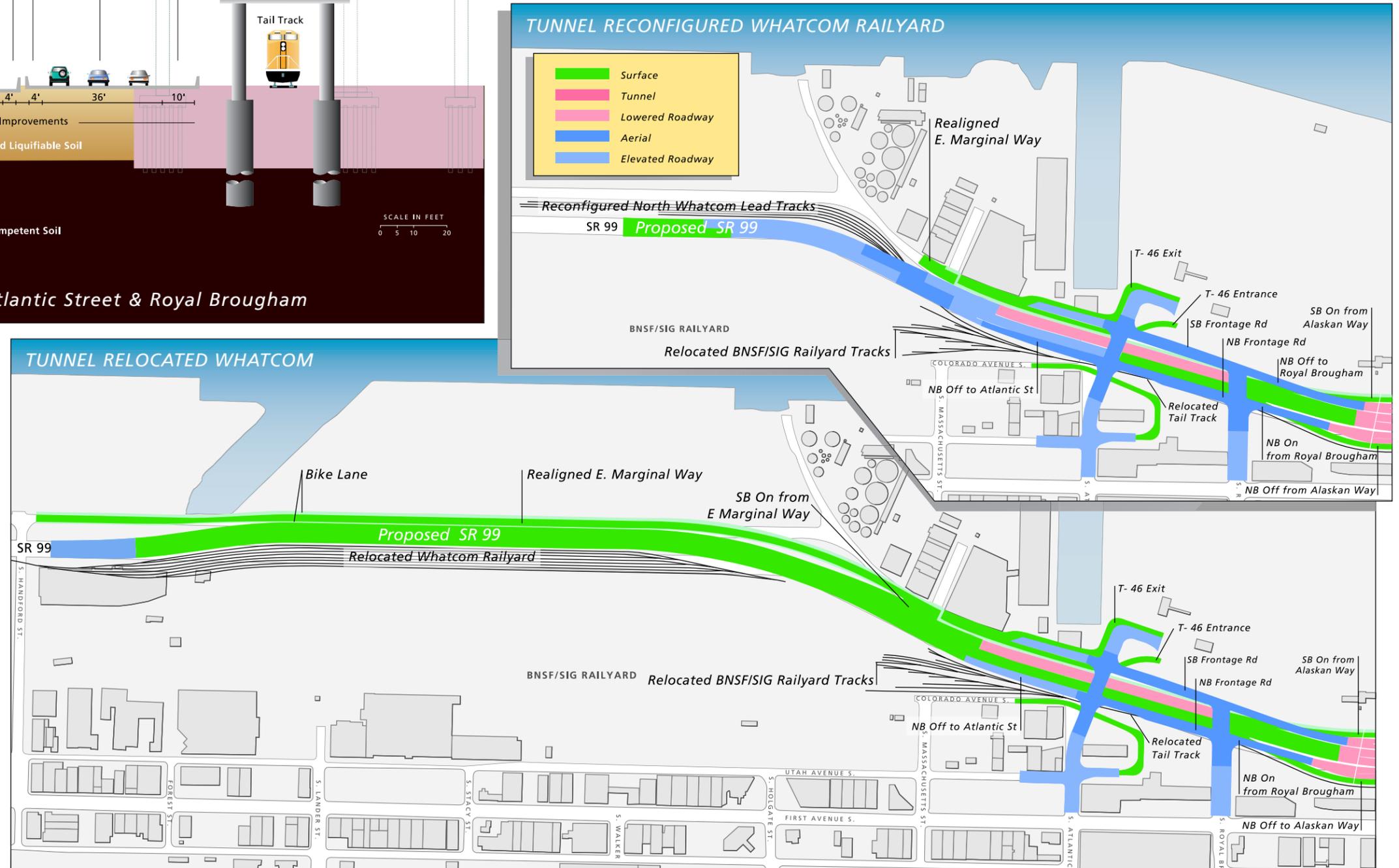
