

Design and Environmental Study For



ARLINGTON AVENUE BRIDGES REPLACEMENT



Design Review Committee Meeting #8 | December 13, 2022

Purpose of Today's DRC Meeting:

- ✓ Environmental Updates
- ✓ Utilities Updates
- ✓ Aesthetics Design Updates
- ✓ Roadway Design Updates
- ✓ Hydraulic Design
- ✓ Schedule
- ✓ Open Questions/Discussion



Environmental Updates

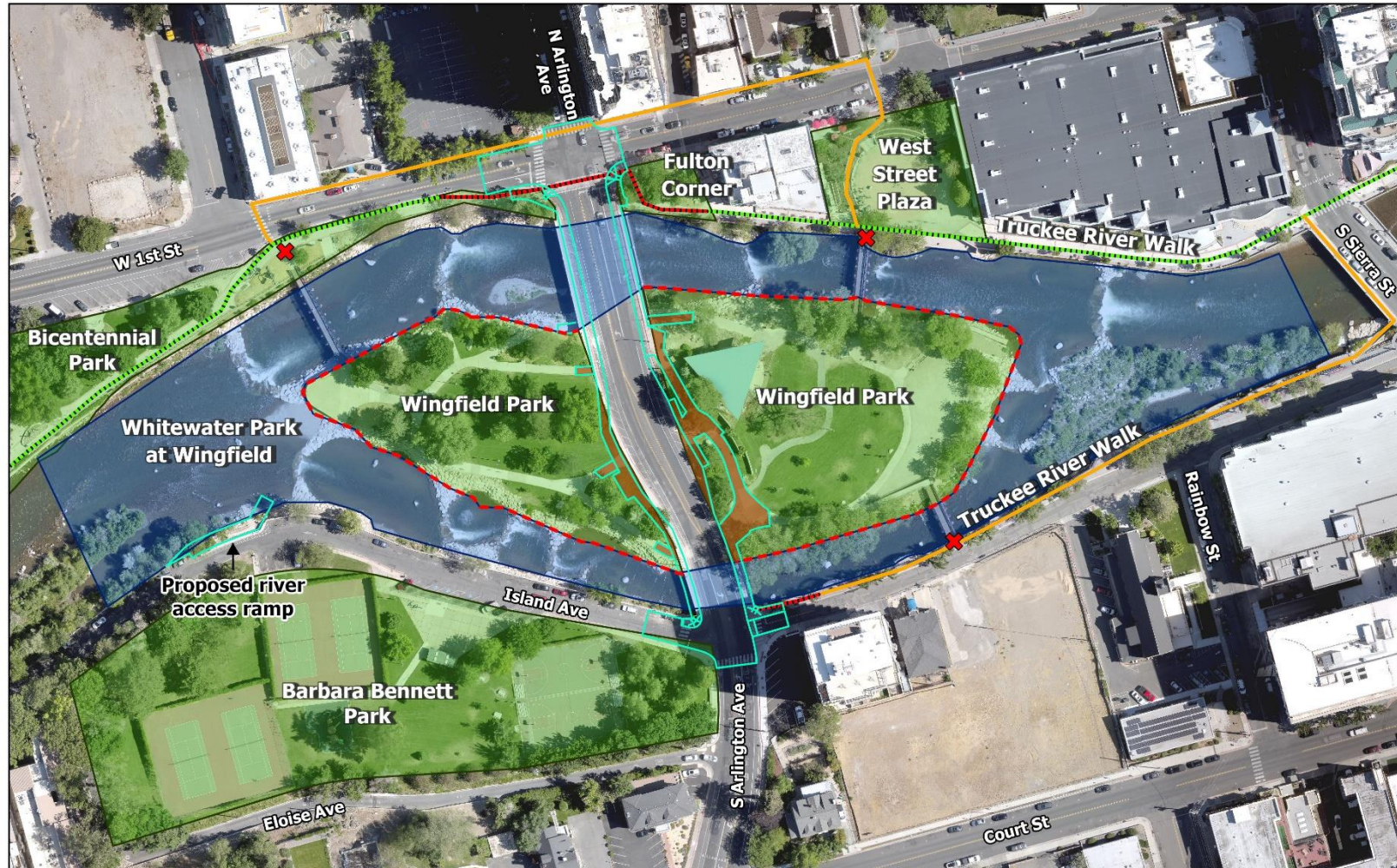
Technical Memos for Env. Study Doc.



Deliverables	Date Submitted	Comments Due
Biological Assessment	Oct 13	Nov 11
Water Quality TM	Oct 20	Nov 18
Hazardous Materials ISA	Oct 20	Nov 18
Land Use TM	Oct 24	Nov 23
Floodplains TM	Oct 26	Nov 28
Section 106 Survey Report and Effects	Nov 22	Dec 22
Section 106 for Geotech	Consultation in Progress	
Section 4(f) OWJ Letters	Pending Agreement with City	
Social/Econ/EJ TM	Dec 02	Jan 06
Visual Resources TM	Dec 02	Jan 06
Topics Dismissed TM	Dec 02	Jan 06
Multimodal TM	Dec 02	Jan 06
Parks/Rec TM	Dec 02	Jan 06
Wetlands/Waters TM	Dec 07	Jan 06

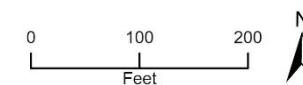
USACE Permits

- Geotechnical Work
 - Section 408 permit currently being reviewed by USACE
 - Section 404 permit to be submitted when Section 7 consultation is complete.
- Project
 - Section 408 permit currently being reviewed by RTC
 - Section 404 permit to be submitted later in design process.



Legend

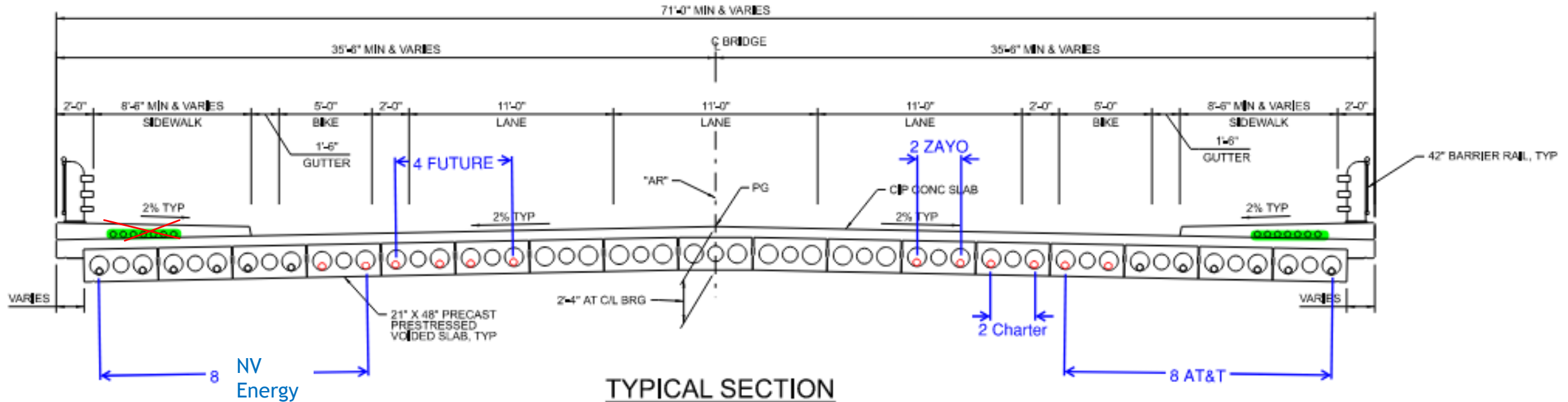
- | | | | | | |
|---|--|---|--------------------------|---|-------------------------------------|
|  | Parks and Recreation Facilities |  | Truckee River Walk Trail |  | Temporary Construction Fencing |
|  | Permanent Impact Area |  | Temporary Trail Detour |  | Temporary Pedestrian Bridge Closure |
|  | Proposed Sidewalk; Proposed Edge of Pavement |  | Temporary Trail Closure | | |



Utilities



Bridge Sidewalk



8-NVE and 4-‘Future’ along East side (main transmission line across north bridge)
 12 - Communication Conduits along west side
 City of Reno IRR facilities (water and electric) across west side (w/in Sidewalk?)

