



SR 520 Bridge Replacement and HOV Program

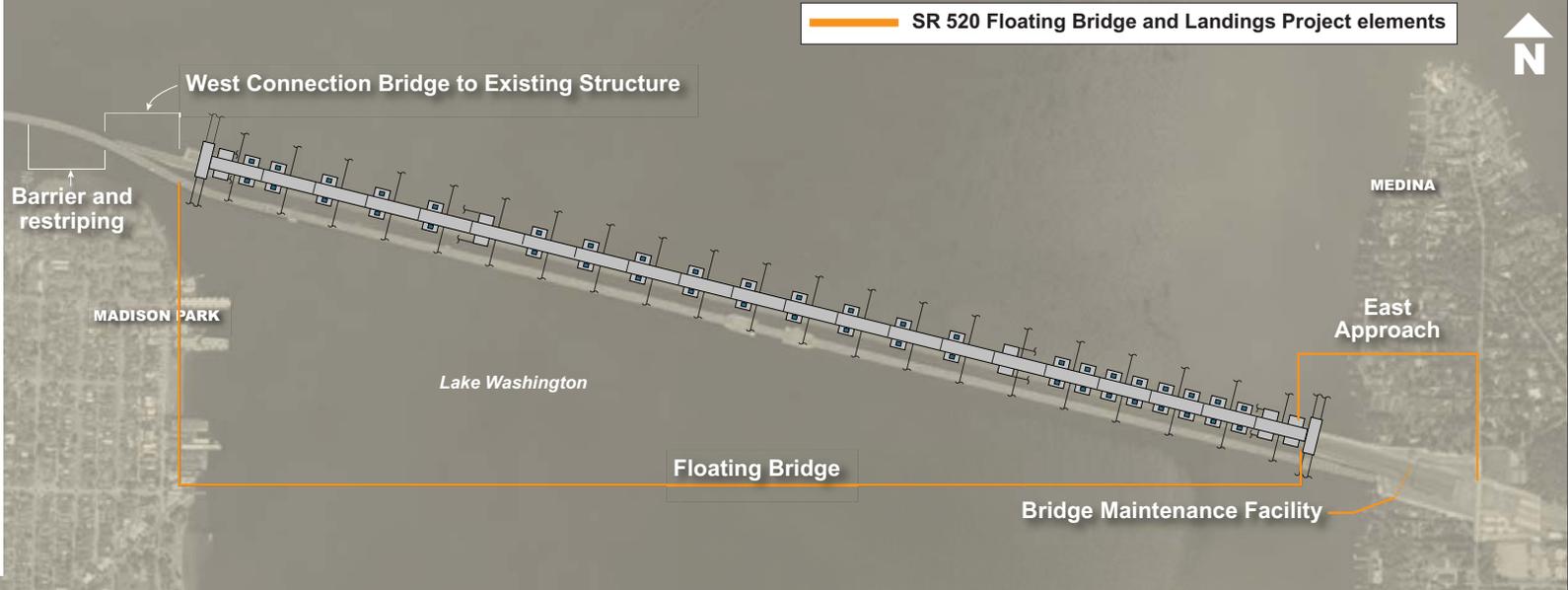
I-5 to Medina: Bridge Replacement and HOV Project



SR 520 Floating Bridge and Landings Project overview

Project elements include:

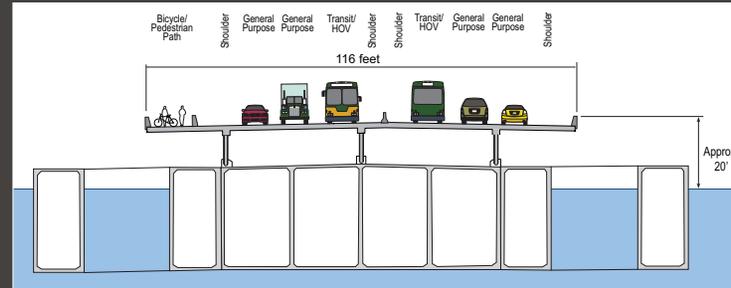
- Design and construction of new six-lane superstructure and roadway, including HOV lanes and a bicycle/pedestrian path.
- Design and construction of supplemental stability pontoons.
- Design and construction of anchors and anchor cables.
- Towing pontoons to Lake Washington.
- Assembly of the new floating bridge.
- Design and construction of permanent East approach with bicycle/pedestrian connection.
- Design and construction of final connection to Evergreen Point Road vicinity.
- Design and construction of transition structures between East and West Approaches and floating bridge.
- Design and construction of new maintenance facility, dock and access.
- Decommission the existing floating bridge.



