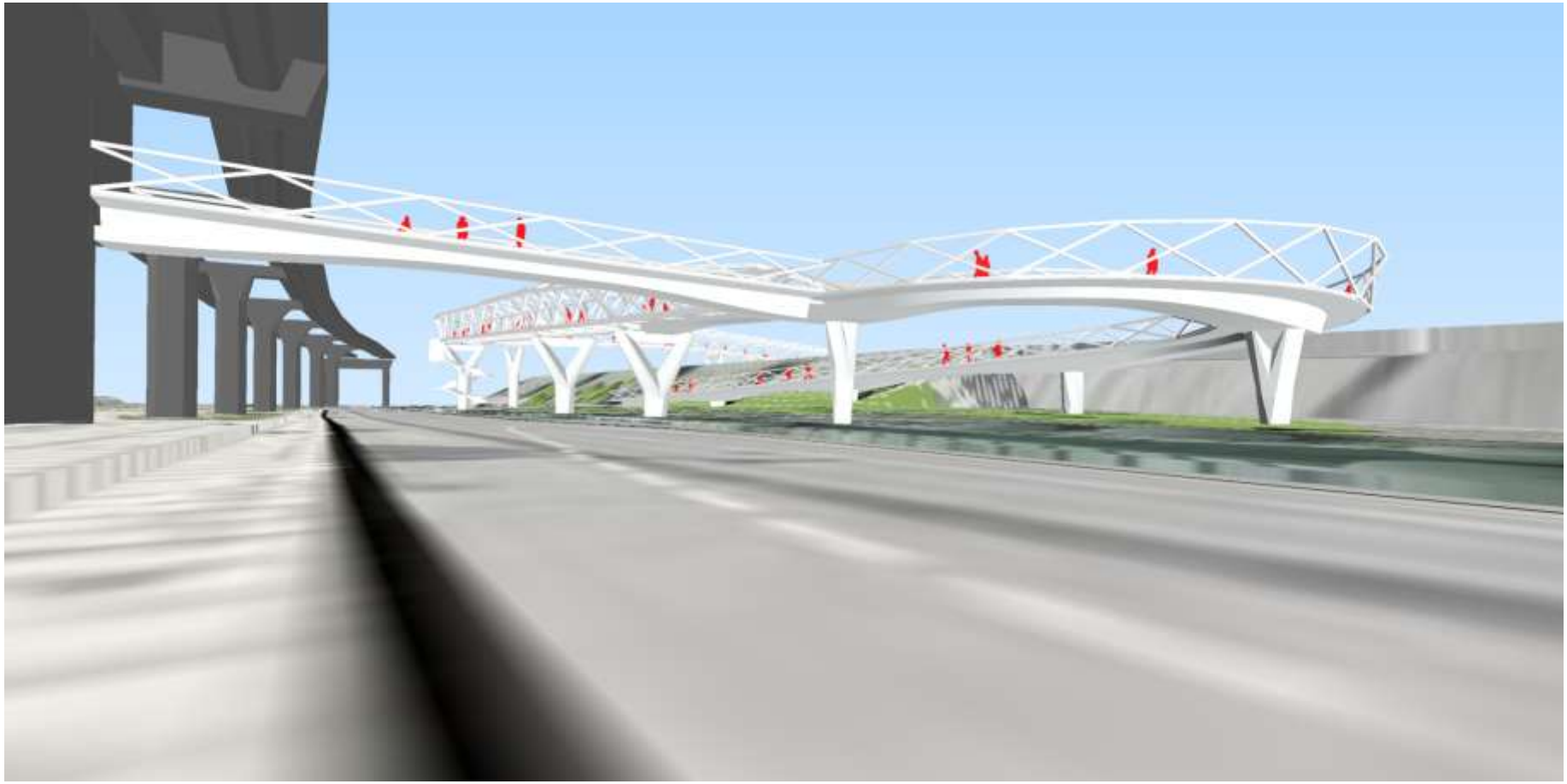




View from Station Mezzanine

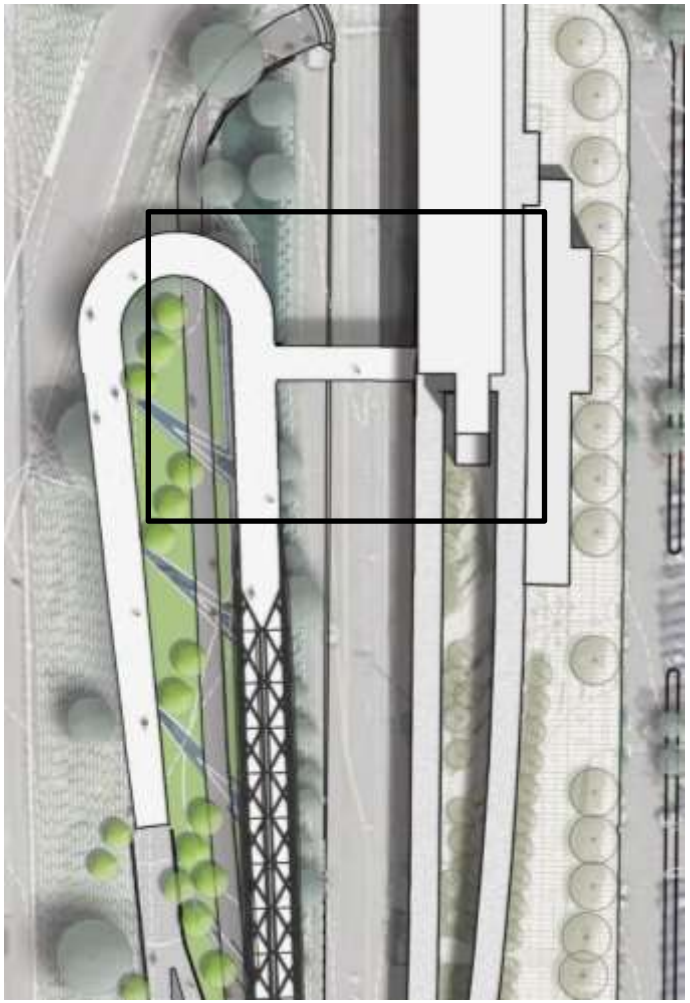


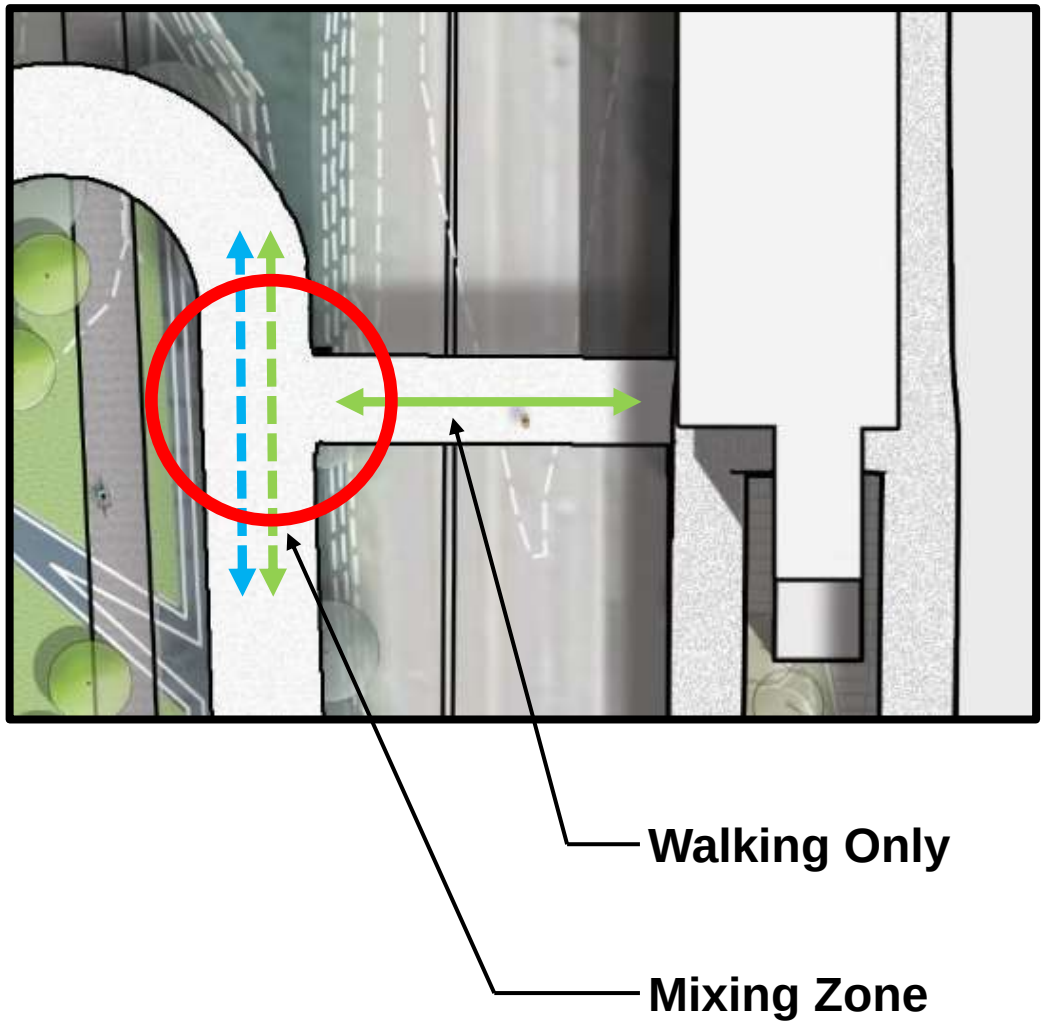
View East from 1st Ave



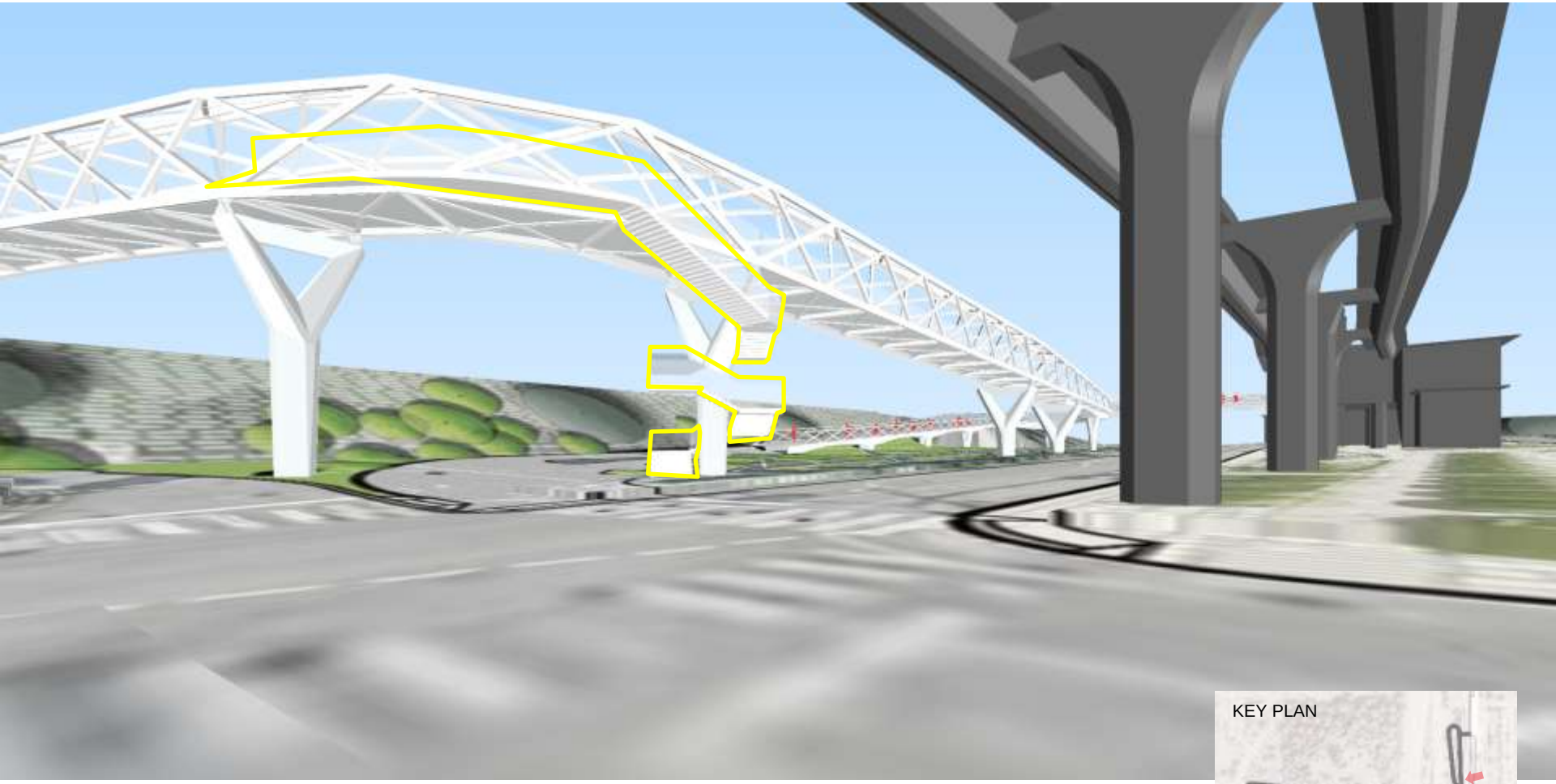
View South along 1st Ave

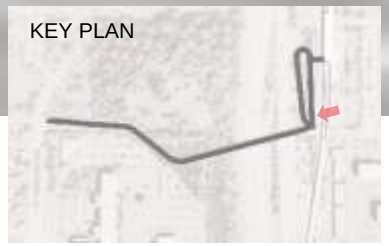
EAST APPROACH | Sound Transit Connection



