

COMPARISON OF SR 520 WESTSIDE OPTIONS: Cost and Design

	OPTION A	OPTION K	OPTION L	A+ HYBRID	OPTION M
COST					
Total Program cost	\$4.526B - \$4.802B	\$6.574B - \$6.672B	\$5.066B - \$5.146B	\$4.433B - \$4.631B*	\$5.862B*
West side	\$2.022B – \$2.298B	\$4.070B – \$4.168B	\$2.562B – \$2.642B	\$2.159B*	\$3.358B*
I-5	\$322M	\$322M	\$322M	\$322M	\$322M
Portage Bay Bridge	\$482M	\$414M	\$426M	\$375M - \$475M	\$446M
Montlake	\$442M	\$2.346B	\$701M	\$448M	\$1.800B
West approach	\$776M	\$988M	\$1.113B	\$894M	\$790M
DESIGN					
Common to all Options	<ul style="list-style-type: none"> Lids at I-5 and 10th Avenue and Delmar Drive. A direct access HOV ramp to and from I-5. The SR 520 and I-5 interchange ramps would be reconstructed with generally the same ramp configuration as the ramps for the existing interchange. Removal of the Montlake Freeway Transit Station and relocated function. Six-lane corridor with a 4+2 configuration (one HOV and two general-purpose lanes in each direction). Lid in the Montlake area. 				
Portage Bay Bridge	<ul style="list-style-type: none"> Replace with a seven-lane bridge (110 feet wide). 	<ul style="list-style-type: none"> Replace with a six-lane bridge (100 feet wide). 	<ul style="list-style-type: none"> Replace with a six-lane bridge (100 feet wide). 	<ul style="list-style-type: none"> Replace with a seven-lane bridge (110 feet wide). 	<ul style="list-style-type: none"> Replace with a six-lane bridge (100 feet wide).
Montlake Interchange	<ul style="list-style-type: none"> The interchange would remain in the same location as today. A new bascule bridge would be constructed over the Montlake Cut. Westbound transit off-ramp to Montlake Boulevard. 	<ul style="list-style-type: none"> A new depressed interchange would be constructed to the east of Montlake Boulevard. Ramps would be constructed to the north through a sequential excavation method tunnel under the Montlake Cut and to the south near the Arboretum. Direct HOV access ramps to and from the east on SR 520. 	<ul style="list-style-type: none"> A new elevated interchange would be constructed to the east of Montlake Boulevard. Ramps would be constructed to the north across a new bascule bridge over the Montlake Cut and to the south near the Arboretum. Direct HOV access ramps to and from the east on SR 520. 	<ul style="list-style-type: none"> The interchange would remain in the same location as today A new bascule bridge would be constructed over the Montlake Cut. Direct access ramps to and from the east on SR 520. 	<ul style="list-style-type: none"> Interchange with additional ramp connections to Montlake Boulevard and Lake Washington Boulevard would be constructed to the east (TBD). Immersed tube tunnel concept under Montlake Cut. Number of lanes on ramps at interchange with SR 520 (TBD). Configuration of the Montlake Boulevard and Pacific Street Intersection to improve local congestion (TBD).
West Approach	<ul style="list-style-type: none"> The bridge structure would be wider and higher over Foster Island than today. Between Foster Island and the floating bridge, the roadway is low and flat resulting in less than desirable stormwater treatment. 	<ul style="list-style-type: none"> The bridge structure would be wider and the highway would be under a lid at Foster Island. The tunnel approach ramps would require fill into Union Bay (boat section). 	<ul style="list-style-type: none"> The bridge structure would be wider and higher over Foster Island than today. The slope of the bridge would have a gradual and constant slope to allow stormwater to flow to land. 	<ul style="list-style-type: none"> Ramp connection to Lake Washington Boulevard (TBD). The bridge structure would be wider and higher over Foster Island than today. The slope of the bridge would have a gradual and constant slope to allow stormwater to flow to land. 	<ul style="list-style-type: none"> Pedestrian connection over SR 520 at Foster Island (TBD). Height of the bridge and the navigation channel clearances (TBD).

NOTES

* This option has not been developed through a Cost Estimation Validation Process. Costs developed with Oct. 16 snapshot.

