

# Design and Environmental Study For



## ARLINGTON AVENUE BRIDGES REPLACEMENT



Design Review Committee Meeting #14 | June 13, 2023

# Purpose of Today's DRC Meeting:

- ✓ Utility Updates
- ✓ Environmental Updates
- ✓ 90% Design Updates
  - ✓ Pedestrian Circulation at Island Ave / Arlington Ave Intersection
    - ✓ New Ramp Design
    - ✓ Turning Movements
    - ✓ Sight Distance
  - ✓ Light Placement
  - ✓ Formliner
- ✓ Schedule
- ✓ CMAR
- ✓ Possible 1 Season Construction Schedule





## Follow Up Meetings

Charter: Tuesday 6/27 10:00 am (To confirm if only want 1 conduit)

City of Reno and PK Electric - Had Field Mtg Wed 5/31 1:00 pm

NV Energy: Follow up once have design needs determined

AT&T: Follow up once have NV Energy Design

Design: Looking at connectivity to existing facilities, vault/box structures outside of roadway and sidewalk

# Environmental Updates



# Environmental Updates

## NEPA Clearance

- ▶ **Section 106:**
  - ▶ No adverse effects to historic resources
  - ▶ Section 106 consultation for geotechnical investigations is complete.
  - ▶ SHPO review of project consultation documents is in progress.
- ▶ **Section 4(f):**
  - ▶ De minimis impact determination for Wingfield Park, Truckee River Whitewater Park, and Truckee Riverwalk is pending FHWA approval.
- ▶ **Section 7:**
  - ▶ USFWS concurrence received 4/17 for geotech drilling and project construction activities in the river (may affect, but is not likely to adversely affect the LCT or cui-ui)

## USACE Permits

- ▶ **Geotechnical Work**
  - ▶ Section 408 - expect authorization by July
  - ▶ Section 404 - submitted to USACE 4/18
  - ▶ Received Section 401 Water Quality Certification on 5/30
- ▶ **Project**
  - ▶ Section 408 - submitted by CTWCD to USACE - April 26
  - ▶ Section 404/401 - will submit later in design process.

# 90% Design



Pedestrian Circulation at Island Ave / Arlington Ave.

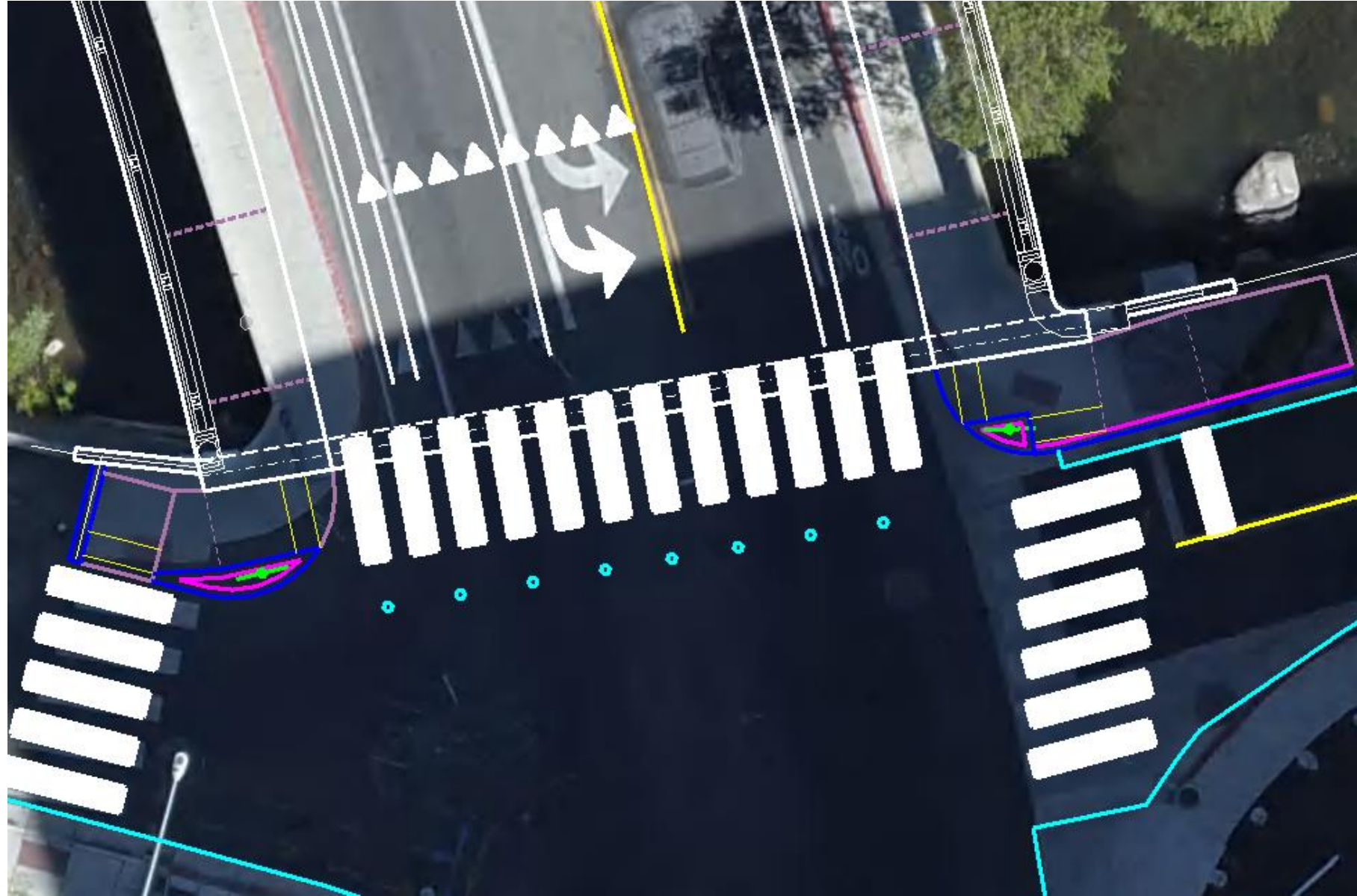
# 90% Design – Pedestrian Circulation

▶ City of Reno Mtg 6/9:

▶ -Type 3 Median Curb?

