

# Tryon Creek Cove Trail Study Area

Tryon Creek State Natural Area to Foothills Park and Willamette River Greenway





# Tryon Creek Cove Trail Plan

## Alternative Routes

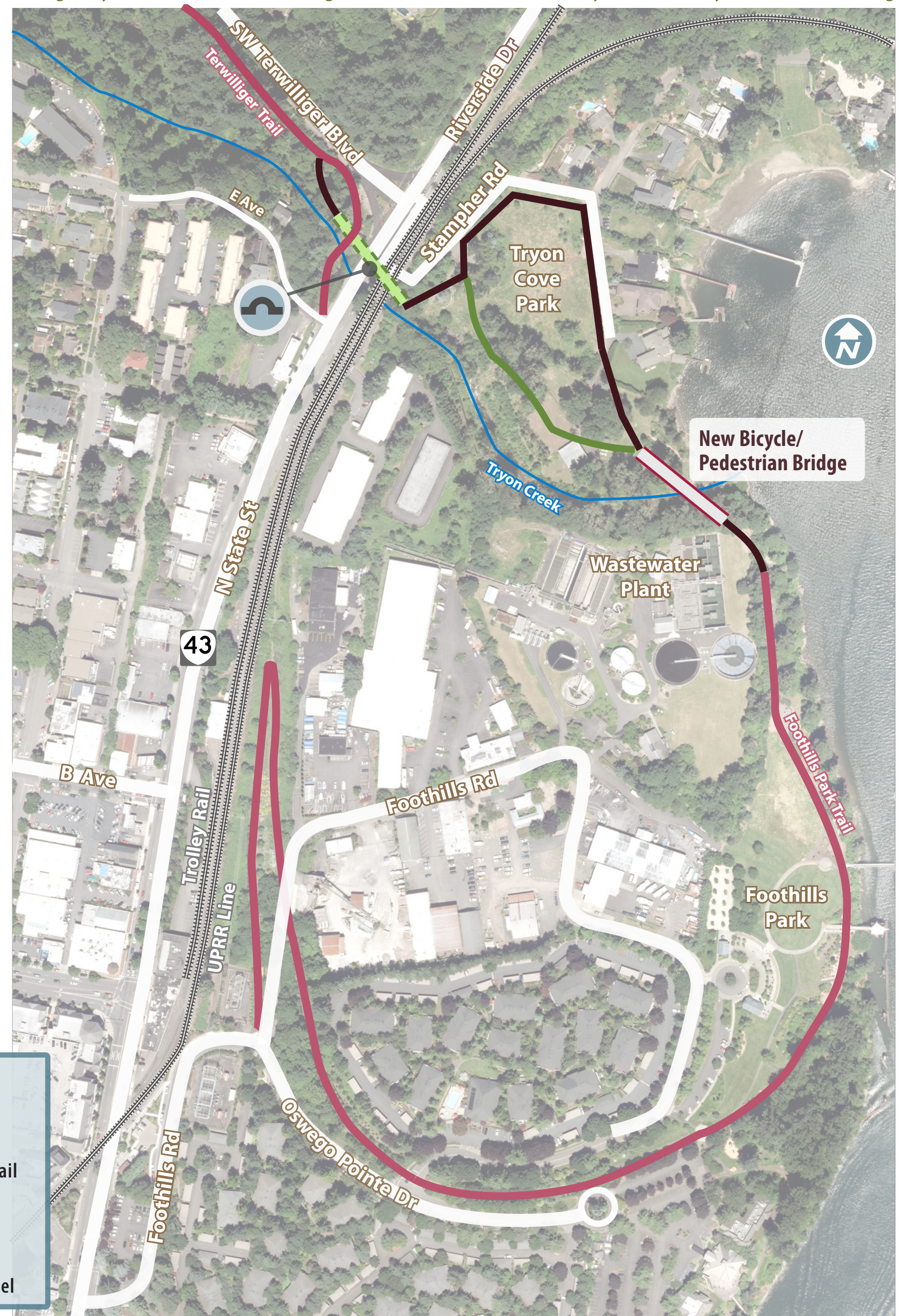
### ALTERNATIVE ROUTE | 1

New Traffic Signal/Stampher Road Crossing Version 2: As of July 2018 Advisory Committee Meeting



