

SR 520 Program

The road to the world's longest floating bridge

Jan. 29, 2015



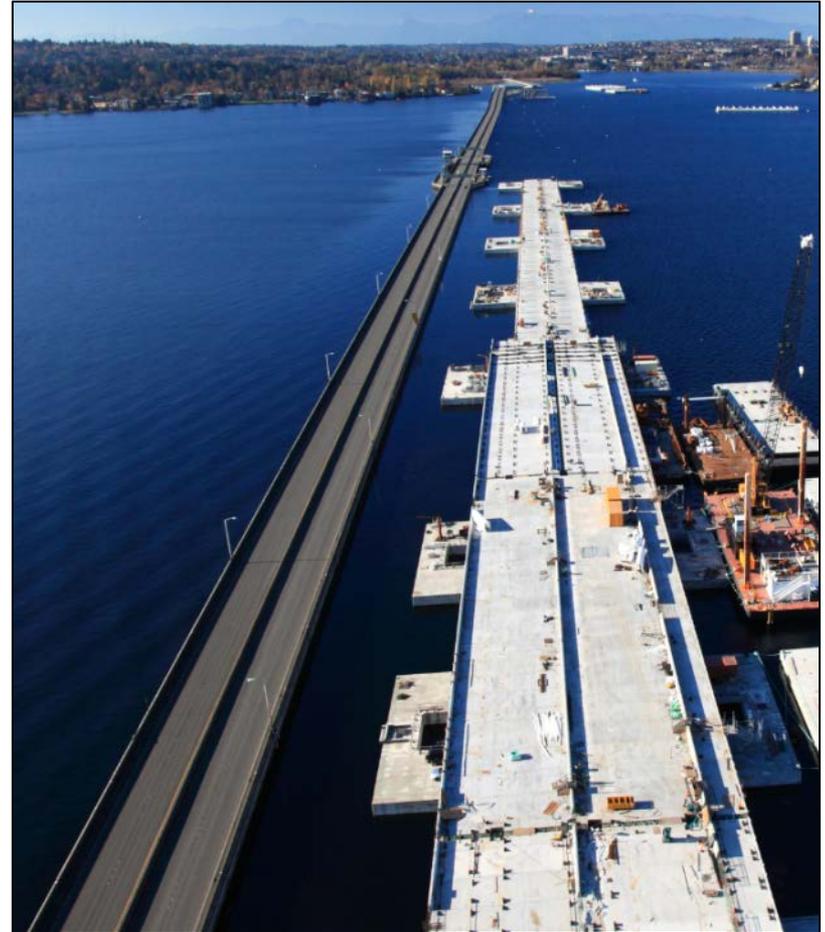
Office of Equal Opportunity Forum

Jan. 29, 2015

Shoreline, WA

Presentation Outline

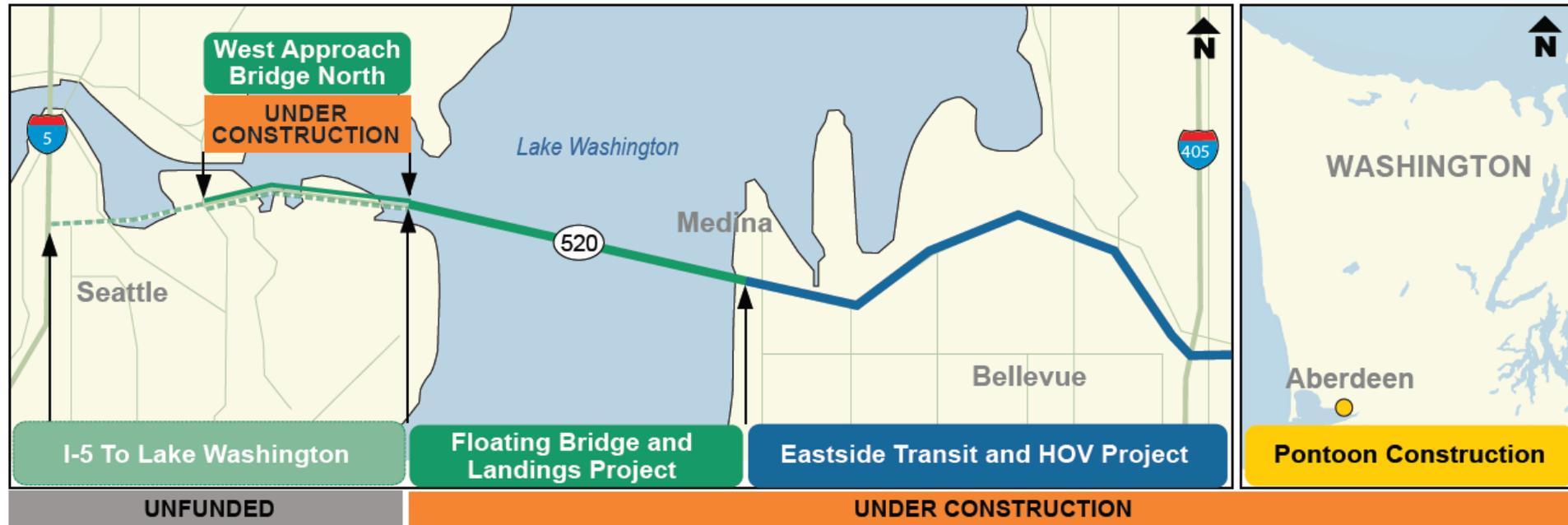
- SR 520 Program background
- Why does the SR 520 bridge need to be replaced?
- Construction of the new floating bridge
- Construction of the West Approach Bridge North
- Questions and answers
(feel free to ask throughout!)