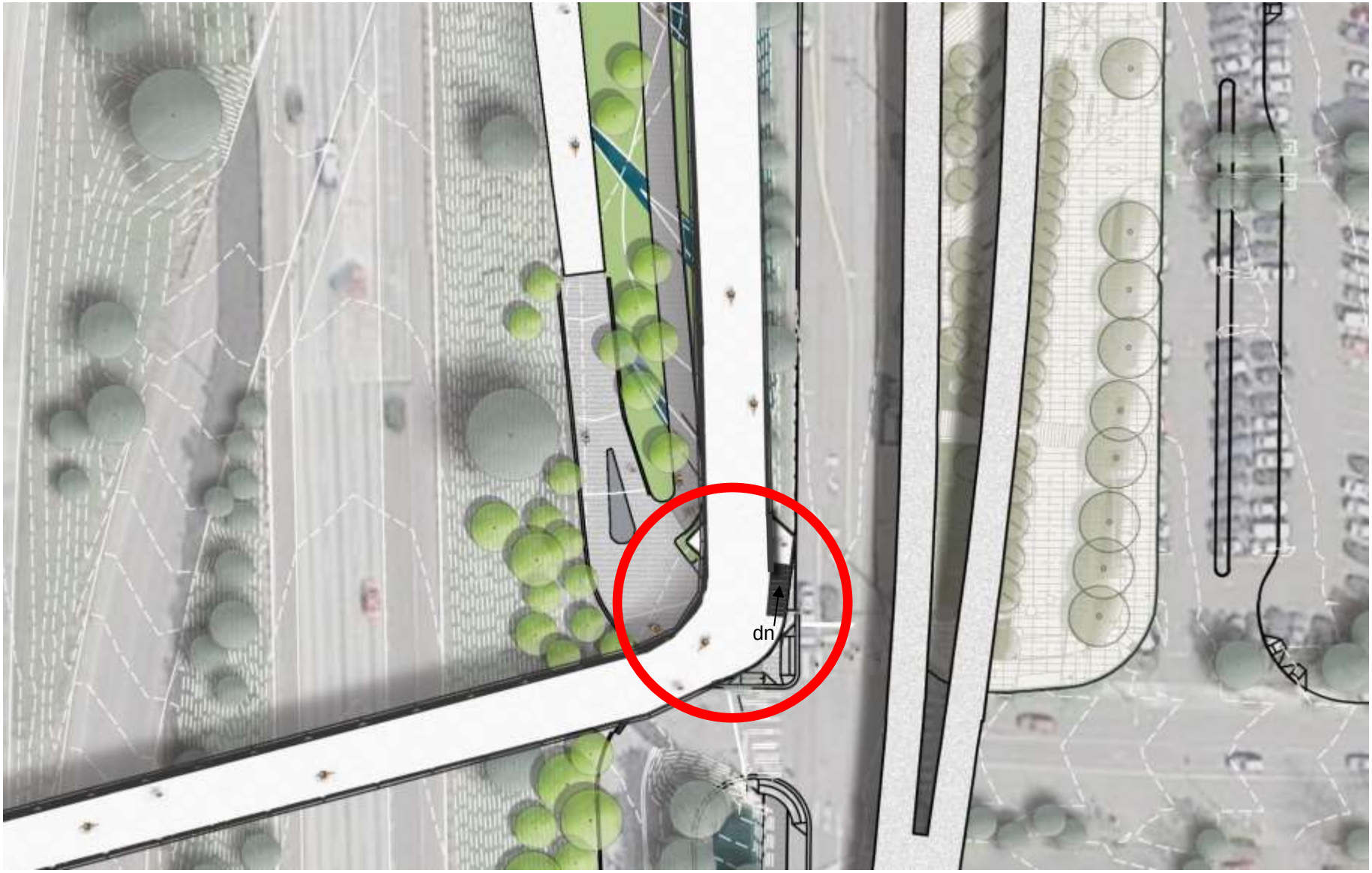


EAST APPROACH | Stair

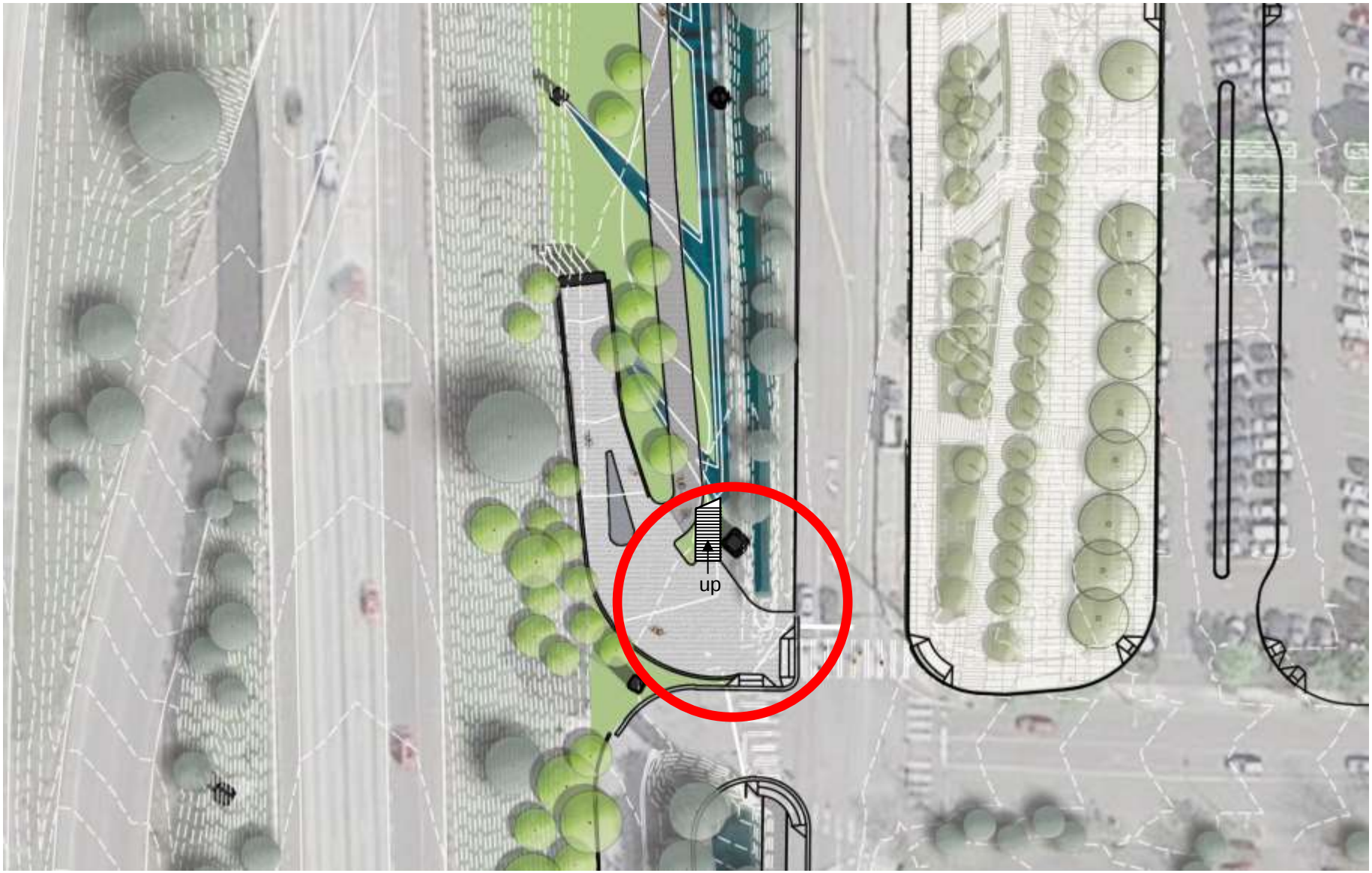




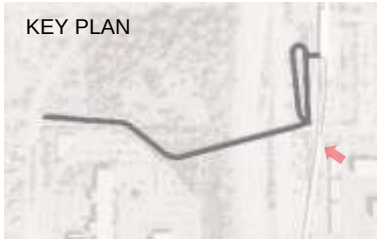
EAST APPROACH | Stair Plan at Deck



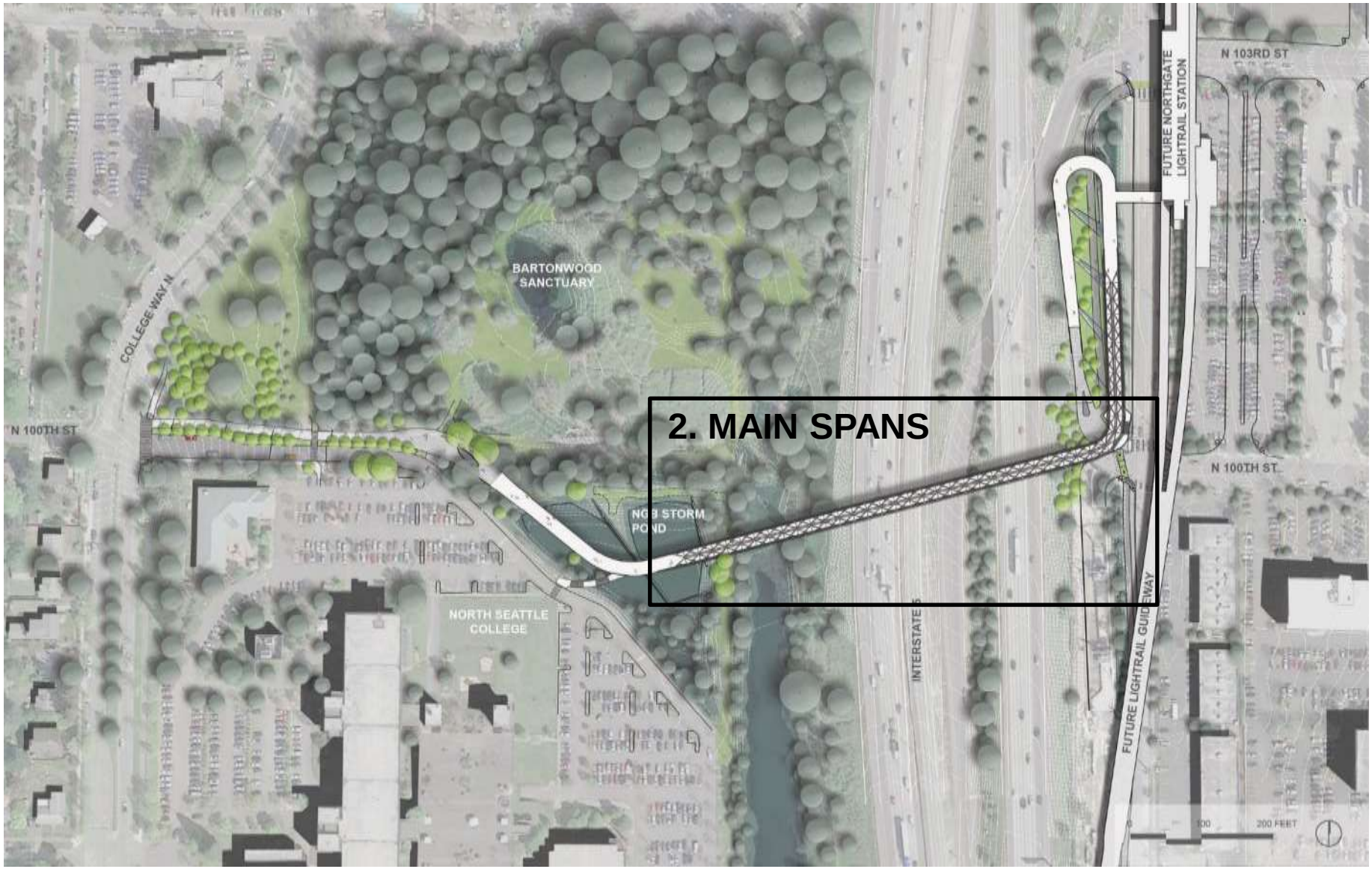
EAST APPROACH | Stair Plan at Grade



EAST APPROACH | Aerial View from South East



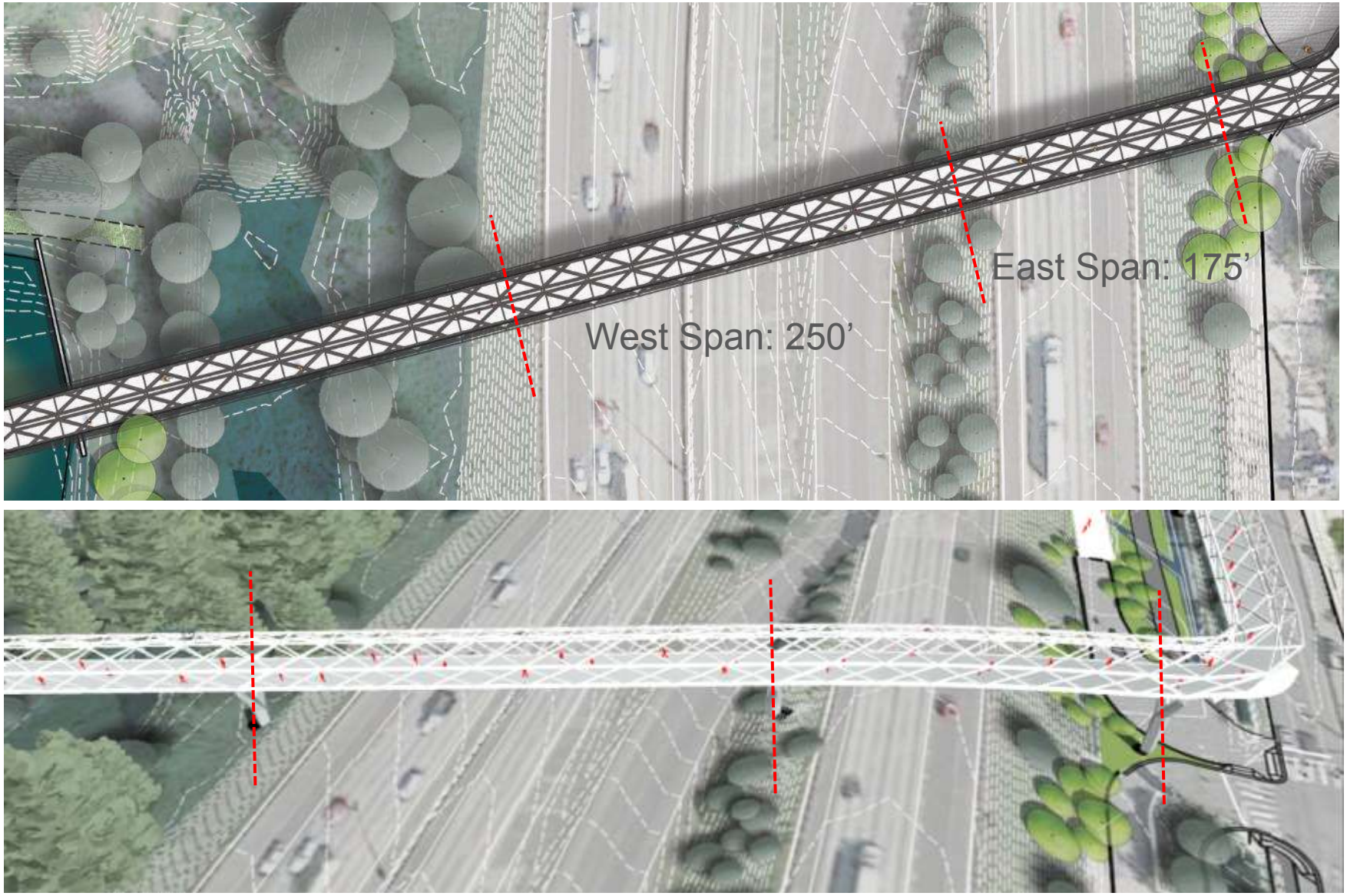
DESIGN | Main Spans