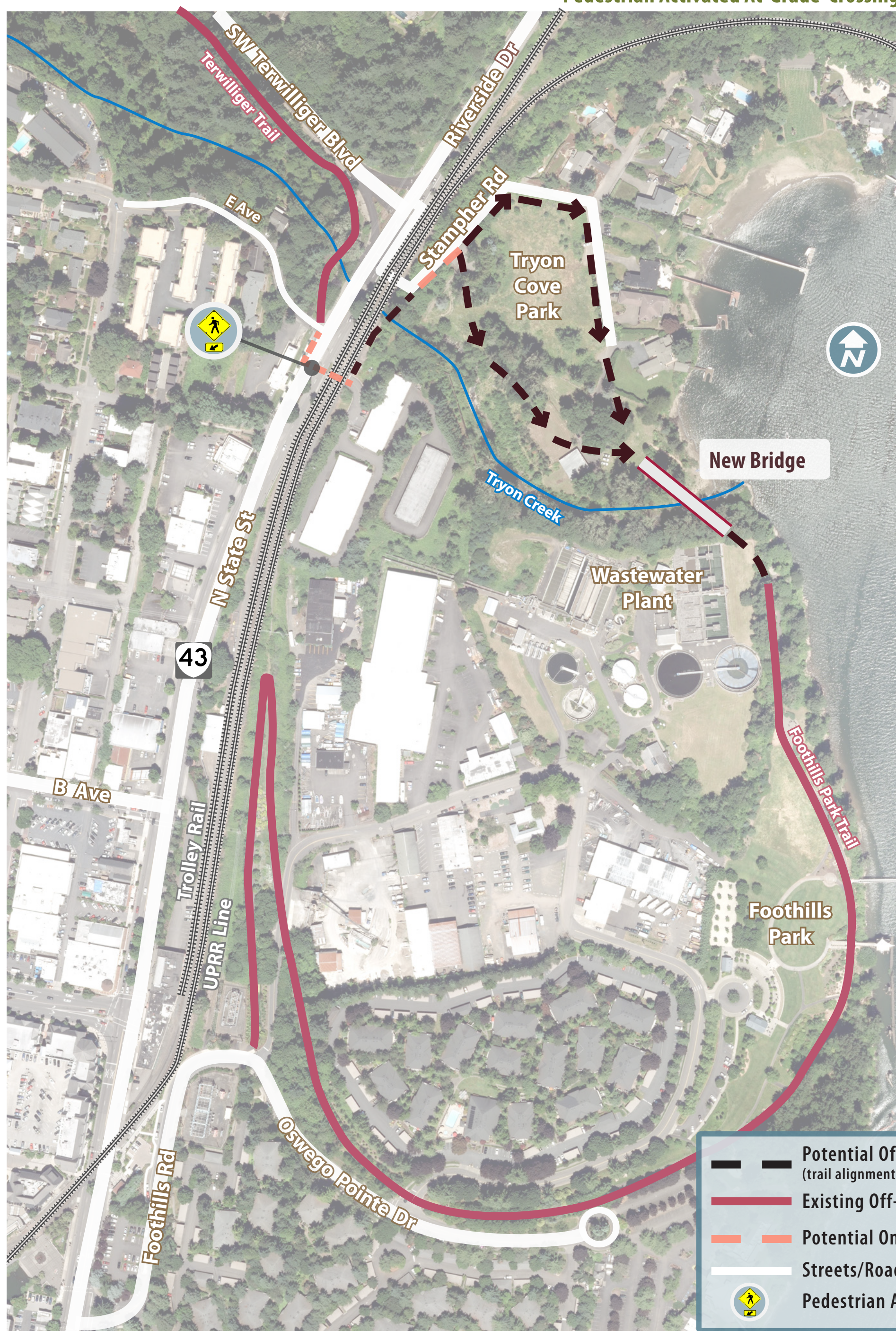
### ALTERNATIVE ROUTE | 2

Highway/Rail Tunnel Undercrossing Connection Version 2: As of July 2018 Advisory Committee Meeting