View of the new SR 520 floating bridge under construction on Lake Washington, looking west. The existing bridge is visible to the left.

What is the SR 520 Bridge Replacement and HOV Program?

Program map

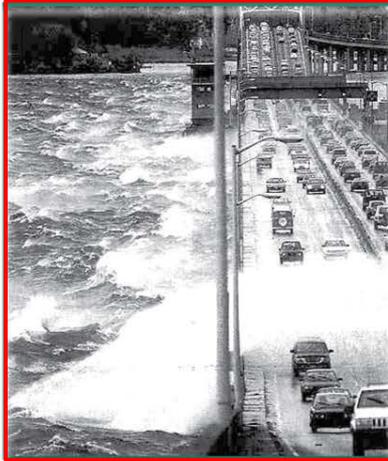
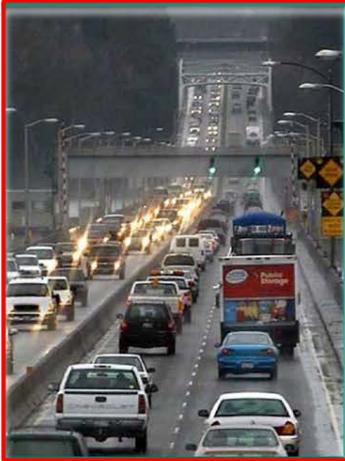


Program schedule

- Eastside Transit and HOV Project: Opened fall 2014
- Pontoon Construction Project (Aberdeen): Completion 2015
- New floating bridge: Opening spring 2016
- West Approach Bridge North: Construction began fall 2014; opening summer 2017
- Rest of the West: Depends on additional funding