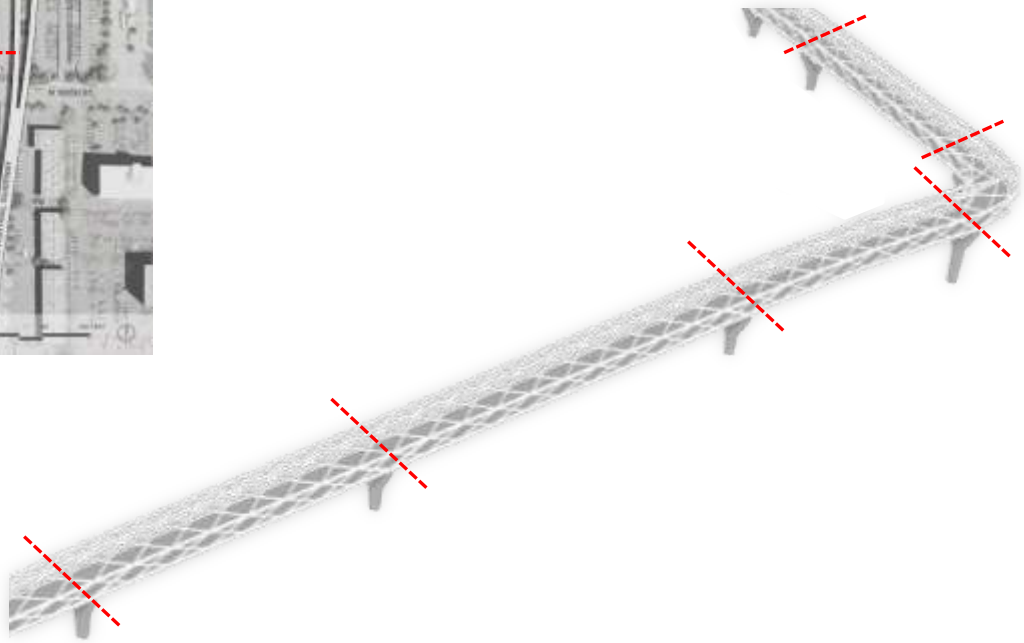


MAIN SPANS | Summary

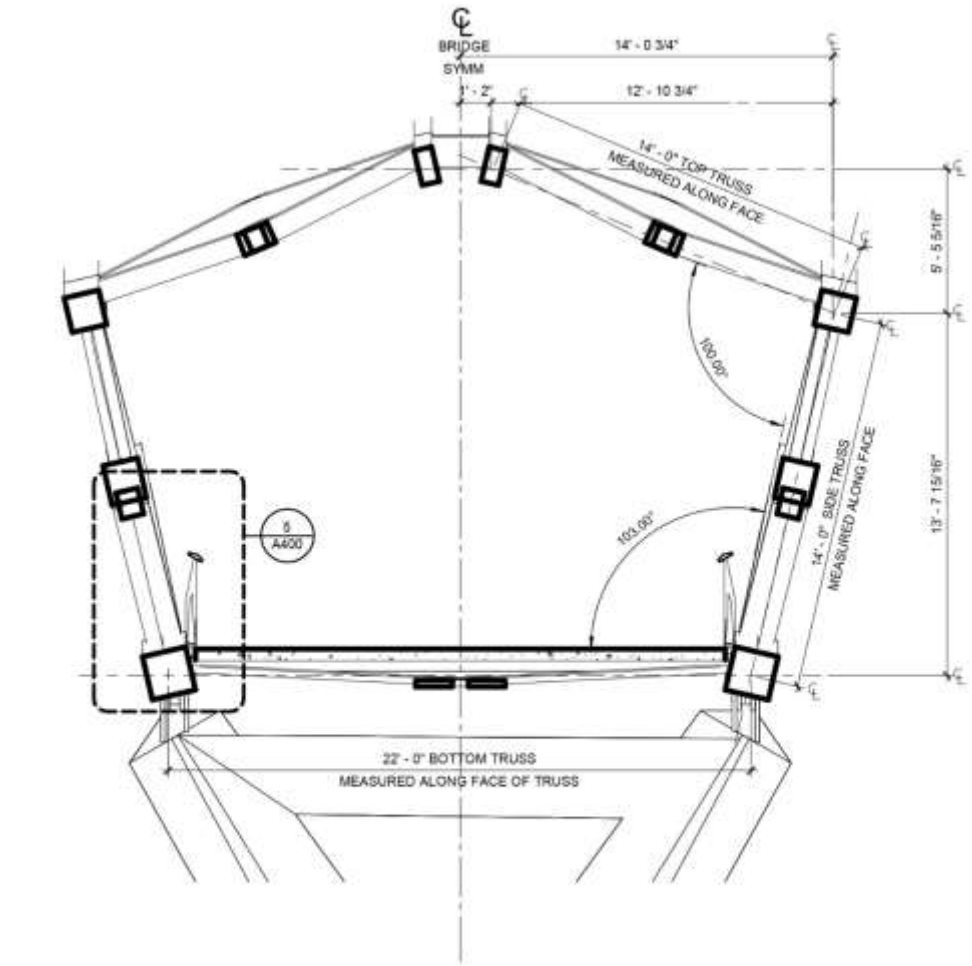
1. Spans
2. Structural Concept
3. Railings and Barrier
4. Lighting
5. Column Design
6. Transition Truss

MAIN SPANS | Span Distances



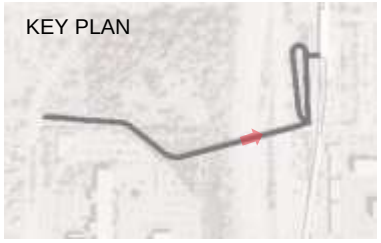


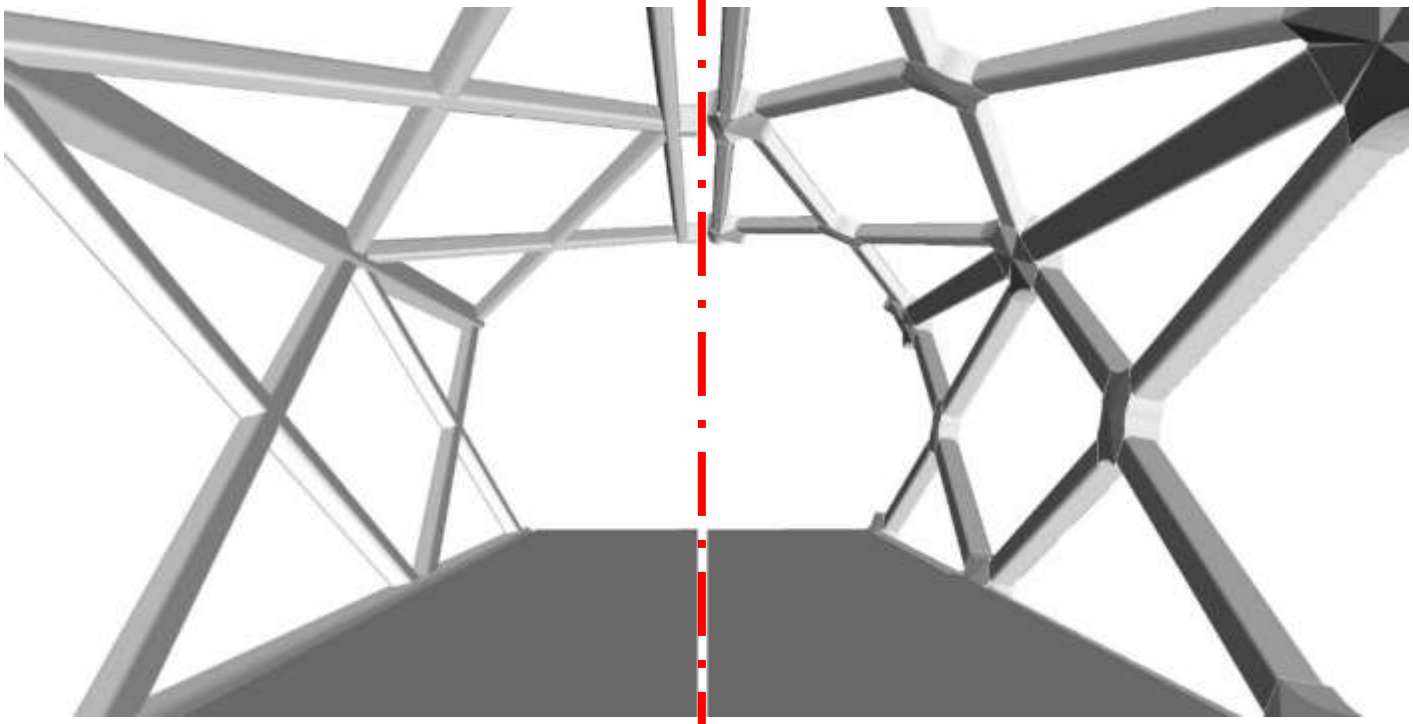
- Higher Quality Fabrication
- Minimizes costly on-site labor
- Minimized impact to i-5