North Bridge

Park Irrigation

- ✓ Request for City of Reno to confirm water/electric needs across north bridge



Aesthetic Updates



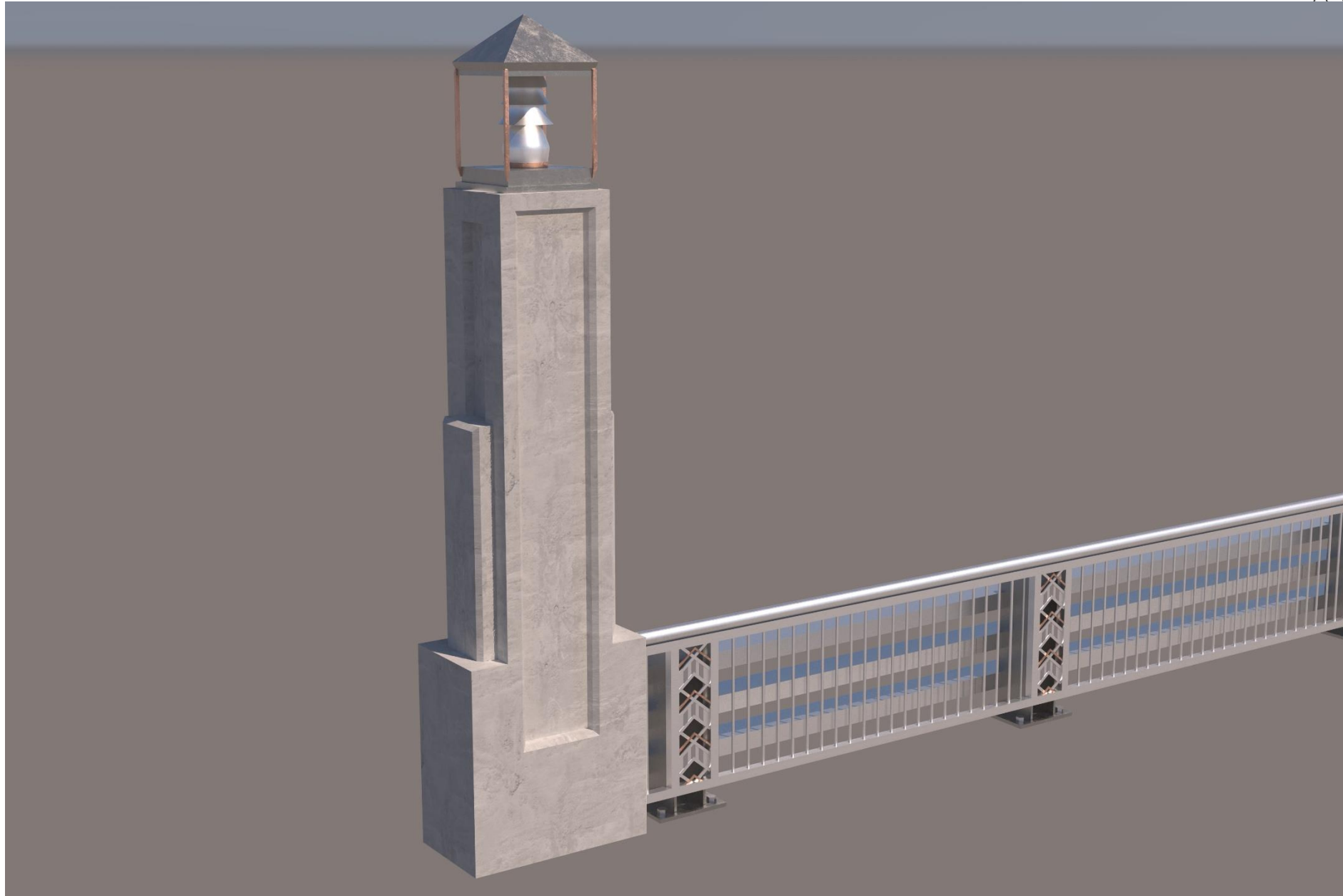
Pylon / Custom Lighting Design Progress



Pylon / Custom Lighting Design Progress



Pylon / Custom Lighting Design Progress

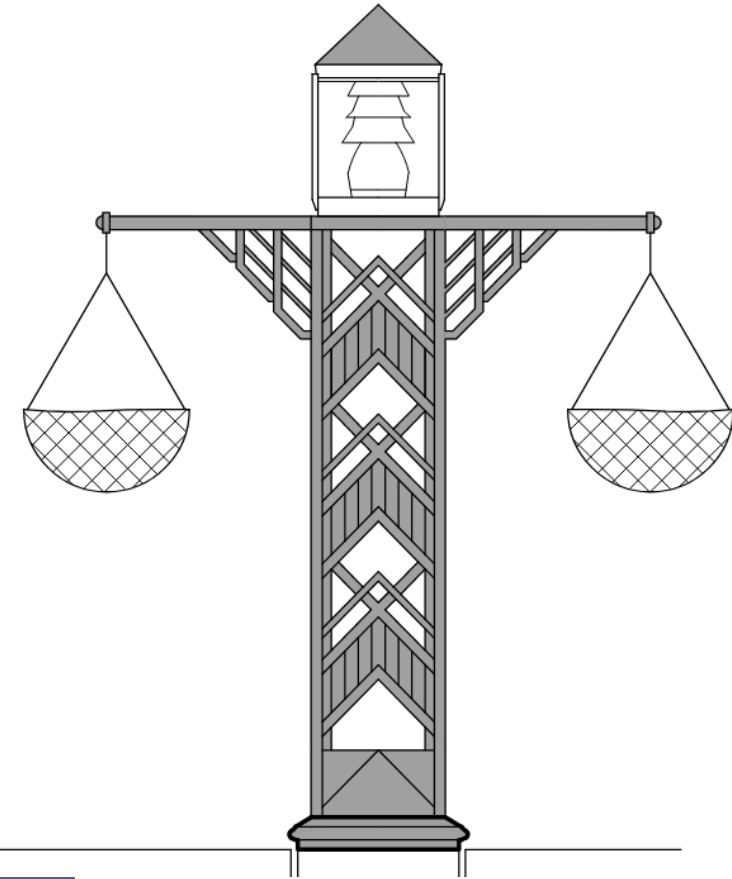


Pylon / Custom Lighting Design Progress

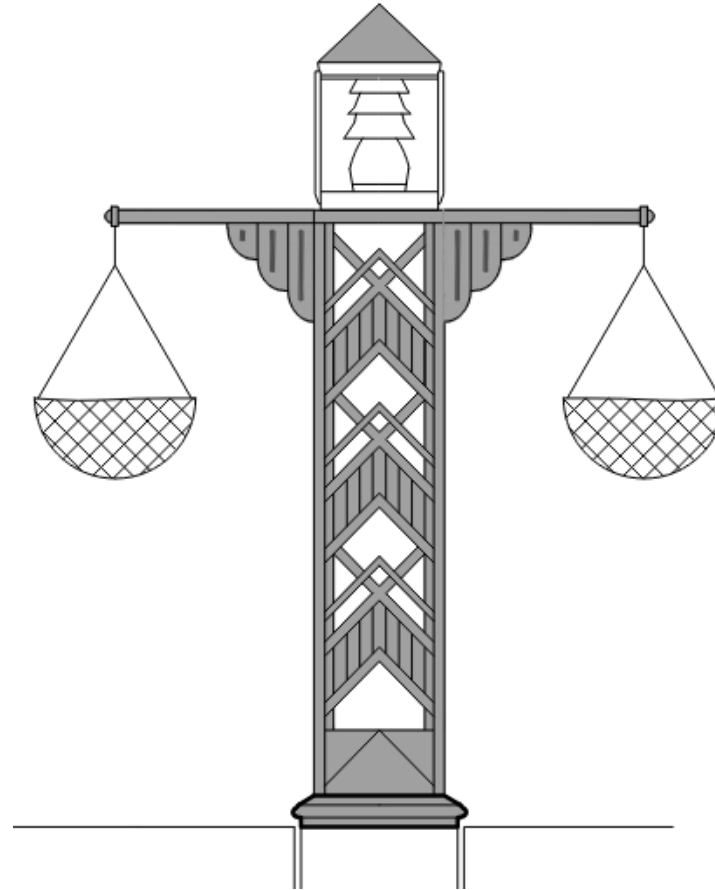


Custom Lighting Flower Basket Hanger

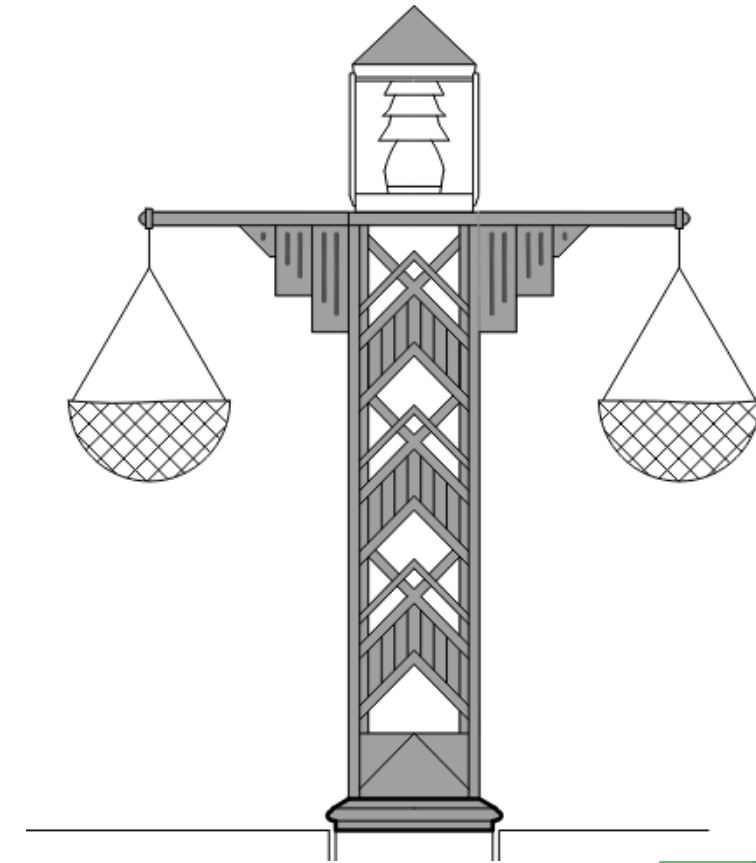
Design Options



Option 1

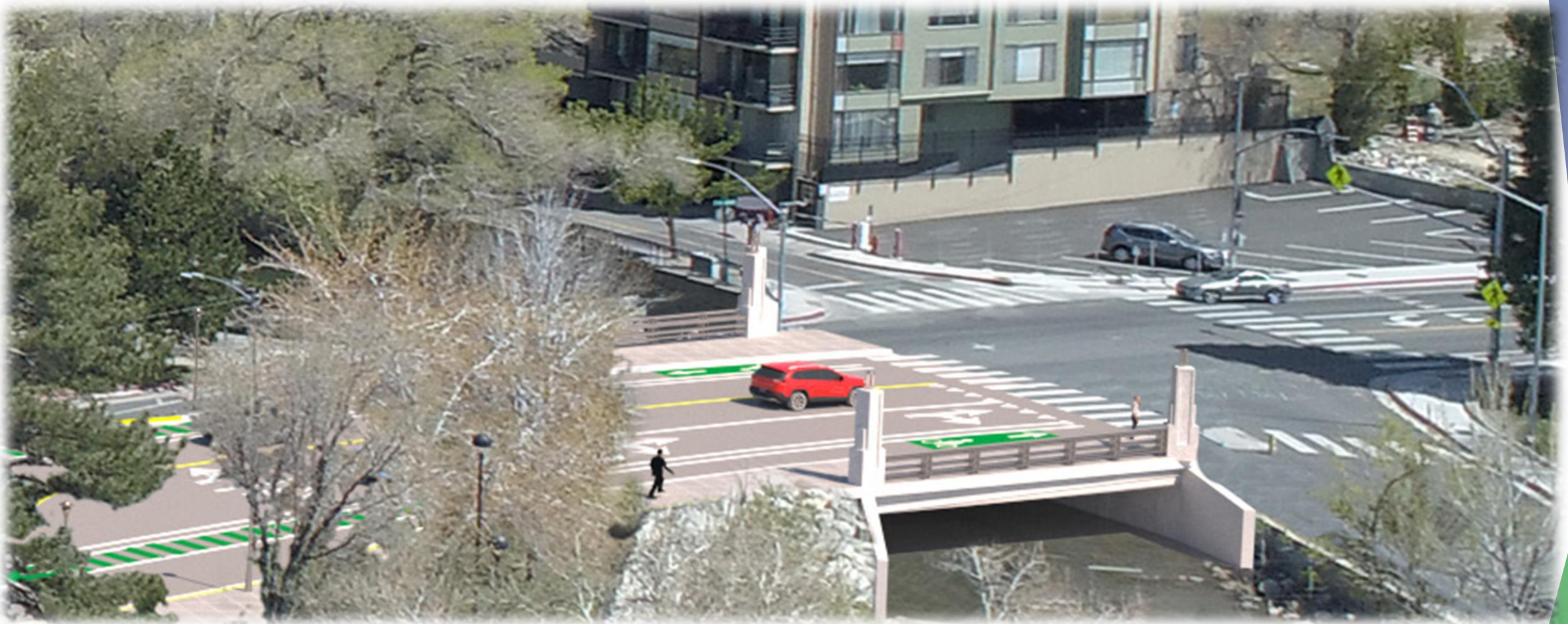


Option 2



Option 3

Pylon / Custom Lighting Design Progress

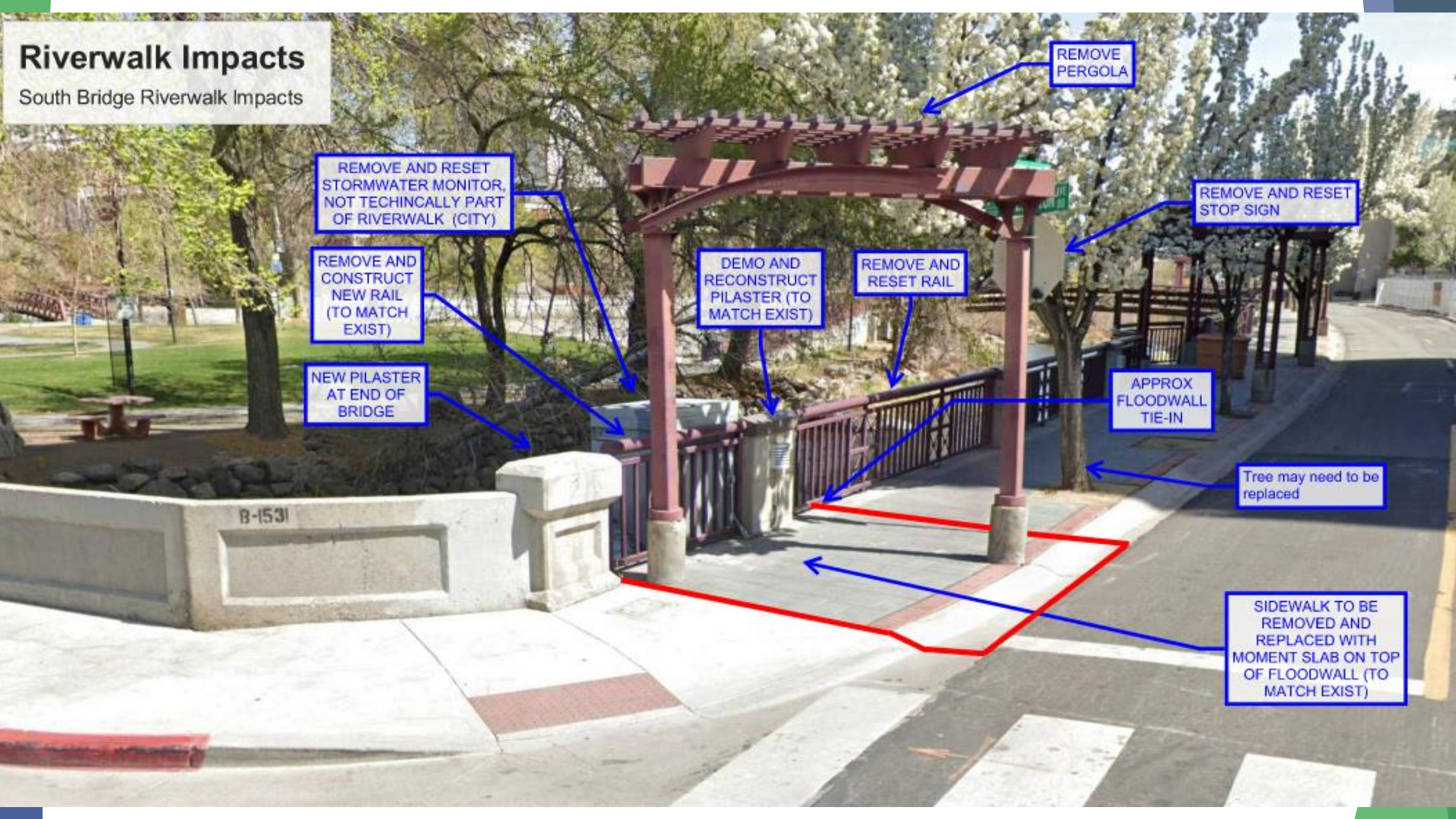


Pylon / Custom Lighting Design Progress



Riverwalk Impacts

South Bridge Riverwalk Impacts



REMOVE PERGOLA

REMOVE AND RESET STOP SIGN

REMOVE AND RESET STORMWATER MONITOR, NOT TECHINCALLY PART OF RIVERWALK (CITY)

REMOVE AND CONSTRUCT NEW RAIL (TO MATCH EXIST)

DEMO AND RECONSTRUCT PILASTER (TO MATCH EXIST)