Construction of a new floating bridge



Floating bridge typical cross section



Towing pontoons





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SR 520 floating bridge construction around the state

Construction activities are planned at multiple locations in Washington state. Pontoons and other bridge components will be towed to Lake Washington for assembly.

A. Grays Harbor

(March 2011 – 2014)

- Pontoon construction
- Pontoon moorage

B. Port of Tacoma

(Nov. 2011 – mid 2014)

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

C. Kenmore

(Feb. 2012 – early 2014)

- Anchors
- Deck sections

D. Lake Washington

(spring 2012 – 2016)

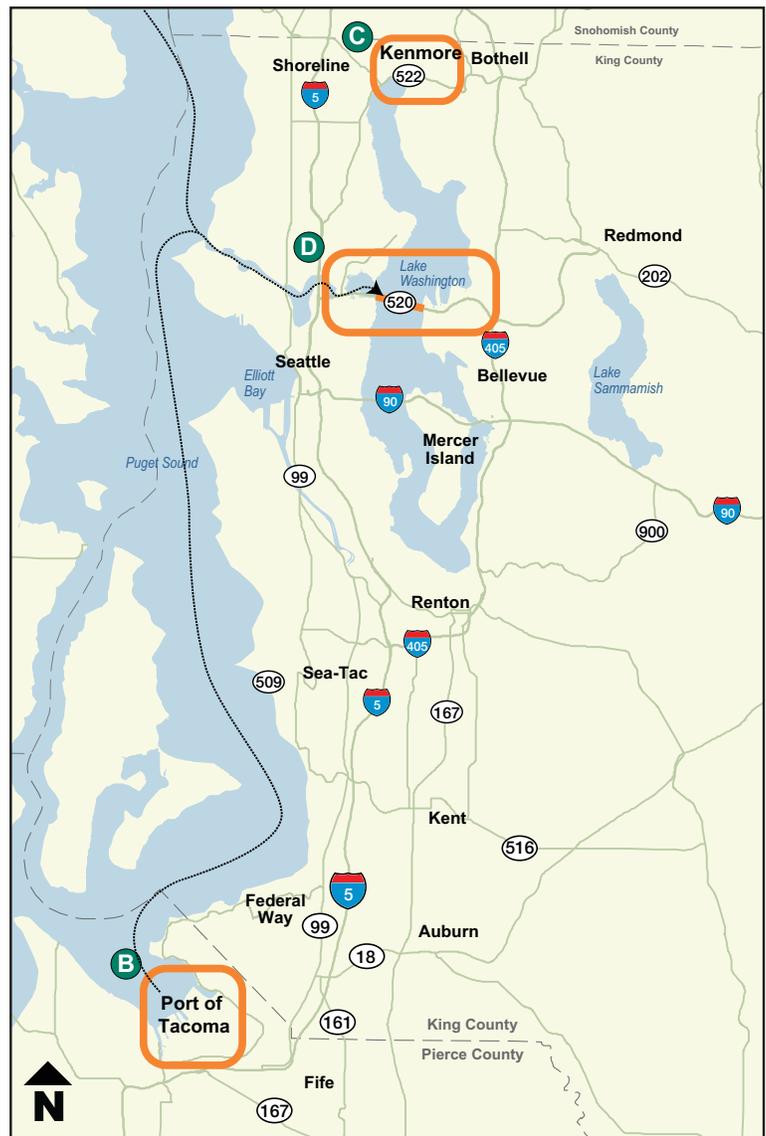
- Pontoon outfitting
- Eastside staging area
- Bridge assembly
- East Approach construction
- Bridge Maintenance Facility
- East and West Approach connections
- Decommission existing bridge



Crews on site in Kenmore.



