

## Welcome to the open house!

Thank you for attending the SR 520 West Approach Bridge North Project (WABN) open house to learn about upcoming SR 520 construction in Seattle. We understand that those who live, work and play in the area will be affected by the major construction activities needed to build this project.

We thank the public in advance for your patience as we work to replace the existing vulnerable structure.



## Stay informed throughout WABN construction

Join us each month to learn about upcoming construction activities and ask the contractor questions related to construction.

### Meeting dates and locations

**Where: Graham Visitors Center**  
2300 Arboretum Drive E.  
Seattle, WA 98112

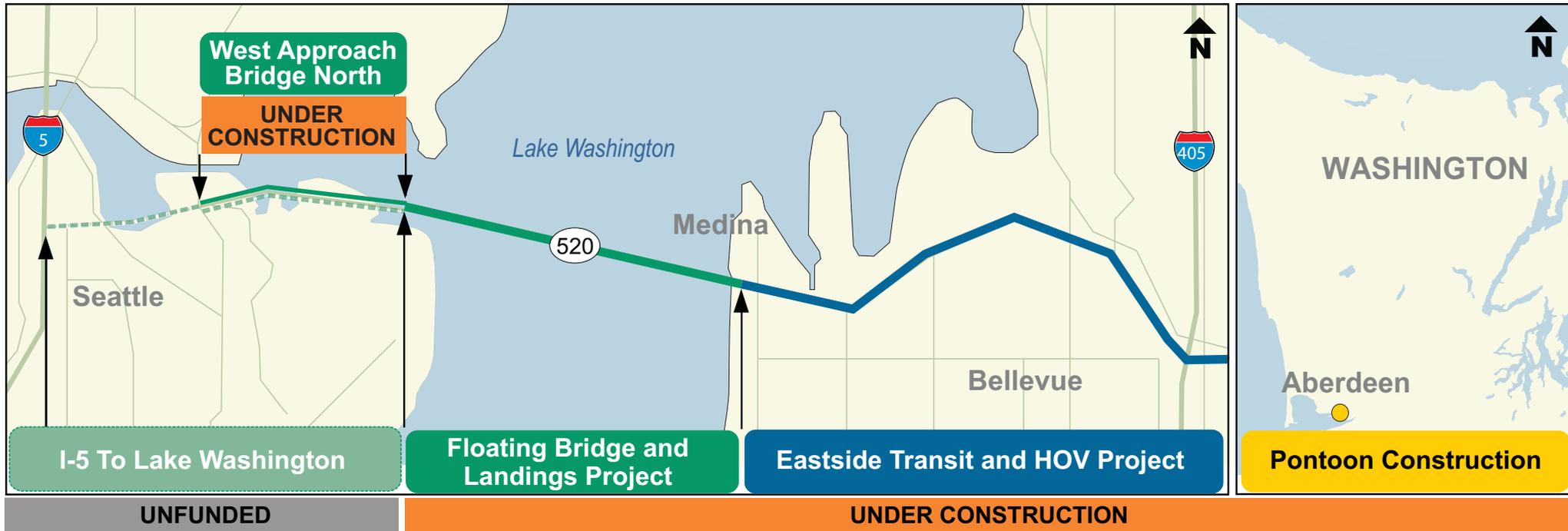
**When: The first Wednesday of every month, 4:30 - 5:30 p.m.**

- November 5
- December 3\*
- January 7
- February 4
- March 4
- April 1

\* The December monthly meeting will be held at  
**Montlake Community Center**  
1618 E. Calhoun St.  
Seattle, WA 98112

**Sign up today for WABN construction email updates to stay informed throughout construction.**

## SR 520 Program overview and schedule



**Eastside Transit and HOV Project:** Completion 2014

**Pontoon Construction in Aberdeen:** Completion 2015

**New Floating Bridge:** Open to traffic spring 2016

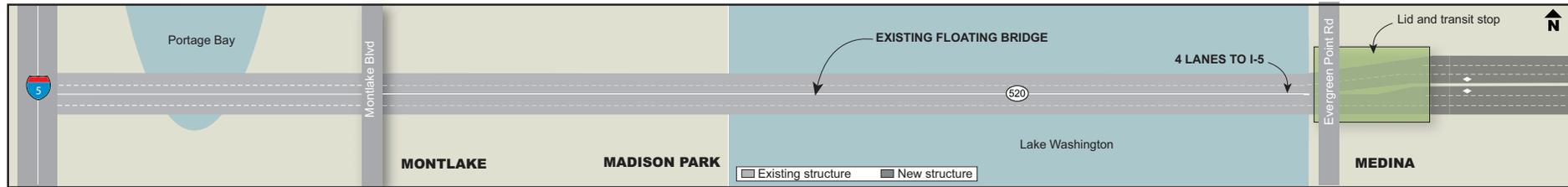
**West Approach Bridge North:** Open to traffic summer 2017