REMOVE AND RESET RAIL

APPROX FLOODWALL TIE-IN

NEW PILASTER AT END OF BRIDGE

Tree may need to be replaced

B-1531

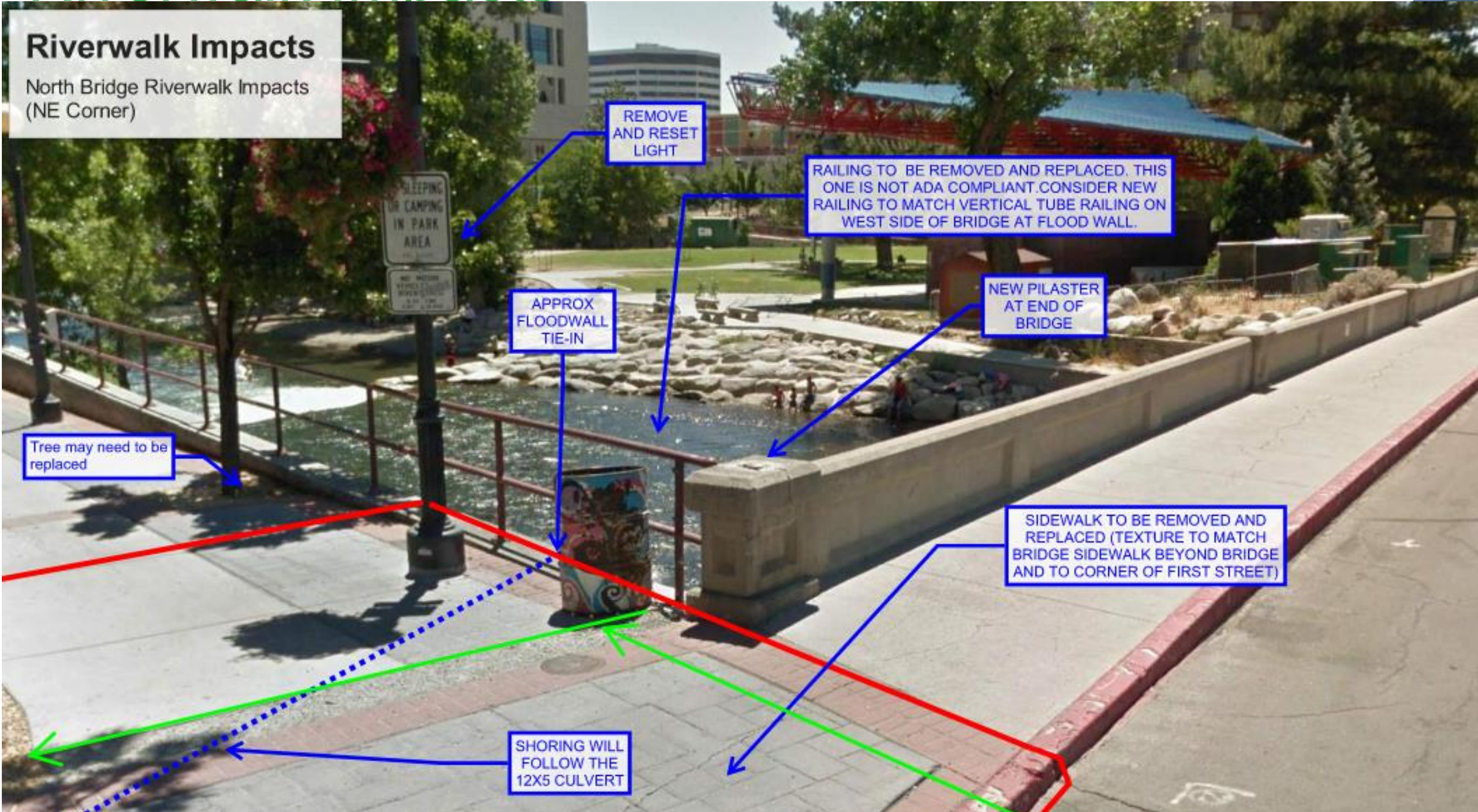
SIDEWALK TO BE REMOVED AND REPLACED WITH MOMENT SLAB ON TOP OF FLOODWALL (TO MATCH EXIST)

Riverwalk Impacts



Riverwalk Impacts

North Bridge Riverwalk Impacts
(NE Corner)



REMOVE AND RESET LIGHT

RAILING TO BE REMOVED AND REPLACED. THIS ONE IS NOT ADA COMPLIANT. CONSIDER NEW RAILING TO MATCH VERTICAL TUBE RAILING ON WEST SIDE OF BRIDGE AT FLOOD WALL.

NEW PILASTER AT END OF BRIDGE

SIDEWALK TO BE REMOVED AND REPLACED (TEXTURE TO MATCH BRIDGE SIDEWALK BEYOND BRIDGE AND TO CORNER OF FIRST STREET)

SHORING WILL FOLLOW THE 12X5 CULVERT

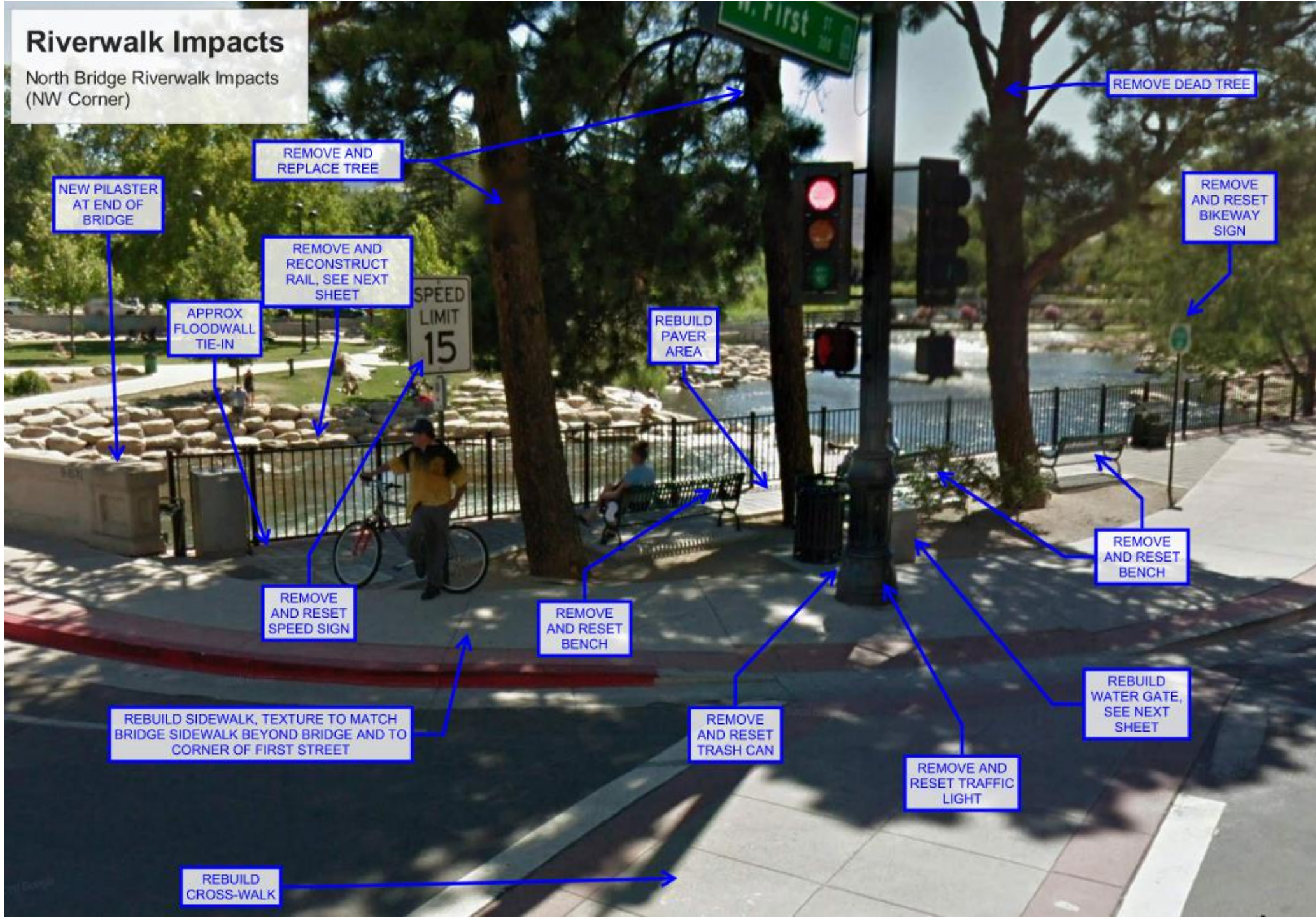
APPROX FLOODWALL TIE-IN

Tree may need to be replaced

SLEEPING OR CAMPING IN PARK AREA

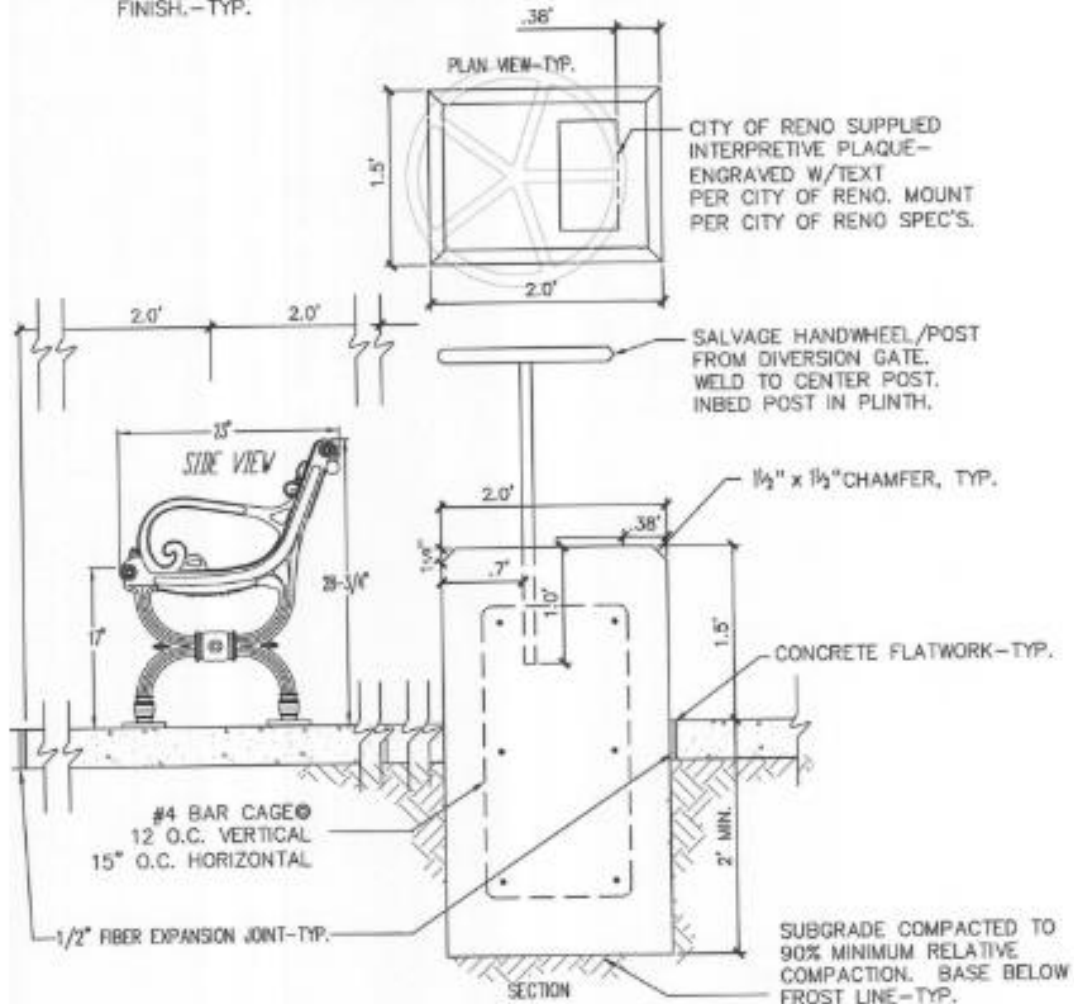
Riverwalk Impacts

North Bridge Riverwalk Impacts
(NW Corner)