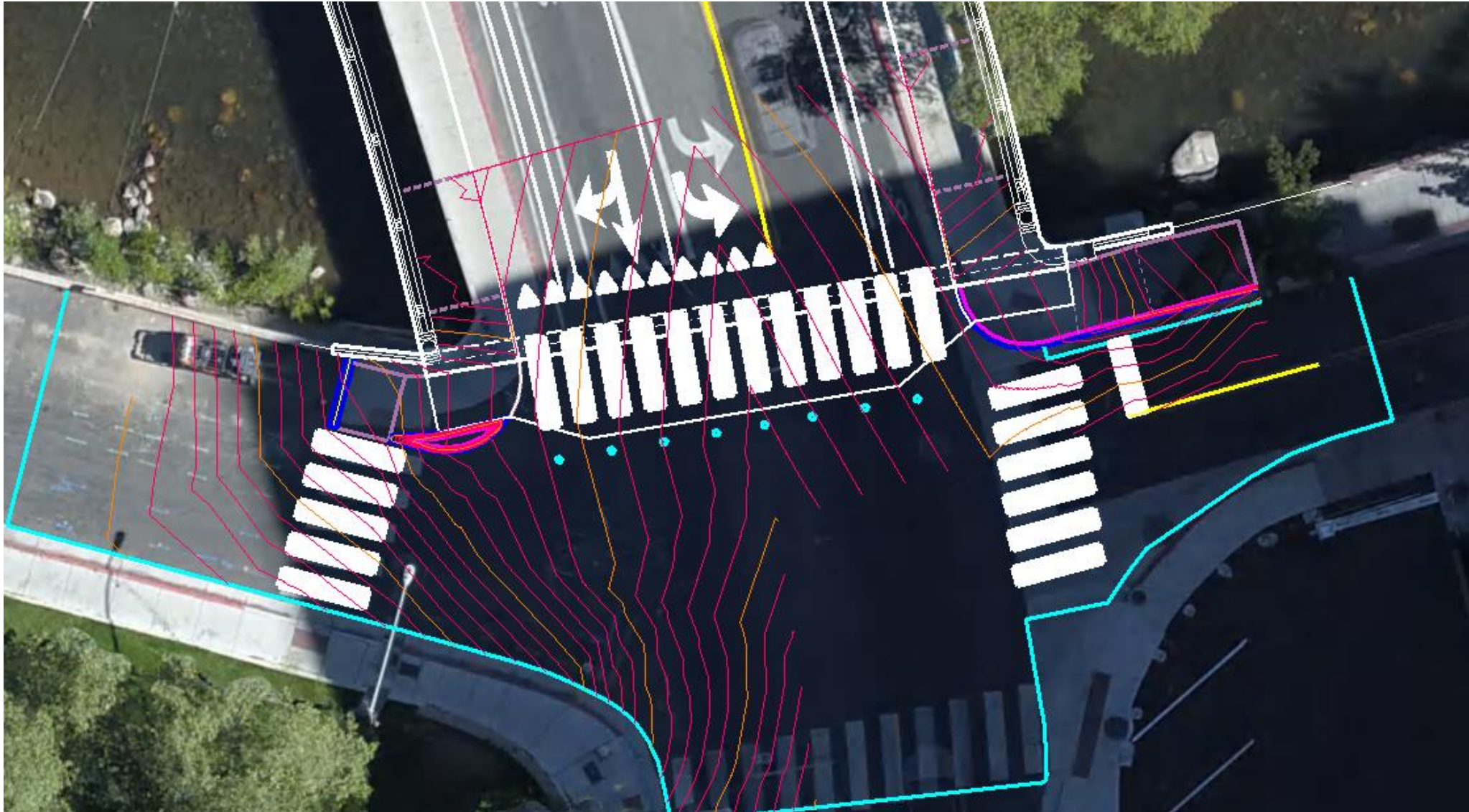
▶ -Taper Transition at Corners?

▶ RRFP Placement



# 90% Design – Pedestrian Circulation

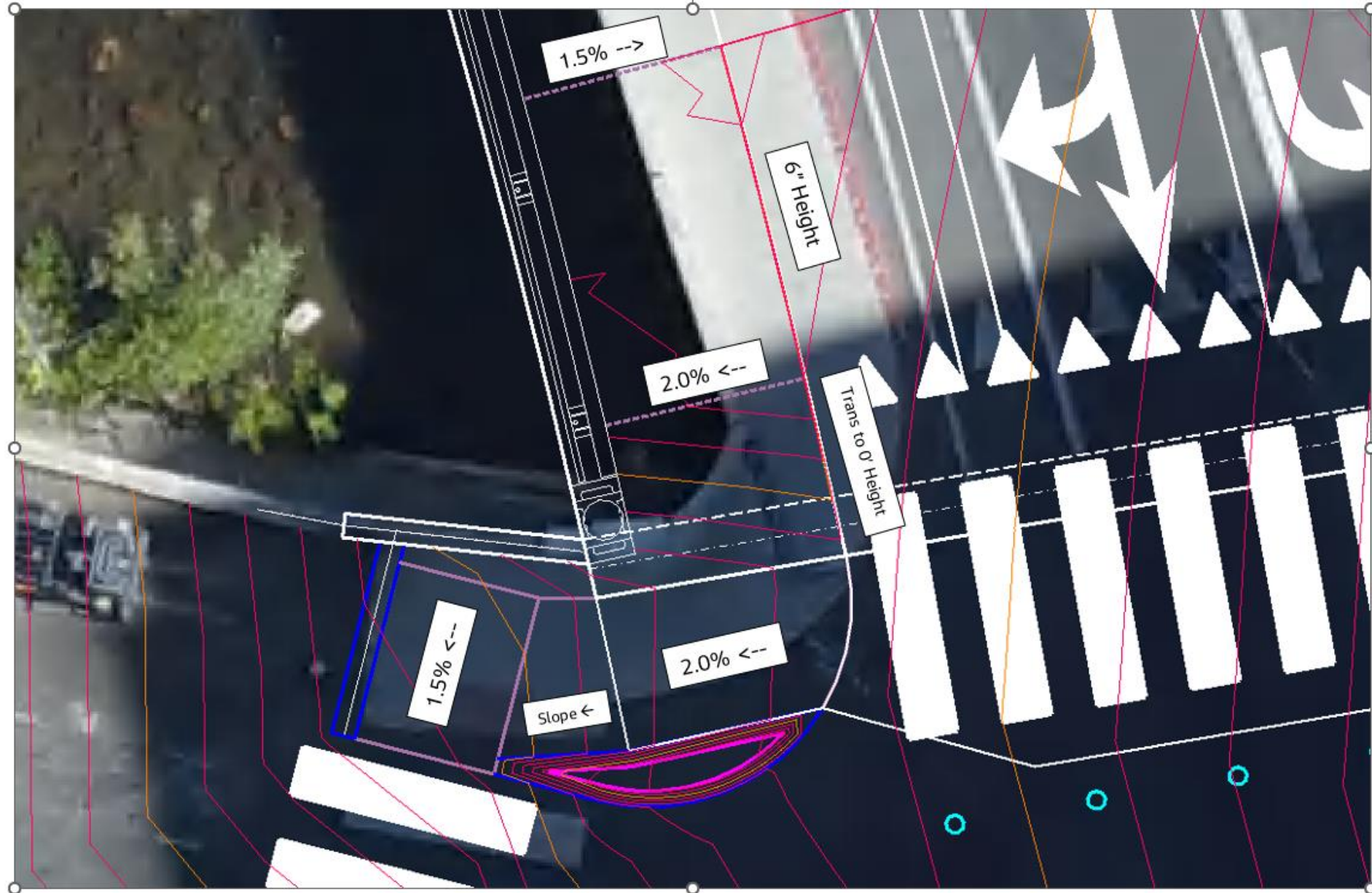
▶ Island Ave / Arlington Ave Int. – Pedestrian ramps at south end of South Bridge (contours at 0.1' interval)