**Remaining west side corridor:** Depends on additional funding

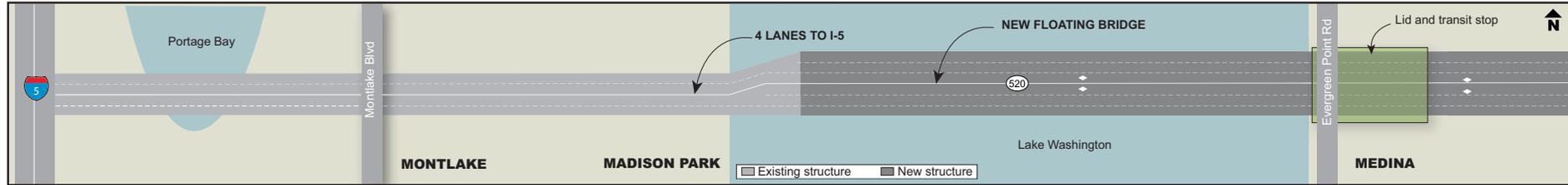
**Note:** Illustration of SR 520 mainline operations. Ramps and interchanges are not detailed.

## SR 520 lane configuration with phased project completion

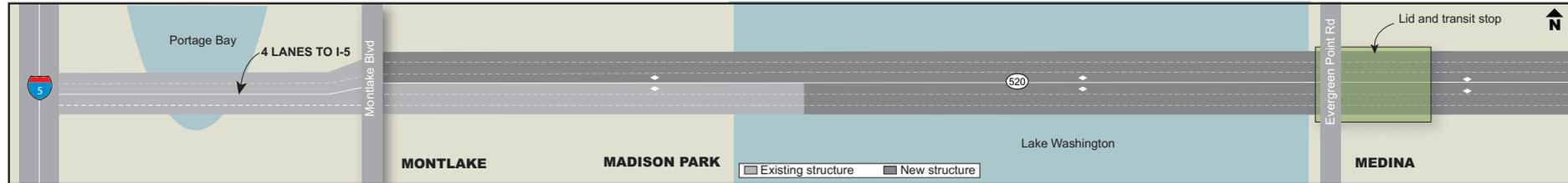
**Fall 2014: Eastside Open To Traffic - 6 Lanes to Evergreen Point Road**



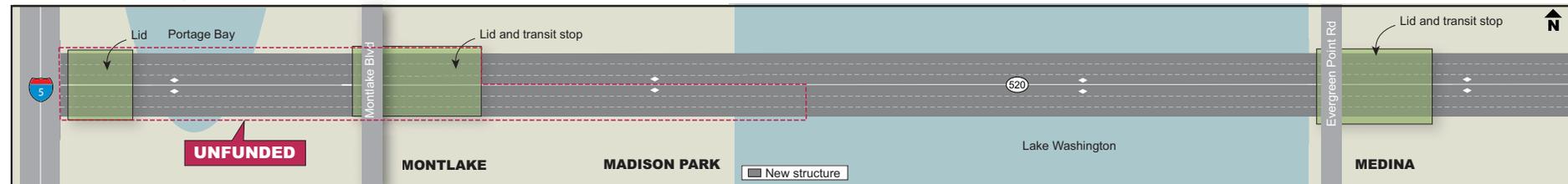
**Spring 2016: Floating Bridge Open To Traffic - 6 Lanes to the West End of the Floating Bridge**