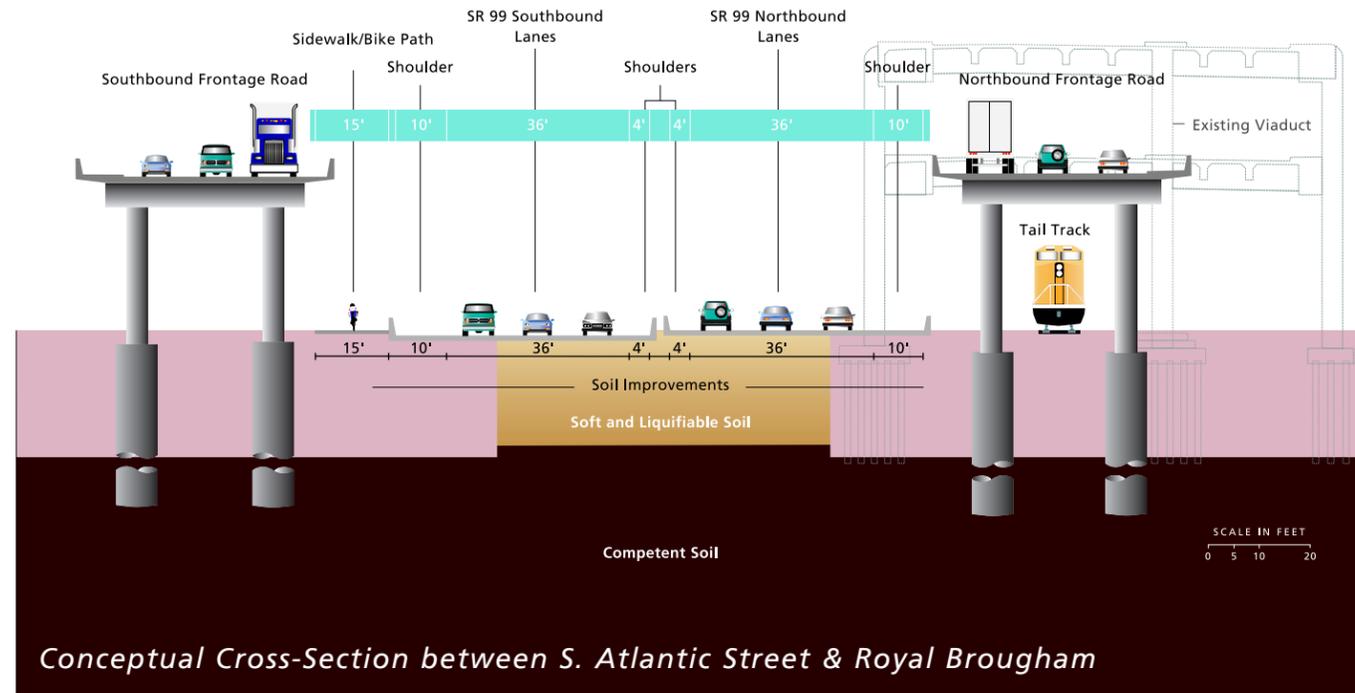