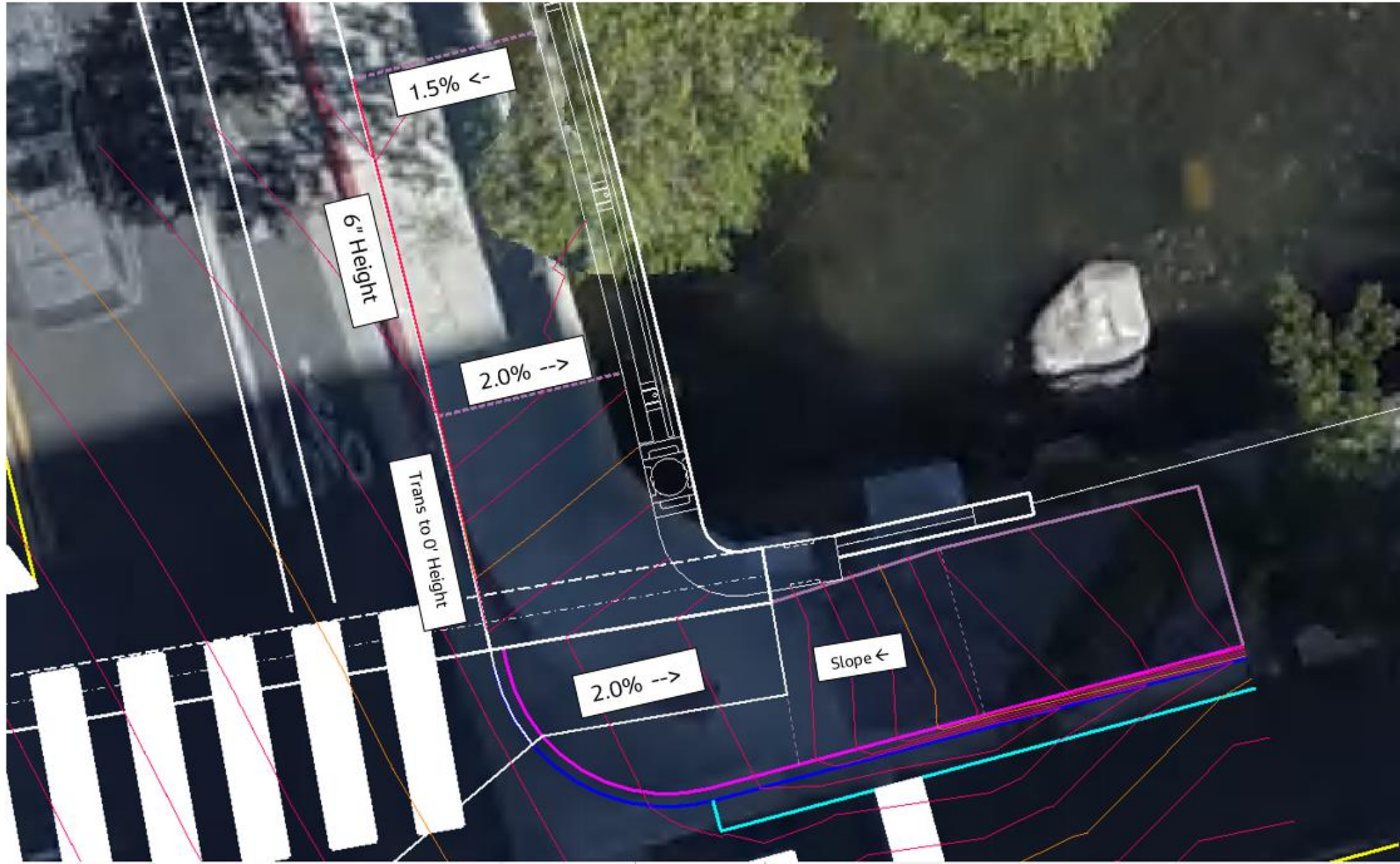
# 90% Design – Pedestrian Circulation

Ped Ramps - Northwest Corner Island/Arlington (contours at 0.1' interval)