**Summer 2017: West Approach Bridge North Open To Traffic - 6 Lanes to Montlake**



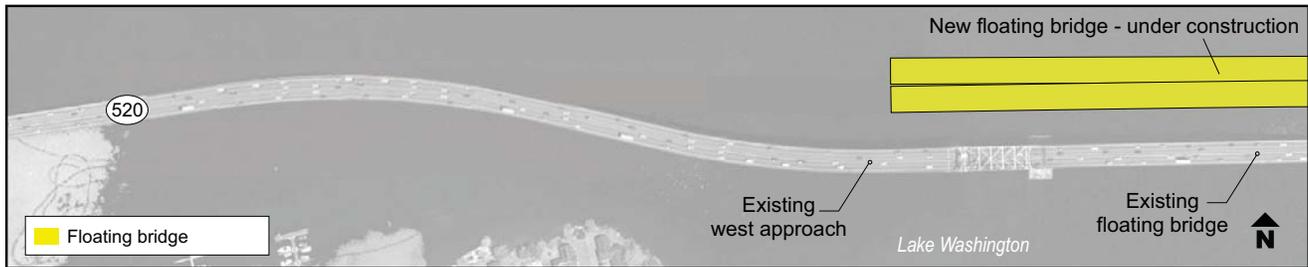
**With Full Funding: Full Corridor Complete - 6 Lanes to I-5**



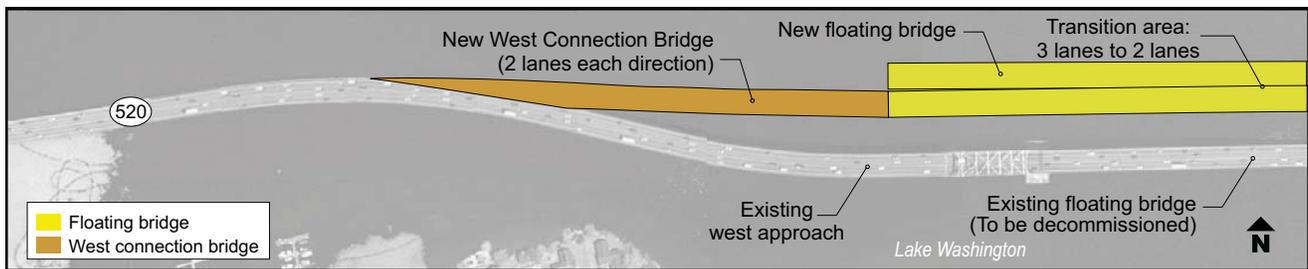
# West Approach Bridge North phasing with other SR 520 bridges

Construction of the new West Approach Bridge North is taking place on Lake Washington, starting this fall. This graphic shows the three new SR 520 bridges being built on the lake, and how they connect.

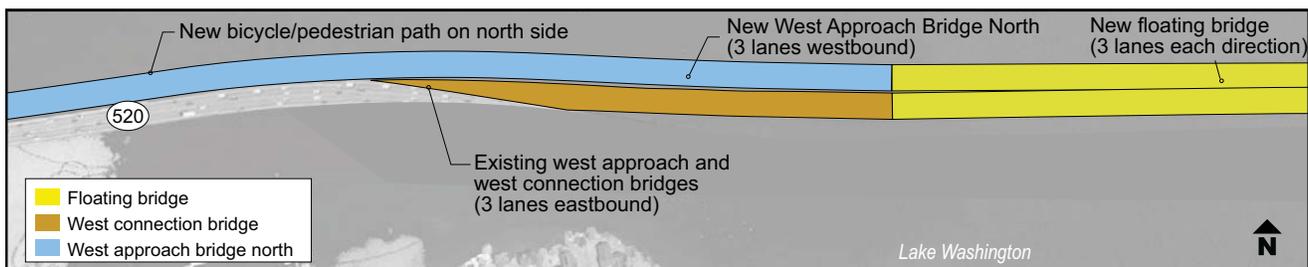
**Step 1 - Floating bridge:** Work on the new floating bridge is already underway on Lake Washington.