1 A400 ENLARGED TYPICAL TRUSS SECTION
1/4" = 1'-0"

MAIN SPANS | Looking East



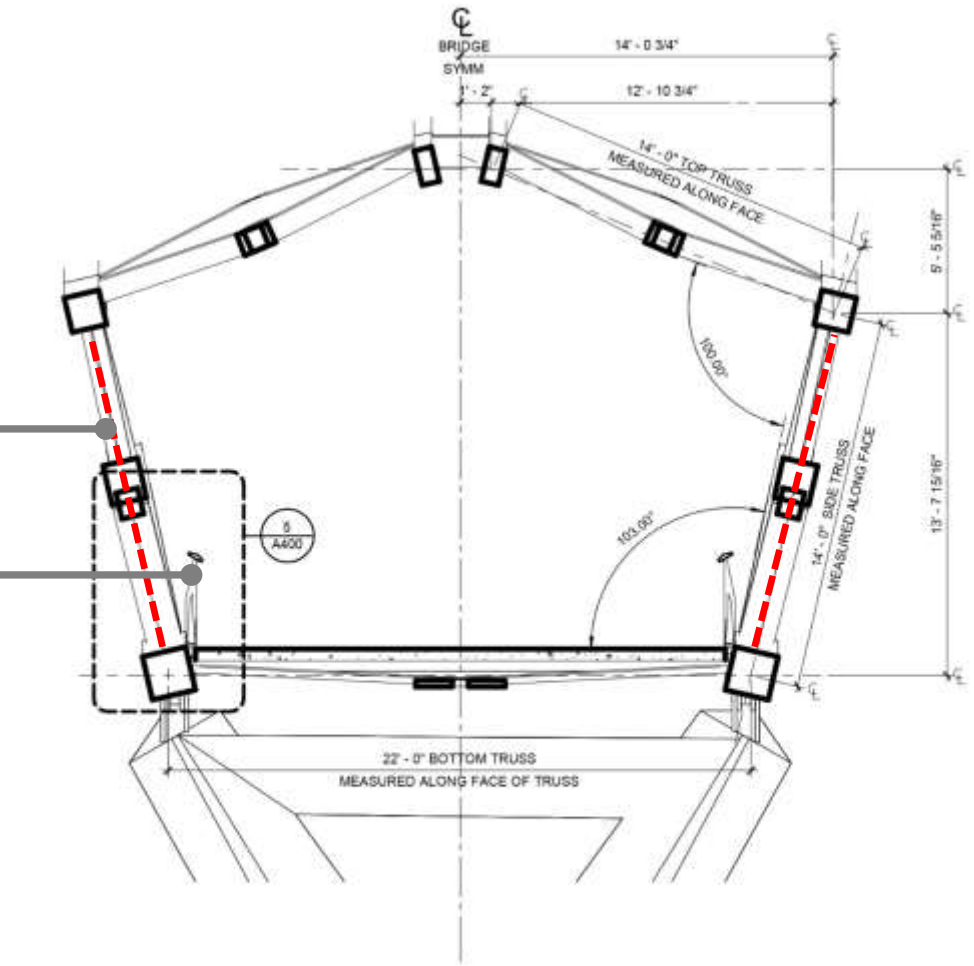


Direct Weld

Cast Steel Nodes

10’ High
Throw Barrier
Over i-5

Leaning Rail

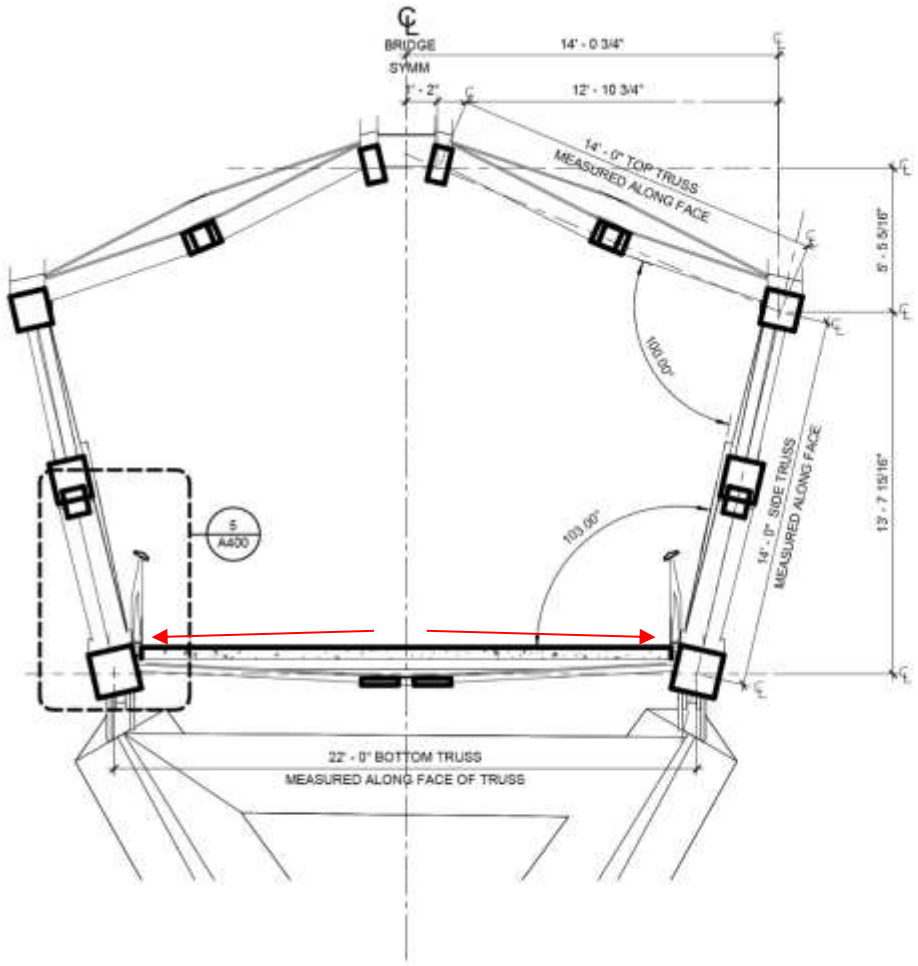


1 A400 ENLARGED TYPICAL TRUSS SECTION
1/4" = 1'-0"

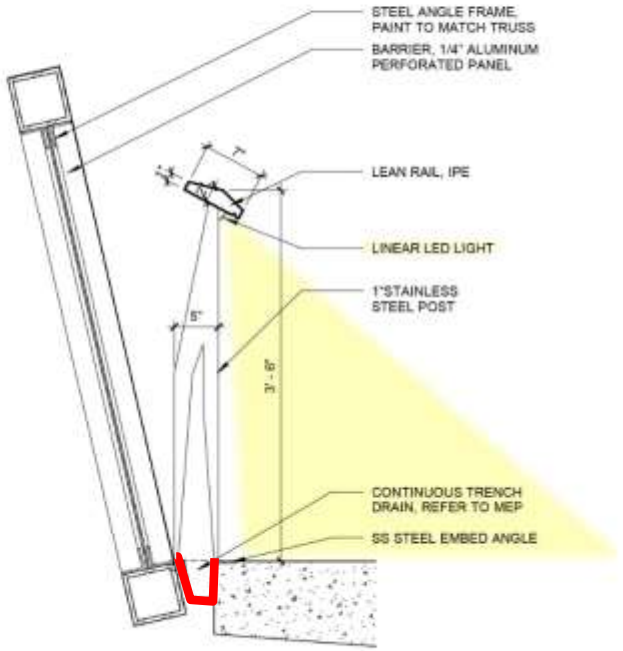
Throw Barrier / Guardrail:
Stainless Steel Cable Mesh

Railing:
Black Locust

Support Structure:
Stainless Steel

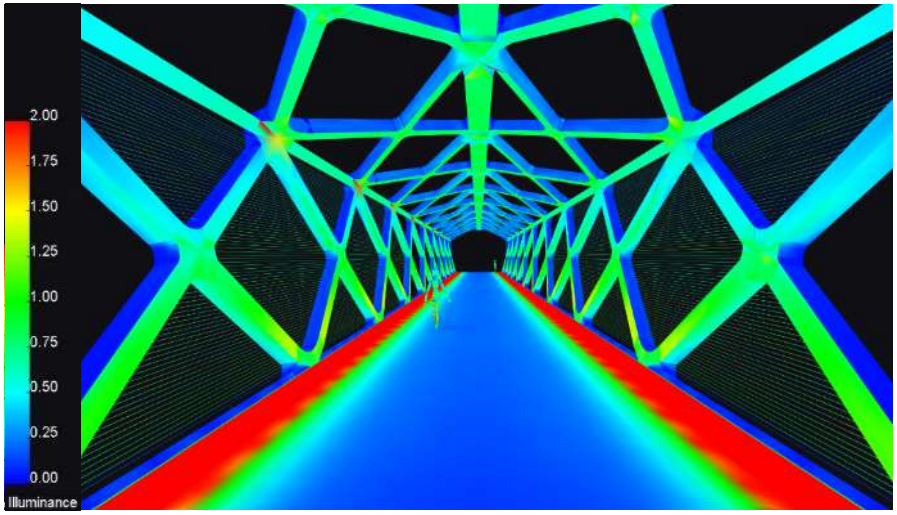


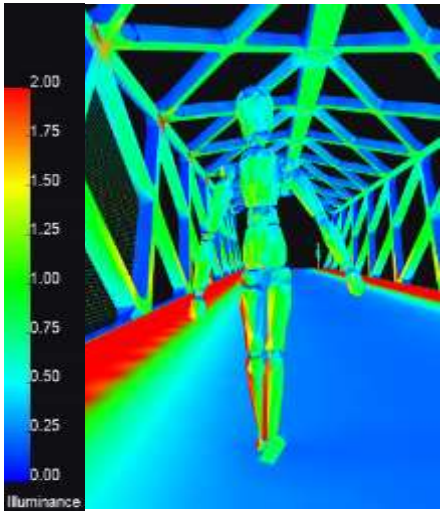
1 A400 ENLARGED TYPICAL TRUSS SECTION
1/4" = 1'-0"