Why does SR 520 need replacing? Public safety

SR 520 bridge is vulnerable to windstorms and earthquakes

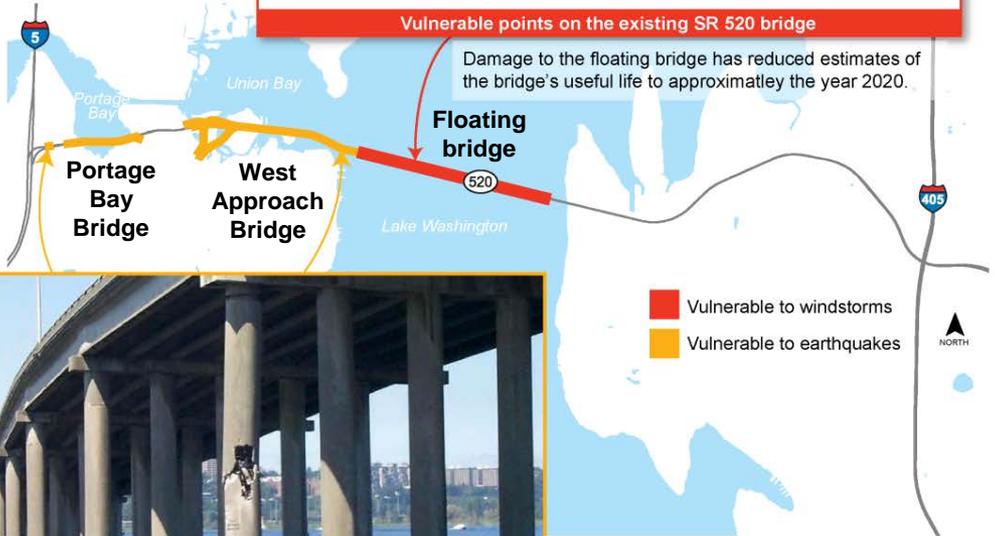
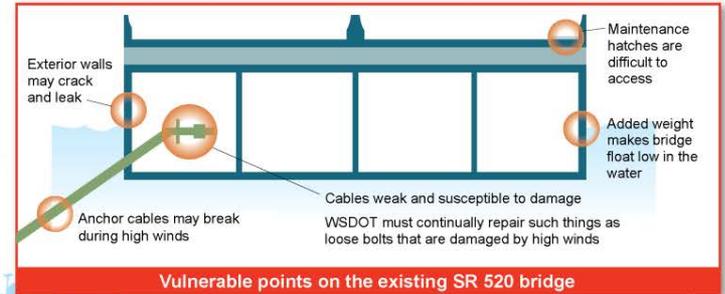


Waves batter the SR 520 floating bridge (top).
Example of earthquake-vulnerable hollow columns (bottom).

Current vulnerabilities



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



Damage to the floating bridge has reduced estimates of the bridge's useful life to approximately the year 2020.