Pontoon progress in Tacoma.



All towing will occur in designated shipping lanes.

How will WSDOT build the new SR 520 floating bridge?

- 1** Build the necessary pontoons, anchors and roadway sections in Aberdeen, Tacoma and Kenmore. Labels: Supplemental stability pontoons (54), Longitudinal pontoons (21), Cross pontoons (2).
- 2** Begin constructing staging area near Medina with construction barges and cranes. Drive temporary piles. Labels: Existing SR 520 floating bridge, Temporary piles.
- 3** Install anchors for the floating bridge. Labels: Crane, Fluke anchor, Gravity anchor, Barge.
- 4** Tow pontoons to Lake Washington.
- 5** Install cofferdams to build bridge piers for East Approach structure. Move cross pontoon into staging area. Labels: Cross pontoon, Cofferdam.
- 6** Build bridge piers in cofferdams and begin pontoon assembly in staging area. Labels: Longitudinal pontoon, Cross pontoon, Bridge piers.
- 7** Join supplemental pontoons to longitudinal pontoons at staging area. Labels: Supplemental stability pontoon, Bridge piers.
- 8** Begin installation of superstructure on pontoons at staging area. Labels: Superstructure.
- 9** Move completed pontoons into position on Lake Washington. Continue assembling pontoons in staging area.
- 10** Move completed pontoons into position on Lake Washington and complete roadway superstructure.
- 11** Connect new floating bridge to completed East Approach and west transition span. Labels: New SR 520 floating bridge, Existing floating bridge to be decommissioned.
- 12** Shift traffic to new floating bridge. Decommission the existing bridge and remove from Lake Washington. Labels: New SR 520 floating bridge open to traffic.

Note: Images for illustration purpose and are not to scale

Upcoming SR 520 floating bridge construction activities

Planned construction activities for April through June 2012

Lake Washington	Tacoma	Kenmore
<ul style="list-style-type: none"> • Tree clearing at the site of the bridge maintenance facility • Installation of shaft anchors for eastern cross-pontoon • Cofferdam construction • Installation of the infrastructure for the in-water staging area • Installation of anchors for eastern longitudinal pontoons • Site prep in the cofferdam • Begin construction of pier footings at East Approach in Medina • Planned towing of pontoons from Aberdeen and Tacoma 	<ul style="list-style-type: none"> • Continue pontoon construction • First float-out of cycle 1 pontoons • Prepare cycle 1 pontoons for towing • Begin second cycle of pontoon construction 	<ul style="list-style-type: none"> • Continue gravity anchor construction • Begin fluke anchor construction • Begin construction of casting area for roadway deck sections

Construction equipment



Example of a cofferdam.



Example of a crane on a construction barge.

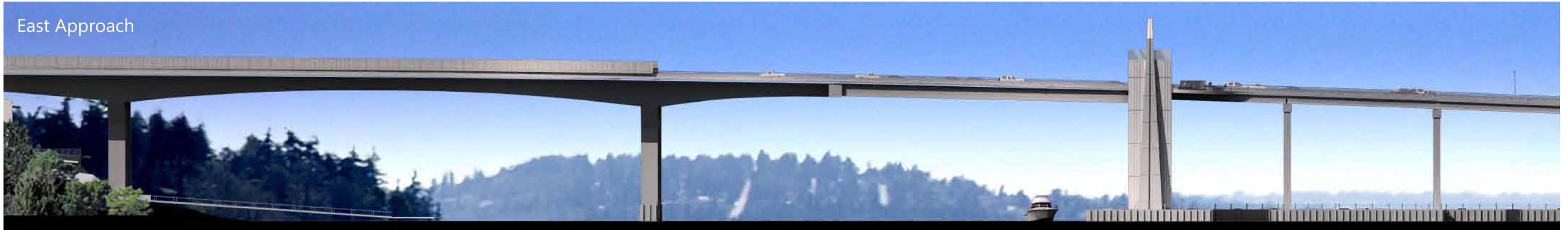
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Elevations of Floating Bridge