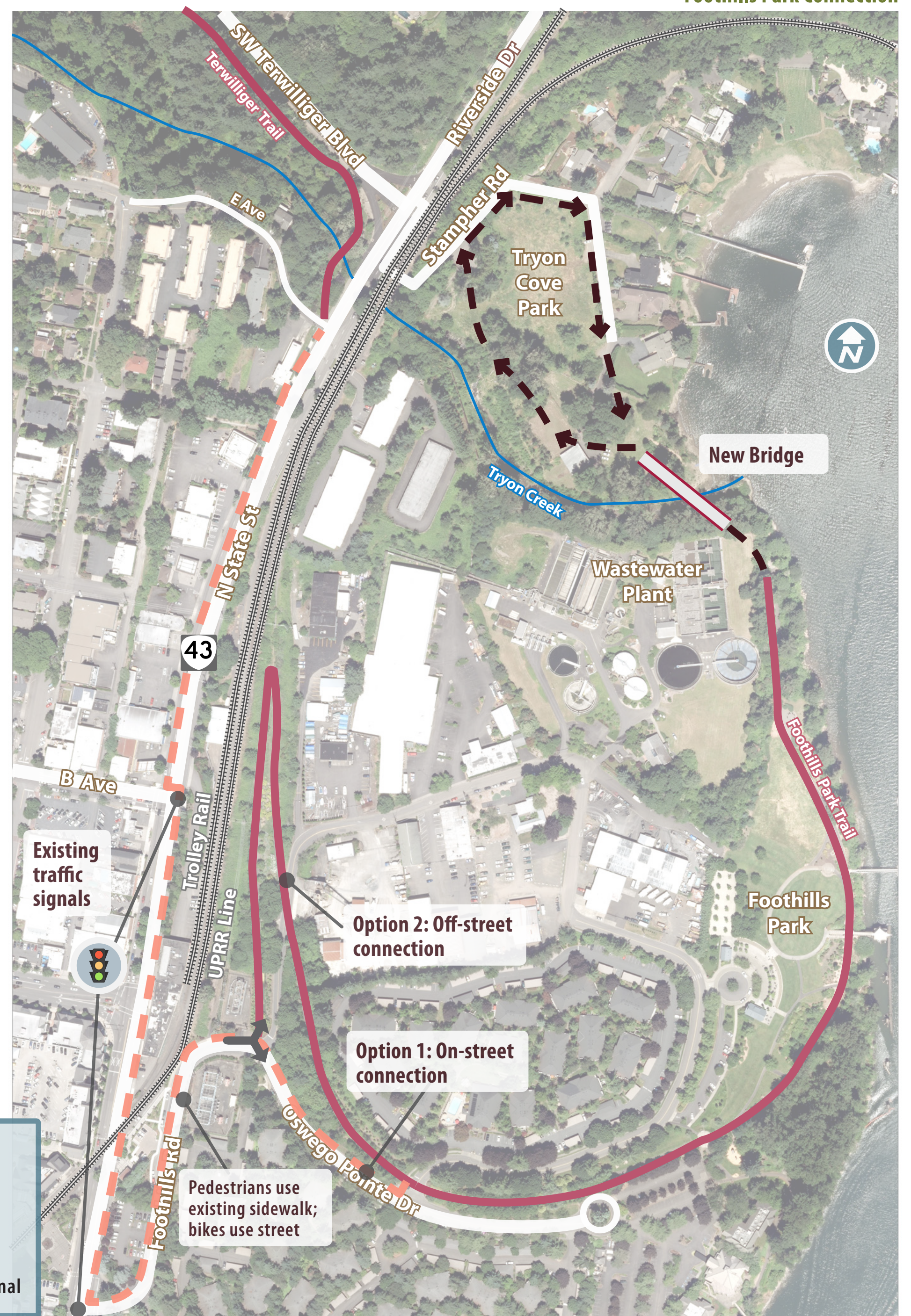
### ALTERNATIVE ROUTE | 3

Pedestrian Activated At-Grade Crossing



### ALTERNATIVE ROUTE | 4

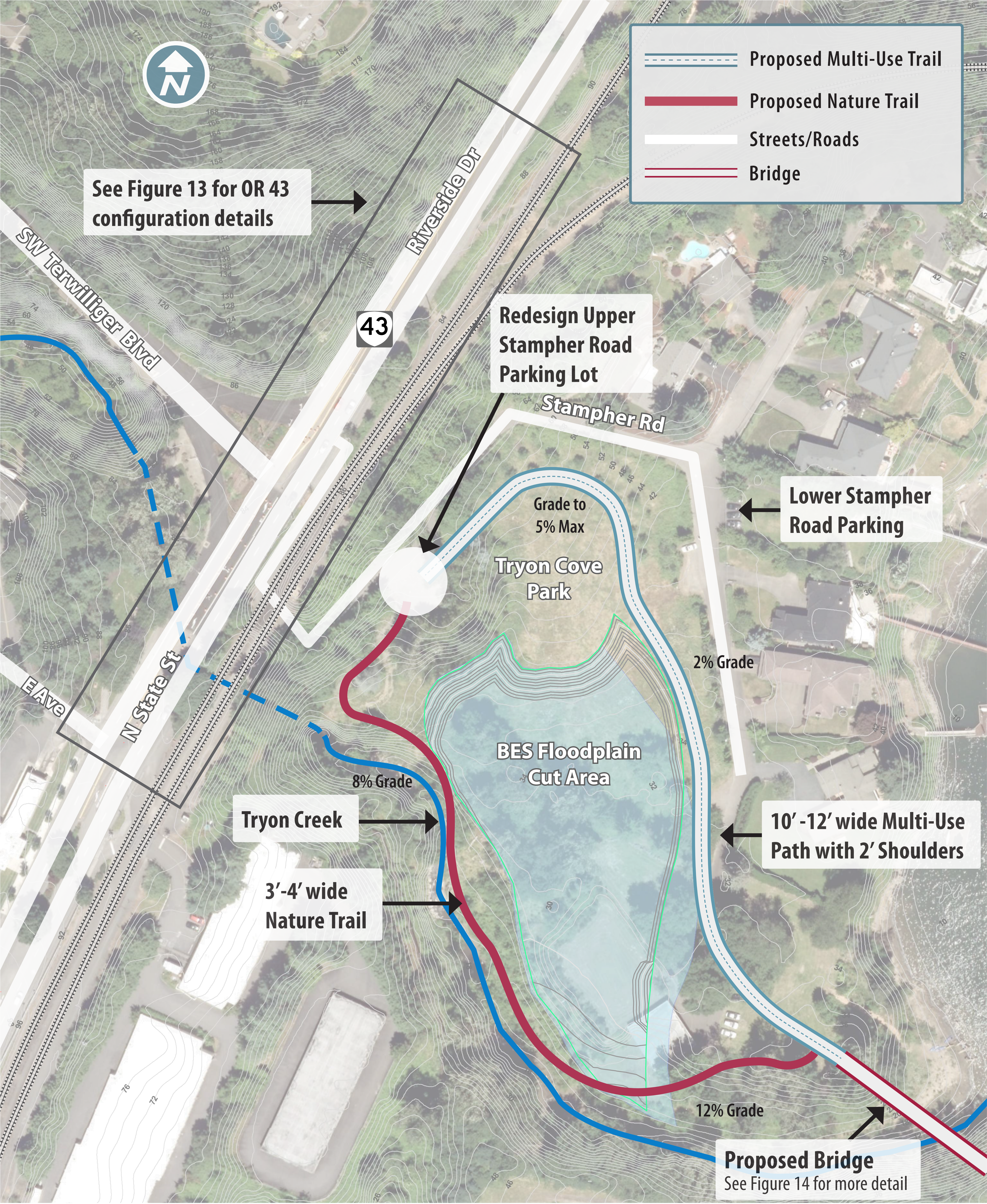
Foothills Park Connection





# Tryon Creek Cove Trail Plan

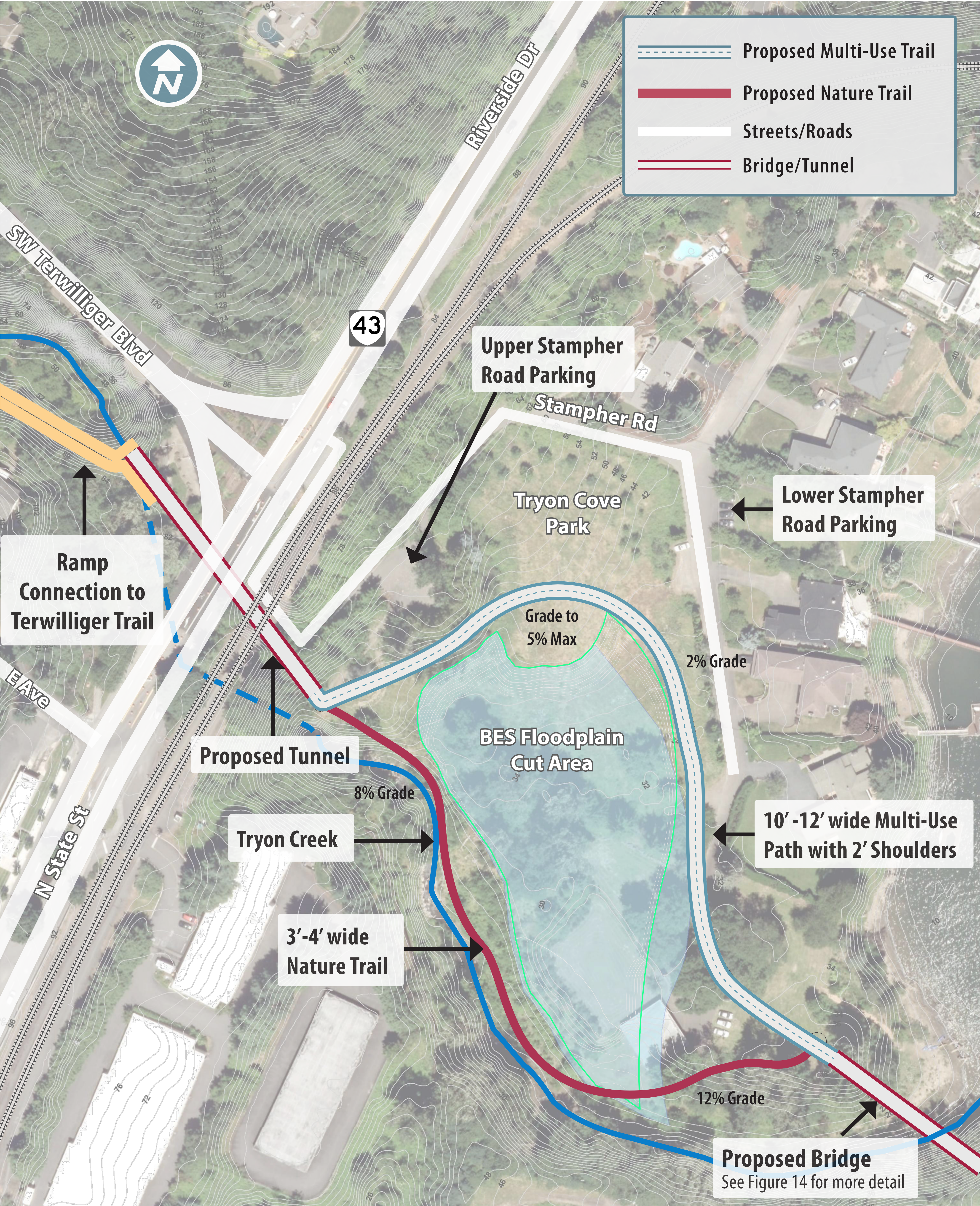
## Traffic Signal/Stampher Road Crossing