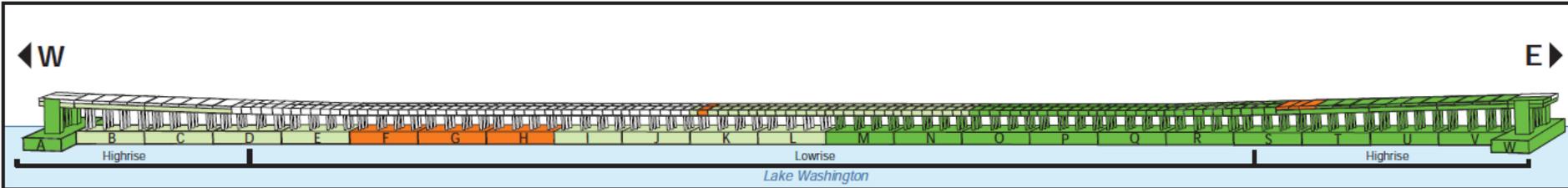


Floating bridge assembly on Lake Washington

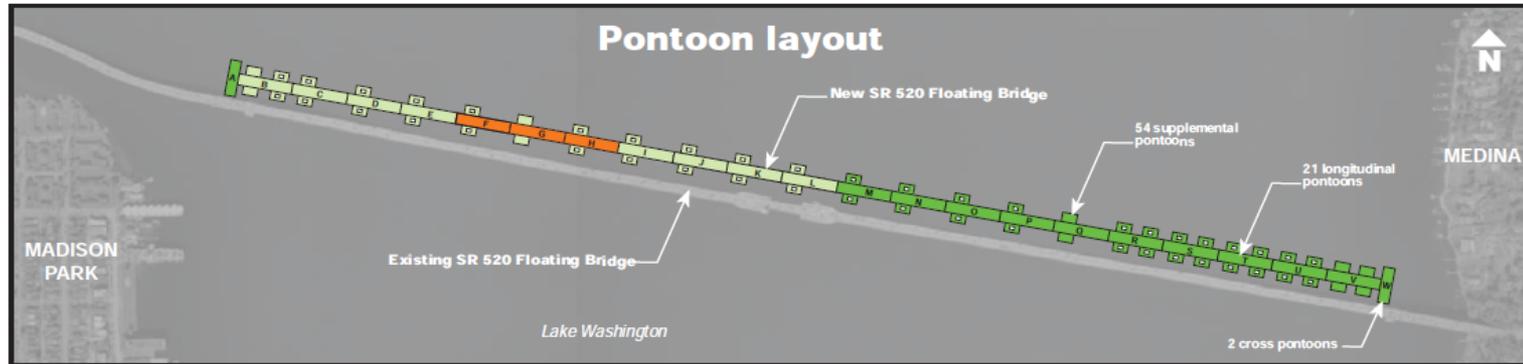
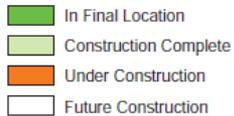
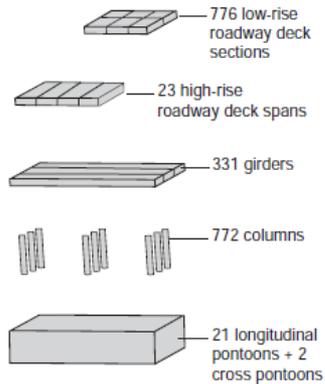


Bridge assembly on Lake Washington

Updated: Jan. 15, 2015



GRAPHIC KEY AND FACTS



Low-rise roadway deck includes pre-cast deck panels being constructed in Kenmore.

- 441 out of 776 pre-cast deck panels have been constructed. 244 of 776 have been placed.

High-rise roadway deck includes girders and cast-in-place deck.

- 11 out of 23 cast-in-place deck spans have been constructed.
- 330 out of 331 girders have been constructed. 196 of 331 have been placed.

The number of columns shown is a representation of the total number of columns.

- 371 out of 772 columns have been installed.

- Current number of pontoons on Lake Washington: 74

- Total number of pontoons constructed to date: 74

- Pontoons currently under construction: 3

Note: not to scale, for illustrative purposes only

Floating Bridge visualizations (looking east)



View of new SR 520 floating bridge, looking east. The new bridge will feature a new transit/HOV lane in each direction and a 14-foot-wide bicycle/pedestrian path on the north side.

Floating Bridge visualizations (new bicycle/pedestrian path)



The new SR 520 floating bridge will feature a 14-foot-wide bicycle and pedestrian path on the north side, providing bikers, joggers and walkers a new walk across Lake Washington.

