

Evaluation of Traffic Operations for SR 520 Mediation Options A, K and L

Key Assumptions

- 2030 PM peak period.
- Based on preliminary analysis.
- Analysis will be updated during the supplemental draft EIS process.
- Information below compared to Year 2030 No Build Alternative

Regional System Operations

Transit Travel Times:

- Options A, K and L are similar.
- HOV lane and direct access ramps provide a substantial benefit compared to No Build.

HOV Travel Times:

- Options A, K and L HOV lane provides a substantial benefit compared to No Build.
- Option A provides a transit only direct access ramp at Montlake Boulevard.
- Options K and L provide HOV direct access ramps at SR 520 interchange.

General-purpose Travel Times:

- Option A would increase vehicle trips and travel times on Portage Bay Bridge compared to the other options, due to the removal of the Lake Washington Boulevard ramps. Option A also has a shorter merge section between the I-5 and Montlake interchanges.

Common to All:

- No substantial changes in regional traffic volumes would be expected as a result of the various Montlake Boulevard area interchange options.
- No substantial changes in the regional transit planning efforts would occur as a result of the Montlake Boulevard area interchange options.
- All options are compatible with:
 - Sound Transit and King County Metro plans.
 - SR 520 High Capacity Transit Plan.
 - State, regional and local goals.
- Additional State and local Transportation Demand Management could be applied to all options and result in lower traffic volumes in the interchange areas.

SR 520 Corridor Operations

Common to all Options:

- Safety would be improved with all three options by improving the design for on- and off-ramp connections, shoulder widths, and sight distances.
- Provides similar benefits to person mobility by completing the HOV lane system on the corridor, thus improving transit and HOV mobility and reliability.
- Transit service on the SR 520 corridor would be similar with all options.

Option A:

- Option A would result in an adverse effect on general purpose traffic on Portage Bay Bridge due to additional traffic using the congested section of SR 520.
- Option A with Lake Washington Boulevard ramps added back into the system would alleviate the adverse effect.
- The addition of a westbound auxiliary lane on SR 520 between Montlake Boulevard and I-5 would help alleviate on-ramp congestion as part of either Option A scenario.

Option K:

- Improves freeway operations through the Lake Washington Boulevard and Montlake Boulevard interchange areas.

Option L:

- Same as Option K.

Local Roadway Operations

Option A:

- Option A has the longest transit travel times of the options, but is an improvement over No Build.
- Option A would divert trips out of the Arboretum but increase trips through other neighborhoods (North Capitol Hill, Montlake, Madison Park).
- Option A would operate with higher levels of local congestion than other options.
 - Adding the Lake Washington Boulevard ramps would reduce the congestion.
- Option A adds two lanes across the Montlake cut, but congestion on the local roadways does not allow the capacity to be fully utilized.

- Additional capacity on Montlake Boulevard and 24th Avenue would be required south of the SR 520 interchange to effectively use the new drawbridge.
- Option A would continue to have traffic congestion effects during the off-peak period resulting from drawbridge openings.

Option K:

- Option K would provide the most improvement for local congestion.
- Option K could be modified to include design elements from Option L at local intersections to improve operations.
- Option K adds four new lanes of capacity across the Montlake cut that can be used effectively.

Option L:

- Option L would operate better than Option A because of the separation between freeway and local traffic.
- Option L adds four new lanes of capacity across the Montlake cut that can be used effectively.
- Option L would continue to have traffic congestion effects during the off-peak period resulting from drawbridge openings.