

## SR520 Bridge Replacement Study Washington State Department of Transportation

<b>Location:</b>	Seattle, Washington
<b>Date:</b>	2008
<b>Structure:</b>	Two (2) Two-Lane Tunnels
<b>Length:</b>	Length Varies Between 800 – 1,000 feet (240 – 300 meters) Depending on Option Selected
<b>Cross-Section:</b>	Width: 49 feet (14.9 meters) Height: 40 feet (12.2 meters)
<b>Geology:</b>	Mix of Hard to Very Dense Clay, Till, Sand and Gravels at the Bottom of Union Bay and Montlake Cut
<b>Cost:</b>	Approximately \$8 Billion
<b>Client:</b>	HDR, Inc.
<b>Owner:</b>	Washington State Department of

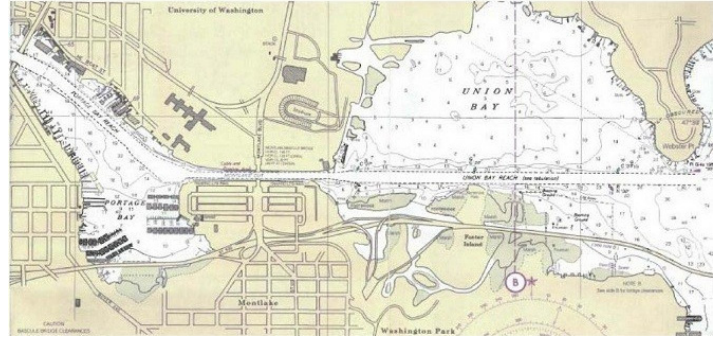


Figure 1. Map of Montlake / University of Washington Area, showing Union Bay and the Montlake Cut. Any tunnel alignment would be constructed across either one of these bodies of water.

### Montlake Cut Tunnel Expert Review Panel:

The WSDOT was addressing the need to ease bridge traffic congestion by replacing the existing SR520 Bridge with a six-lane bridge capable of withstanding earthquakes and severe storm events. An additional part of the plan involved the road interchange on the western side of the bridge for which various tunneling options were assessed.

Gall Zeidler Consultants (GZ) was part of the Montlake Cut Tunnel Expert Review Panel. The purpose of this panel was to evaluate the feasibility and advantages and disadvantages of all tunneling options for the interchange connections from the SR520 mainline just east of Montlake, to the University of Washington. The tunnel options included an immersed tunnel, a Tunnel Boring Machine (TBM) tunnel, and a Sequential Excavation Method (SEM) tunnel.

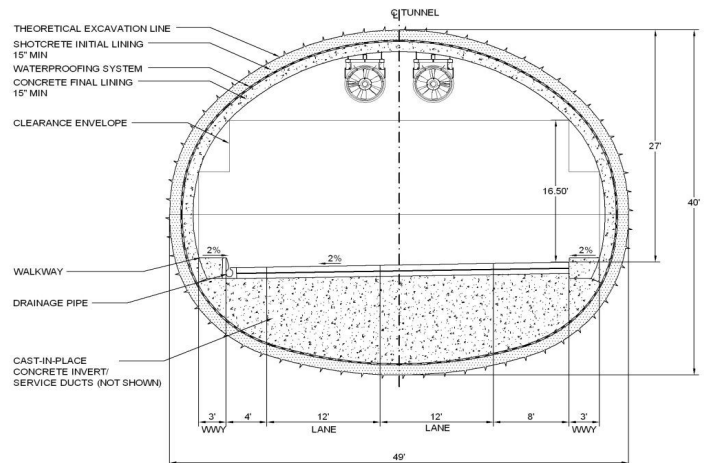


Figure 2. Typical cross-section of the two lane Montlake Cut tunnel.