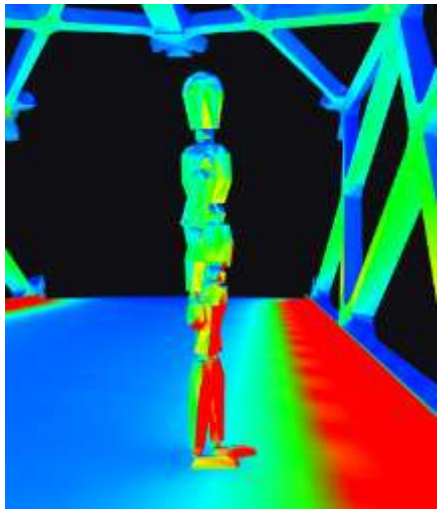


4 A400 DETAIL @ GUARDRAIL
1" = 1'-0"

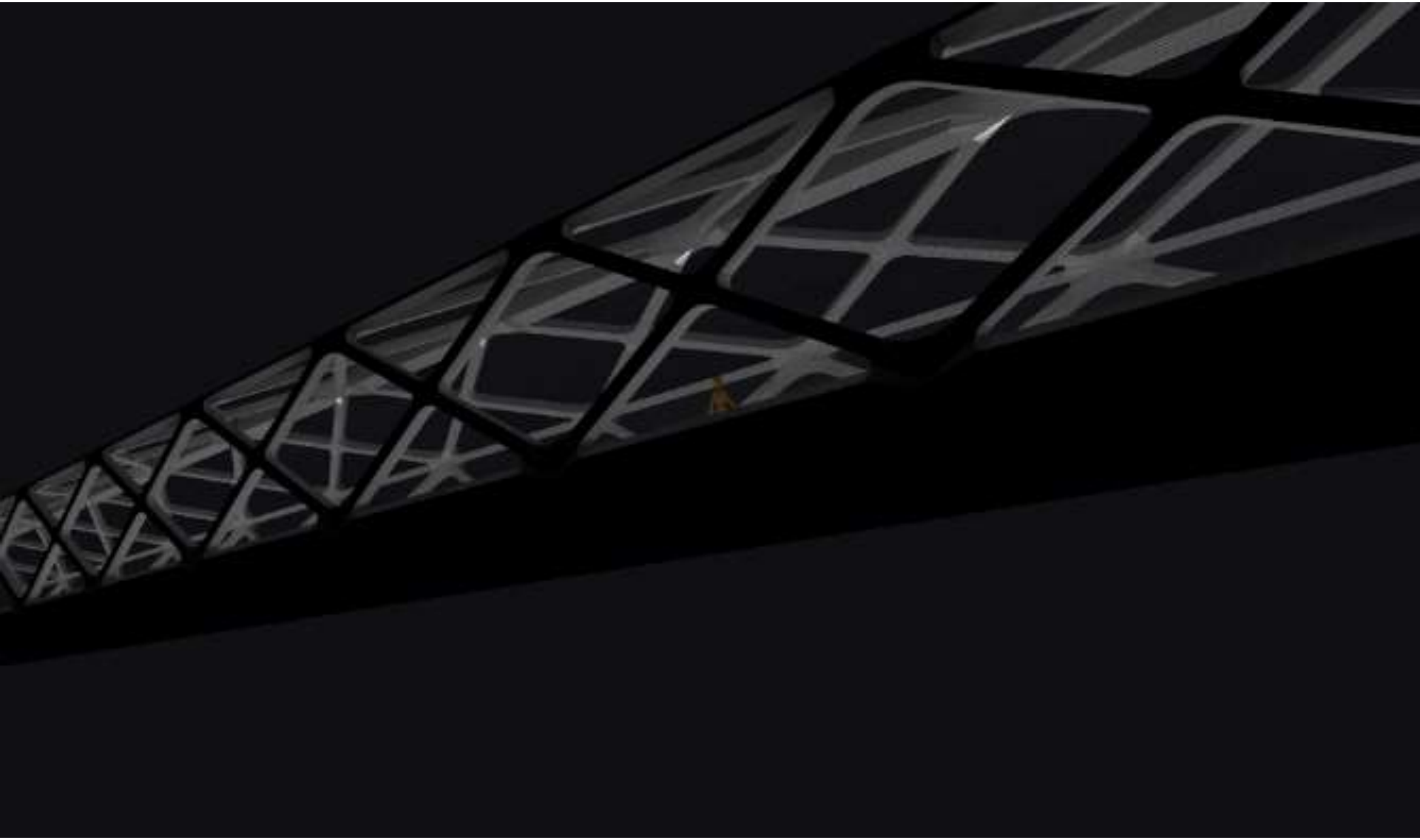
MAIN SPANS | Lighting Simulations

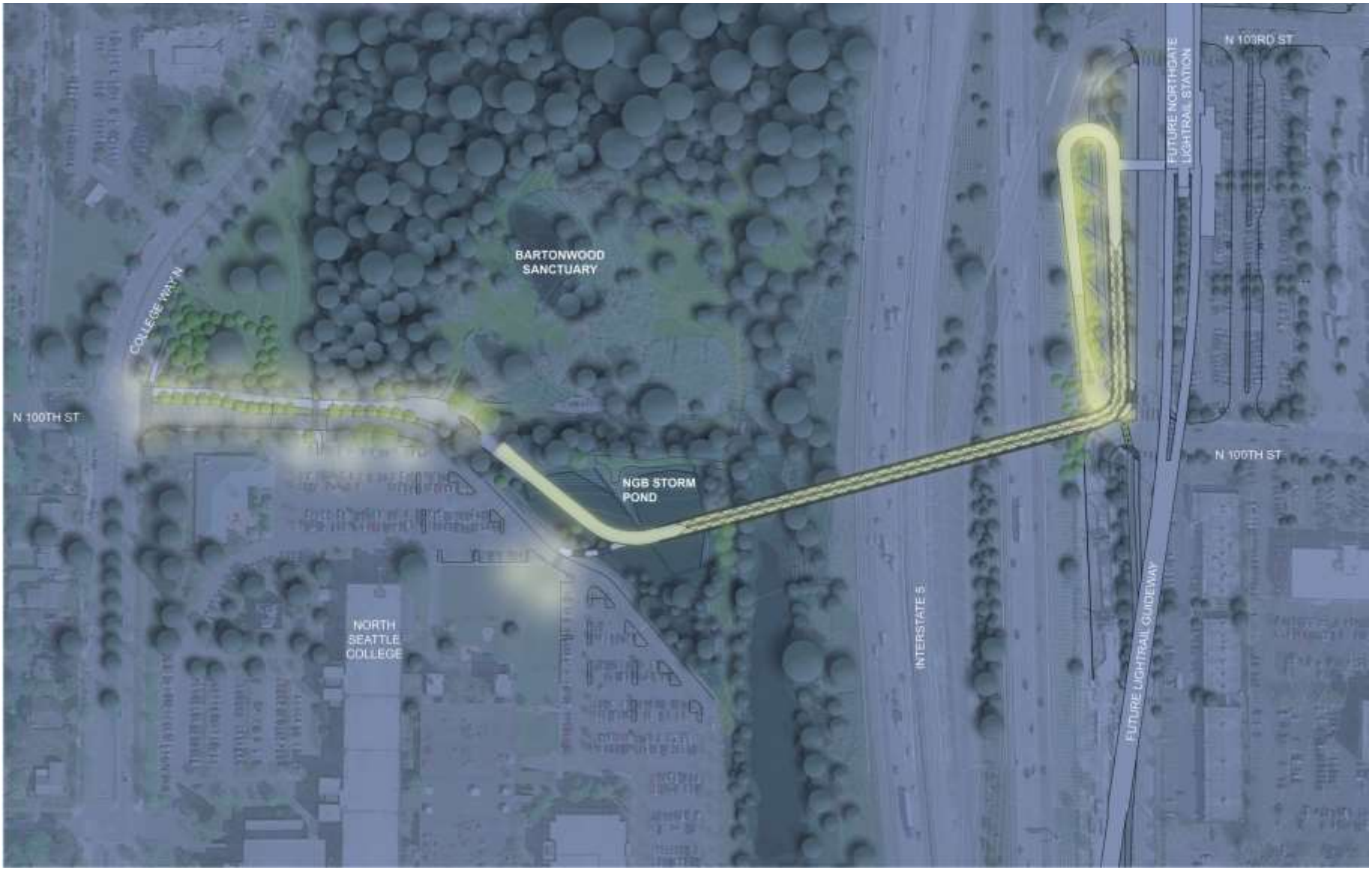


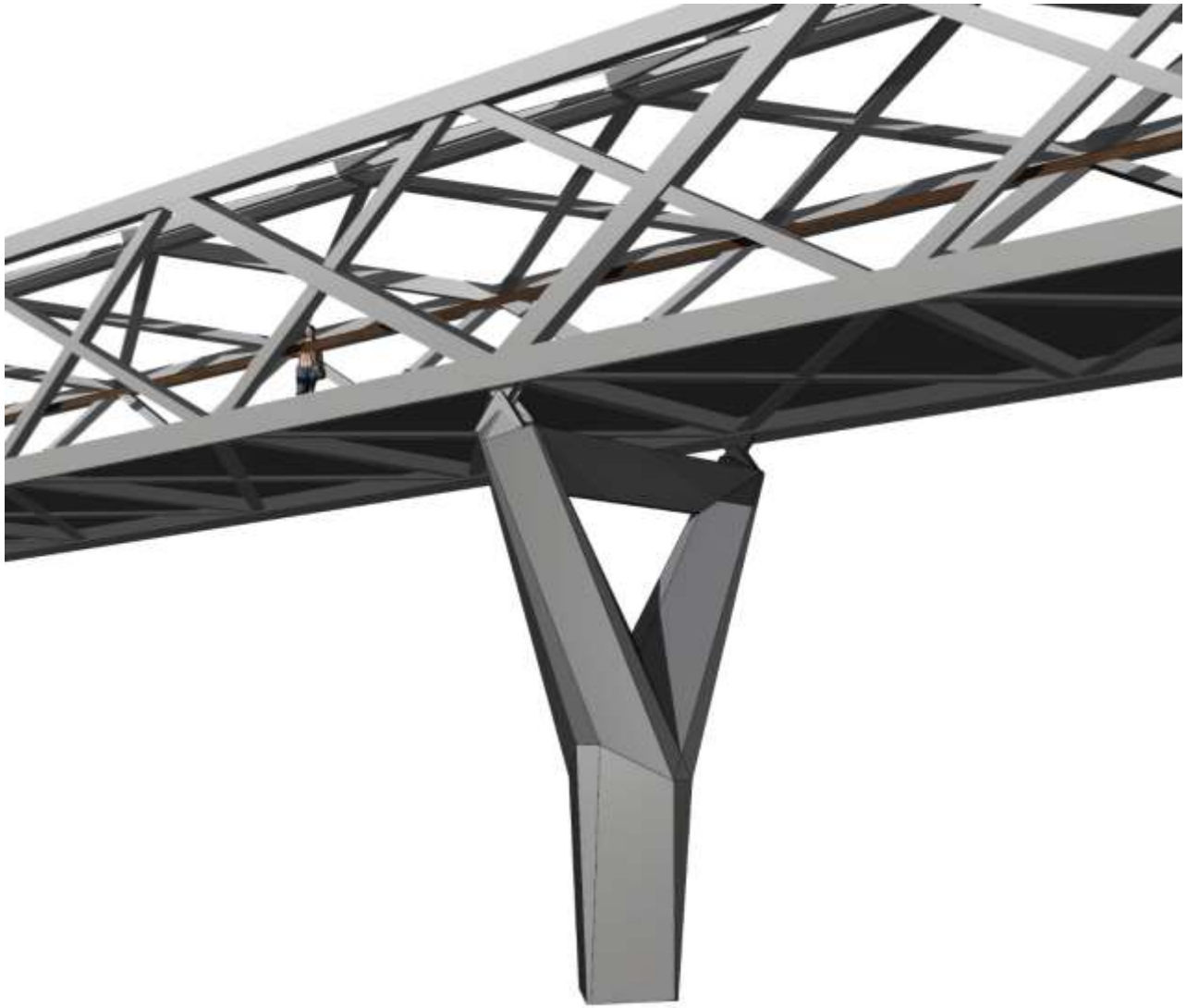


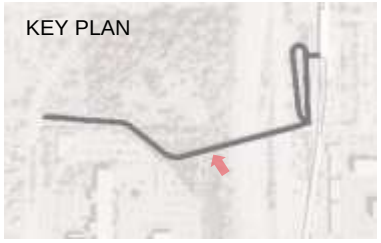


MAIN SPANS | Lighting Simulation from Roadway



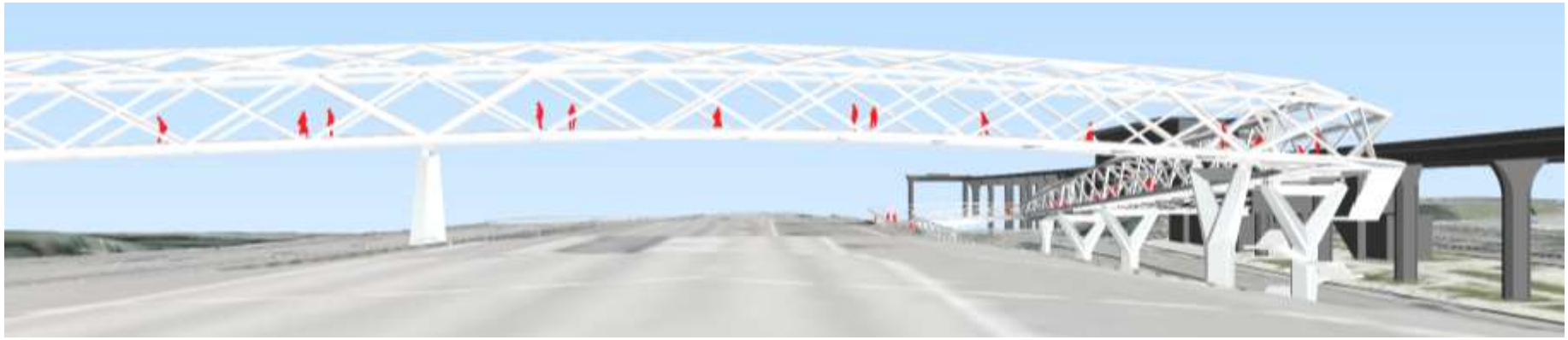

BARTONWOOD SANCTUARY
COLLEGE WAY N
N 100TH ST
NGB STORM POND
NORTH SEATTLE COLLEGE
INTERSTATE 5
FUTURE LIGHTRAIL GUIDEWAY
FUTURE NORTHGATE LIGHTRAIL STATION
N 103RD ST
N 100TH ST