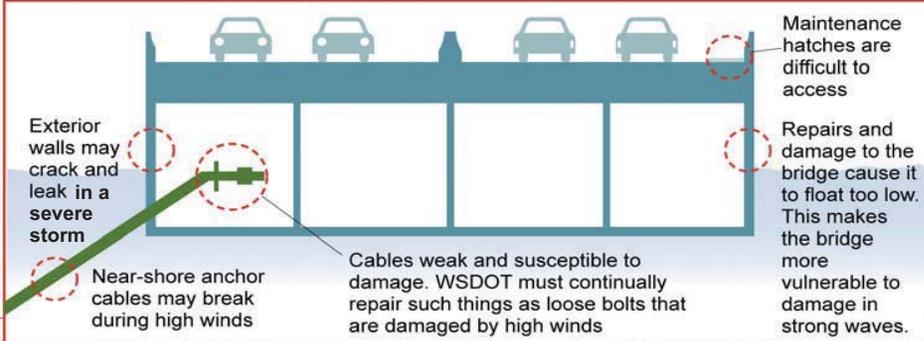
**Step 2 - West Connection Bridge:** In fall 2014, we completed a new west connection bridge that will connect the new floating bridge to the existing west approach bridge.



**Step 3 - West Approach Bridge North:** In fall 2014, we are starting work on the West Approach Bridge North. When WABN is complete, westbound traffic will travel on the new structure while eastbound traffic will travel on the existing west approach.



# Structural vulnerability of existing SR 520 bridges



**A torn cable joint found during a routine inspection in February 2006. The cables connect the floating bridge pontoons to their underwater lakebed anchors.**

**Exterior walls may crack and leak in a severe storm**

**Maintenance hatches are difficult to access**

**Repairs and damage to the bridge cause it to float too low. This makes the bridge more vulnerable to damage in strong waves.**

**Cables weak and susceptible to damage. WSDOT must continually repair such things as loose bolts that are damaged by high winds**

**Near-shore anchor cables may break during high winds**

**The existing floating bridge is vulnerable to high winds.**

**Vulnerable to High Winds**

**Vulnerable to Earthquakes**

**Hollow columns on Portage Bay Bridge and approach bridges are vulnerable to earthquakes.**

**Column cap to hollow column connection may crumble during earthquake**

**Hollow columns may implode during earthquake**

**The inside of a hollow bridge support column that was damaged by a barge in 1999.**

SOURCE: Photos from <http://www.wsdot.wa.gov/Projects/SR520Bridge/Photos/Damage.htm>.



The SR 520 floating bridge and structures are nearing the end of their design lives and are at risk of catastrophic failure.

## SR 520 Program costs and funding

*Updated: April 2014*

<b>SR 520 program cost estimate</b> <i>2009 legislative budget cap: \$4.65 billion</i>		<b>\$4.3 B</b>
<b>Funding received to date</b> <i>Based on 2014 Legislative authorization</i>		<b>\$2.9 B</b>
State funding (Nickel and TPA)	\$0.58 B	
Federal funding	\$0.2 B	
SR 520 Account (tolling and future federal funds)	\$1.65 B	
Federal TIFIA loan	\$0.30 B	
Deferred sales tax	\$0.16 B	
<b>Unfunded need</b> <i>Based on 2012 Cost Estimate Validation Process (CEVP) cost estimate*</i>		<b>\$1.4 B</b>

\* Note: WSDOT is currently conducting the next CEVP cost estimate update, with results expected in late 2014.

WSDOT awarded a \$199.5 million construction contract to Flatiron West, Inc. in July 2014 to construct the West Approach Bridge North Project, which is funded by the federal TIFIA loan.

## SR 520 job creation and construction around the state

SR 520 construction activities are taking place at multiple locations in Washington state. Job totals below reflect the number of workers at each location on June 30, 2014.



### Grays Harbor

- Pontoon construction
- Pontoon moorage
- Casting basin construction

**340 direct jobs**  
June 2014

### Port of Tacoma

- Pontoon construction
- Pre-cast concrete elements
- Pontoon moorage and outfitting

**183 direct jobs**  
June 2014

### Kenmore

- Pre-cast concrete elements
- Deck sections
- Anchors

**72 direct jobs**  
June 2014



### Lake Washington

- Bridge assembly
- Bridge Maintenance Facility
- East and West Approach connections
- Decommission existing bridge

**311 direct jobs**  
June 2014

### Eastside

- Highway widening
- Culvert installation
- Lid construction

**484 direct jobs**  
June 2014



### West Connection Bridge

- Bridge assembly

**70 direct jobs**  
June 2014

**TOTAL \* 1,460 direct jobs**  
June 2014

In addition to direct employment listed above, SR 520 construction creates opportunities for vendors, suppliers and other services like restaurants and retail.