# Tryon Creek Cove Trail Plan

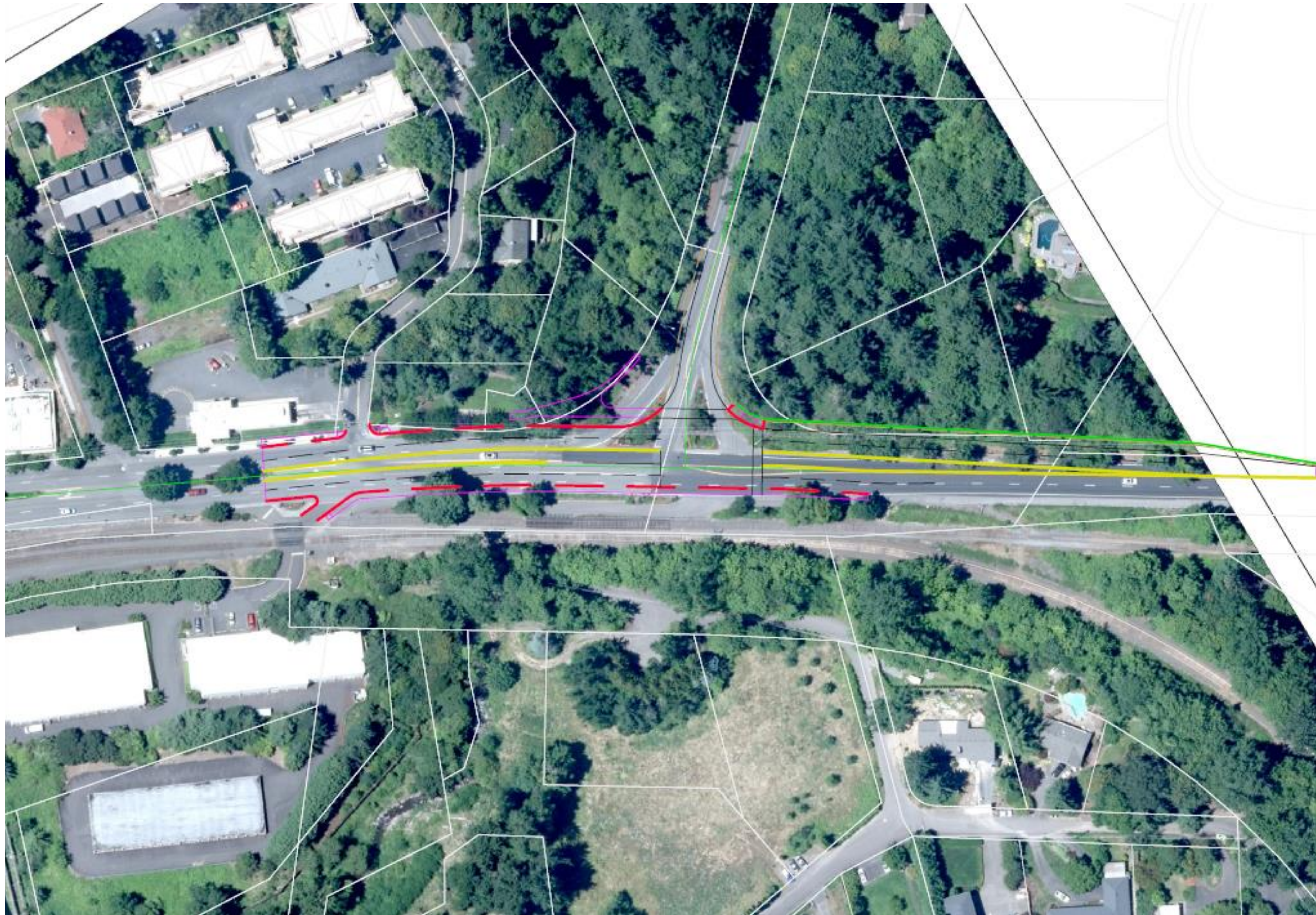
## Highway/Rail Tunnel Undercrossing





# Tryon Creek Cove Trail Plan

Full Signal Alternative – OR 43 Lane Changes/Improvements





# Tryon Creek Cove Trail Plan

## Tryon Creek Bridge and Connecting Trails





# Tryon Creek Cove Trail Plan

## COST SUMMARY

Alternative 1 – OR 43 Full Signal		
OR 43 signalization and improvements		\$ 4.84 M
Stampher Road improvements		\$ 1.56 M
10-foot-wide multiuse pathway*		\$ 310 K
Soft-surface pathway		\$ 110 K
14-foot-wide bridge/approaches with Foothills connection		\$ 1.35 M
	Total	\$ 8.17 M
Alternative 2 – OR 43 Undercrossing		
12-foot-wide horseshoe-shaped tunnel/approaches		\$ 11.41 M
10-foot-wide multiuse pathway*		\$ 310 K
Soft-surface pathway		\$ 100 K
14-foot-wide bridge/approaches with Foothills connection		\$ 1.35 M
	Total	\$ 13.17 M

\*A 12-foot-wide paved trail would increase the cost by approximately 25 percent.