COMPARISON OF SR 520 WESTSIDE OPTIONS: Traffic Operations

	OPTION A	OPTION K	OPTION L	A+ HYBRID	OPTION M
TRAFFIC OPERATIONS					
Common to all options	<ul style="list-style-type: none"> Six-lane alternative provides a travel time benefit for transit and HOV. Added shoulder width improves corridor safety and reliability. Removal of the Montlake Freeway Transit Station and relocated function. 		<ul style="list-style-type: none"> 60 percent of transit riders are using the local service. Transfer connections between the transit service and the University Link Station is the same for all options. Montlake Bridge openings last an average of five minutes during the off-peak hours. 		
Local	<ul style="list-style-type: none"> Improves overall local traffic operations compared to No Build. Lowest volumes in the Arboretum. Highest diversion to other neighborhoods. 	<ul style="list-style-type: none"> Improves overall local traffic operations compared to No Build. Traffic volumes increase through the Arboretum compared to No Build. Provides full access to SR 520 from the north and south of Montlake Cut. 	<ul style="list-style-type: none"> Improves overall local traffic operations compared to No Build. 	<ul style="list-style-type: none"> Improves overall local traffic operations compared to No Build. Traffic volumes through the Arboretum are similar to No Build. 	<ul style="list-style-type: none"> Pending modeling, assumed to improve overall local traffic operations similar to Option K. Traffic volumes increase through the Arboretum compared to No Build.
Transit	<ul style="list-style-type: none"> Drawbridge openings affect SR 520 buses and the local transit service during off-peak hours. Improved local transit times over No Build. 	<ul style="list-style-type: none"> SR 520 buses bypass the drawbridge openings during the off-peak hours. Local bus service adversely affected by increased local congestion. 	<ul style="list-style-type: none"> SR 520 buses use new drawbridge thus slightly reducing travel times during the off-peak hours. Local bus service adversely affected by increased local congestion. 	<ul style="list-style-type: none"> Drawbridge openings affect SR 520 buses and the local bus service during off-peak hours. Preferred option by King County Metro and University of Washington. 	<ul style="list-style-type: none"> SR 520 buses bypass the drawbridge openings during the off-peak hours. Transit shares ramps with general-purpose traffic to enter and exit SR 520.
Construction	<ul style="list-style-type: none"> Requires capacity improvements on Montlake Boulevard to the south. Lowest number of construction truck trips. 	<ul style="list-style-type: none"> Requires capacity improvements on Montlake Boulevard to the south. Highest number of truck trips compared to all options. Closes NE Pacific Street during construction. Redirects traffic to Pacific Place. High level of construction delay. Removes bus layover space during construction. 	<ul style="list-style-type: none"> Requires capacity improvements on Montlake Boulevard to the south. Highest number of truck trips compared to all options. Closes Pacific Street intersection during construction. Redirects traffic to Pacific Place. High level of construction delay. Removes bus layover space during construction. 	<ul style="list-style-type: none"> Low level of construction truck trips. 	<ul style="list-style-type: none"> Similar to Option K. Medium level of construction truck trips.

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	OPTION A	OPTION K	OPTION L	A+ HYBRID	OPTION M
ENVIRONMENTAL					
Impacts covered in SDEIS?	Yes	Yes	Yes	Yes	<ul style="list-style-type: none"> • Will require additional supplemental analysis of the immersed tube tunnel and traffic operations.
Construction Impacts	<ul style="list-style-type: none"> • In-water construction and work bridges would affect aquatic resources and wetlands. • Access disruptions to parks and trails. • Noise impacts on neighborhoods adjacent to the alignment (including pile driving). • Increased traffic congestion from haul and detour routes. 	<ul style="list-style-type: none"> • In-water construction and work bridges would affect aquatic resources and wetlands. • Access disruptions to parks and trails. • Noise impacts on neighborhoods adjacent to the alignment (including pile driving). • Increased traffic congestion from haul and detour routes. • Additional disruption and noise in East Montlake/McCurdy Parks and along west shore of Union Bay due to construction of boat section and depressed interchange. 	<ul style="list-style-type: none"> • In-water construction and work bridges would affect aquatic resources and wetlands. • Access disruptions to parks and trails. • Noise impacts on neighborhoods adjacent to the alignment (including pile driving). • Increased traffic congestion from haul and detour routes. • Would not include boat section and depressed interchange. 	<ul style="list-style-type: none"> • In-water construction and work bridges would affect aquatic resources and wetlands. • Access disruptions to parks and trails. • Noise impacts on neighborhoods adjacent to the alignment (including pile driving). • Increased traffic congestion from haul and detour routes. 	<ul style="list-style-type: none"> • Effects have not been analyzed. • Option requires in-water dredging for open-cut trench across Montlake Cut and resulting effects on tribal treaty fishing.
Permanent Impacts	<ul style="list-style-type: none"> • Would displace three residences and the Museum of History and Industry in Seattle. • Would displace part of National Oceanic and Atmospheric Administration facilities. • Fill 0.1 acres of wetlands. • Shade 3.2 acres of wetlands. • Fill 0.5 acres of open water. • 5.6 acres of park land converted to right-of-way. 	<ul style="list-style-type: none"> • Would displace one residence and the Museum of History and Industry. • Fill 1.8 acres of wetlands. • Shade 2.8 acres of wetlands. • Fill 2.7 acres of open water. • 7.6 acres of park land converted to right-of-way. 	<ul style="list-style-type: none"> • Would displace one residence and the Museum of History and Industry in Seattle. • Fill 0.3 acres of wetlands. • Shade 4.3 acres of wetlands. • Fill 0.6 acres of open water. • 7.1 acres of park land converted to right-of-way. • Enhanced treatment for west approach stormwater. 	<ul style="list-style-type: none"> • Would displace three residences and the Museum of History and Industry in Seattle. • Would displace part of National Oceanic and Atmospheric Administration facilities. • Enhanced treatment for west approach stormwater. 	<ul style="list-style-type: none"> • Full design not determined at this time, not possible to calculate impacts.

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