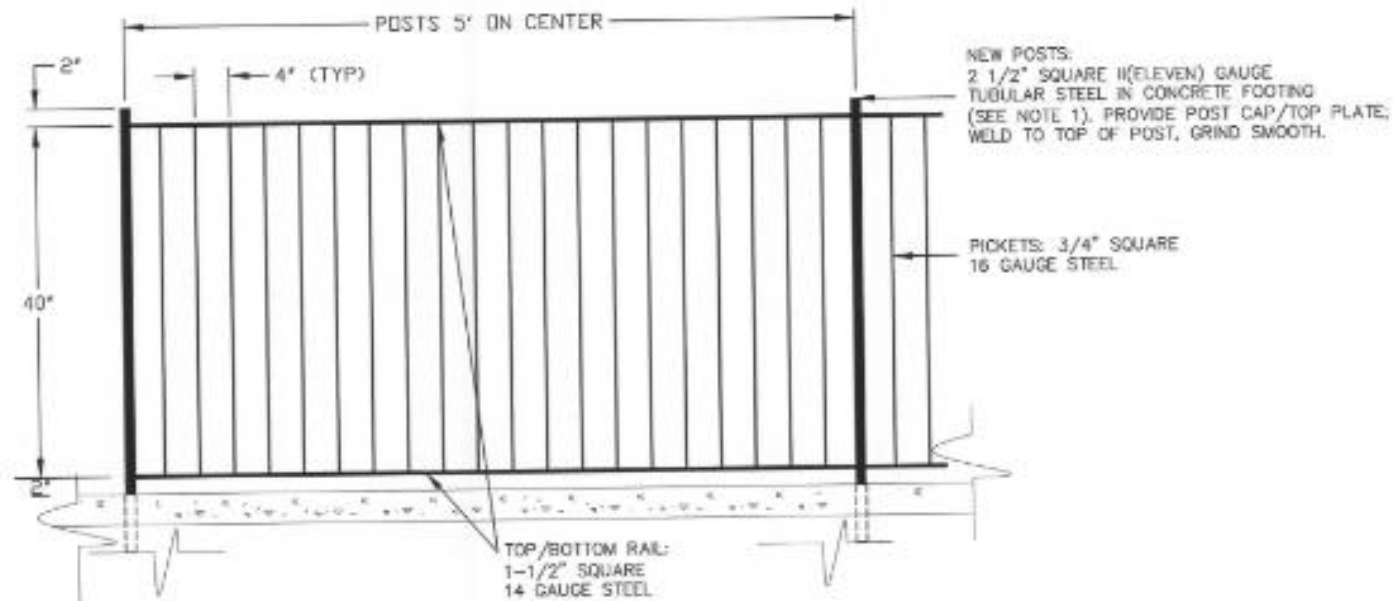


CONCRETE NOTES:

1. CONCRETE REINFORCING SHALL CONSIST OF COLLATED, FIBRILLATED POLYPROPYLENE FIBERS AS MFD. BY FIBERMESH OR APPROVED EQUAL. ADD 1 1/2 LBS. FIBERMESH PER CUBIC YARD OF CONCRETE.
2. CONCRETE SHALL BE NATURAL COLOR W/MEDIUM SANDBLAST FINISH.-TYP.



C BENCH BASE/PLINTH DETAIL
SCALE: 1"=1'

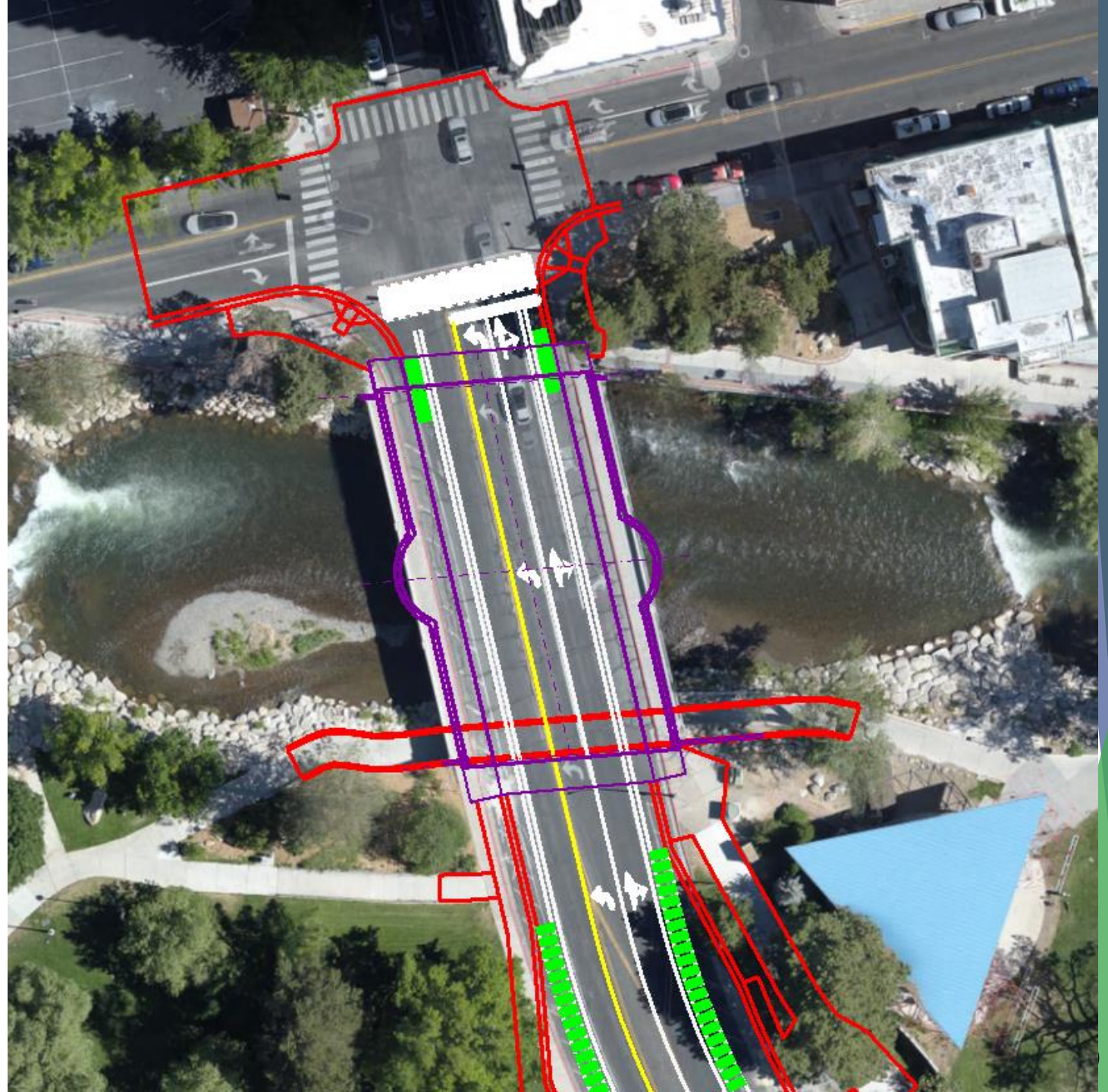


- NOTE:
1. ALL STEEL TO HAVE POWDERCOAT BLACK FINISH. FOOTING CONDITIONS PER STRUCTURAL ENGINEER'S DRAWINGS, SEE $\frac{5}{S2}$ $\frac{6}{S2}$
 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.

D REPLACEMENT DETAIL, PAGE L4
NOT TO SCALE

Roadway Design Updates

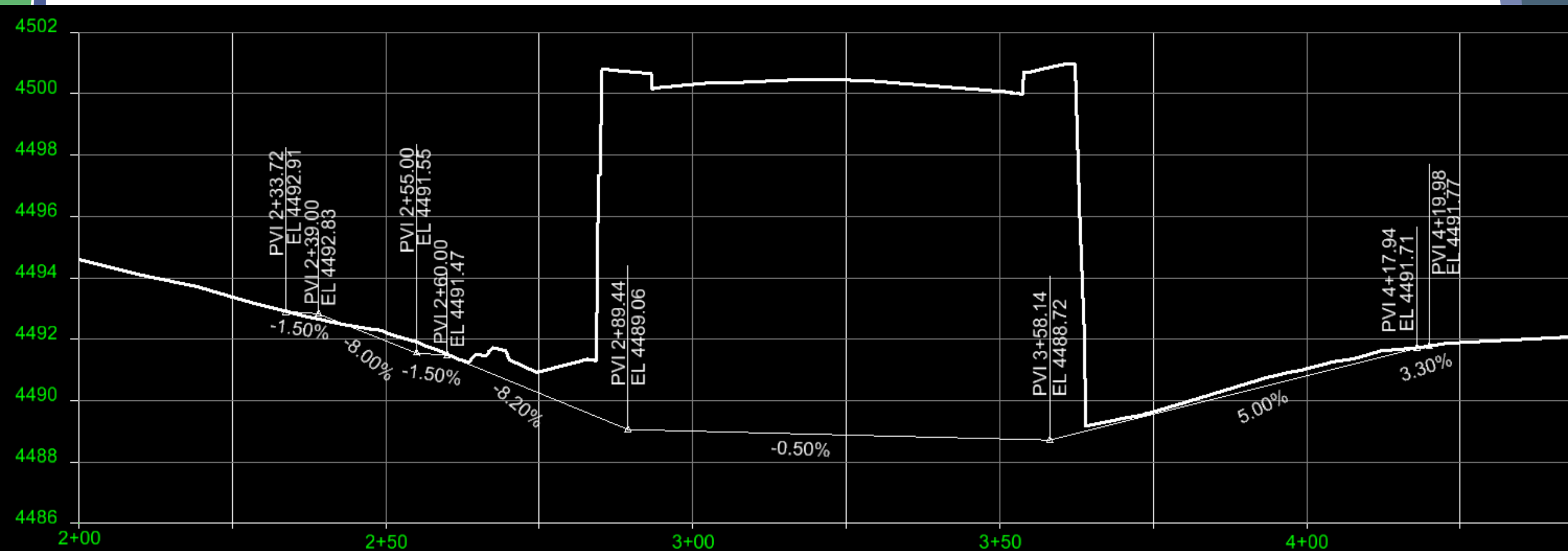
- ▶ North Bridge
 - ▶ Path Under North Bridge Tie-In Locations
- (See Path Profile Next Page)



Roadway Design Updates

- ▶ North Bridge

- ▶ Path Under North Bridge - Profile



Roadway Design Updates

- ▶ North Bridge
 - ▶ Path Under North Bridge - Existing Trench Drain



Roadway Design Updates

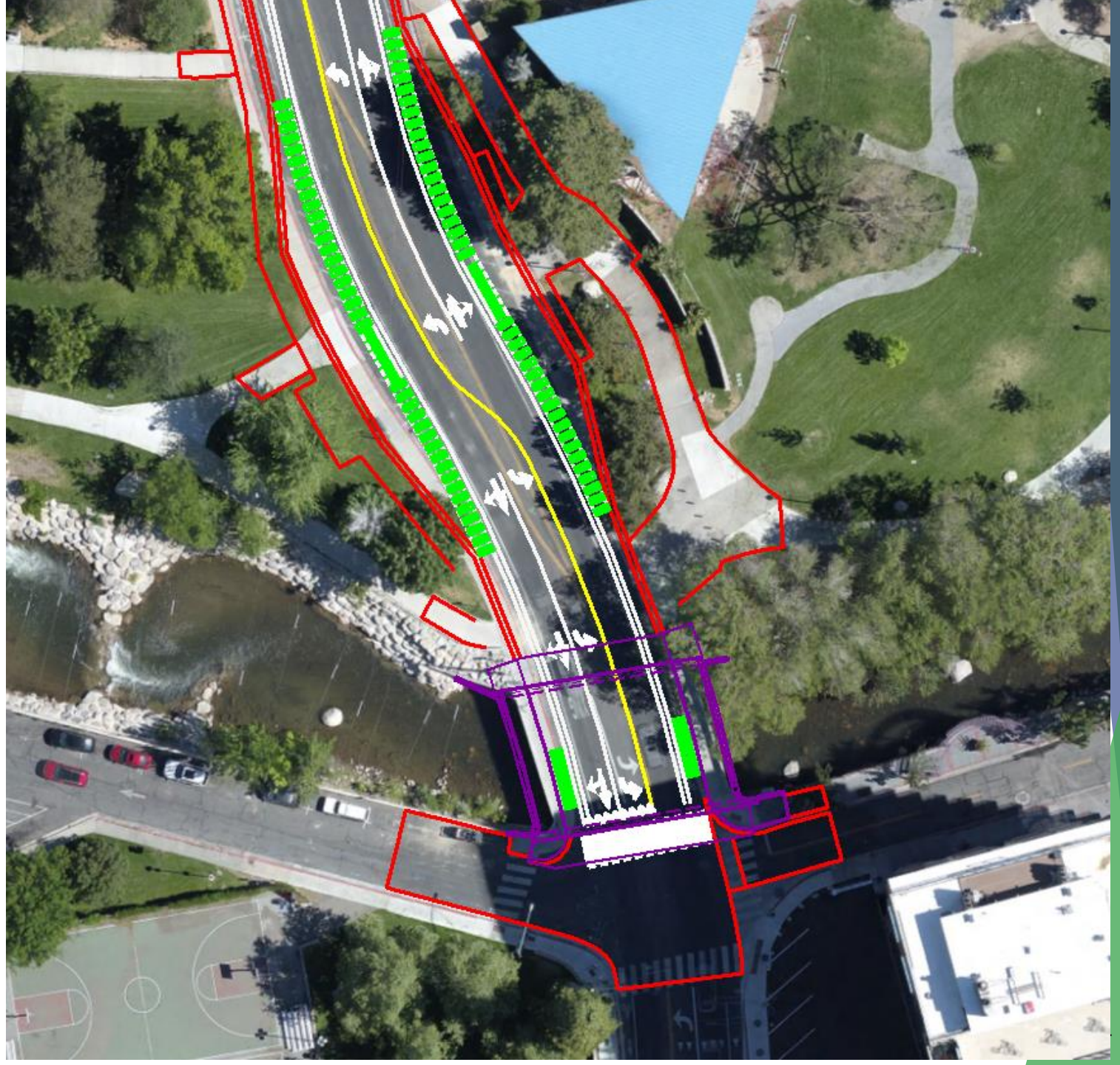
- ▶ North Bridge
 - ▶ Path Under North Bridge - Existing Trench Drain Outlet Pipe with Flap