## COMPARISON OF SIGNAL AND TUNNEL OPTIONS

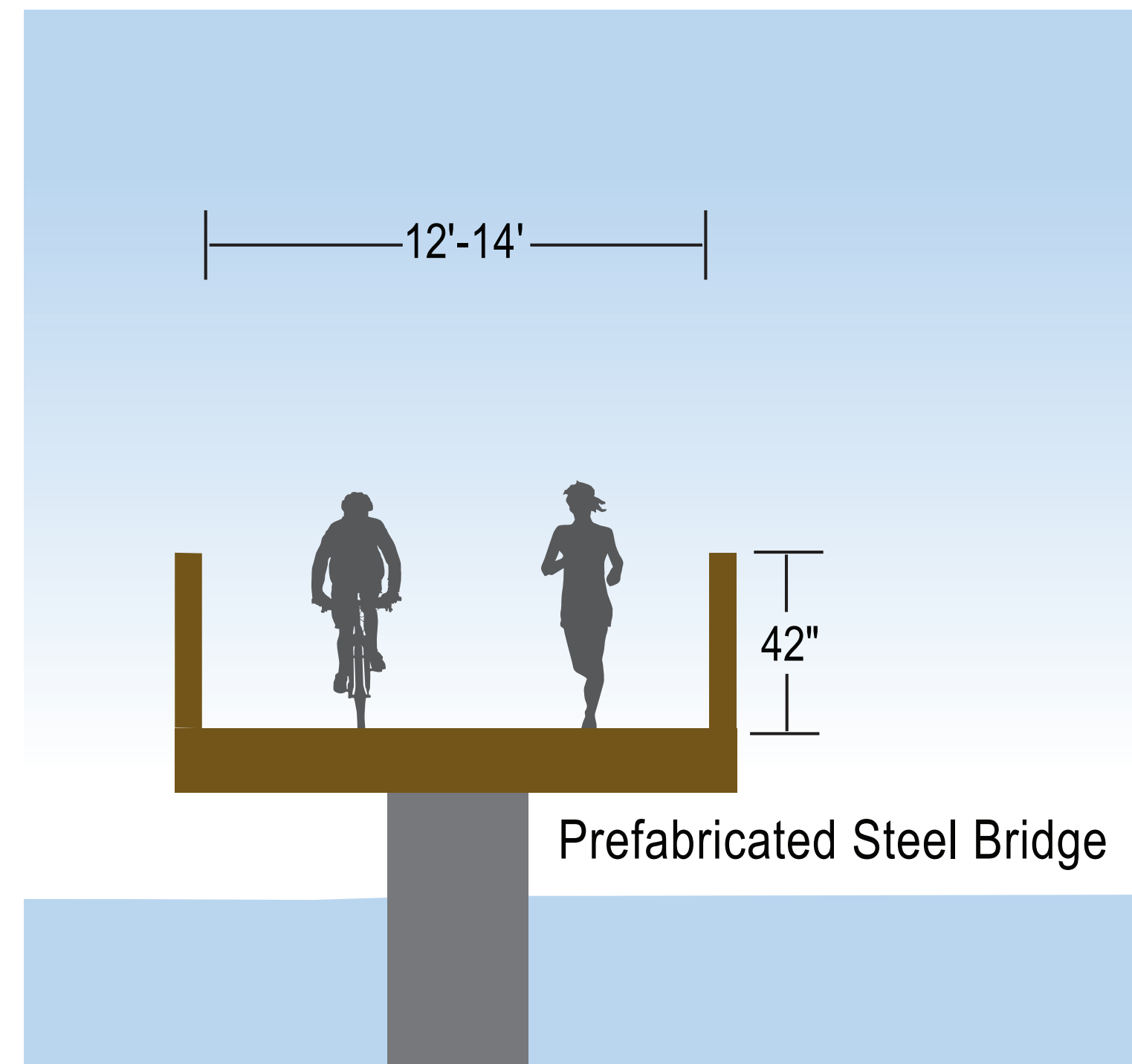
Criteria	Alternative 1 – Full Signal	Alternative 2 – Tunnel
Safety	<ul style="list-style-type: none"><li>Requires shared use of Stampher Rd</li><li>Improves vehicle and trail user safety</li></ul>	<ul style="list-style-type: none"><li>Avoids conflicts on Stampher Rd</li><li>Concerns over personal safety</li><li>Avoids at-grade crossings</li></ul>
Route Directness	<ul style="list-style-type: none"><li>Reasonably direct access to Tryon Cove Park</li></ul>	<ul style="list-style-type: none"><li>Most direct access to Tryon Cove Park</li></ul>
Cost	<ul style="list-style-type: none"><li>Conventional known cost solution</li><li>May require Terwilliger ramp removal and added southbound lane</li></ul>	<ul style="list-style-type: none"><li>Higher cost</li></ul>
Ease of Use	<ul style="list-style-type: none"><li>Signal crossing familiar to users</li></ul>	<ul style="list-style-type: none"><li>Tunnel raises concerns over personal safety</li></ul>
Traffic Impacts	<ul style="list-style-type: none"><li>Increases shared use of Stampher Rd</li><li>Signal could increase OR 43 congestion</li></ul>	<ul style="list-style-type: none"><li>No adverse operational impacts on OR 43 or Stampher Rd traffic</li></ul>
Environmental Impacts	<ul style="list-style-type: none"><li>Minimal</li></ul>	<ul style="list-style-type: none"><li>Extensive during construction phase</li><li>Connection to Terwilliger Trail may impact natural area</li></ul>
Institutional Barriers	<ul style="list-style-type: none"><li>Likely meets ODOT signal warrants</li><li>Likely to require revised crossing order from ODOT Rail and UPRR</li></ul>	<ul style="list-style-type: none"><li>Likely to require revised crossing order from ODOT Rail and UPRR</li></ul>
Constructability	<ul style="list-style-type: none"><li>No significant issues</li></ul>	<ul style="list-style-type: none"><li>Construction will be complex but is doable</li></ul>