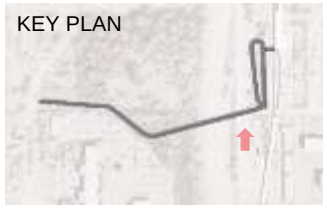

KEY PLAN

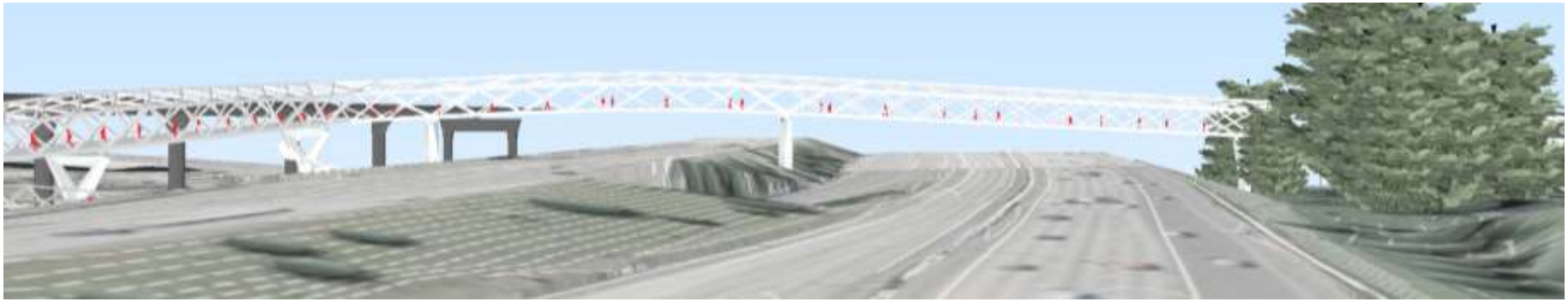
BRIDGE DESIGN | Column Geometry

BRIDGE DESIGN | Views From I-5



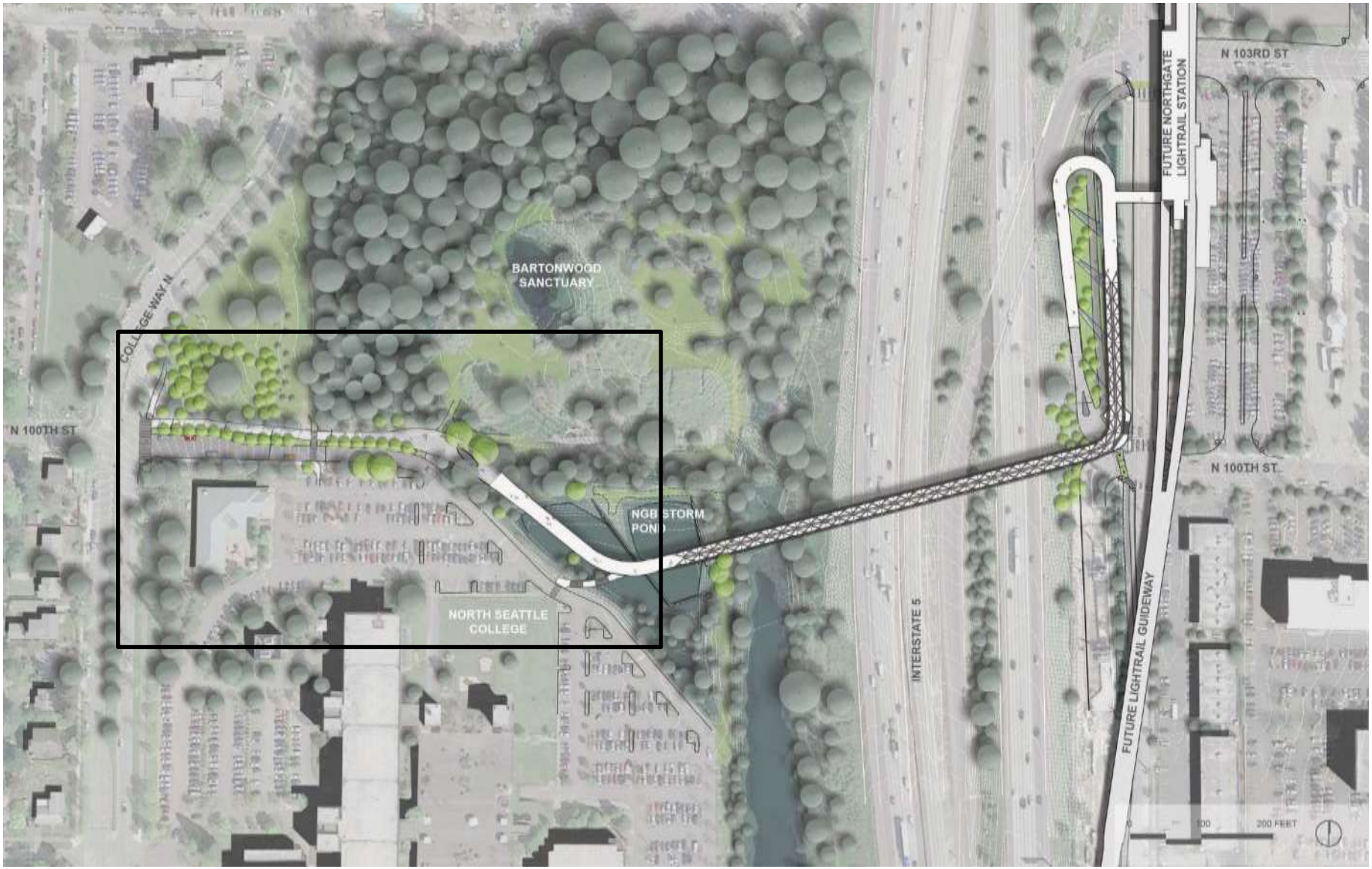
From NB I-5





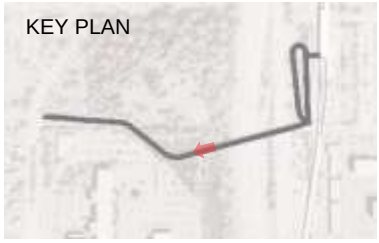
From SB I-5

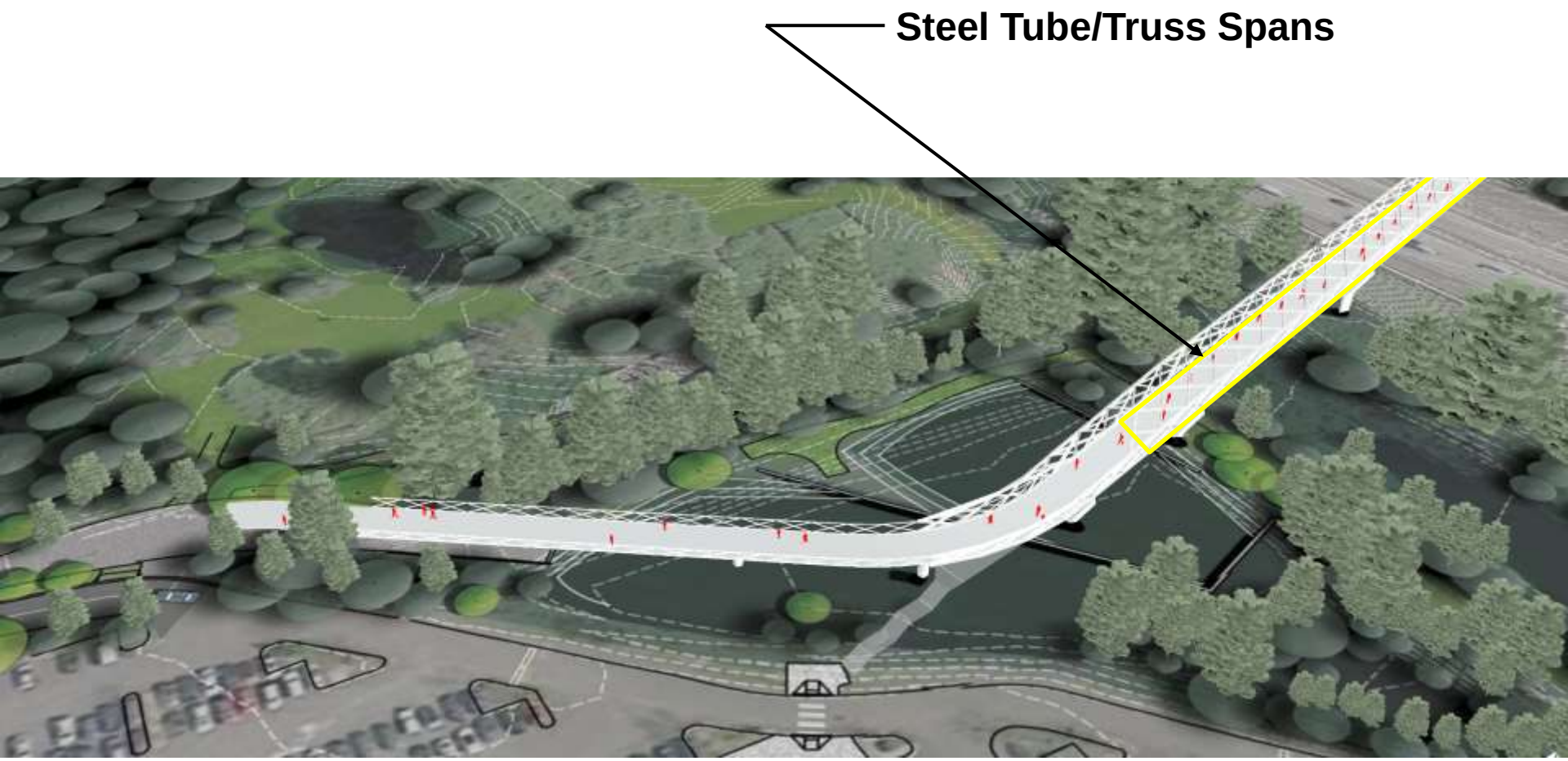
DESIGN | West Approach

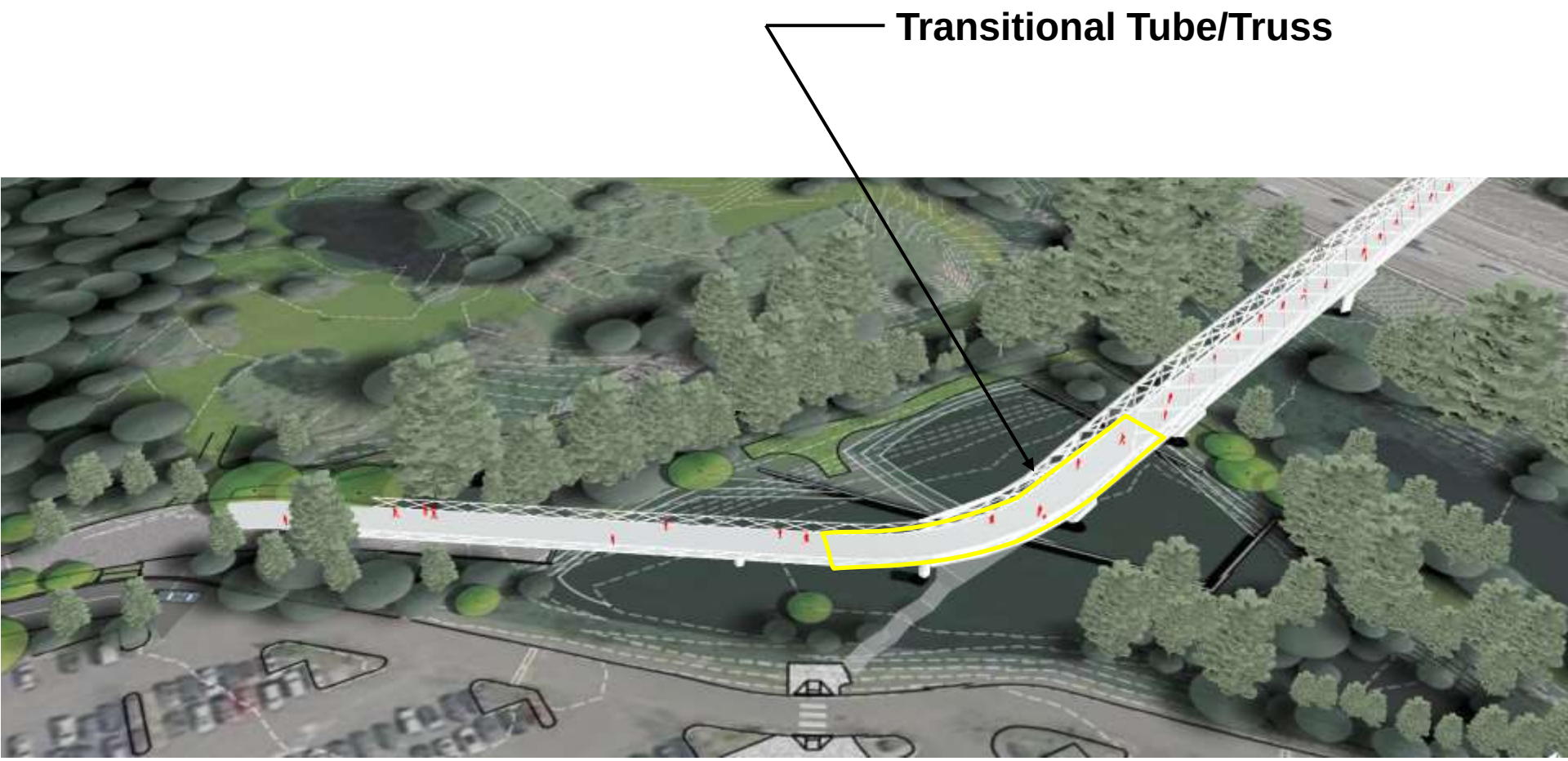


WEST APPROACH | Summary

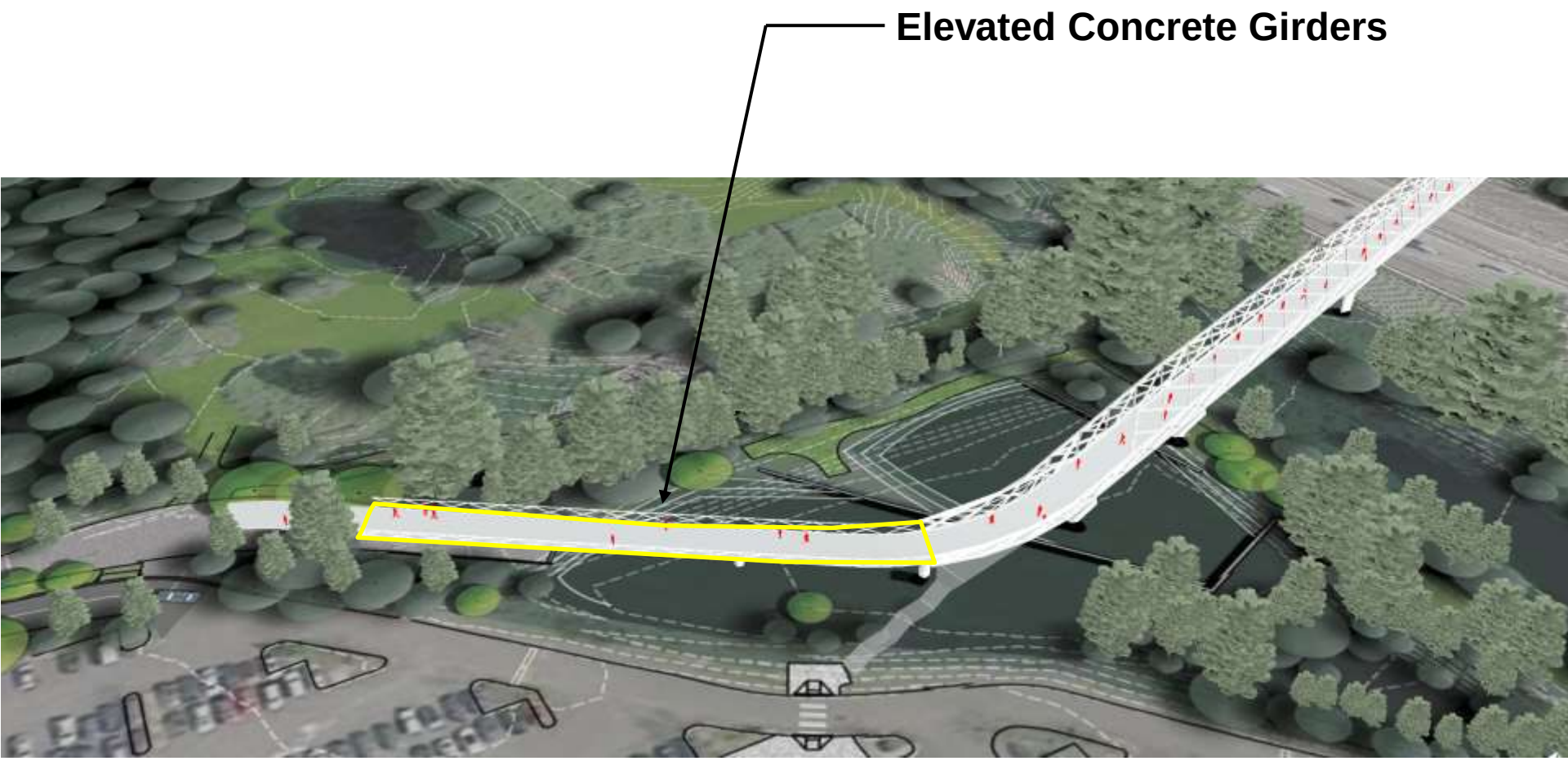
1. Components
2. Stairs
3. Vegetation
4. Water
5. Connections