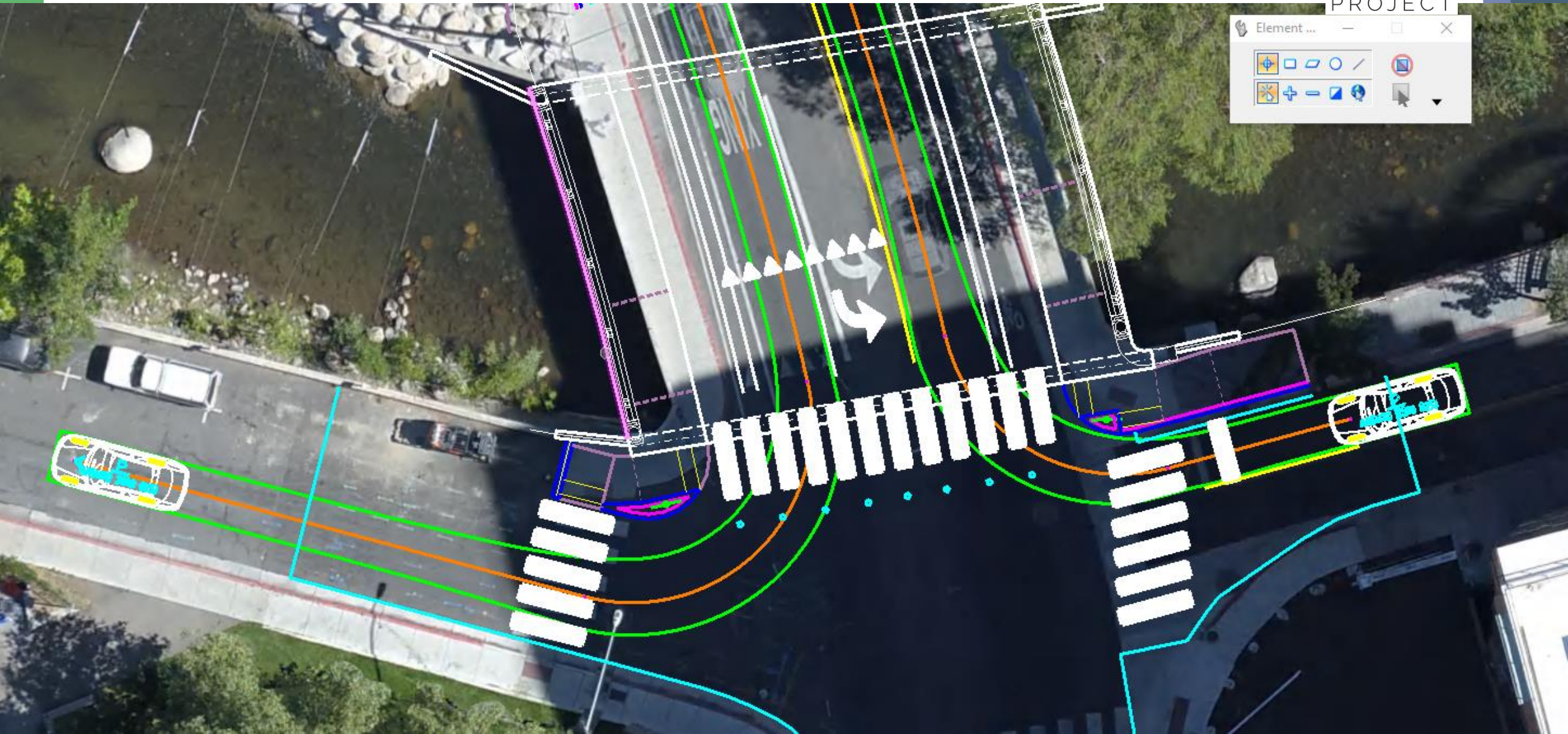


# 90% Design – Pedestrian Circulation

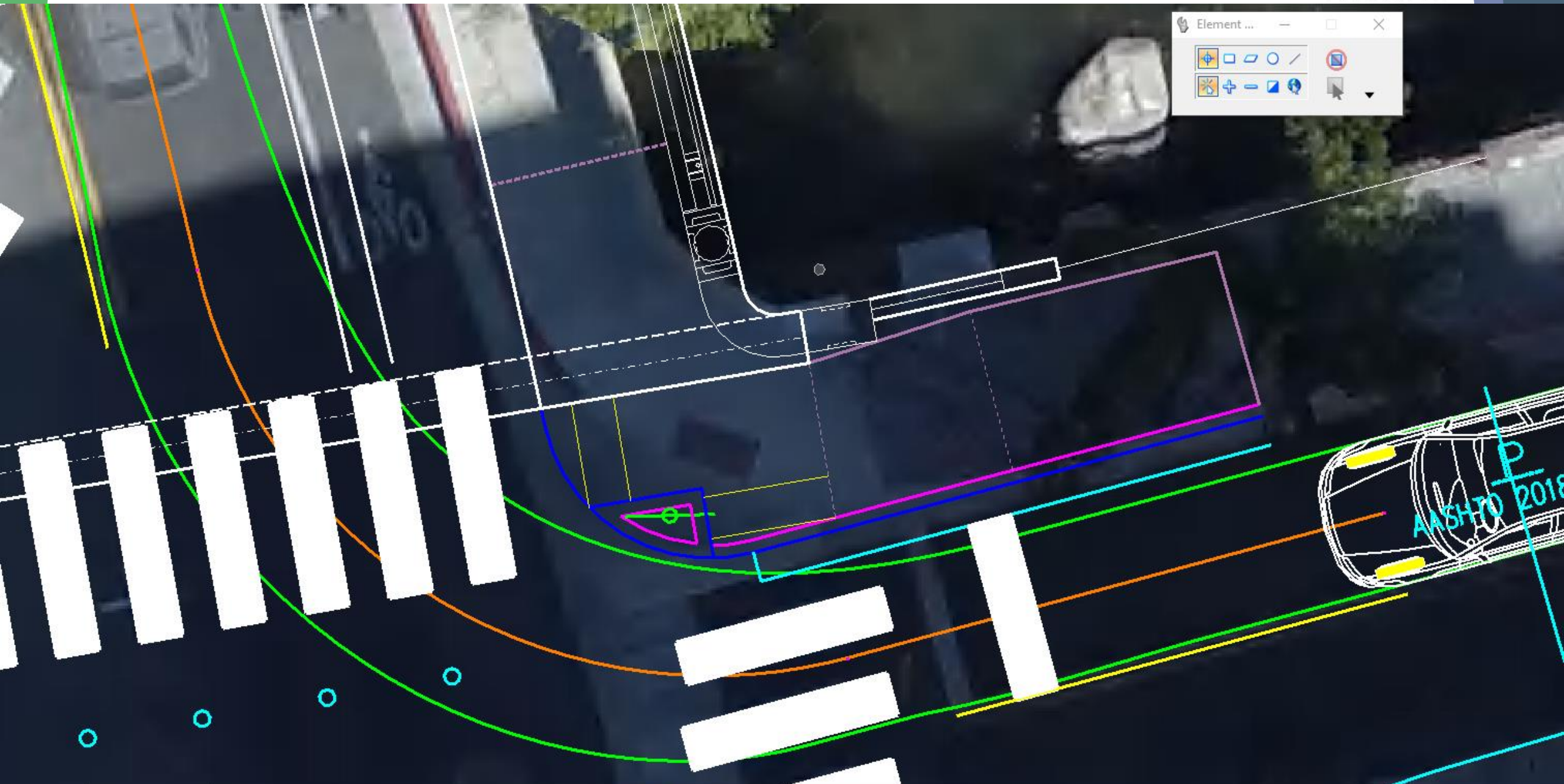
Ped Ramps – Northeast corner Island/Arlington (contours at 0.1' interval)



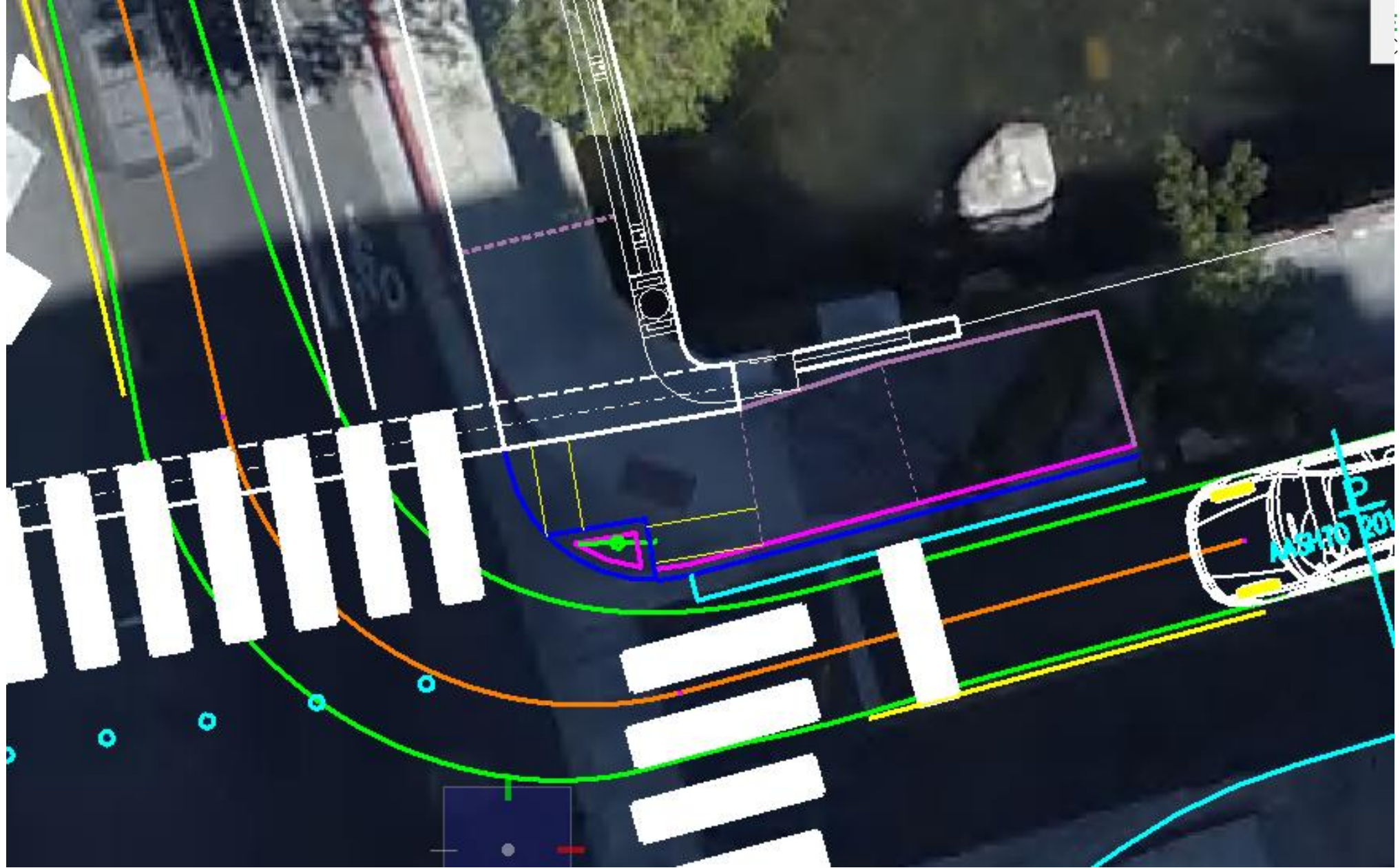
# Passenger Car - 25' Radius (Both)