Roadway Design Updates

▶ South Bridge

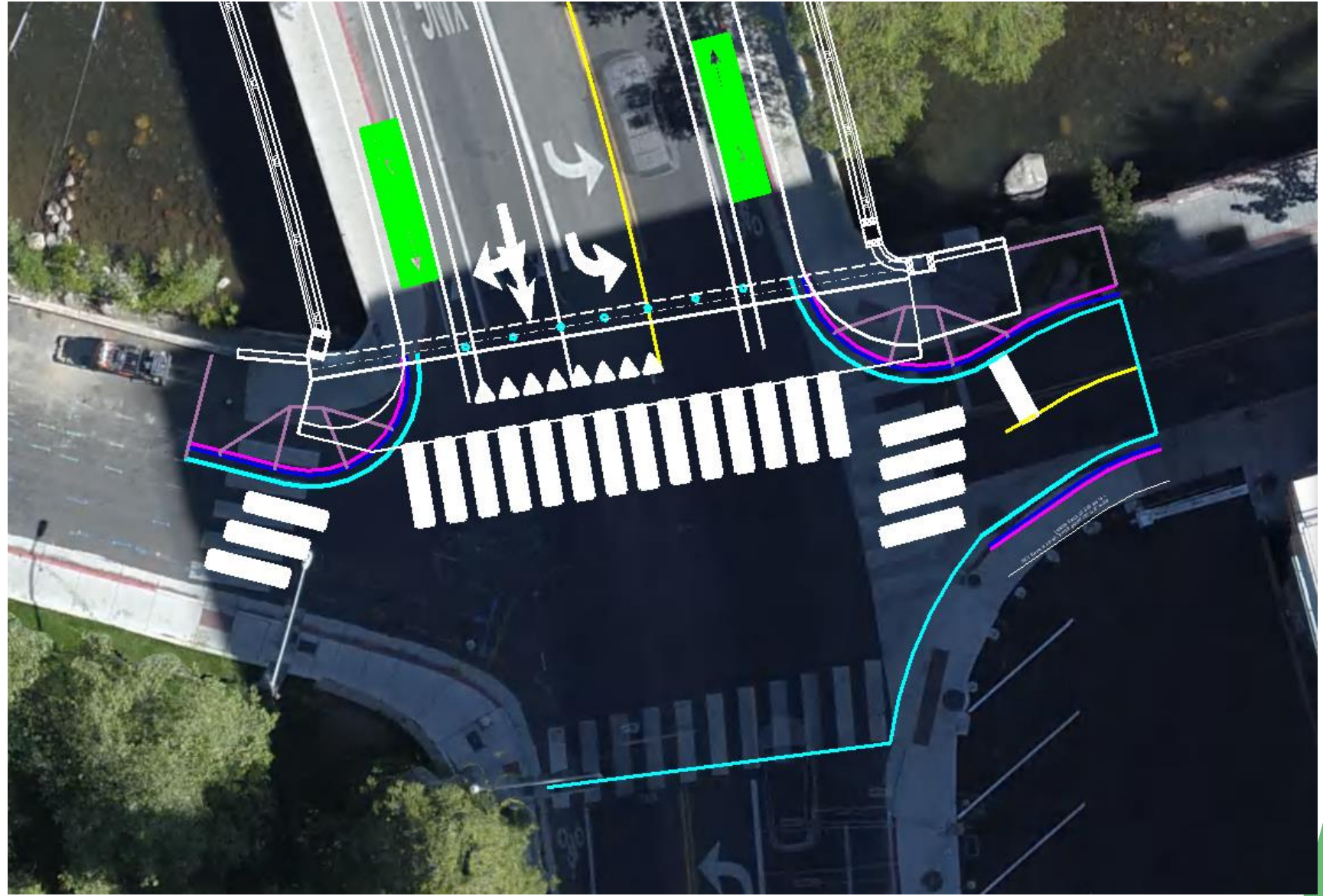
- ▶ Crosswalk north side of Island;
- ▶ Doesn't appear can accommodate ramps - rebar w/in bridge section



Roadway Design Updates

- ▶ South Bridge

- ▶ WIP Sidewalk Bulb-outs to accommodate crosswalk at north side of Island Ave

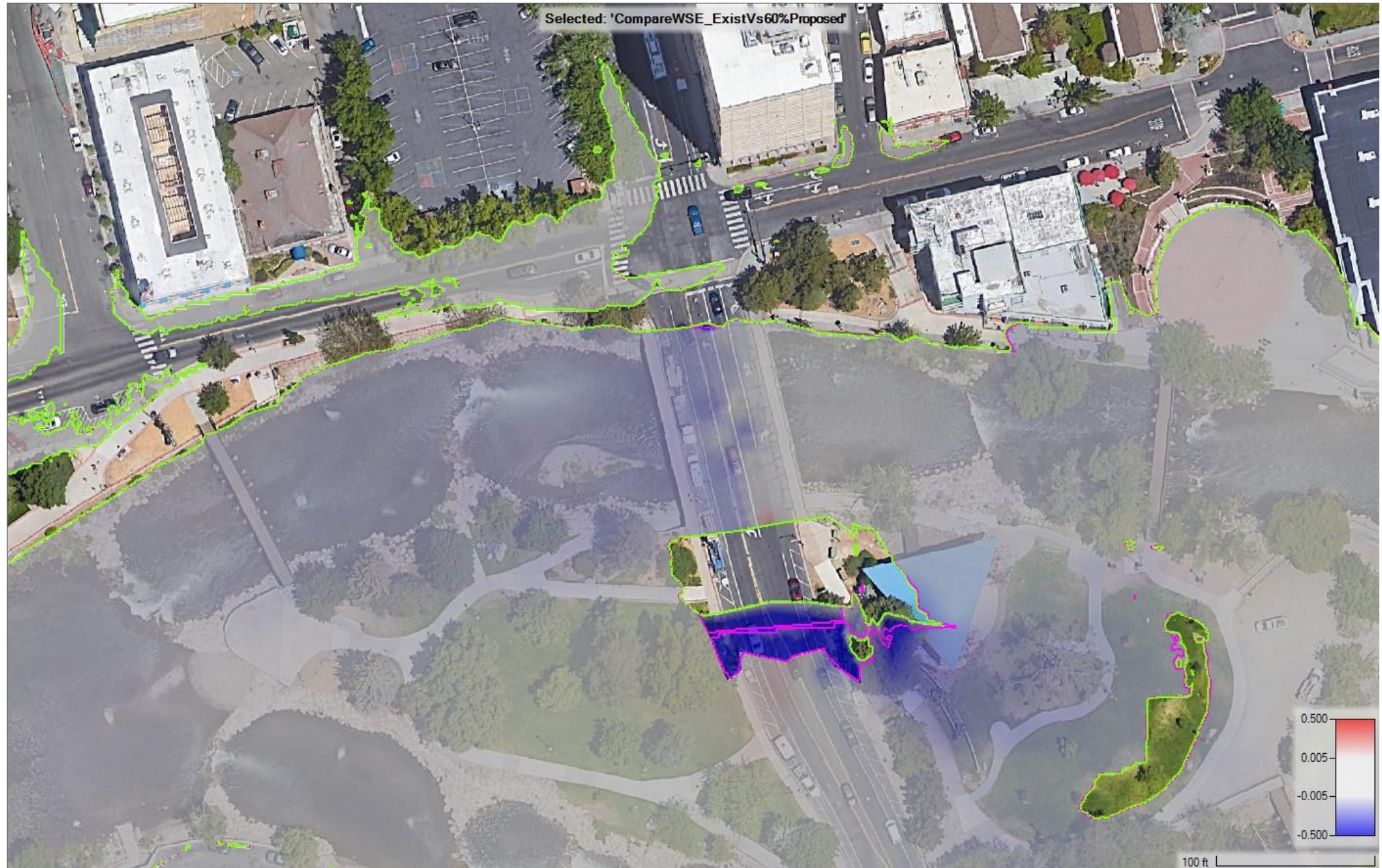


Hydraulic Design Updates

- ▶ CTWCD / USACE Storm Event (14,000 cfs)



Existing vs. 60% Design(North) CTWCD 14,000 cfs:



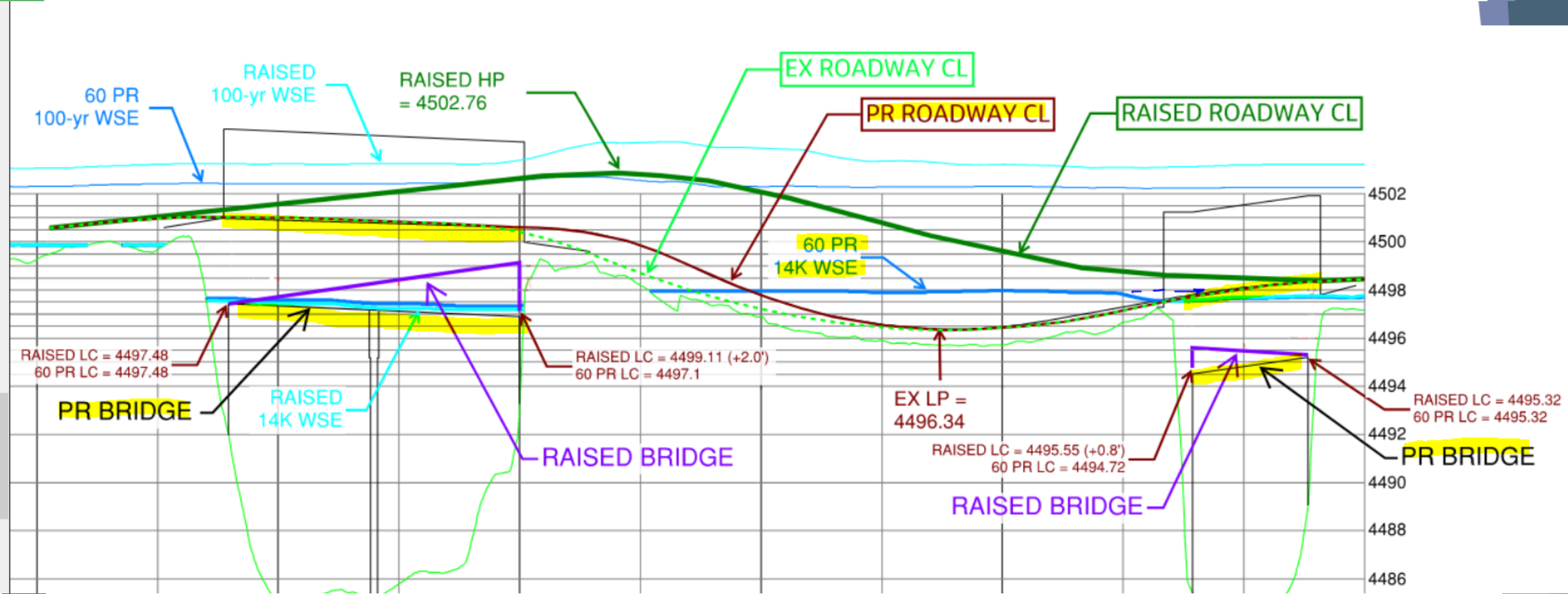
Existing vs. 60% Design(South) CTWCD 14,000 cfs:



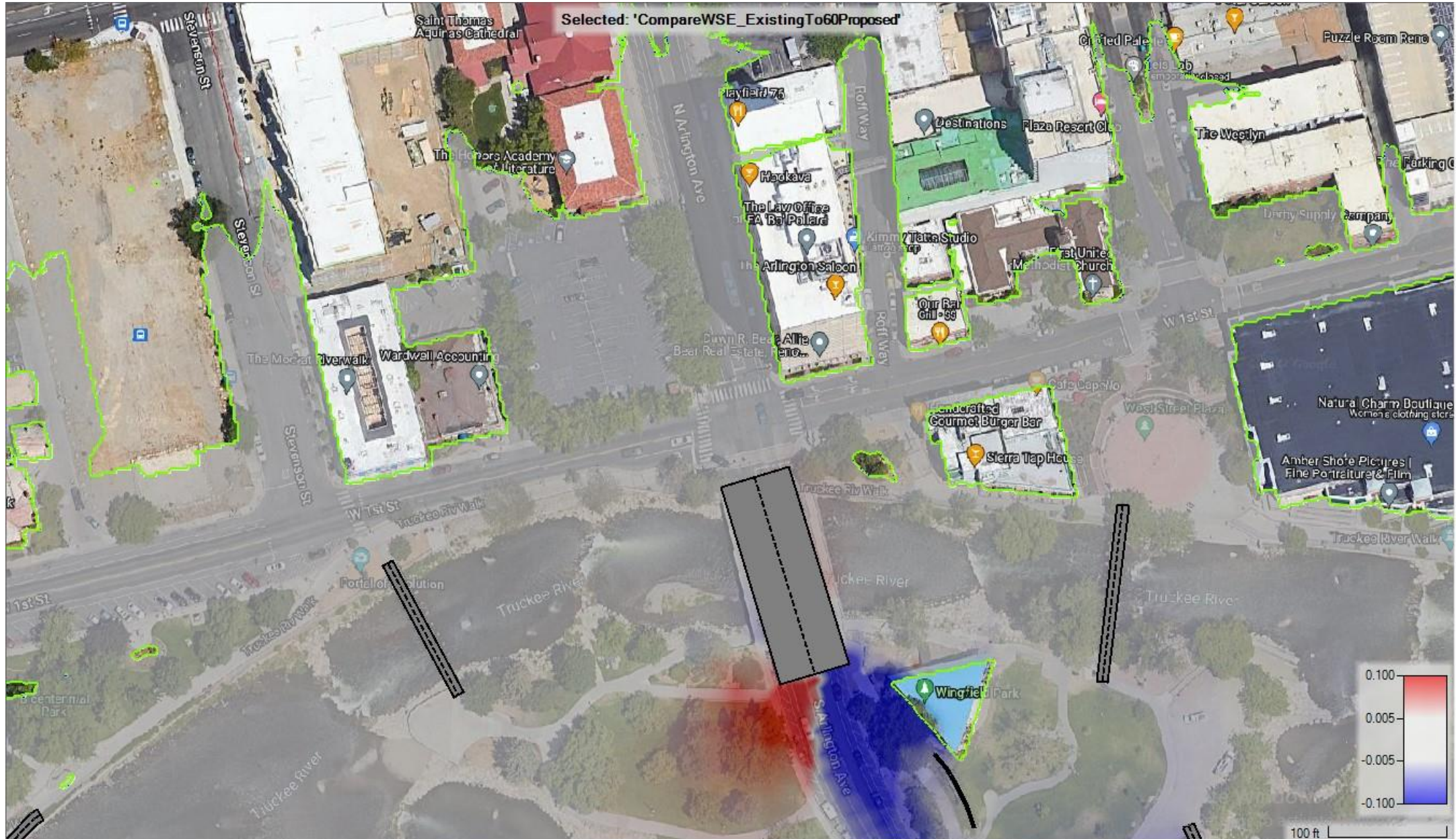
Modeling Discussion - CTWCD 14,000 cfs:

- Model Results – CTWCD 14,000 cfs
 - Existing Conditions
 - Confirmed to group that CTWCD district model is a 1D-2D mesh in the vicinity of Arlington Avenue.
 - Existing WSE for 14,000 cfs is approximately 4497.5' to 4497.8' at the upstream side of the north bridge and approximately 4497.6' to 4497.8' at the upstream side of the south bridge
 - Flows cross Arlington Avenue at the low point between the two bridges and at least a portion of the south bridge is inundated during a 14,000 cfs flow event.
 - 60% Design vs. Existing Conditions
 - Flooding at W. First Street intersection is result of water getting out of bank farther upstream along Riverside Drive.
 - Green delineation = existing conditions Pink delineation = 60% proposed design
 - WSE for proposed 60% design is 0 to 0.1' lower than existing conditions at the upstream side of the bridges. Kayla stated that the USACE concerns are public safety and want to ensure there is not water on the roadway.
 - The **bridge deck of the north bridge is dry** with the 60% proposed design
 - The bridge deck of the **south bridge will not be dry** because, as occurs during existing conditions, the profile of Arlington Avenue has a low point through Wingfield Park just north of the south bridge and **water will encroach onto the south bridge deck as it flows through the park and across Arlington Avenue** at this location.

Modeling Discussion - CTWCD 14,000 cfs:

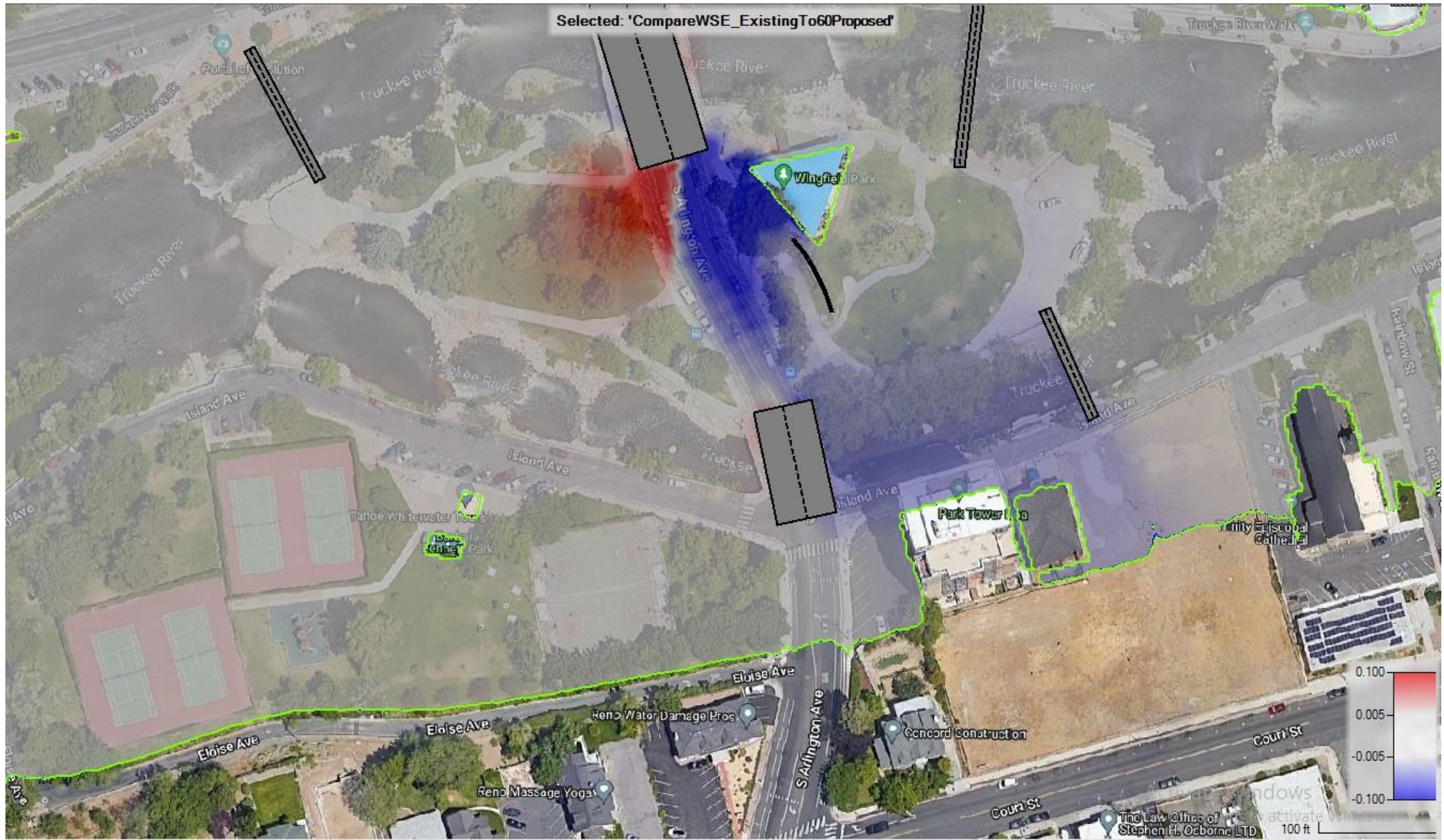


TRFMA 100-Yr Existing vs. Proposed

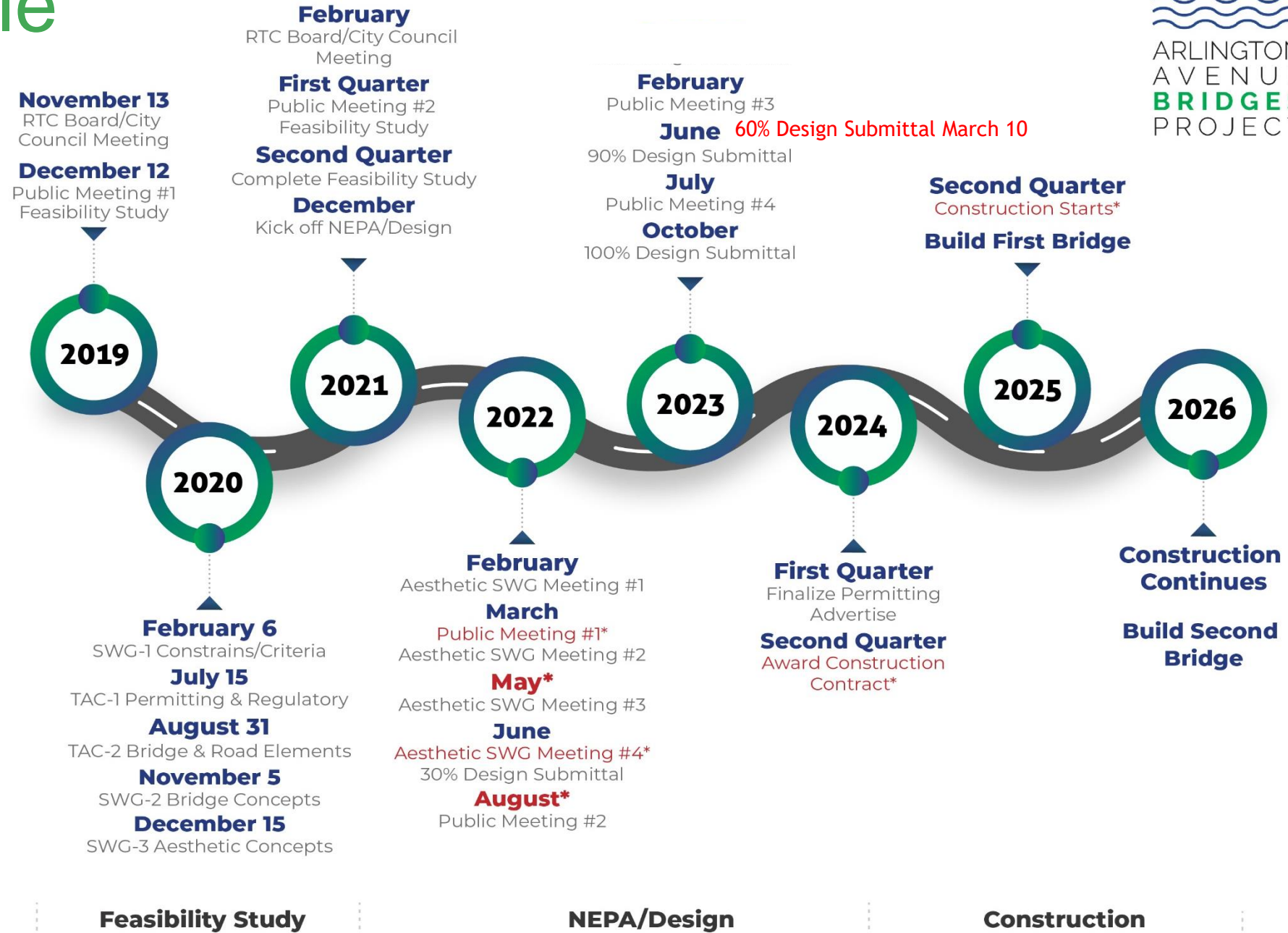


TRFMA 100-Yr

Existing vs. Proposed



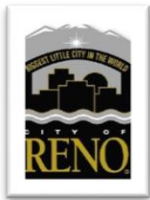
Schedule



* Schedule changes highlighted in red

Thank You for Participating!

jtortelli@rtcwashoe.com



*Building A Better Community
Through Quality Transportation.*
rtcwashoe.com



PK Electrical, Inc.



