

# Preliminary 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.
- Option A as modified to include the westbound auxiliary lane across Portage Bay Bridge would help reduce travel times on the SR 520 corridor.

### 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 as modified to include the westbound auxiliary lane across Portage Bay Bridge would help alleviate congestion as part of the base Option A scenario.
- Option A with both the auxiliary lane and the Lake Washington Boulevard ramps added back into the system would improve freeway conditions through the Lake Washington Boulevard and Montlake Boulevard interchange areas.

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 (base) as originally proposed 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 and Montlake).
- Option A would operate with higher levels of local congestion than other options.
  - Adding a westbound auxiliary lane to SR 520 would reduce congestion on the local street system.
  - Adding the Lake Washington Boulevard ramps and a westbound auxiliary lane would further reduce the congestion on the local street system.

- Option A adds two lanes across the Montlake Cut with a second Bascule Bridge, but congestion on the local roadways does not allow the capacity to be fully utilized.
  - Adding a westbound auxiliary lane to SR 520 would help improve traffic flow on Montlake Boulevard.
  - Additional capacity on Montlake Boulevard and 24<sup>th</sup> Avenue would be required south of the SR 520 interchange to effectively use the new drawbridge.
  - If the Lake Washington Boulevard ramps were included, no additional through lane would be needed on Montlake Boulevard.
- Option A would continue to have traffic congestion effects during the off-peak period resulting from drawbridge openings.
- Option A reduces the traffic volumes through the Washington Park Arboretum compared to No Build.
  - Option A with Lake Washington Boulevard ramps would have similar traffic volumes in the Arboretum compared to No Build.
  - Adding the westbound auxiliary lane does not affect traffic volumes in the Arboretum.

#### Option K:

- 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 separate freeway and local traffic similar to Option K.
- 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.