Tunnel South Section Choices



CHAPTER 5 - PROJECT EFFECTS

What's in Chapter 5?

Chapter 5 identifies long-term project effects and possible mitigation measures. Project effects without mitigation are discussed first, and possible mitigation measures are discussed later in Question 18.

Chapter 7 identifies short-term construction effects and possible mitigation measures.

1 How would the alternatives change conditions for vehicles, bicyclists, and pedestrians?

For the most part, the conditions and type of access provided by the updated Tunnel Alternative are similar to the Tunnel Alternative evaluated in the Draft EIS, and the access provided by the Elevated Structure Alternative would be similar to the access described for the Rebuild and Aerial Alternatives in the Draft EIS. The primary access changes proposed with the updated alternatives are the improvements north of the Battery Street Tunnel, which would lower Aurora/SR 99 and connect city streets over the top.

How would conditions for vehicles change in the south?

In the south section, SR 99 currently has a southbound off-ramp and a northbound on-ramp connecting to First Avenue S. near Railroad Way S. Exhibits 5-1 and 5-2 show how both alternatives would replace these ramps with new ramps, called the South of Downtown (SODO) Ramps, which would connect SR 99 to SR 519 at S. Atlantic Street and S. Royal Brougham Way near the stadiums. Similar to what was described in the Draft EIS, these ramps would maintain or improve access by providing direct con-

nections to the stadiums and SR 519, which connects to I-90. For only the Tunnel Alternative, ramps would be provided to connect to Alaskan Way near S. King Street to provide drivers with access into and out of downtown. For the Tunnel Alternative, these new ramps would replace the function of the existing Columbia and Seneca ramps, which would be removed.

The primary difference in traffic movements compared to the Draft EIS is that the Reconfigured Whatcom Railyard design proposed with both alternatives would not provide a southbound connection from E. Marginal Way S., and a frontage road would be provided on both sides of SR 99.

The Tunnel Alternative would provide the following movements at the SODO Ramps:

- Northbound off from SR 99 to S. Atlantic Street
- Northbound off to the Alaskan Way surface street near S. King Street
- Northbound on to SR 99 from S. Royal Brougham Way
- Southbound off from SR 99 to S. Royal Brougham Way
- Southbound on to SR 99 from the Alaskan Way surface street near S. King Street

The Elevated Structure Alternative would not provide ramps to or from Alaskan Way near S. King Street, but it would provide the other ramps described above for the Tunnel Alternative.

The frontage roads would allow drivers to be able to connect to either S. Atlantic Street or S. Royal Brougham Way from SR 99. On the west side of SR 99, the frontage road would connect to

E. Marginal Way S., which would be rebuilt. In addition to the ramps described above, a loop ramp near S. Atlantic Street would carry two-way freight traffic moving between Port of Seattle terminals and the railyards.

How would other design choices in the south section change conditions for vehicles?

The Relocated Whatcom Railyard design would provide the same connections described above, only a southbound connection would be provided from E. Marginal Way S. near S. Massachusetts Street, as shown in Exhibits 5-1 and 5-2.

How would conditions change for drivers headed into and out of downtown?

Tunnel Alternative

The Tunnel Alternative would change the specific locations where drivers get into and out of downtown, but access would continue to be provided. Ramps into and out of downtown at Columbia and Seneca Streets would not be provided. Instead, drivers entering downtown from the south would use ramps provided to or from Alaskan Way near S. King Street. From Alaskan Way, drivers could access downtown from several city streets. Drivers heading into or out of downtown from the north would continue to reach downtown using the Denny Way ramps.

Traffic heading to and from the Ballard/Interbay area could continue to use ramps at Elliott and Western Avenues as they do today. In this area, the existing northbound off-ramp to Western Avenue and the southbound on-ramp to Elliott Avenue would be replaced. As described in the Draft EIS, the existing southbound off-ramp and northbound on-ramp near

Supplemental Draft EIS Appendix C

In the 2006 *Appendix C, Transportation Discipline Report*, Chapter 5 provides additional information on access changes.

