



Washington State
Department of Transportation

SR 520 Bridge Replacement and HOV Project



FACT SHEET

Fall 2007

Natural disasters threaten the SR 520 bridge

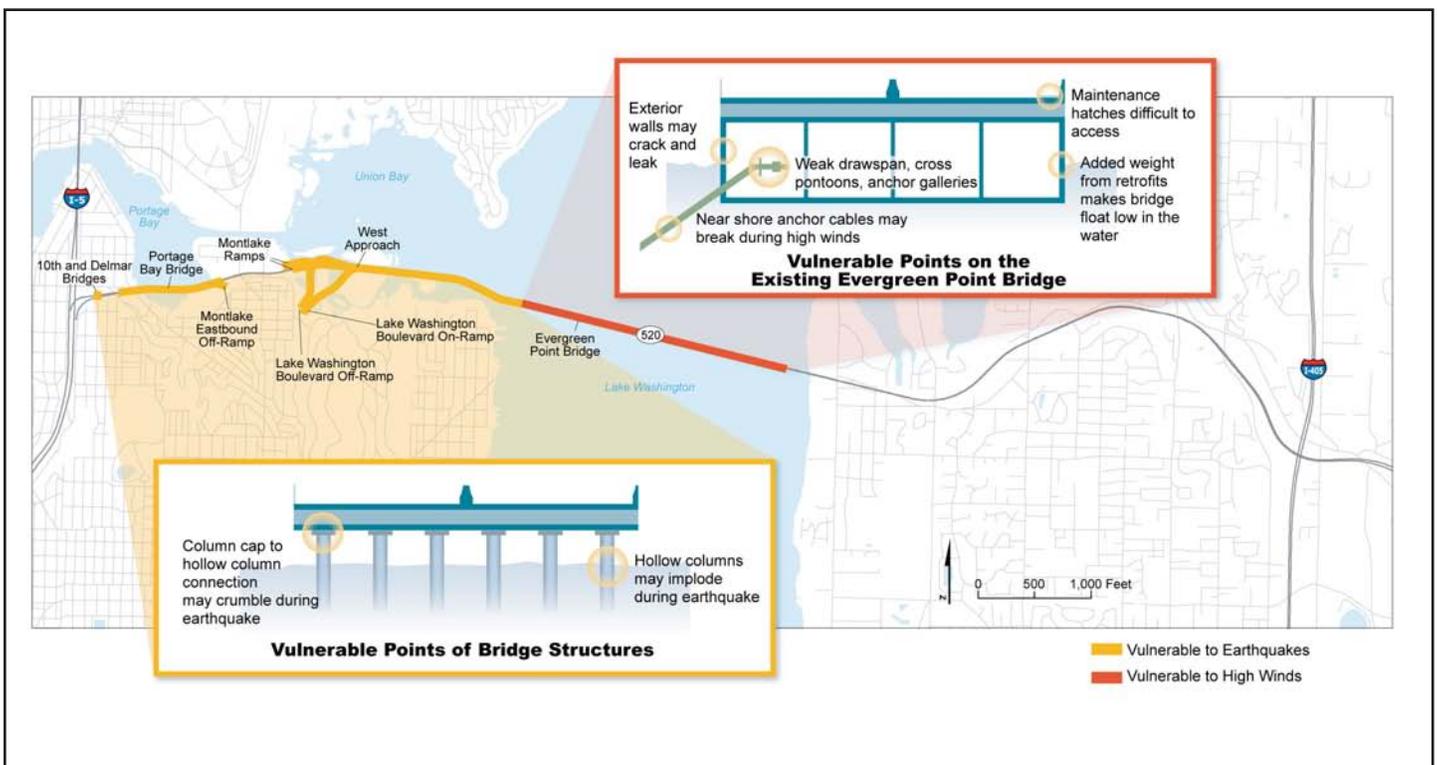
The SR 520 floating bridge carries approximately 160,000 people and 115,000 vehicles each day. As one of only two Lake Washington floating bridges, it is a critical regional route carrying people and goods. If the SR 520 bridges, bridge approaches or surrounding roadway were to be severely damaged or destroyed lives could be lost and the effects to regional and statewide travel and the economy would be significant.

Why do the SR 520 bridges and approaches need to be replaced?

The SR 520 bridges are vulnerable to earthquakes and windstorms. The Portage Bay Bridge and the west approach from I-5 to the floating bridge are the most vulnerable sections to earthquakes. They are built on hollow columns which could implode during

an earthquake. The tops of the columns have caps that may crack and crumble during an earthquake, tipping or dropping the bridge sections.

Strong windstorms may severely damage, break apart and destroy the floating bridge portion of SR 520. Bridge components have been sheared off because of severe rocking and the pontoons are cracked and leaking from past storm damage; the frequent fixes and maintenance can't keep the bridge in safe shape forever and it needs to be replaced. The maintenance fixes to the bridge have added significant amounts of weight to the bridge so it sits one-foot lower in the water than originally designed, making it even more vulnerable to the tossing and turning of stormy lake waves.



How is WSDOT keeping the public informed about and safe on SR 520 today?

- 24-hour electronic bridge monitoring
- traffic management procedures, including detours and traveler information
- real-time public information online and via the media
- emergency operations center activation procedures
- ongoing coordination with other agencies and local jurisdictions
- ongoing emergency response training for WSDOT staff

How will the new SR 520 bridge be safer for drivers?

Construction crews will build the new bridge to seismic standards and to withstand up to 92 mph windstorms. The bridge will be built with stronger pontoons that are more stable. In addition, the road will be 26 feet above the water, decreasing the chance of waves crashing onto the bridge. The new bridge will not have a drawspan in the middle of the floating bridge, which is where the bridge is most vulnerable to storm damage.

The new bridge will have shoulders and wider lanes so that drivers are safer. They will also make the bridge more reliable for travelers because traffic incidents will have a place to pull out of travel lanes and emergency vehicles can respond faster.

Storm damage 2006

During a December 2006 storm, all three center-lock hooks on the drawspan sheared off and fell into the pontoon cells, the catwalk on the end of the draw pontoon was damaged, and a portion of the wave deflector on the south side of the pontoons was damaged. As a result of this storm, the SR 520 floating bridge was closed for more than 12 hours.

Is WSDOT prepared for a SR 520 catastrophic bridge failure?

During last year's fierce windstorms, we were prepared with emergency response plans. We provided timely and accurate public information and identified alternate routes. If SR 520 had to be permanently closed because of damage or destruction, more extensive and long-term detour routes and communication methods would be needed.

We are coordinating with the Washington State Patrol, federal agencies, other state agencies, King County and jurisdictions surrounding Lake Washington to prepare for a catastrophic failure of the bridges and surrounding roadway. The plan will be developed with local cities along SR 520 and around the north end of the lake as well as emergency responders. The plan, which will be finalized in spring 2008, will include traffic management and communication plans, and a plan for restoring the bridge as quickly as possible.



Waves crash along side the SR 520 bridge

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