East Approach



Lowrise Longitudinal Pontons



West Approach



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View Looking East



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View of West Navigation Channels



Existing View



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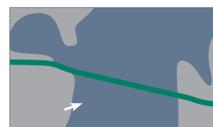


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Overall Bridge View from Madison Park



Existing View



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Sentinel Element



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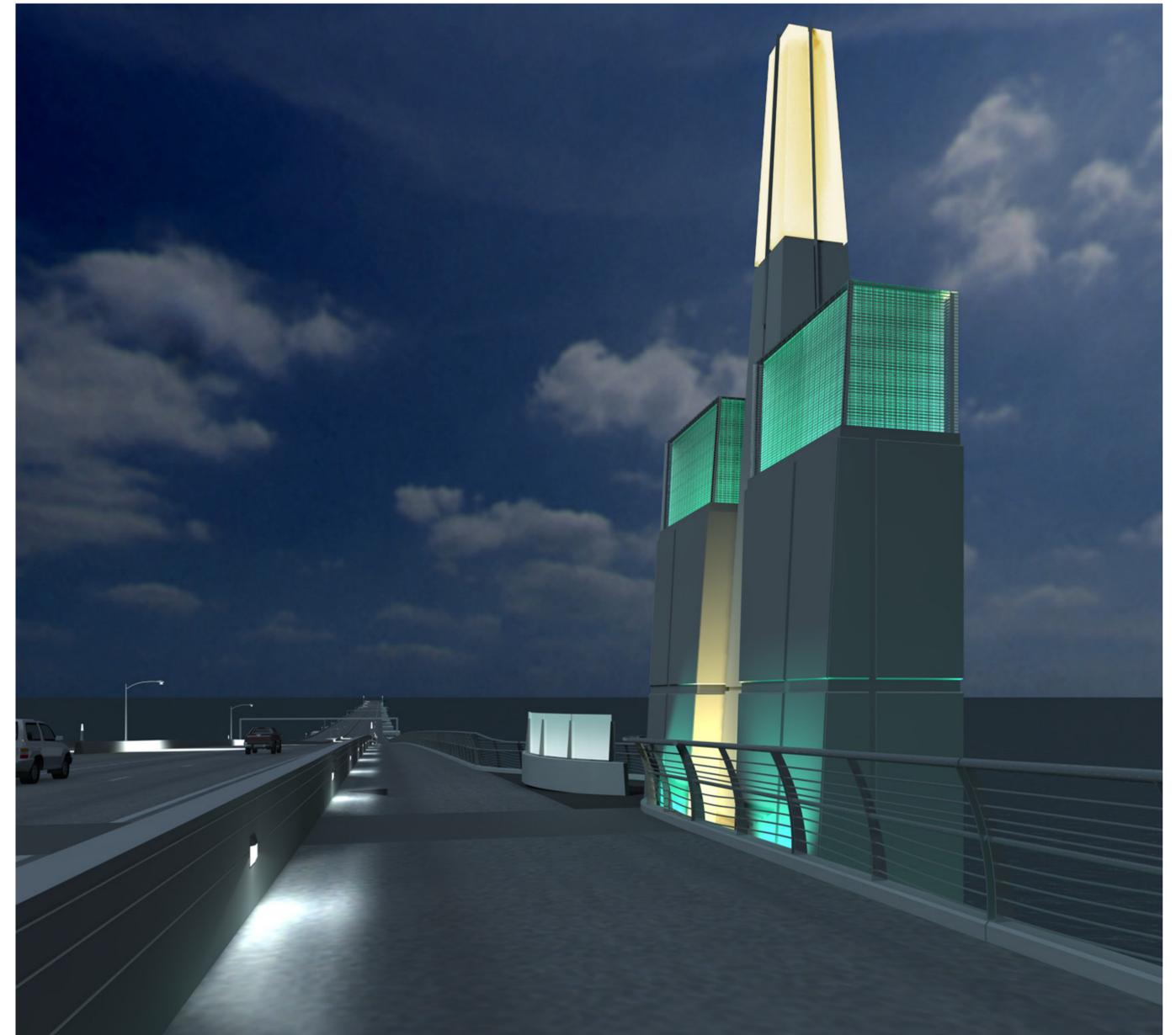
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Sentinel Lighting