Elevated Structure South Section Choices

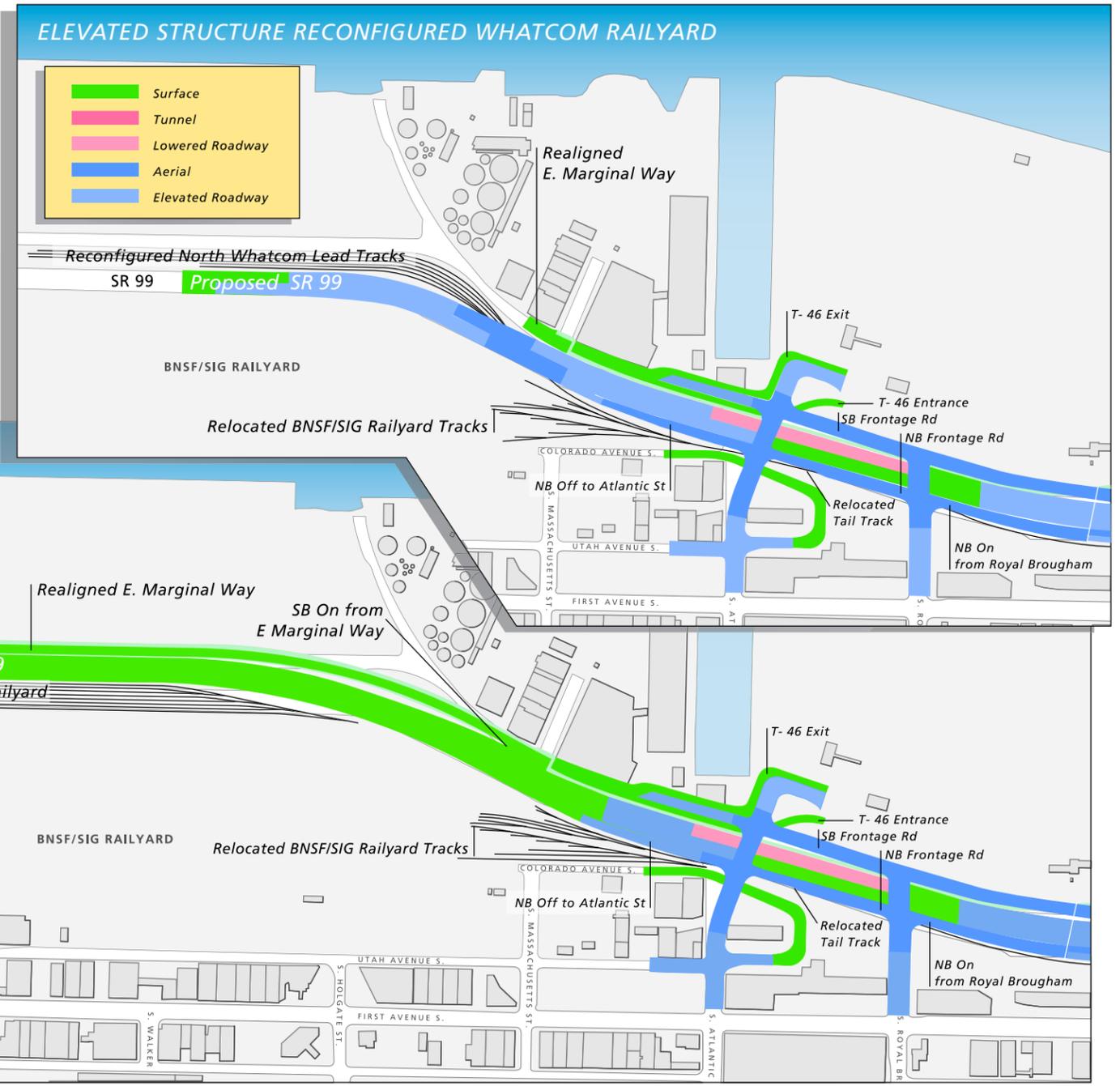