Extra Slides For Reference As Needed

North End

TMWA (Thomas Speer, Steve Volk)

- 8-in Cast Iron within W. 1st Street intersection
- TMWA to replace/realign prior to construction; currently under design
- Protect in Place During Construction - Specification Requirements
- West of Intersection:
8-in Ductile Iron
w/ 2-in HDPE lateral
- East of Intersection:
8-in Transite
- North of Intersection:
8-in Cast Iron along west side
- Assume Park Irrigation Line from this 2-in HDPE lateral



South End

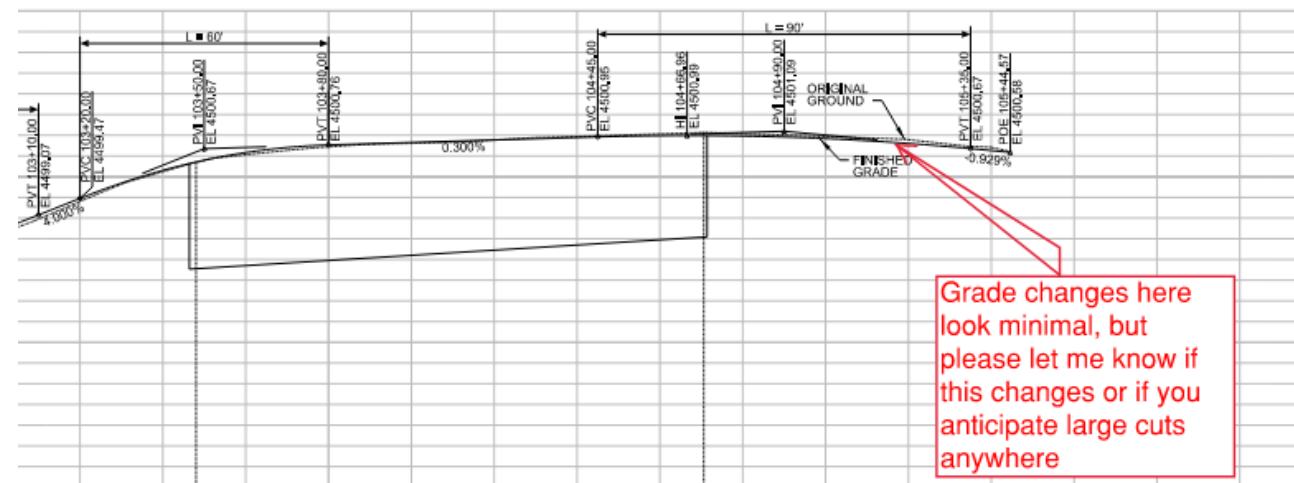
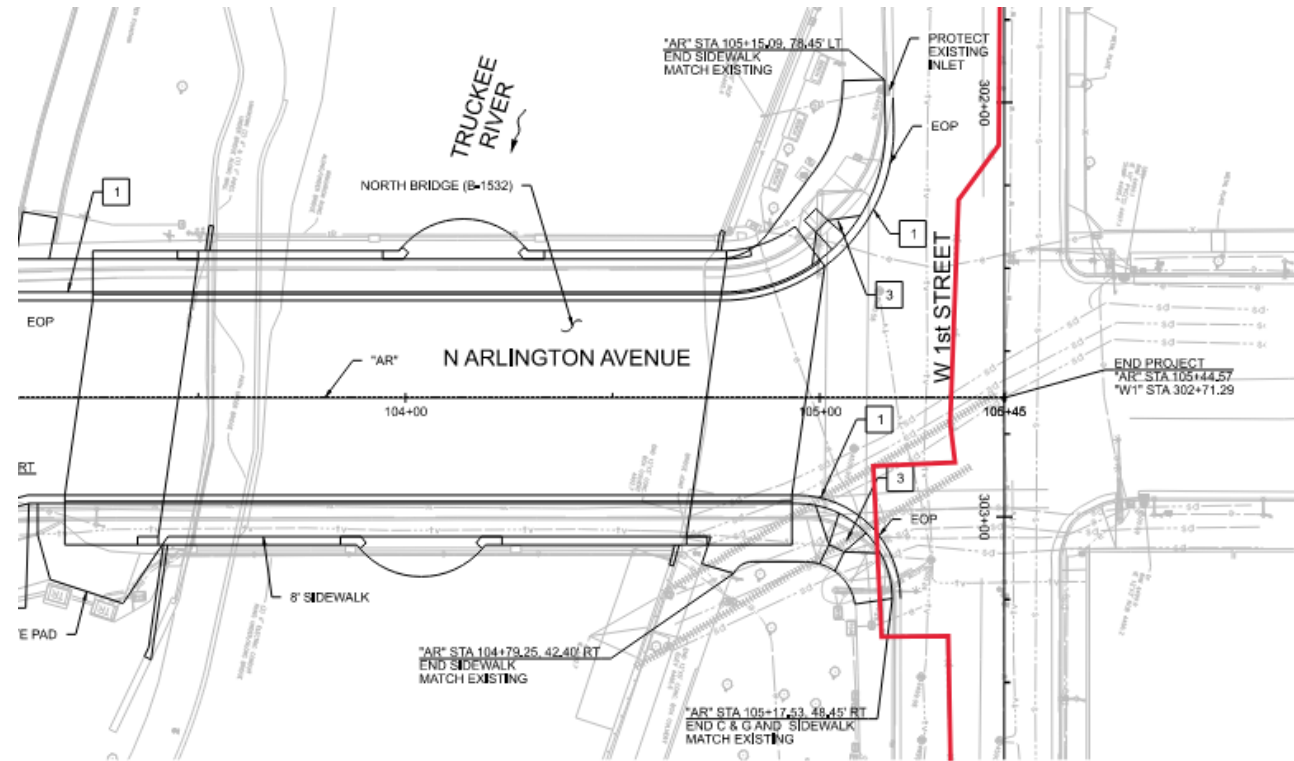
TMWA

- 8-in C900 Retired in Place within Island Ave intersection - Contractor Allowed to Remove During Construction of South Abutment
- 8-in Ductile Iron Across Intersection
- West of Intersection- 2 Lines: 6-in Transite & 8-in C900
- East of Intersection- 1 Line: 8-in C900
- South of Intersection: 6-in Cast Iron and 6-in Transite Retired in Place
- Along Arlington: 6-in Cast Iron retired in place; 8-in C900 along western side



NVE - GAS (Becca Epstein)

- ✓ Existing along W. 1st St.
- ✓ Protect in Place w/ Excavation for Bridge Abutment - Requirements for specifications



Grade changes here look minimal, but please let me know if this changes or if you anticipate large cuts anywhere

North Bridge

NVE - ELECTRIC (Benjamin Eide-Hughes)

- Underground the OH-E
- Remove/Replace UG Primary from Vault to Transformer Through New Bridge (2-4" Conduits)
- Streetlights and Services in this area directly serve the customer - Apply for Formal Electrical Project: info@nvenergy.com

- PROTECT IN PLACE
 - LIMITS OF REMOVAL OF CURB AND GUTTER
 - SAWCUT (NO DIRECT PAVEMENT)
 - REMOVE AND REPLACE BOLLARD, IN-KIND
 - REMOVE OVERHEAD PEDESTRIAN WARNING SYSTEM
 - SEE BRIDGE PLANS FOR BRIDGE REMOVALS
 - REMOVE AND RESET BENCH
- GEND**
- LIMITS OF REMOVAL OF COMPOSITE SURFACE (APPROX 24" DEPTH)
 - LIMITS OF REMOVAL OF P,C,C,P, AND BASE (APPROX 16" DEPTH)
 - LIMITS OF REMOVAL OF COMPOSITE SURFACE (DEPTH VARIES) (SIDEWALK AND PATHS)

NVE ELECTRIC COMMENTS:
SEE COMMENTS BELOW FOR STREET LIGHT POLES AND OH SERVICE WIRE AND PRIMARY CABLE.

PROTECT IN PLACE SL L311604 OR REMOVE/REPLACE FOR CONSTRUCTION?

REMOVE/REPLACE PRIMARY CABLE.

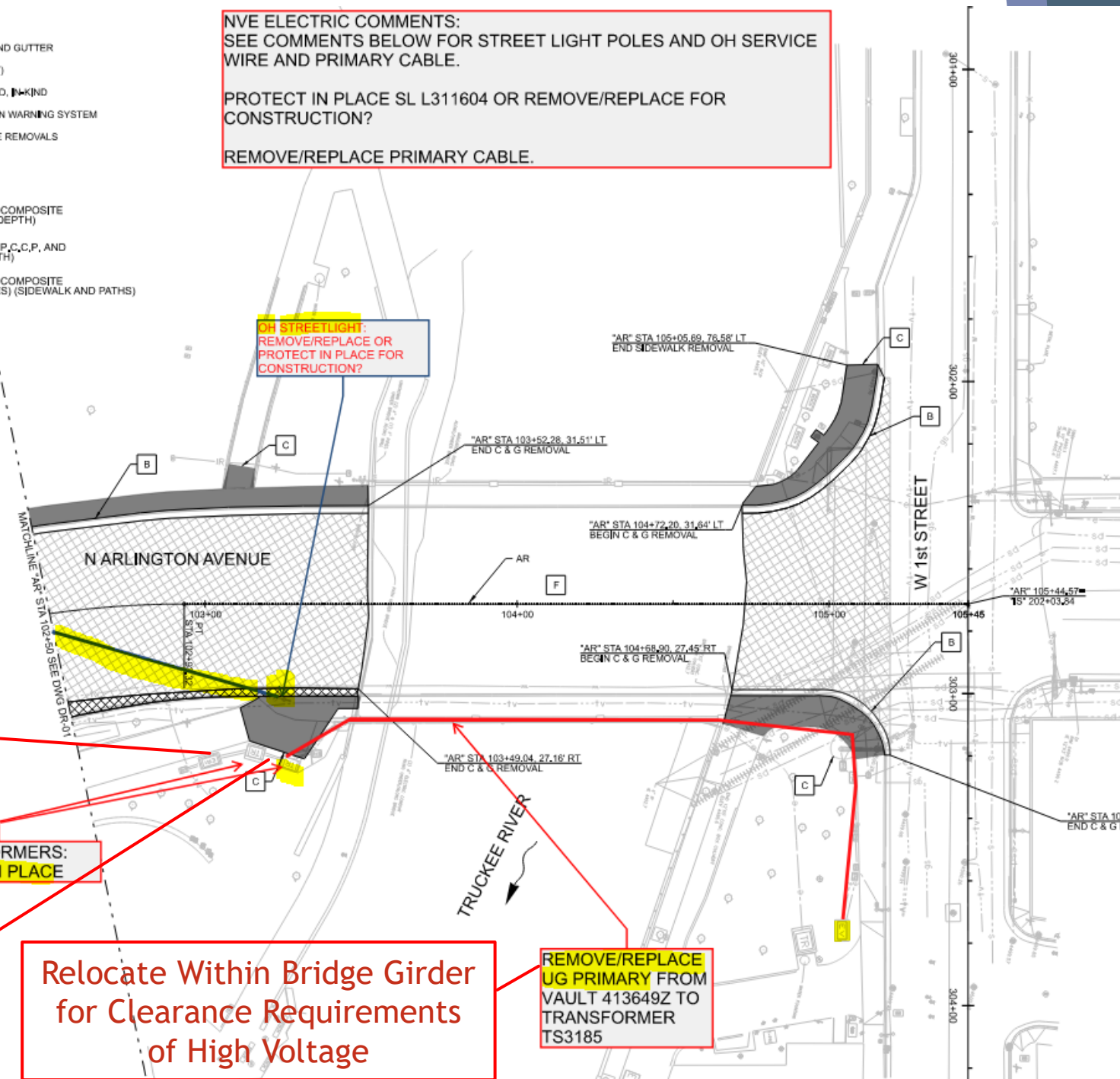
Houses City of Reno Meter(s)

2-TRANSFORMERS:
PROTECT IN PLACE

NVE Transformers (2)
Middle One is Empty - Can be removed or repurposed

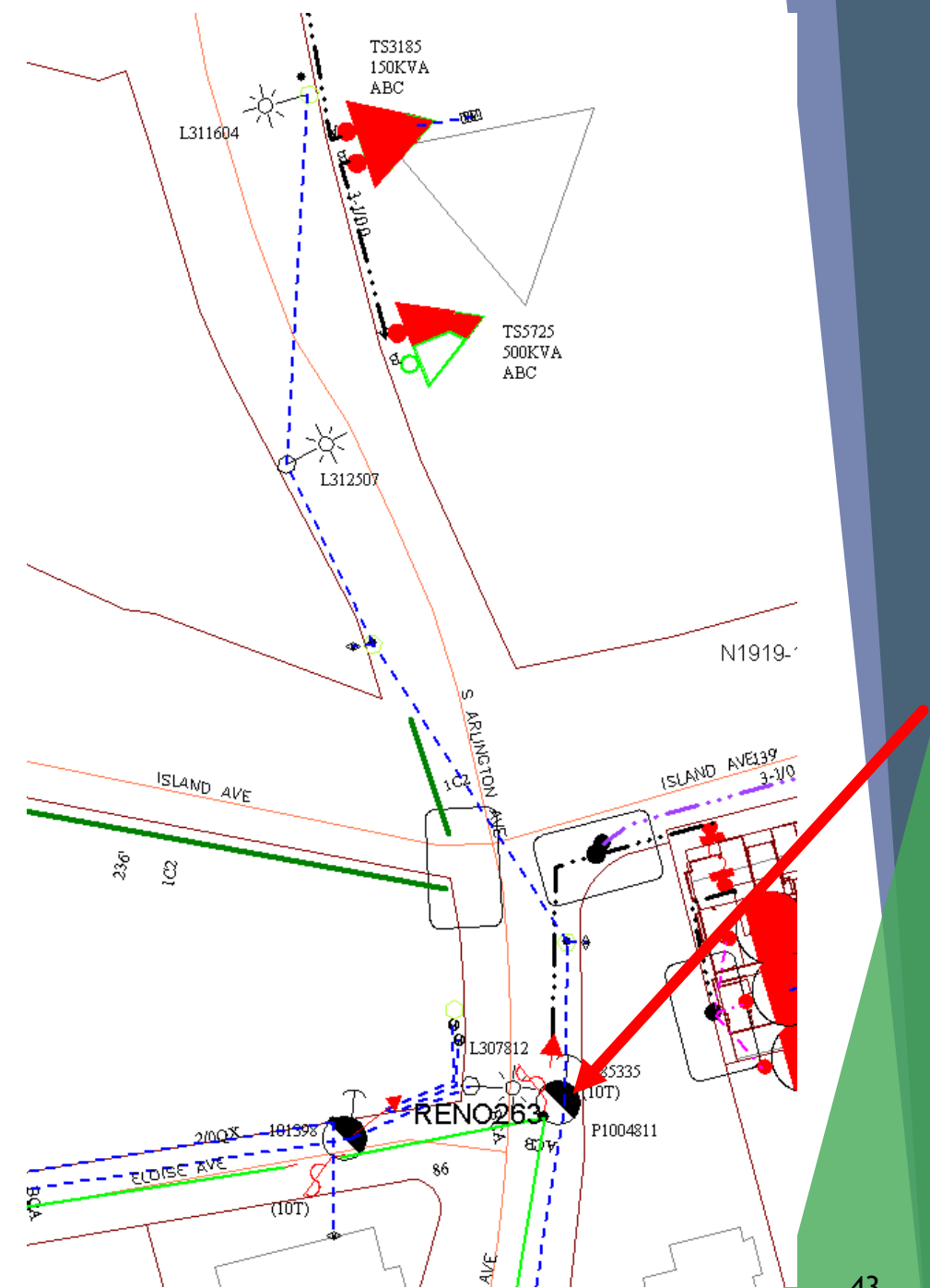
Relocate Within Bridge Girder for Clearance Requirements of High Voltage