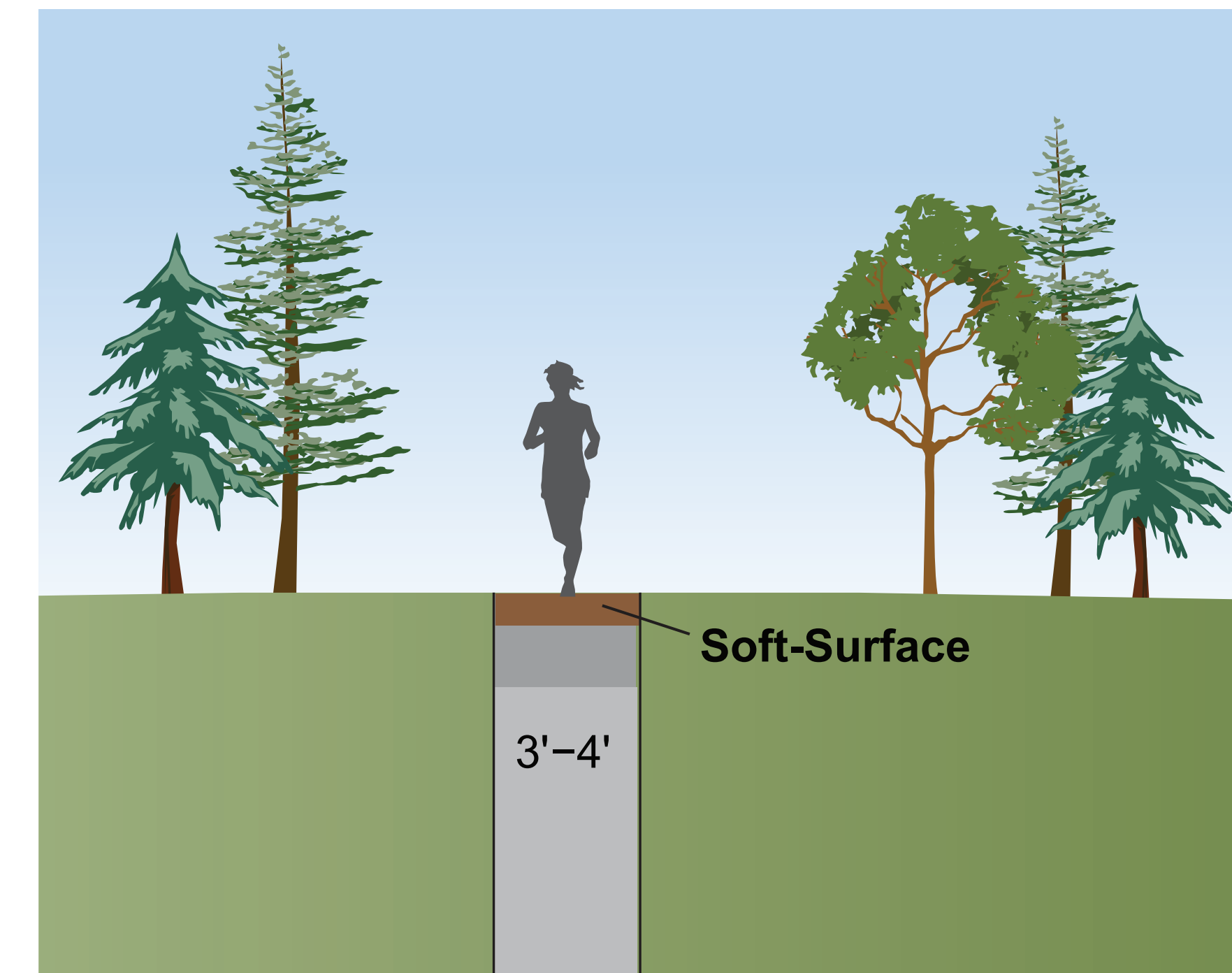
# Tryon Creek Cove Trail Plan

## Cross Sections

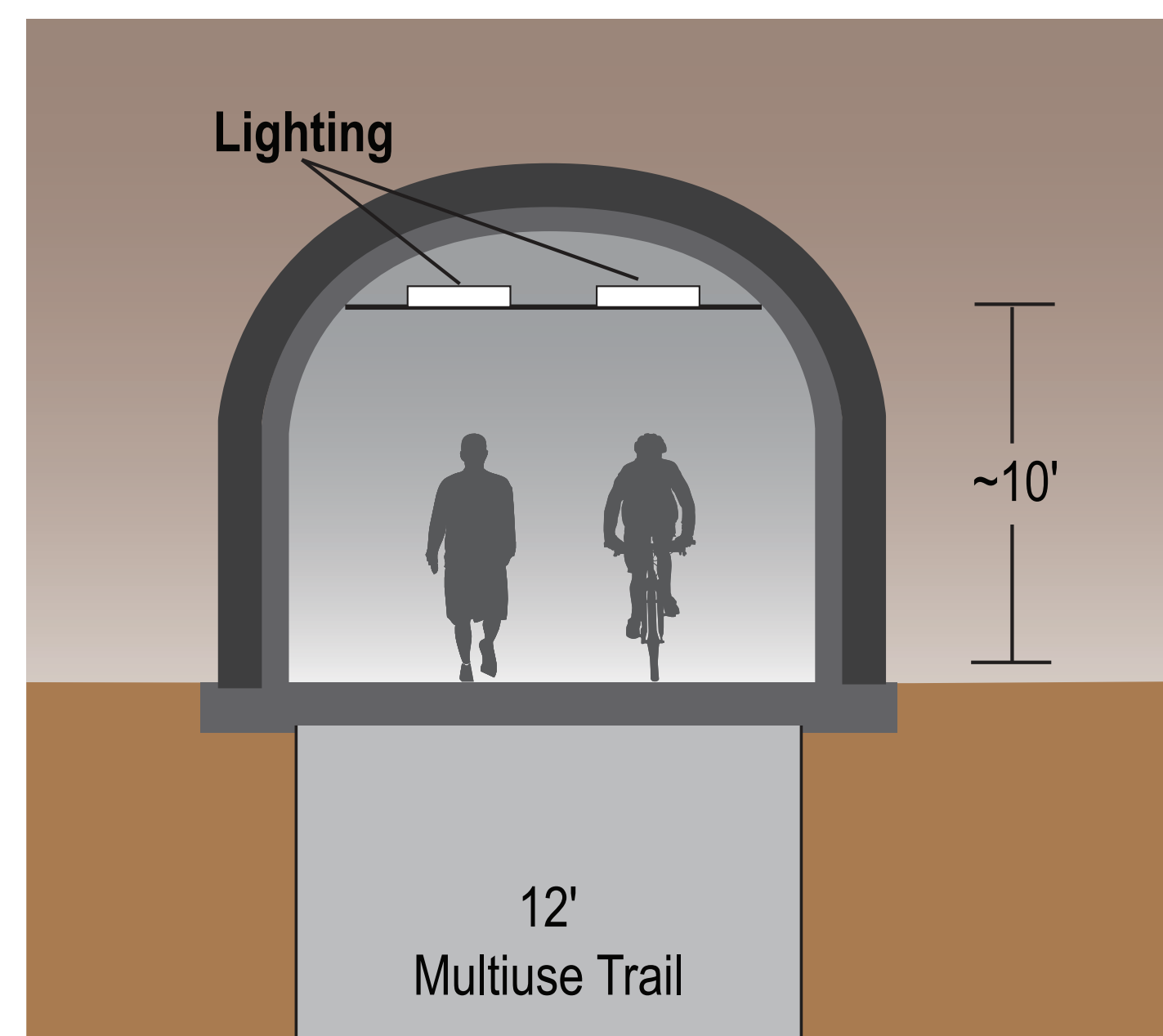
### BRIDGE



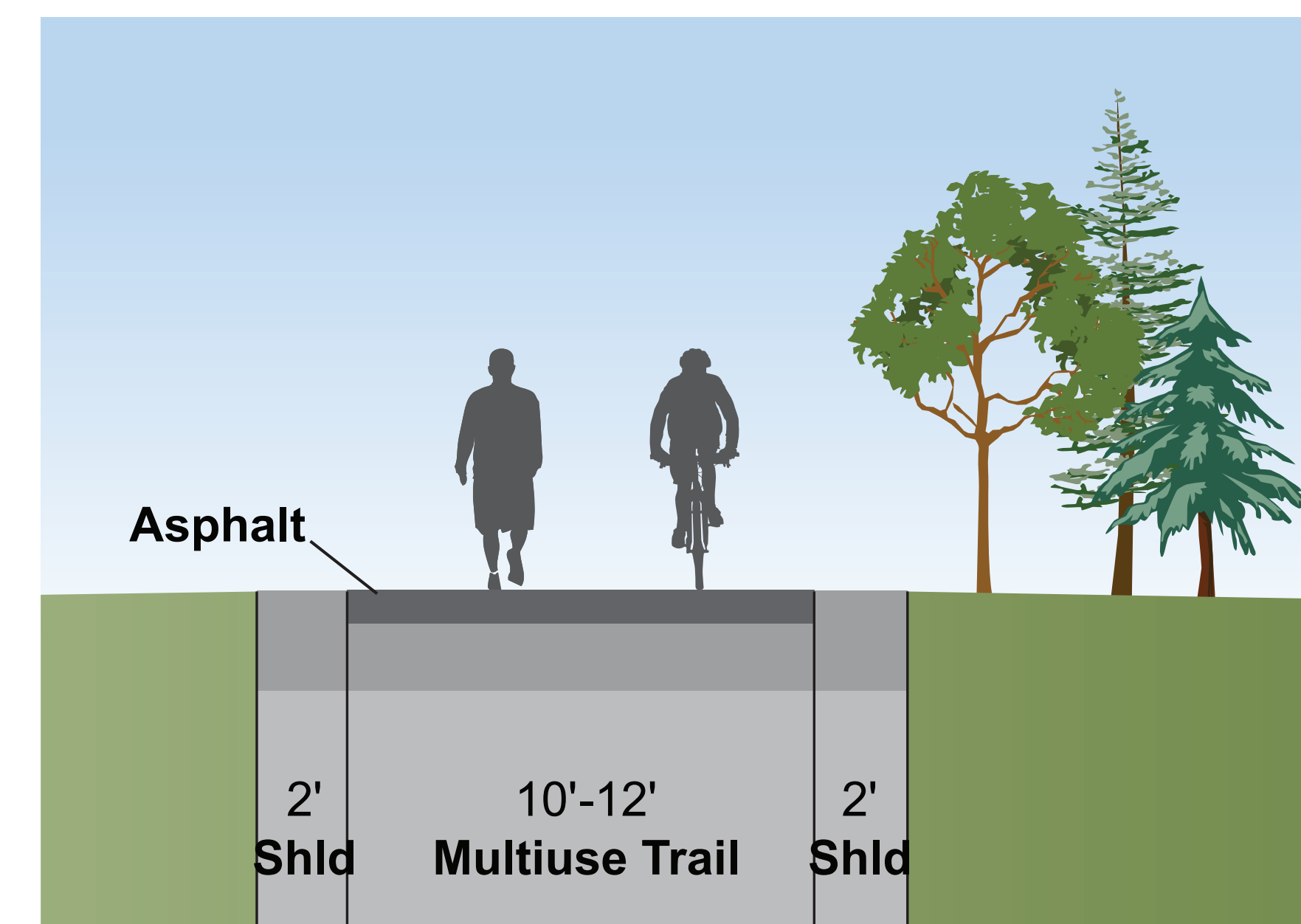
### NATURE PATHWAY



### TUNNEL



### MULTIUSE PATHWAY





# Tryon Creek Cove Trail Plan

## Costs of Potential Phases

### **PHASE 1: TRYON CREEK BRIDGE AND FOOTHILLS PARK TRAIL CONNECTION**

- \$1.35 million

### **PHASE 2: TRYON COVE PARK TRAIL PATHWAYS**

- Paved Multiuse Pathway: 10 to 12 feet wide  
\$310,000 to \$390, 000
- Soft-surface Nature Pathway: 3 to 4 feet wide  
\$110,000