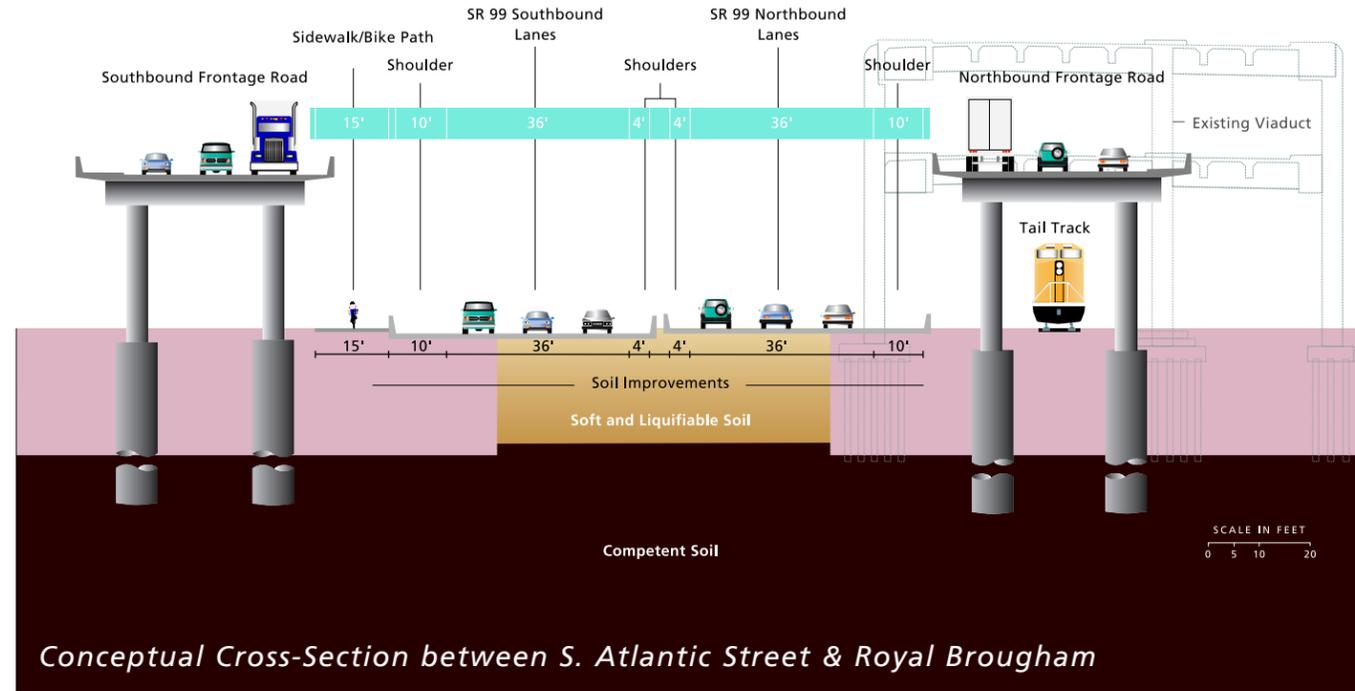