# Passenger Car – 25' Turning Radius

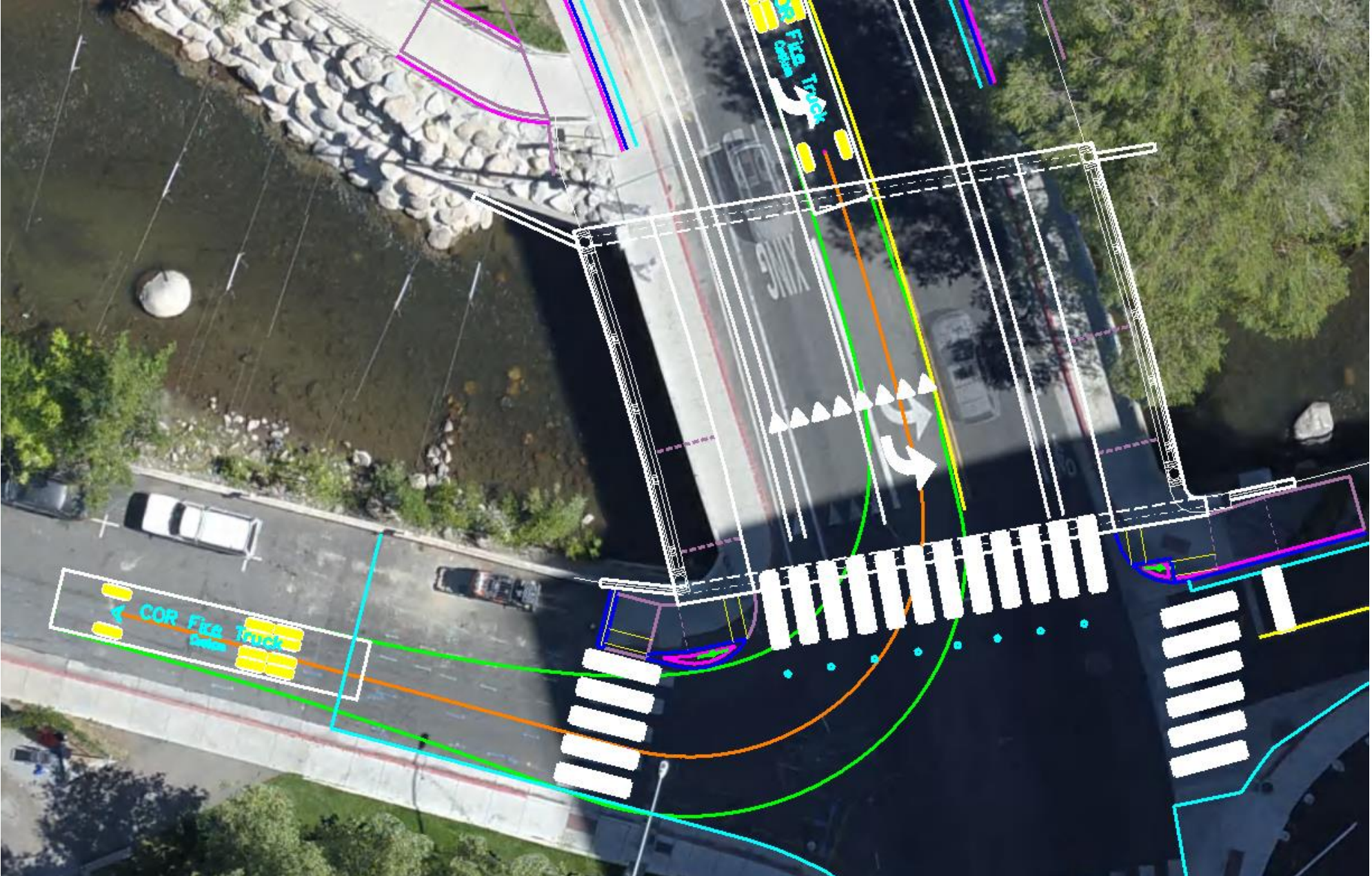


# Passenger Car – 20' Turning Radius





# Fire Truck Turning Movement – 32' Radius

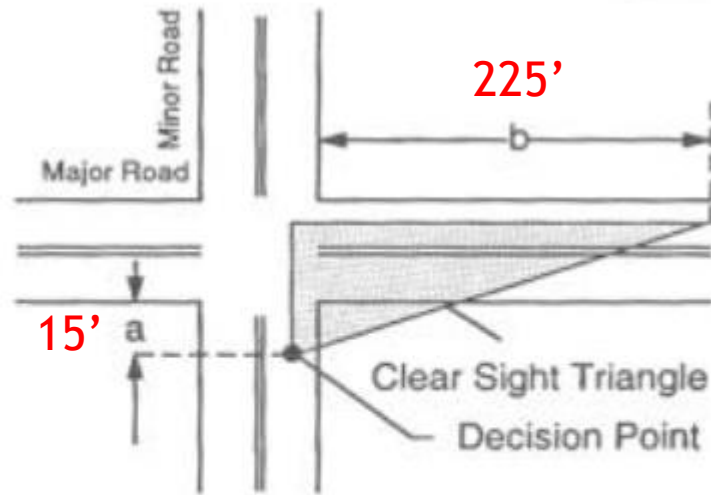








# Sight Triangles – 20 mph



Departure sight triangle  
for viewing traffic  
approaching from the right

$$ISD = 1.47 V_{\text{major}} t_g$$

ISD = length of sight triangle leg along major road, ft (m)