Floating bridge and landings: Potential sub-contractor opportunities

Awarded contract amount: \$586 million

Execution Date: Summer 2011 to Kiewit-General-Manson,
a Joint Venture

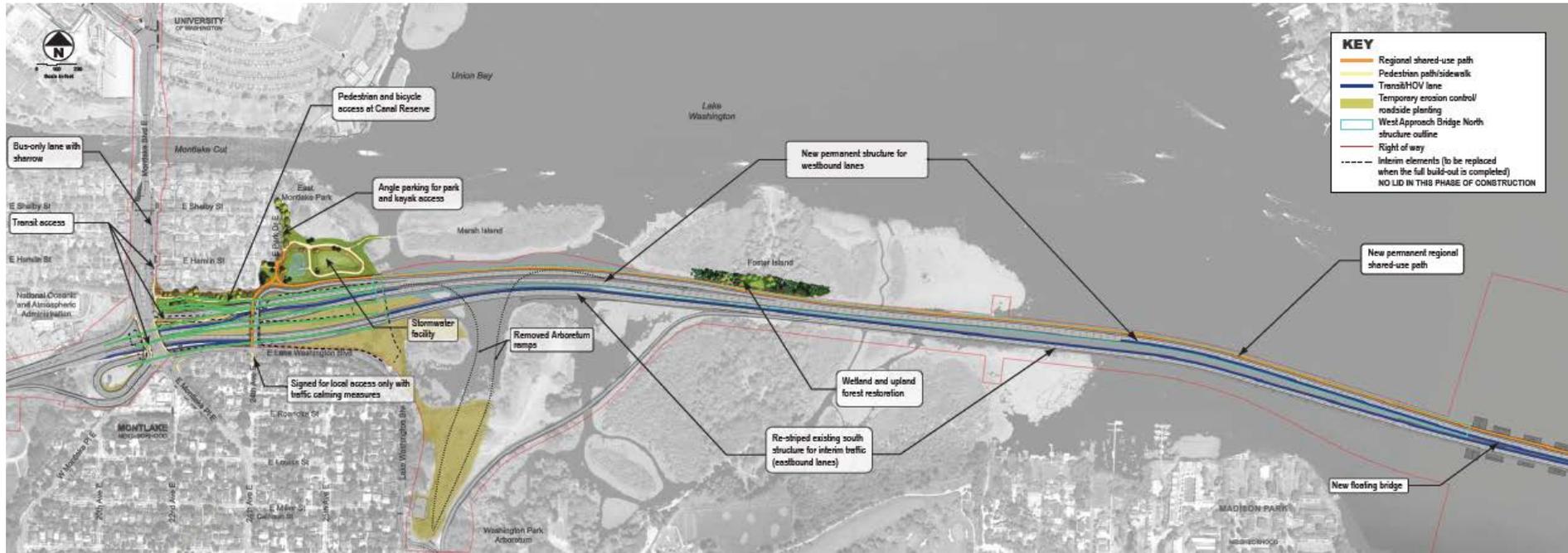
WSDOT Construction Engineering Manager: Dave Becher

Kiewit-General Project Manager: Cody Bishop

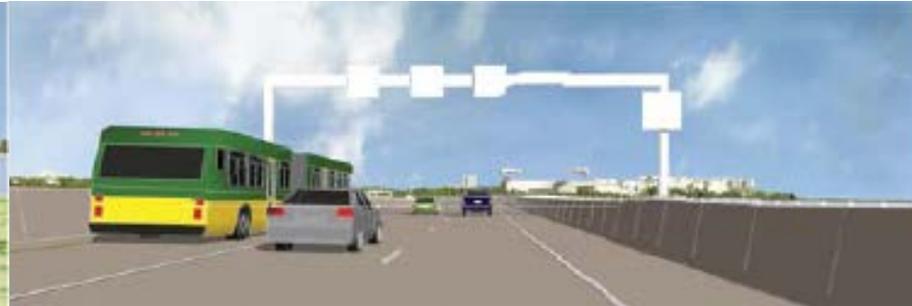
Floating bridge and landings: Potential sub-contractor opportunities

- Concrete Paving and Barrier
- Noise and Retaining Walls
- Electrical CCW Cable Pulls and Feeders
- Bridge Architectural Electrical
- Striping
- Coatings in Pontoon Anchor Galleries
- Chain Link Fence
- Demolition of Existing Approach and Pontoons

Next construction phase: West Approach Bridge North



Looking west



Looking west

Construction update: West Approach Bridge North



Gov. Inslee, WSDOT Secretary Peterson and other key elected officials broke ground on the West Approach Bridge North project on Oct. 15, 2014, in Seattle.