Exhibit 5-2

Battery Street would be closed to general traffic but maintained for emergency access. These ramps will be closed to general traffic to improve safety on SR 99.

Proposed access to and from downtown is similar to what was evaluated in the Draft EIS. The primary difference is that access to and from the Ballard/Interbay area will be kept similar to existing conditions with ramps at Elliott and Western Avenues, rather than replacing the ramps at Elliott and Western Avenue with ramps to Alaskan Way near Stewart Street.

Elevated Structure Alternative

With the Elevated Structure Alternative, proposed access to and from downtown would be similar to the connections provided today and those evaluated for the Rebuild and Aerial Alternatives in the Draft EIS. There would be minor changes for drivers traveling

into and out of downtown. In the south section, the new SODO Ramps would replace the existing ramps at First Avenue S., providing drivers with a new way into or out of the area south of downtown. The ramps at Columbia and Seneca Streets and Elliott and Western Avenues would be replaced, so drivers would not notice much of a change compared with what is there today. Similar to the Tunnel Alternative, the existing southbound off-ramp and northbound on-ramp near Battery Street would be closed to general traffic but maintained for emergency access to improve safety on SR 99. Drivers heading to and from downtown from the north would continue to reach downtown using the Denny Way ramps.

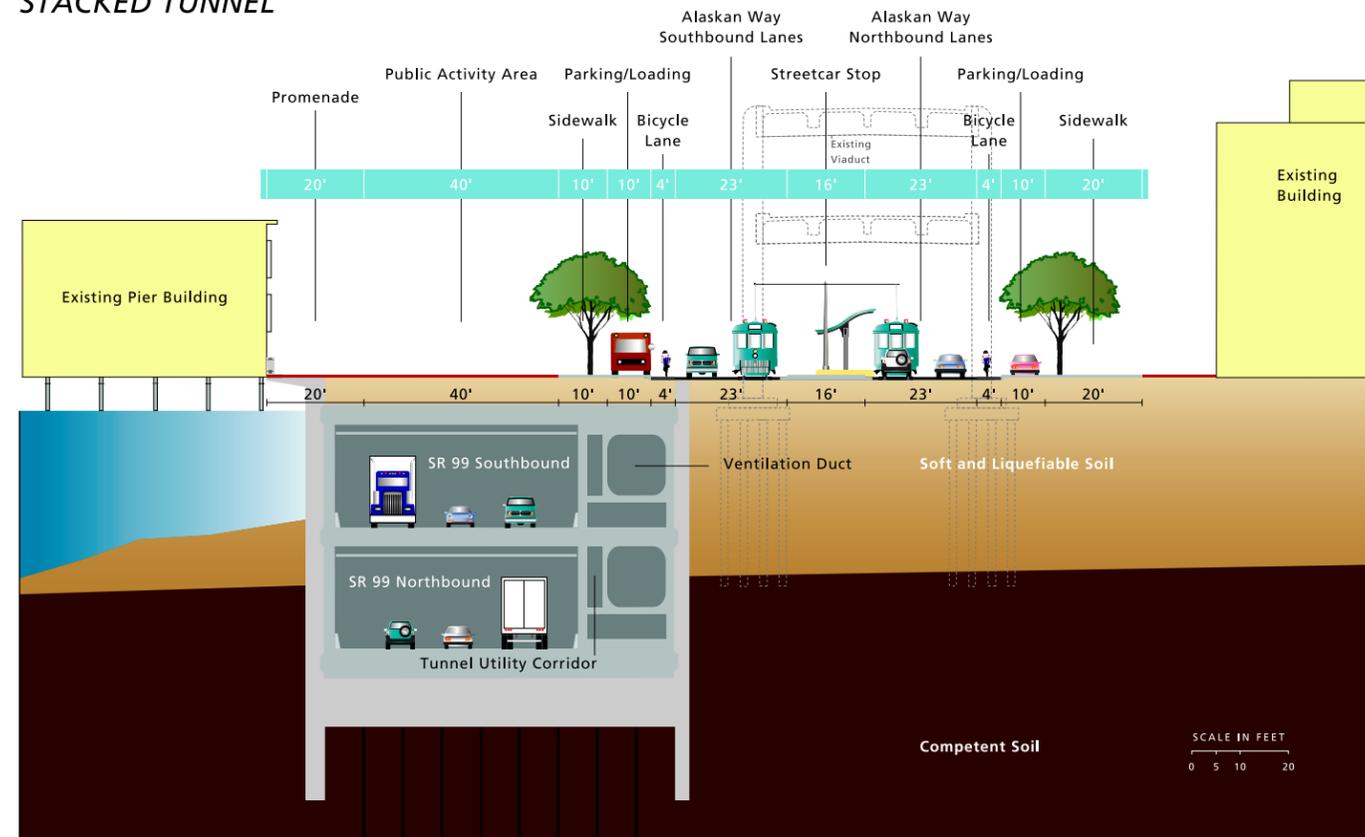
How would conditions on the Alaskan Way surface street change for vehicles?

Tunnel Alternative

The Tunnel Alternative would remove the viaduct, which would open up the area between the waterfront and downtown. There are several ways this area could be configured, but based on input from many organizations and citizens, we are proposing to build the Alaskan Way surface street to the east of the existing roadway, as shown in Exhibit 5-3. From Railroad Way S. to Yesler Way, Alaskan Way would have three lanes in each direction. North of Yesler Way, two lanes would be provided in each direction with turn pockets at key locations. Two waterfront streetcar tracks would be provided (one track in each direction), and vehicles would share a lane with the streetcar. In addition, Alaskan Way would have expanded open space,