**\*Note:** WSDOT will monitor and report West Approach Bridge North construction job numbers as construction continues to ramp up.

## Medina to SR 202: Eastside Transit and HOV Project

We are nearly finished with SR 520 improvements on the Eastside, including:

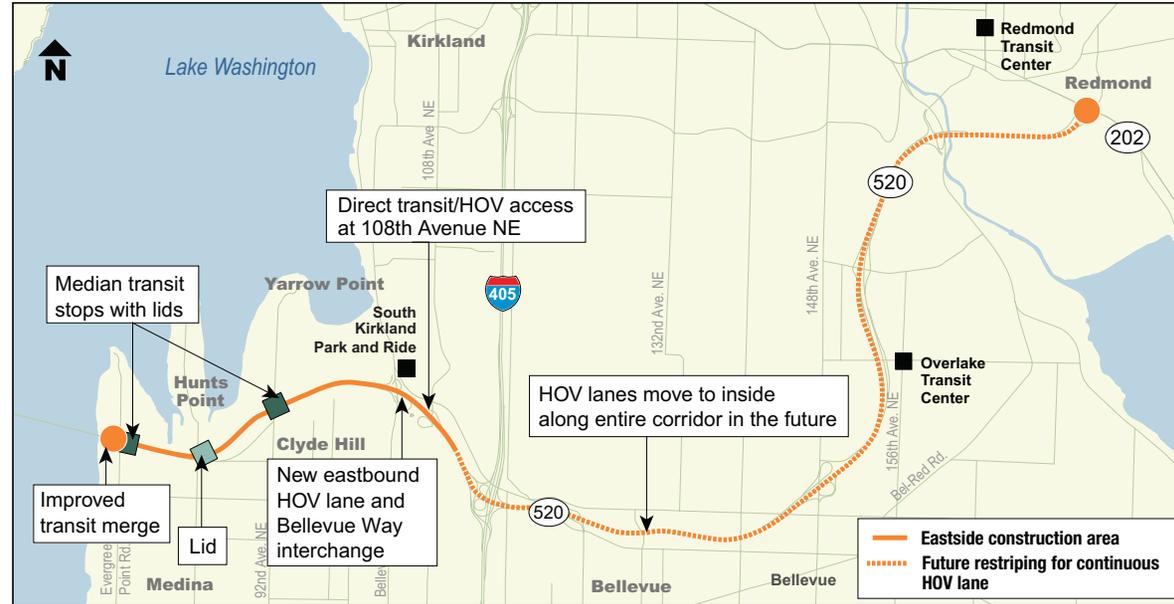
- Transit/HOV lanes in both directions through the entire Eastside corridor (now open).
- Wider, safer shoulders.
- Median transit stops at Evergreen Point Road and 92nd Avenue Northeast (now open).
- Direct-access ramp to and from 108th Avenue Northeast for carpools and transit (now open).
- Regional bicycle and pedestrian path with connections to local trails.

### Environmental and community enhancements:

- Wider, fish-friendly culverts.
- Noise-reduction techniques.
- Stormwater treatment and detention facilities.
- New lids at Evergreen Point Road, 84th Avenue Northeast and 92nd Avenue Northeast.

### Project schedule:

- Construction start: Spring 2011
- Open to traffic: Sept. 2014



A bus picks up passengers in Medina at the new Evergreen Point Road median transit stop, which opened in summer 2014.



Buses and carpools have their own travel lanes on the new Eastside HOV system that opened Sept. 15.

## SR 520 mitigation overview map

Note: these mitigation materials show projects that have been constructed as well as others where the layout shown is conceptual and has not been finalized. For projects that are tied to the unfunded portion of the SR 520 program, design and construction will begin once funding is secured.

### 1 Bryant Building



Parks mitigation located on the northwest end of Portage Bay, north of SR 520. Funded.

### 2 Montlake Triangle



Construction mitigation located just north of the Montlake Cut and SR 520, near the University of Washington. Funded. Graphic credit: University of Washington

### 3 Washington Park Arboretum



Parks mitigation located in the Arboretum, south of the SR 520 floating bridge. Partially funded

### 4 WSDOT Peninsula



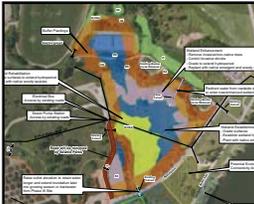
Wetland mitigation located in the Arboretum, near the unused R.H. Thomson ramps. Unfunded.

