

# NEW BRIDGE BUILT TO WEATHER WICKED WINDS AND WAVES



High winds and waves are great for surfers, but they're a threat to floating bridges. The force of strong, undulating waves can damage – even break apart – a floating highway. You'll be glad to know that the new SR 520 floating bridge is designed and built to withstand extremely severe storms.

## HOW DO WINDSTORMS AND WAVES AFFECT FLOATING BRIDGES?

Strong, wind-fueled waves cause bridge pontoons to bend, heave and twist. The movement creates stress in the pontoons and their anchor system. Past storms have sheared off components on the old SR 520 floating bridge and caused pontoon cracks and leaks that required significant maintenance and retrofits.

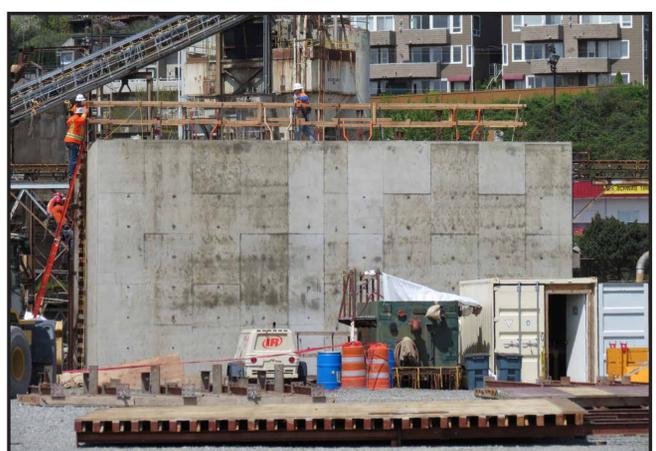
## HOW NEW BRIDGE IS STRONGER AND SAFER THAN OLD BRIDGE

The new floating bridge has:

- **Greater storm resistance;** it's designed to withstand winds of 89 mph (a 100-year storm), compared to 77 mph (a 20-year storm) for the old bridge.
- **Bigger, stronger pontoons;** they're the heaviest, widest, deepest and longest floating-bridge pontoons ever built, with stronger concrete and more post-tensioning cables.
- **Bigger, heavier anchors,** some weighing nearly 600 tons when loaded with ballast rocks.
- **Stronger anchor cables;** they're 3 $\frac{1}{8}$ -inch-thick cords of steel.
- **No drawspan,** which was the old bridge's weakest point.
- **A taller roadway deck** (20 feet high), so waves will no longer wash over cars.



A new SR 520 pontoon eases through the Montlake Cut.



Crews put the finishing touches on a 420-ton gravity anchor.



Thick steel cables hold the new bridge to its anchors.



With a higher roadway, the new bridge won't provide free car washes during storms.