$V_{\text{major}}$  = design speed of major road, mph (km/h)

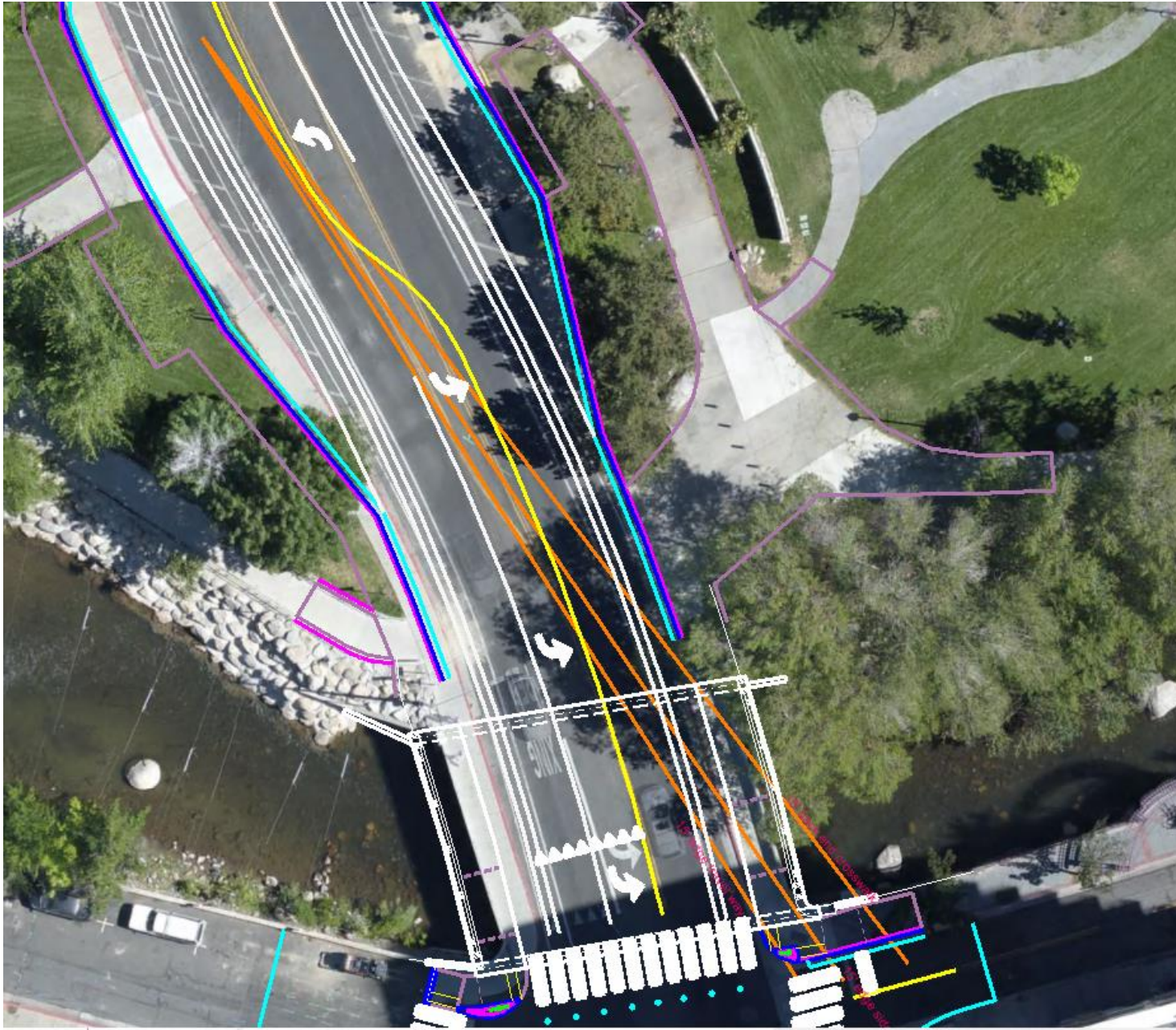
$t_g$  = time gap for minor road to enter the major road, sec

Design Vehicles. For local roads and streets, assume a passenger car as the design vehicle (i.e.,  $t_g = 7.5$  seconds).