### 5 Union Bay Natural Area

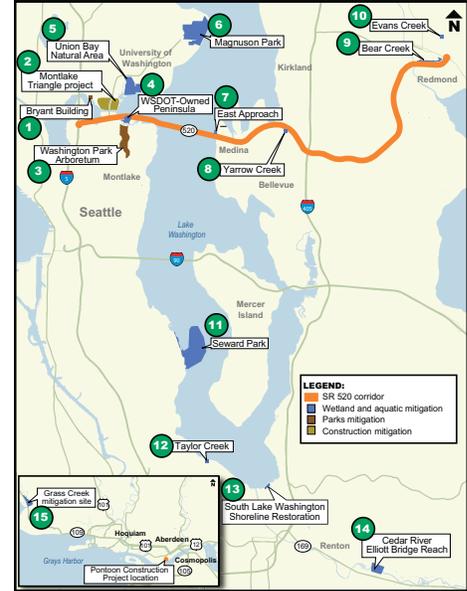


Wetland mitigation located on the north end of Union Bay, west of the SR 520 floating bridge. Funded.

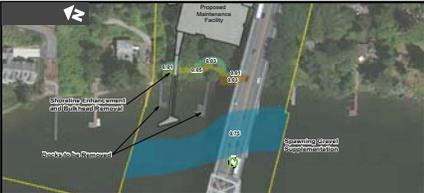
### 6 Magnuson Park



Wetland and aquatic mitigation located north of SR 520 near Sand Point, on the west end of Lake Washington. Unfunded.

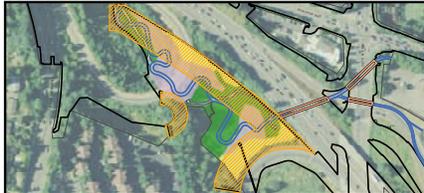


### 7 East Approach



Aquatic mitigation located at the east end of the SR 520 floating bridge on Lake Washington. Funded

### 8 Yarrow Creek



Wetland mitigation located near SR 520 on the Eastside. Funded.

### 9 Bear Creek



Aquatic mitigation located north of SR 520, near Redmond. Funded.

### 10 Evans Creek



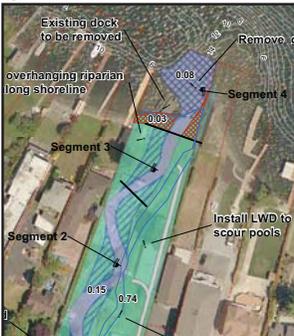
Wetland mitigation located north of SR 520, near Redmond. Funded.

### 11 Seward Park



Aquatic mitigation located near the south end of Lake Washington. Unfunded.

### 12 Taylor Creek



Aquatic mitigation located in south Seattle, near Lake Washington. Unfunded.

### 13 South Lake Washington shoreline restoration



Mitigation located on the south end of of Lake Washington. Funded.

### 14 Cedar River Elliott Bridge Reach



Wetland and aquatic mitigation located southeast of Lake Washington, near Renton. Funded.

### 15 Grass Creek



Wetland mitigation located near Grays Harbor, in southwest Washington. Funded.

# West side design refinements overview per ESSB 6001

## ESSB 6001 Legislation

*“Within the amounts provided in this section, the department must continue to work with the Seattle department of transportation in their joint planning, design, outreach, and operation of the remaining west side elements including, but not limited to, the Montlake lid, the bicycle/pedestrian path, the effective network of transit connections, and the Portage Bay bridge of the SR 520 Bridge Replacement and HOV project.”*

### For the Portage Bay Bridge, WSDOT and the city studied:

- Box girder and cable stay bridge types
- Bridge alignment
- Inclusion of a bicycle and pedestrian path

### For the Montlake lid area, WSDOT and the city studied:

- Better connections
- Quality open space
- Sustainability

### For transit and non-motorized connections, WSDOT and the city studied:

- Bicycle and pedestrian connections to existing and planned city networks
- Multimodal connections across the Montlake cut
- Implementation and next steps

**Based on this direction,** we further developed our previous designs.

Walk around the room to view the refined concepts for the Montlake lid, Portage Bay Bridge, and non-motorized connectivity.

## Design process to date