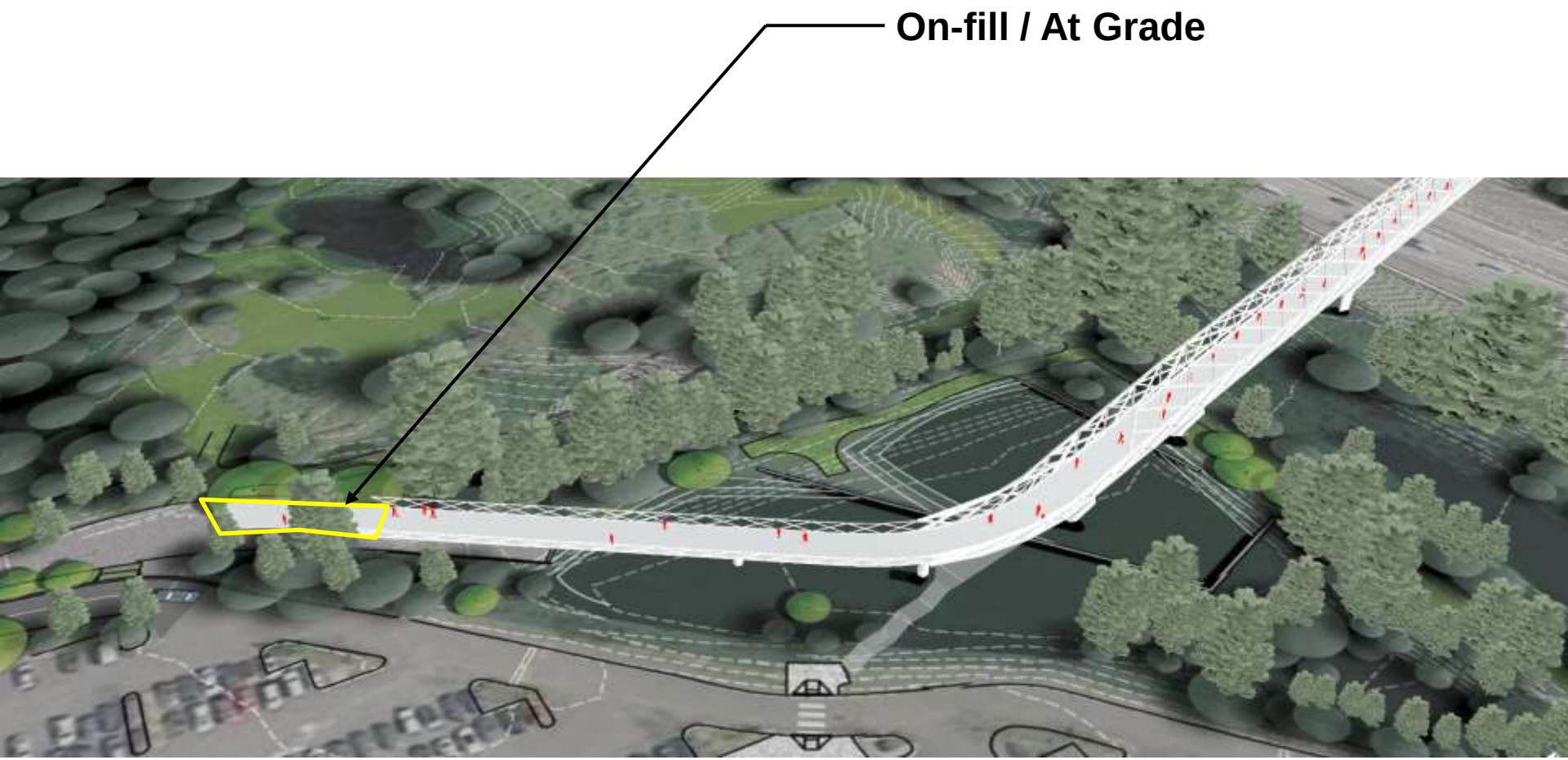

KEY PLAN

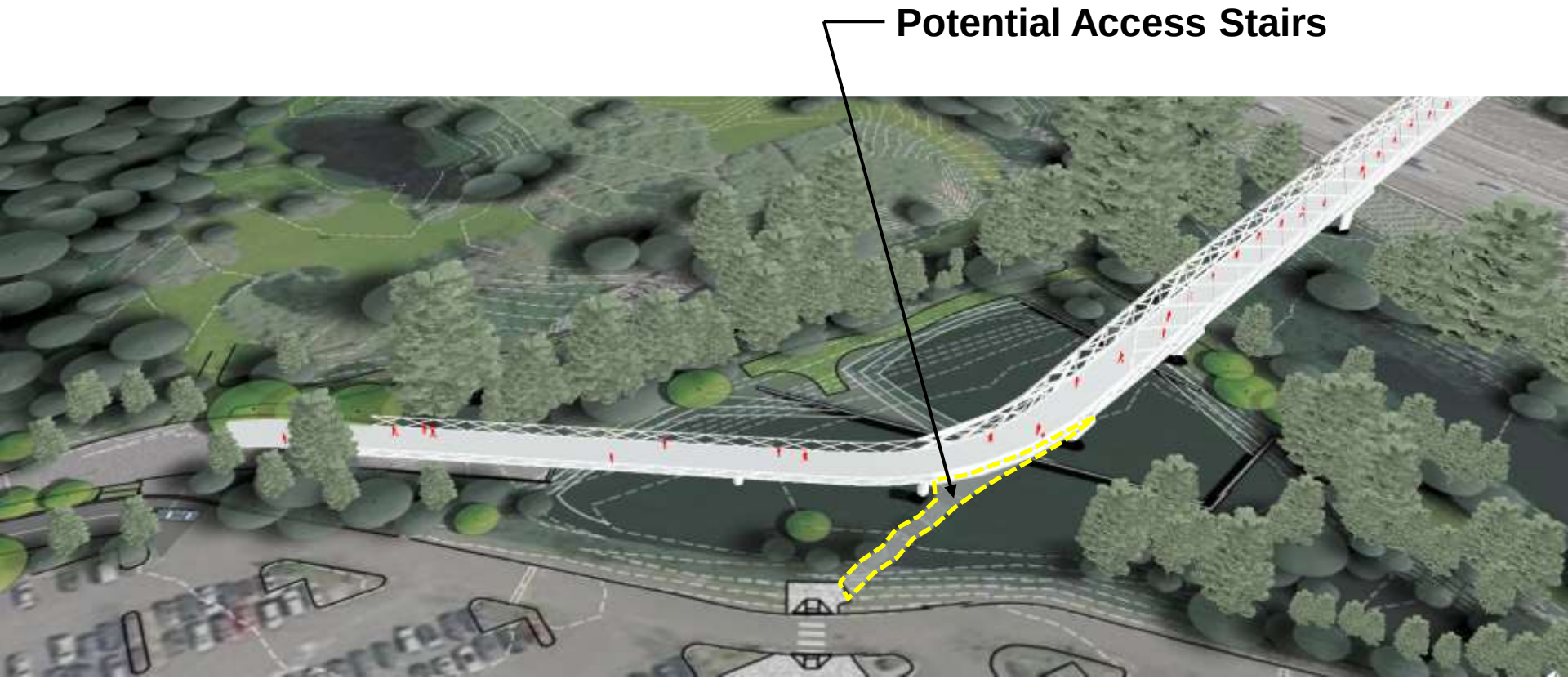

Steel Tube/Truss Spans


Transitional Tube/Truss

WEST APPROACH | Components




On-fill / At Grade

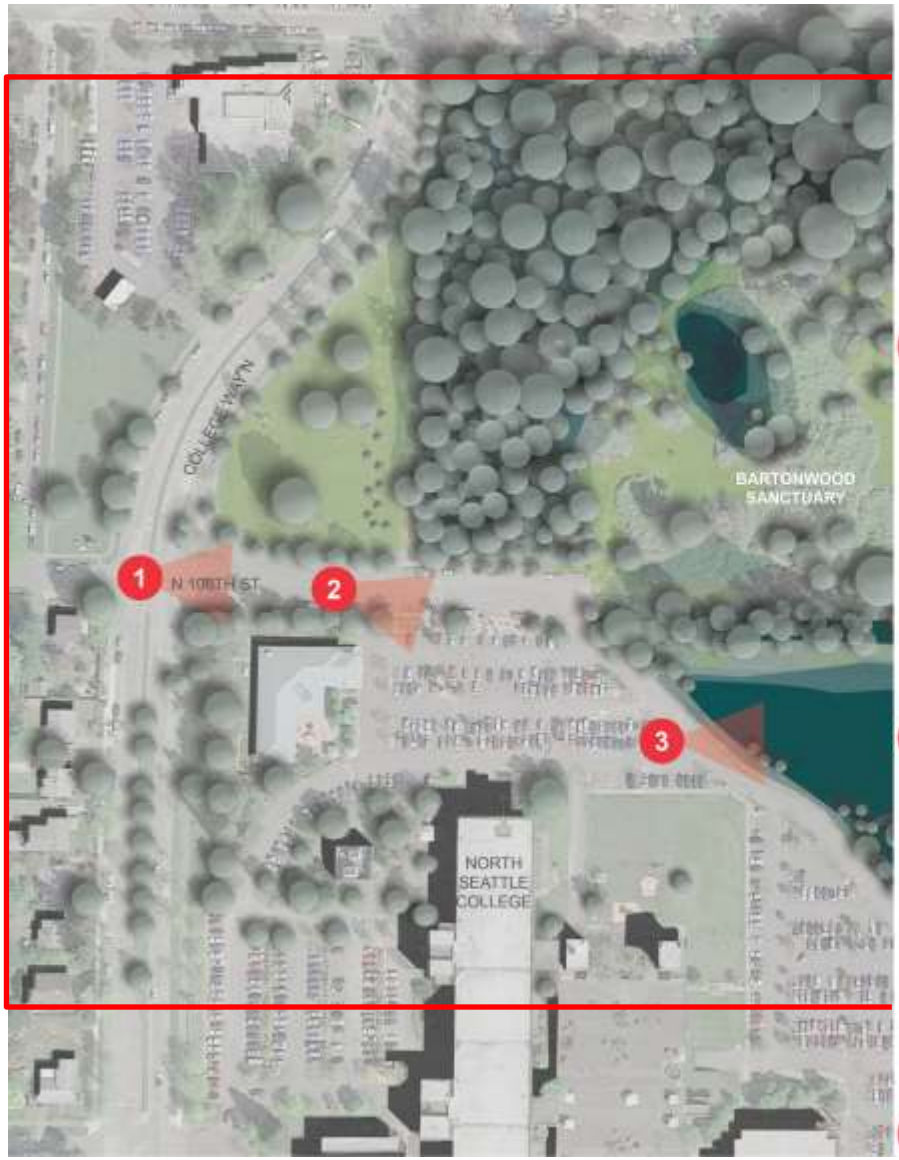

Potential Access Stairs

WEST APPROACH | Vegetation

WEST APPROACH | Water + Topography

WEST APPROACH | Water + Topography

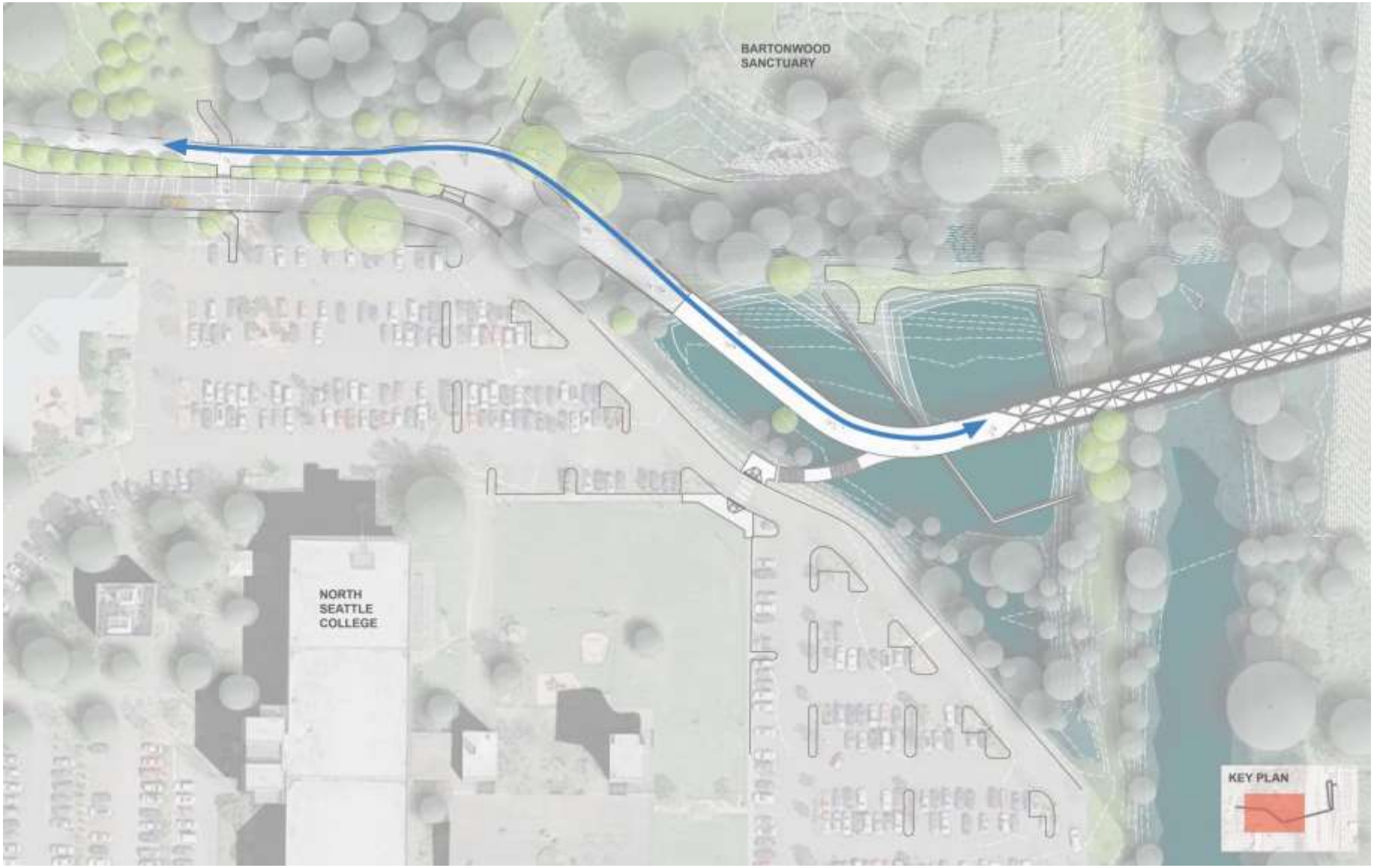
WEST APPROACH | Existing Conditions



WEST APPROACH | NSC Circulation + Connection

WEST APPROACH | Access: Pedestrians

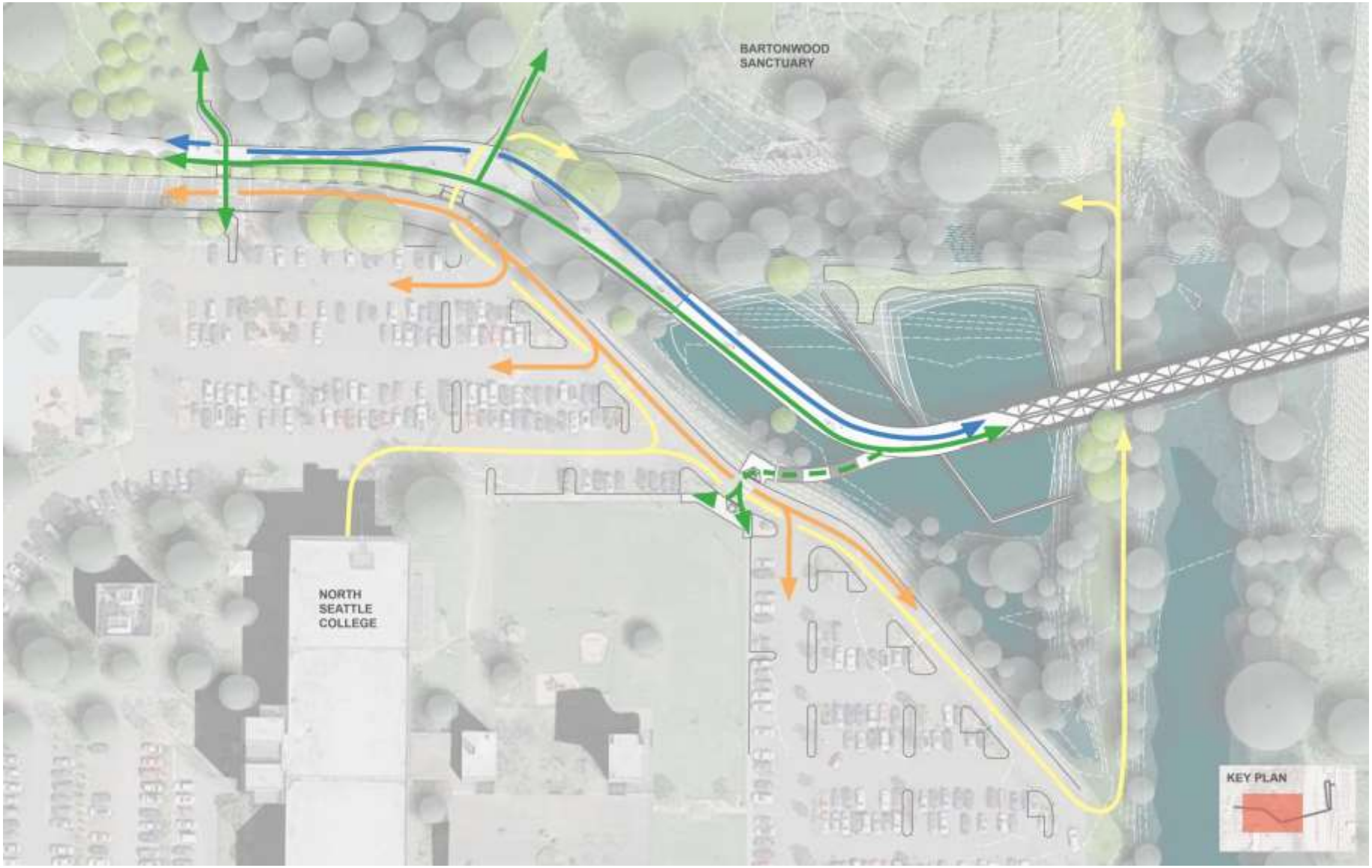
WEST APPROACH | Access: Bikes



WEST APPROACH | Access: Adjacent Automobile Traffic

WEST APPROACH | Access: Uses

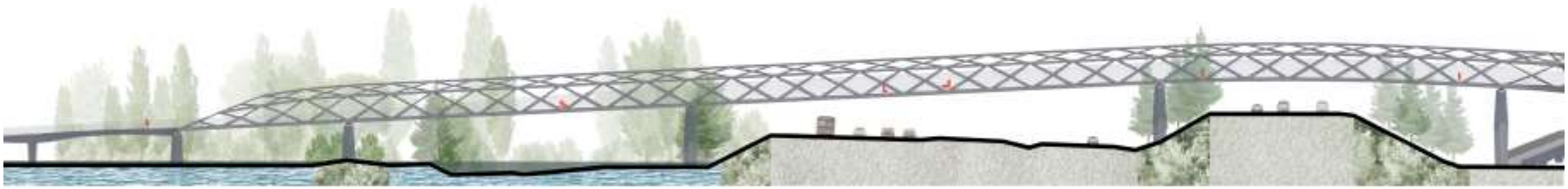
WEST APPROACH | Access: All Users