REMOVE/REPLACE UG PRIMARY FROM VAULT 413649Z TO TRANSFORMER TS3185



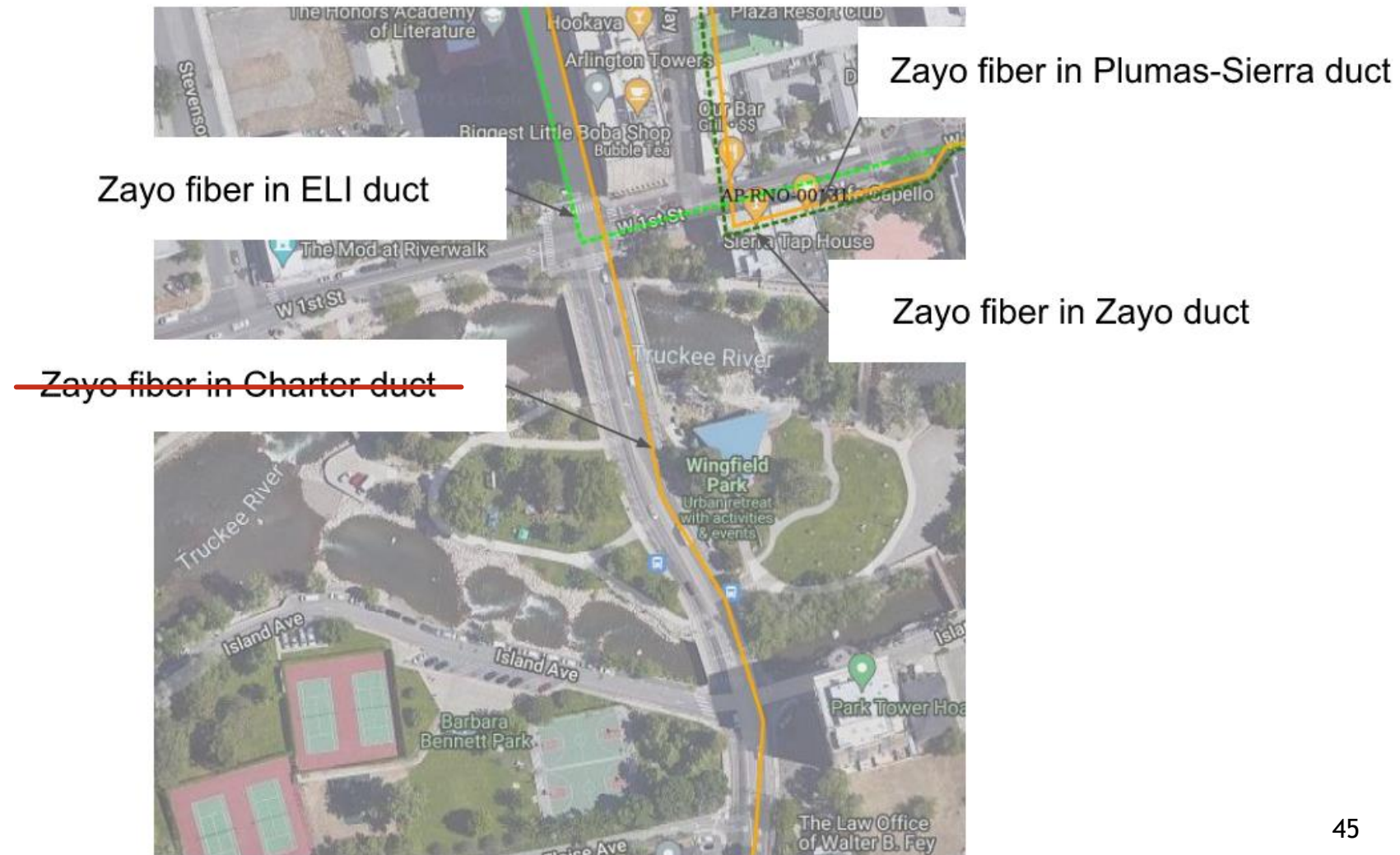
NVE - ELECTRIC

- Underground the existing Overhead
- Pole - P1004811 at end of Elsie Ave.



ZAYO (Gary Getchell, Robert Alford)

- * No Zayo Fiber in Charter Duct across South Bridge to Amphitheater
- * Zayo would like to have conduit across both bridges and along Arlington between bridges; 2-2" min



AT&T (Steve Lewis, Clifford Cooper)

Confirmed Existing:

Bank of 9 conduits across both north and south bridges

Design:

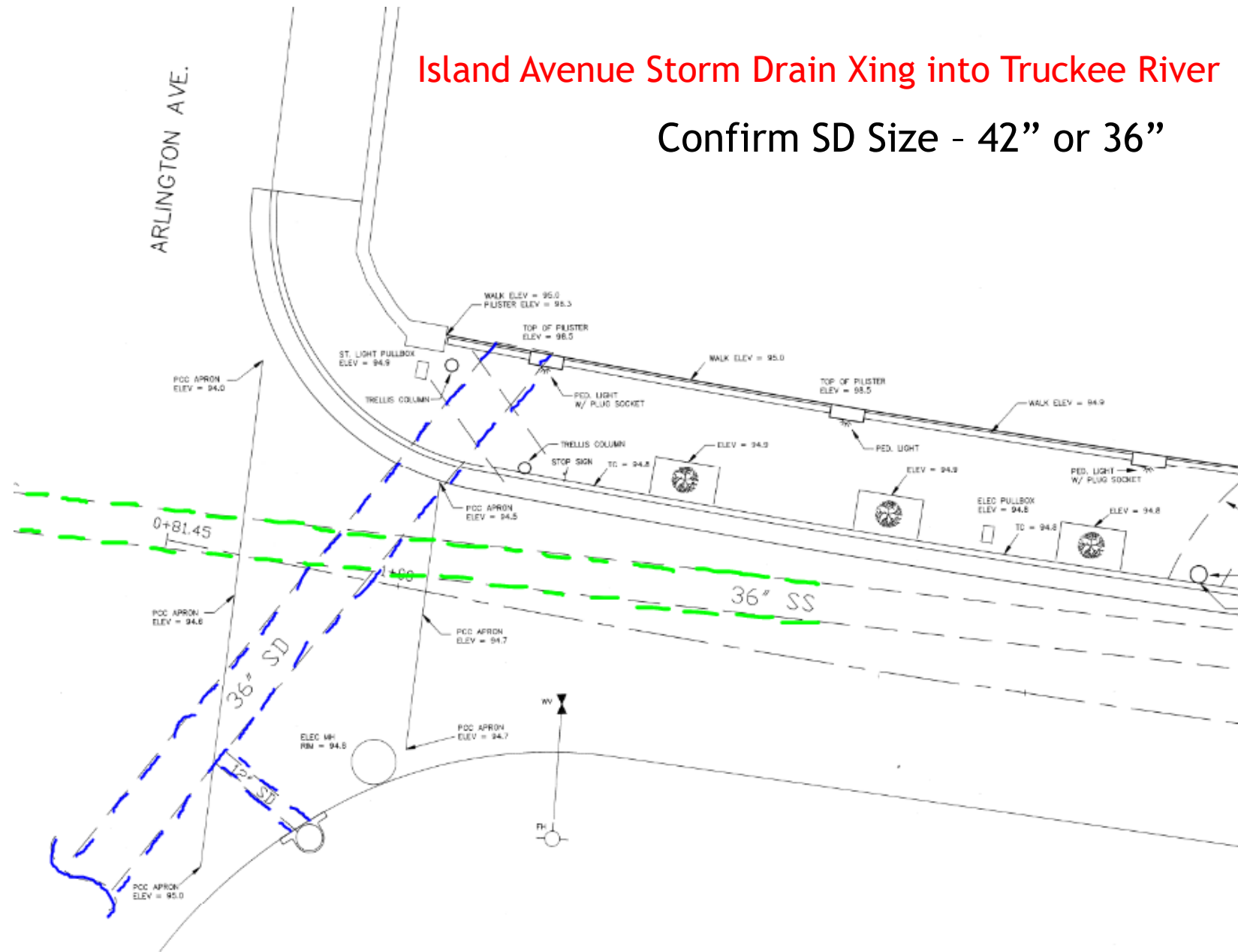
7-4" Conduits requested across both bridges and along Arlington



South Bridge / Floodwall

Island Avenue Storm Drain Xing into Truckee River

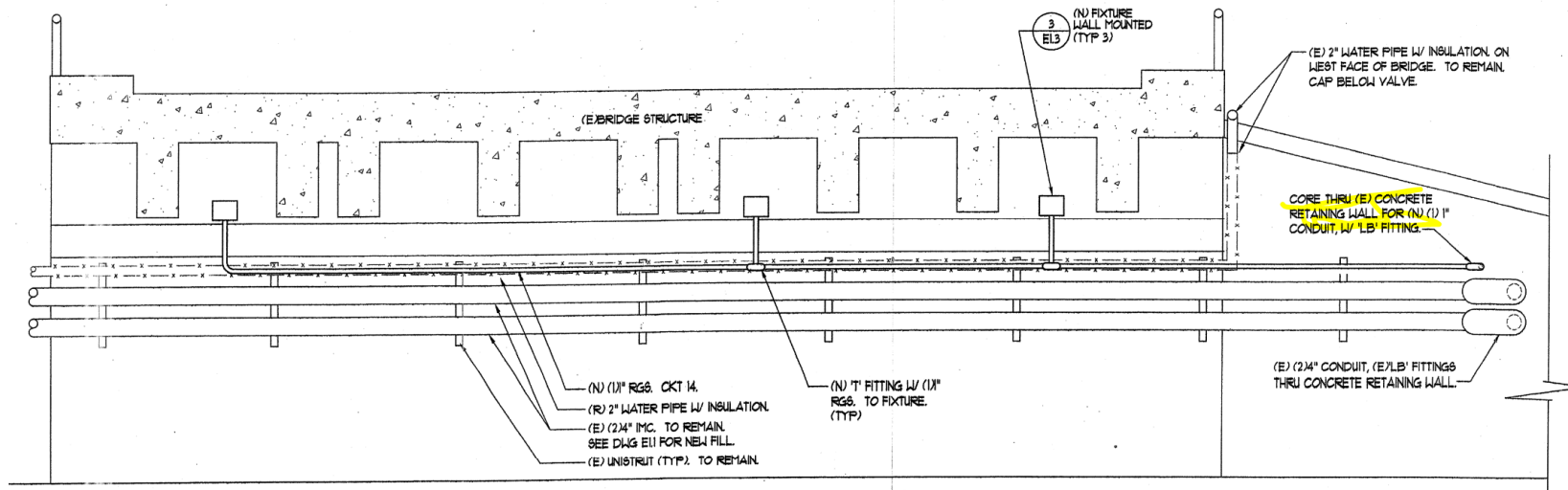
Confirm SD Size - 42" or 36"



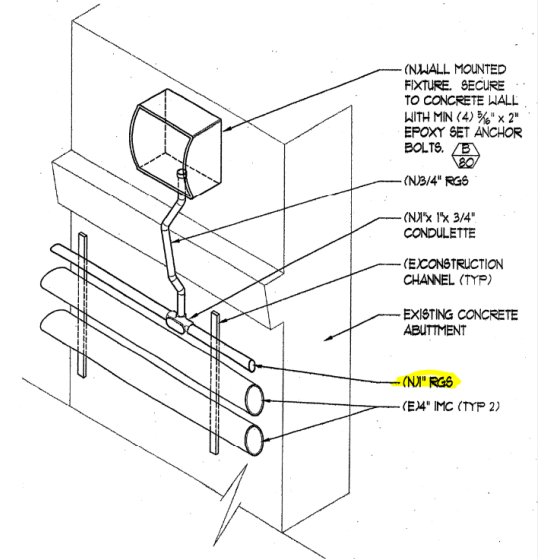
North Bridge

Conduit Along Path

- 1 - 1" Electrical Conduit:
Under bridge lighting?



2 ARLINGTON STREET BRIDGE - SOUTH ABUTMENT ELEVATION
NO SCALE



3 BRIDGE LIGHT DETAIL
NO SCALE

Public Meeting Survey Results