WATER VIEW



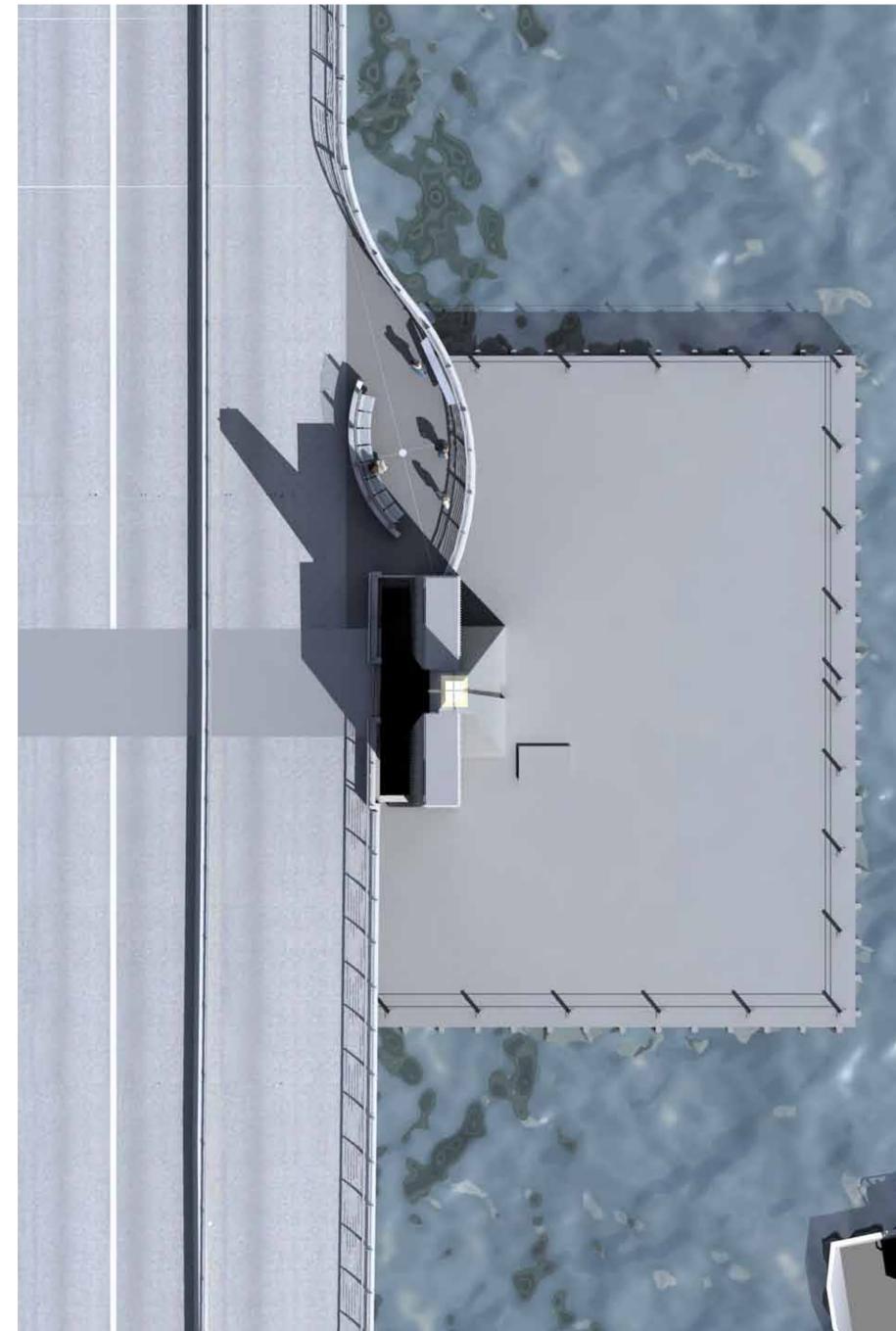
PEDESTRIAN VIEW

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Sentinel Pedestrian View



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Low-Rise Belvedere