Construction update: West Approach Bridge North



Note: For illustration purposes, not to scale



Work bridge construction and pile installation



Work bridge at the MOHAI shoreline



Arboretum Waterfront Trail reopened

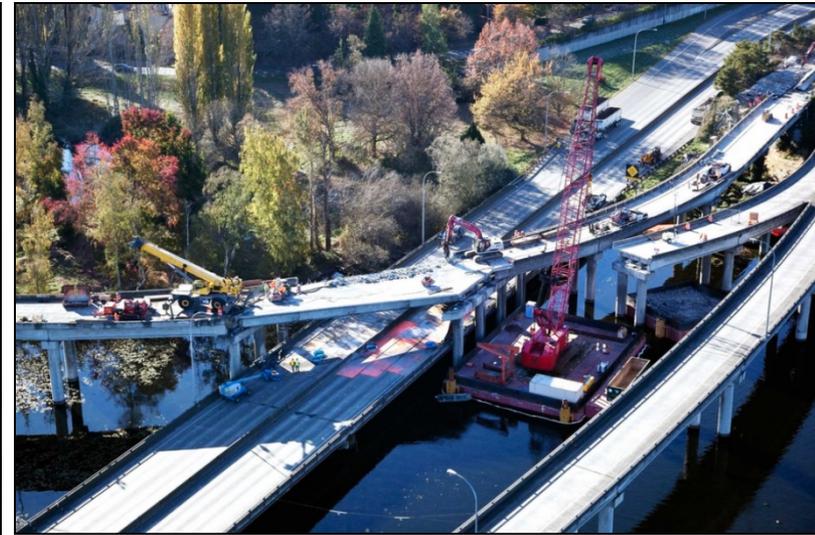


Pile installation near Foster Island

“Ramps to Nowhere” demolition activities



Crews break up the concrete bridge deck to continue removing the “Ramps to Nowhere”



Crews were busy at work in fall 2014 removing the old unused R.H. Thomson “ramps to nowhere” to make room for the new West Approach Bridge North.



West Approach Bridge North: Potential sub-contractor opportunities

Total Construction Cost: \$199 million

Execution Date: August 2014 to Flatiron West Inc.

WSDOT Construction Engineering Manager: Brian Dobbins

Flatiron West Inc. Project Manager: Justin Allington

West Approach Bridge North: Potential sub-contractor opportunities

Aggregate Supply

Archaeological and Historical Salvage

Asphalt paving

Bollard

Bridge Control System

Bridge Demolition

Bridge Drainage System

Bridge Railing

Bridge Transverse Joint Seal

Cleaning Existing Drainage Structures

Cold Planning

Concrete Fascia Panel

Concrete Supply

Contaminated Material Handling and Disposal

Demolition

Dewatering

Directional Boring

Dowel Bar

Driven Pile

Electrical

West Approach Bridge North: Potential sub-contractor opportunities continued

Electrical

Landscaping and Irrigation

Erosion Control

Material Trucking

Fencing

Modular Expansion Joint System

Formliner

Manholes

Gates

Overhead Signs

Geotextiles

PCC Paving

Ground Anchor

Pier 41 Fender System

Guardrail

Pipe Supply

Joint Seal

Precast Concrete

Lagging

Prestressing

West Approach Bridge North: Potential sub-contractor opportunities continued

Reinforcing Steel

Textured PCC

Riprap

Tie Bar

Seismic Isolation Bearing

Traffic Barrier

Signage

Underground Electrical

Soldier Pile

Striping

Structural Earth Wall

Structural Low Allow Steel

Survey

Television Inspection

Next steps

- **Floating bridge construction continues** – new bridge to open in spring 2016.
- **West Approach Bridge North construction continues** – new bridge to open in summer 2017.
- **“Rest of the West” project elements** – pending additional funding.



Questions?

For more information:

Visit: www.wsdot.wa.gov/projects/SR520Bridge

E-mail: SR520Bridge@wsdot.wa.gov

Call: 1-888-520-NEWS (6397)

Mail: SR 520 Bridge Replacement and HOV Program
999 3rd Avenue, Suite 2200
Seattle, WA 98104