### **PHASE 3: OR 43/RAILROAD CROSSING ALTERNATIVES AND TERWILLIGER TRAIL CONNECTION**

- OR 43 Full Signal at Terwilliger Blvd including Stampher Road Improvements  
\$6.4 million
- OR 43/Rail Tunnel Undercrossing  
\$11.41 million



# Tryon Creek Cove Trail Plan

## Tunnel and Bridge Examples

**Woolwich Foot Tunnel Under the River Thames in East London – 1,654 feet long**



By Kleon3 - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=45589703>

**Tunnel**



Image provided by Turn Key Tunneling, Inc.

**Pedestrian Tunnels Under I-84 at Sandy River**



ODOT

**Example of Multi-slope Concrete Ramp and MSE Retaining Wall Approach Structure**



Google Maps

**Pedestrian Bridge**



Image provided by [www.bigrbridge.com](http://www.bigrbridge.com)



# Tryon Creek Cove Trail Plan

## State Street Sidewalks

West sidewalk at B Avenue



West sidewalk at E Avenue



East sidewalk south of B Avenue



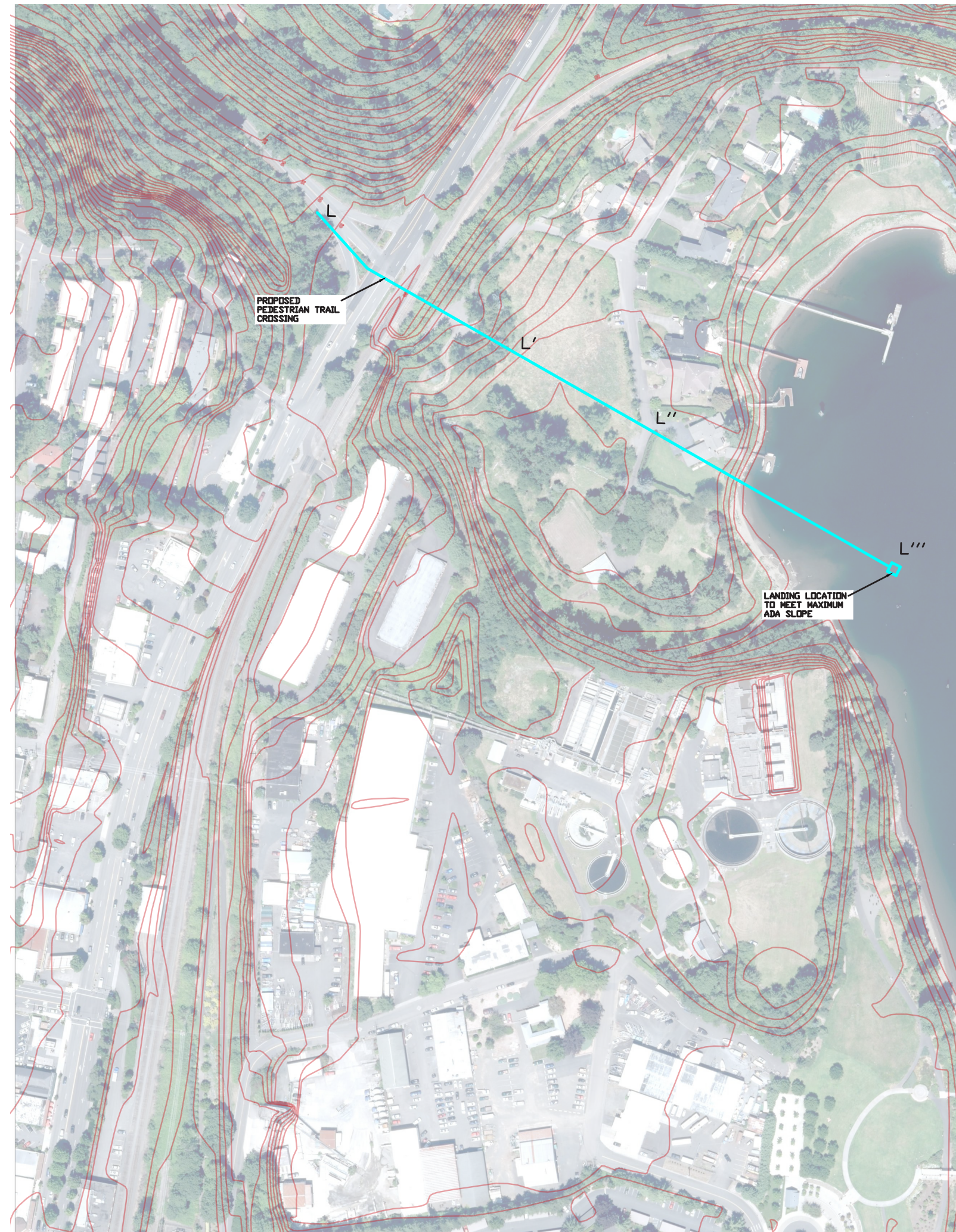
East sidewalk south of B Avenue





# Tryon Creek Cove Trail Study Area

## OR 43 Bridge



**Option 1**

**Pedestrian bridge meeting minimum ODOT clearance and maximum ADA pedestrian slope**



**Option 2**

**Pedestrian bridge with switchbacks meeting minimum ODOT clearance and maximum ADA pedestrian slope**

### **OR 43 BRIDGE**

- Bridge structure = 500 feet +/-
- \$7.5 million
- Elevated 60 feet above Stampher Road
- At ADA grades – ramp is 875 to 1,200 feet long
- Switchbacks or stairs and/or elevator is required
- Major visual and functional impacts on Tryon Cove Park