



Washington State
Department of Transportation

SR 520 Bridge Replacement and HOV Project



Fall 2007

Replacing the SR 520 bridge starts with pontoons

Replacing the SR 520 bridge is critical because it is vulnerable to earthquakes and severe windstorms. Building a new floating bridge starts with pontoons. The large, hollow concrete structures that sit deep in the water are designed to support the weight of the road, plus the cars, trucks, and buses that use the bridge daily.

WSDOT is moving ahead with planning for early pontoon construction, a critical step towards opening a new bridge to drivers by 2018, if funding is available. This means the pontoons could be ready two years earlier than originally planned, which will speed up bridge recovery in case of a catastrophic failure.

We have selected the Port of Grays Harbor as a potential construction site for the pontoons. Contractors will then have the option of using a construction site that has been reviewed through the environmental process. We plan to involve contractors in the selection of the ultimate pontoon construction site to encourage innovative construction methods.

How do bridge pontoons float?

A floating bridge is similar to a tanker ship or barge. Despite being heavy concrete structures, pontoons float because the water they displace weighs more than the pontoons, road, and traffic they support.



Underneath the Evergreen Point Floating Bridge, the columns and roadway sit on the pontoons, 2007



Cracks in the pontoons are inspected and repaired during the annual SR 520 bridge closure, 2007



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How have floating bridges been built in the past?

The box-like shapes of the pontoons are created by using wood and steel forms. Concrete is then poured into the forms to create the pontoon floors, walls, and top slabs.

Completed pontoons are floated from the construction facility and can either be stored or towed to the bridge site. They are joined together at the bridge site and secured in place by steel cables that are anchored to the sea floor or lakebed.

The road, concrete columns, or beams are constructed on top of the pontoons. These can be added at different phases of the construction process, either before or after the pontoons are towed to the bridge site.

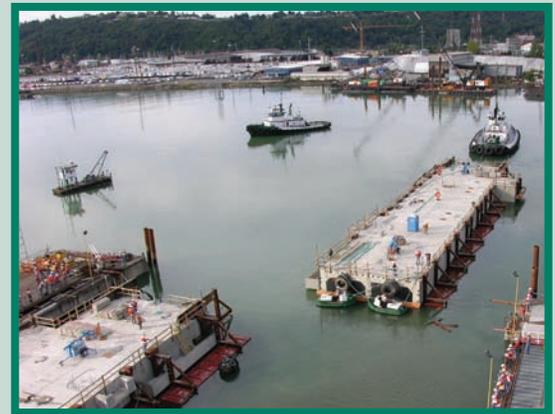
How will the public be involved in pontoon construction?

We are preparing a supplement to the corridor's Draft Environmental Impact Statement that was published in 2006. This supplement will include more information on construction impacts, mitigation, west side design options, and pontoon construction, outfitting, and transportation to Lake Washington.

We are also beginning a separate environmental impact statement on building and storing pontoons to replace the bridge. While there is some overlap between the two environmental documents, pursuing a separate process will mean the pontoons are ready sooner in case of a catastrophic failure. The public will have an opportunity to review and comment on both environmental documents when they are released.



Lowering a wood floor form to create the shape of a SR 104 Hood Canal Bridge pontoon, 2006



A tug boat tows a completed SR 104 Hood Canal Bridge pontoon, 2007

Your comments and questions are important to us.

For More Information

Project Web site:

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