WEST APPROACH | Materials

WEST APPROACH | Vegetation and Wildife

WEST APPROACH | Elevations



DESIGN RESPONSE | Enhanced Environmental Function

EXISTING

WATER
29%

VEGETATION
59%

IMPERVIOUS
37%

PERVIOUS
63%

EXISTING

WATER
9%

VEGETATION
30%

IMPERVIOUS
61%

PERVIOUS
39%

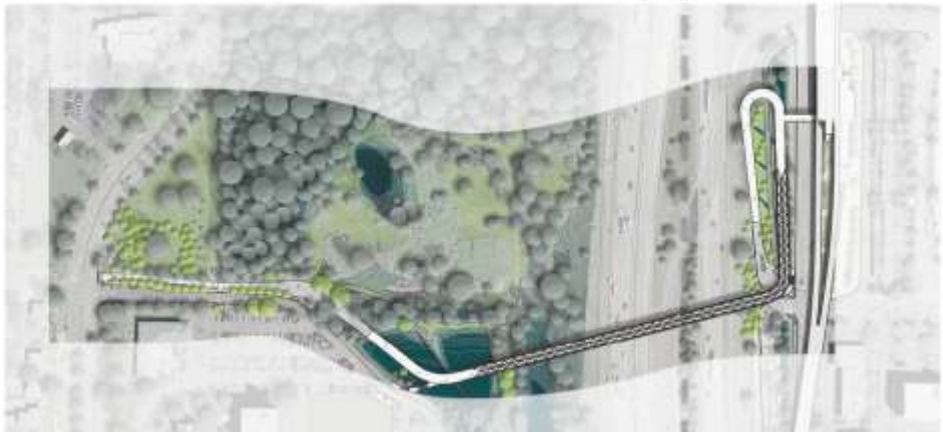
PROPOSED

WATER
31% +2%

VEGETATION
63% +4%

IMPERVIOUS
39% +2%

PERVIOUS
61% -2%



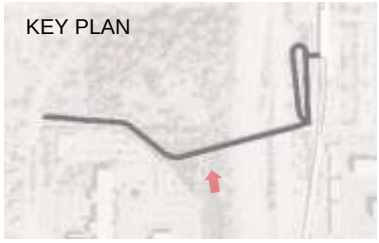
PROPOSED

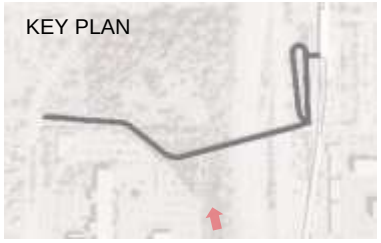
+3% WATER
12%

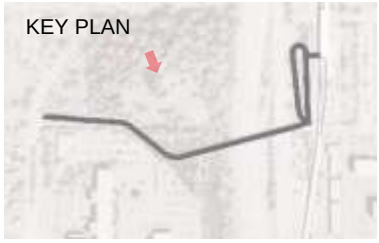
+9% VEGETATION
39%

-5% IMPERVIOUS
56%

+5% PERVIOUS
44%


KEY PLAN


KEY PLAN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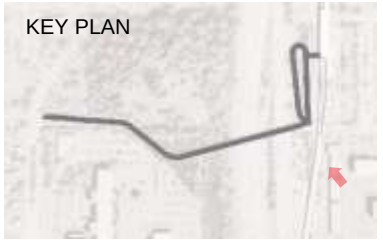
KEY PLAN

DISCUSSION

END