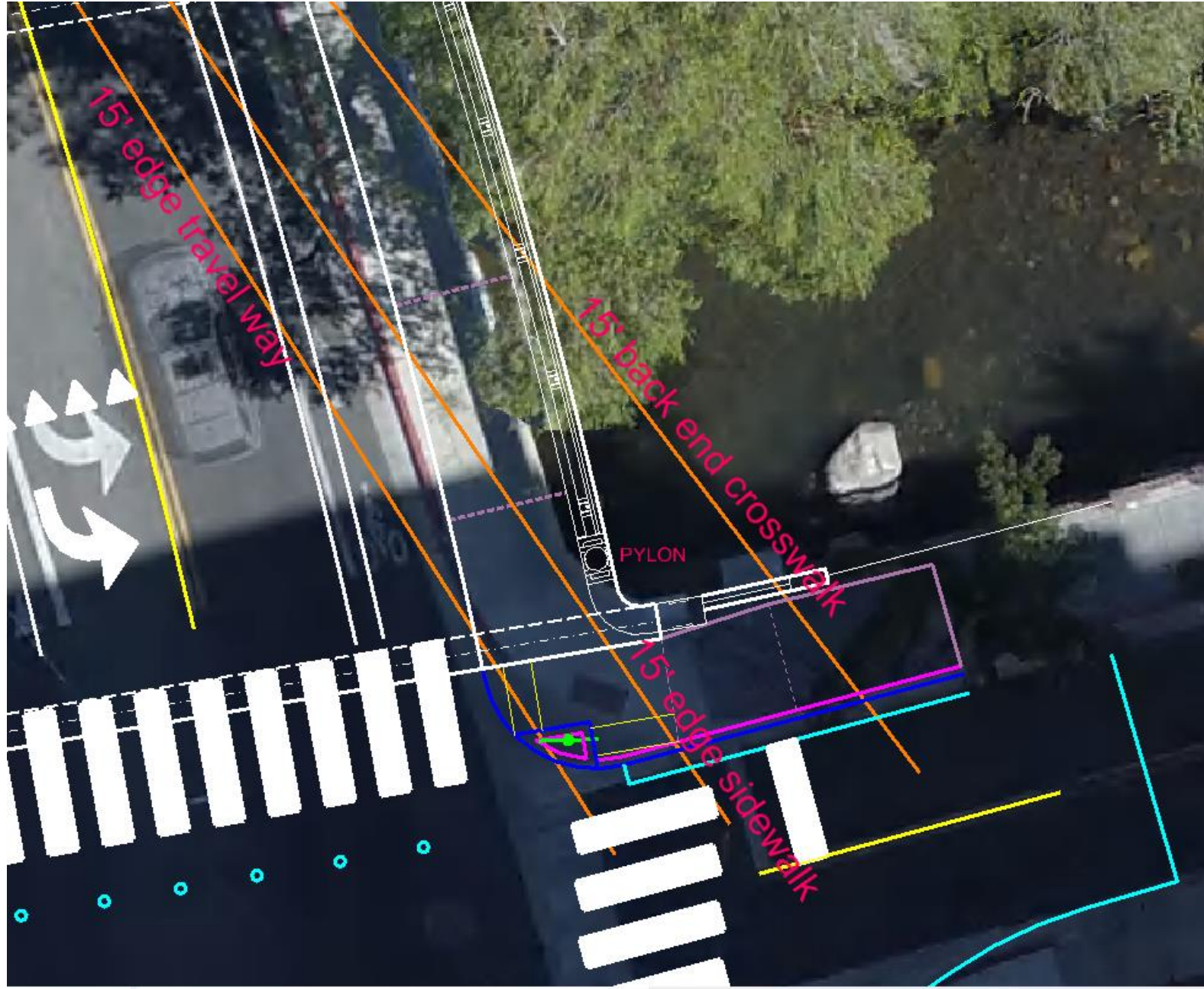
$$ISD = 1.47 * 20 * 7.5$$

$$ISD = 220.5 \text{ ft (use 225')}$$

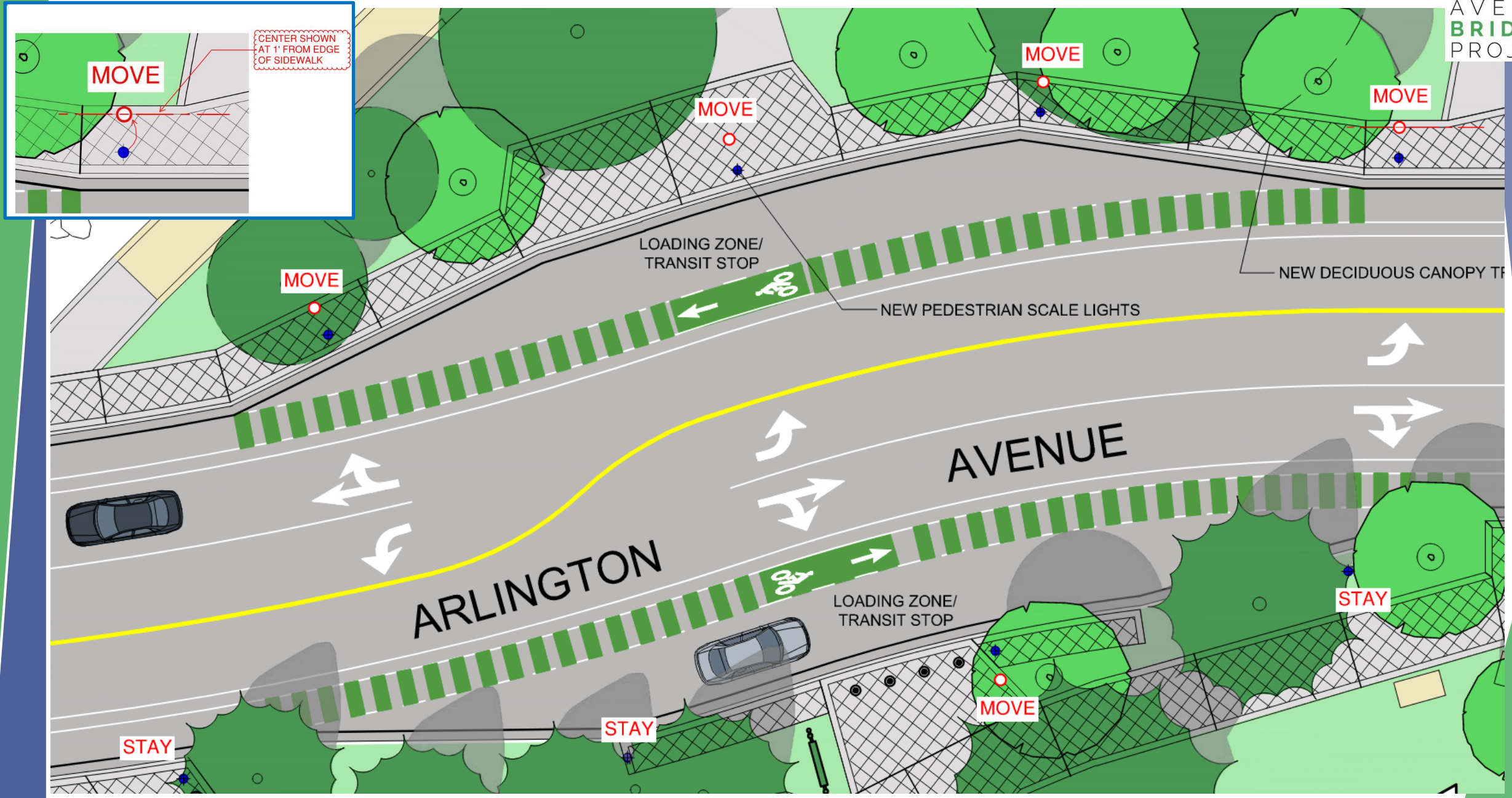
# Sight Triangles – 20 mph



# Sight Triangles – 20 mph

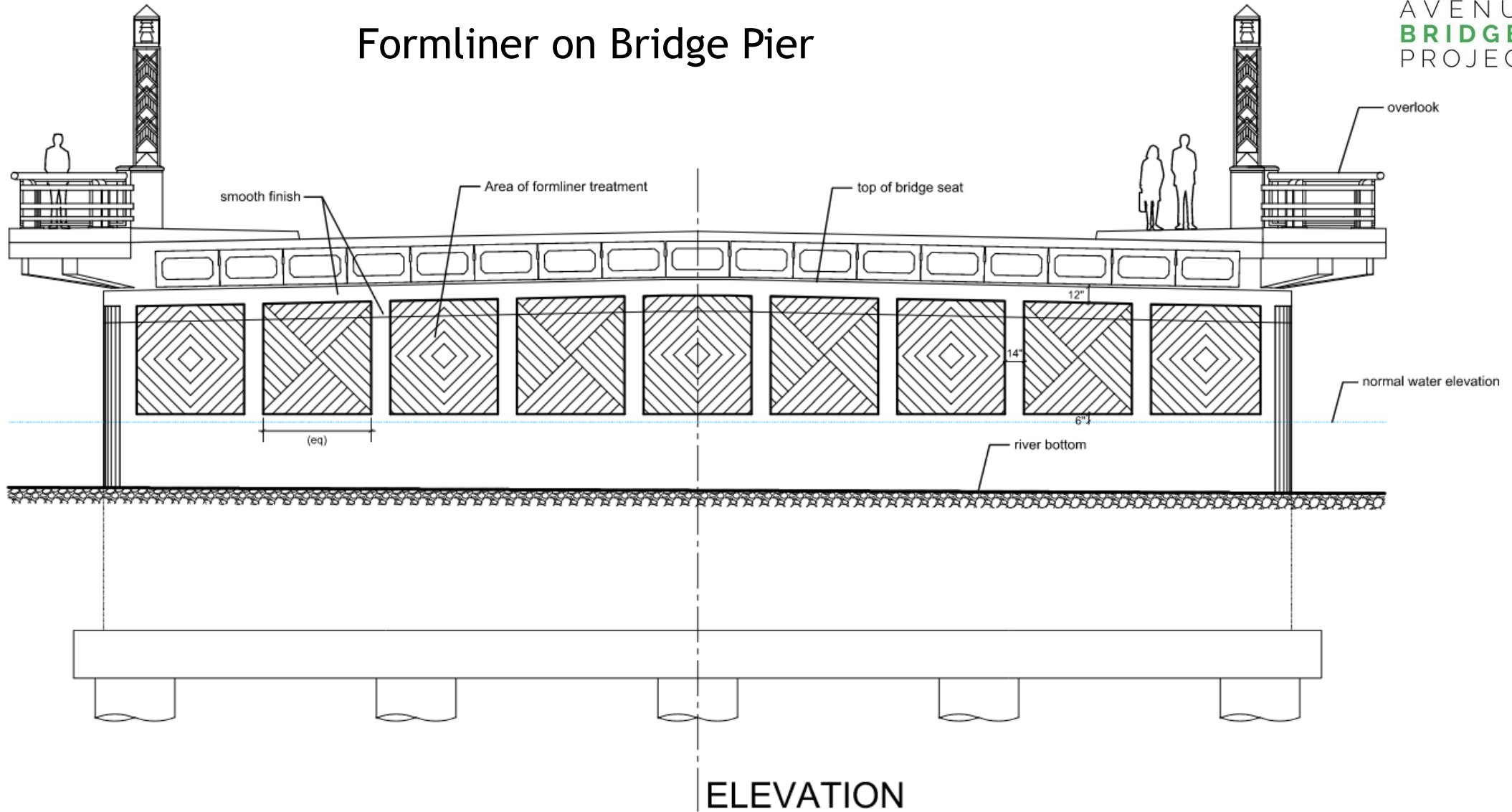


# 90% Design – Light Placement



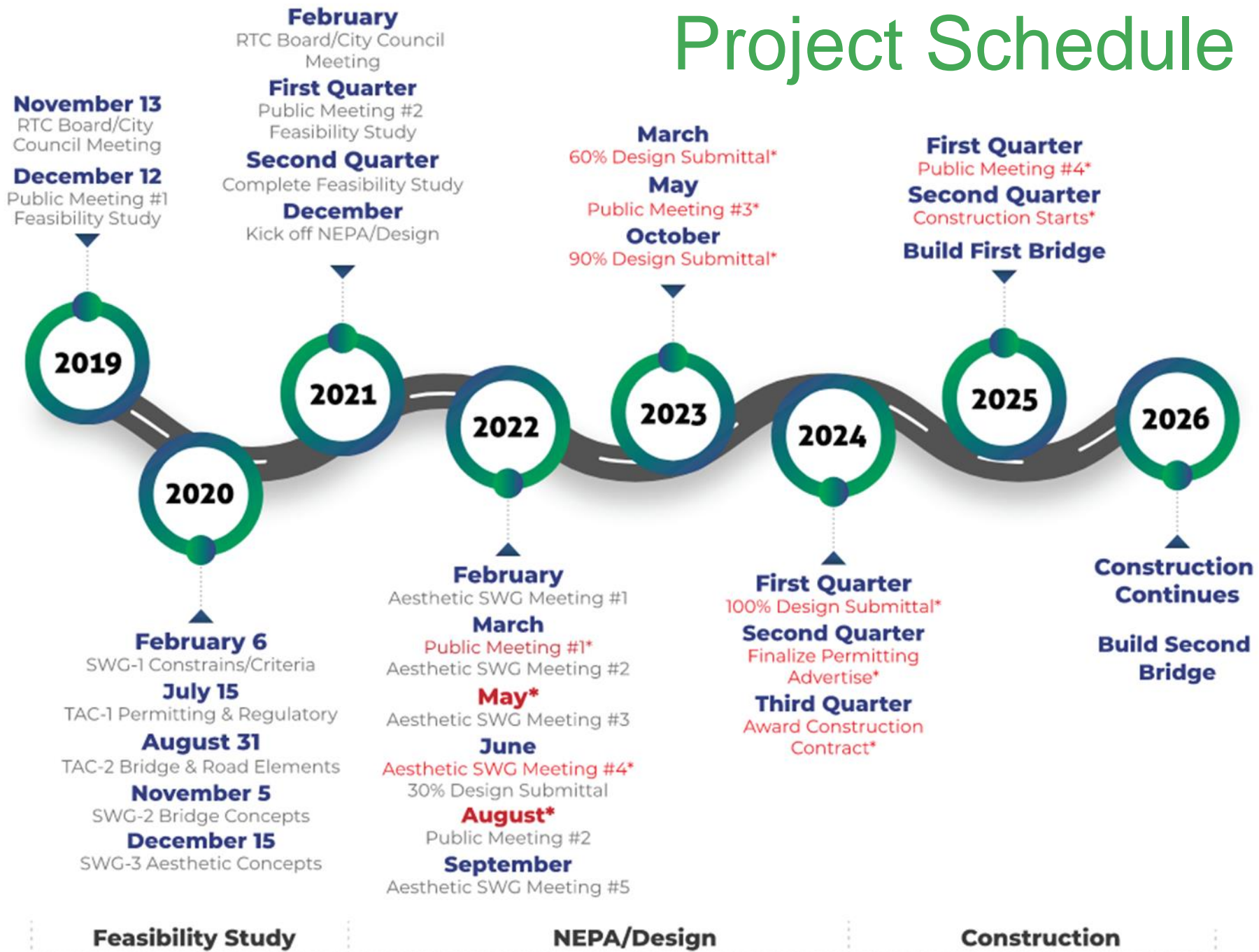
# 90% Design – Aesthetics - Formliner

## Formliner on Bridge Pier



## NORTH BRIDGE - PIER

# Project Schedule



\* Schedule changes highlighted in red

# CMAR / Feasibility of 1-Season Construction

- ▶ June 16 RTC Board Meeting Agenda Item

- 4.4.4 Authorize staff to pursue efforts to deliver the Arlington Avenue Bridges Project using the Construction Manager at Risk (CMAR) project delivery method, on a parallel path with planned and ongoing efforts to use the Design-Bid-Build project delivery method. (For Possible Action)

- ▶ Benefits of getting contractor on board at 90% design

- ▶ Construction Phasing and Schedule

- ▶ RTC has been working with subconsultant ICE to research feasibility of 1-season (in water) construction schedule
    - ▶ Adequate Cure Times; NDOT requirements; Phasing of Dewatering To Switch From one bridge to another
    - ▶ Environmental Permitting Requirements

- ▶ Dewatering plan

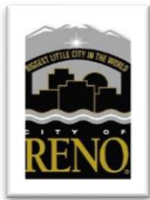
- ▶ Design Details

- ▶ Ability to Order Bridge Girders and Long-Lead Items



# Thank You for Participating!

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PK Electrical, Inc.