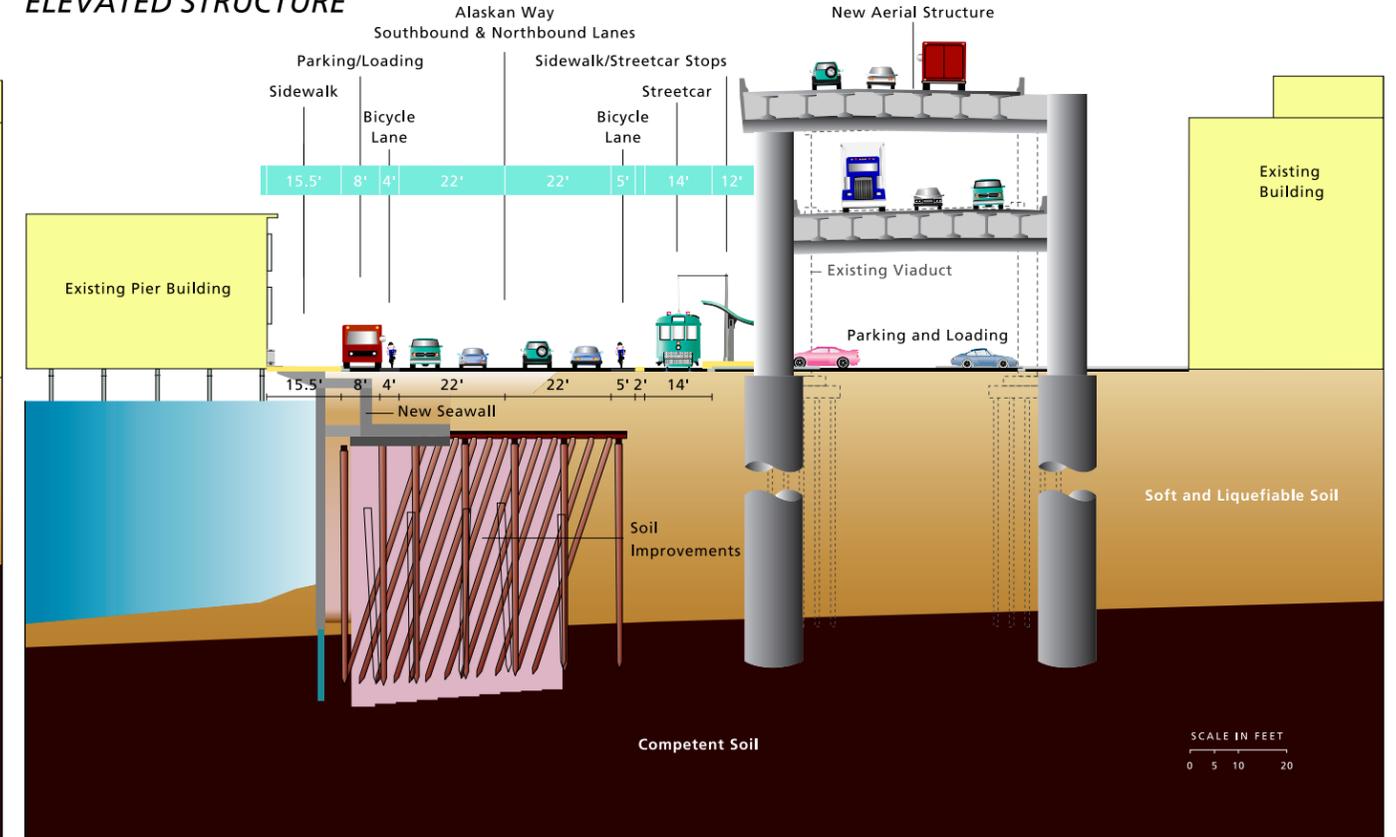
Alaskan Way Cross-Sections

STACKED TUNNEL



Conceptual Cross-Section at Seneca Street Looking North

ELEVATED STRUCTURE



Conceptual Cross-Section at University Street Looking North

Partially Lowered Aurora

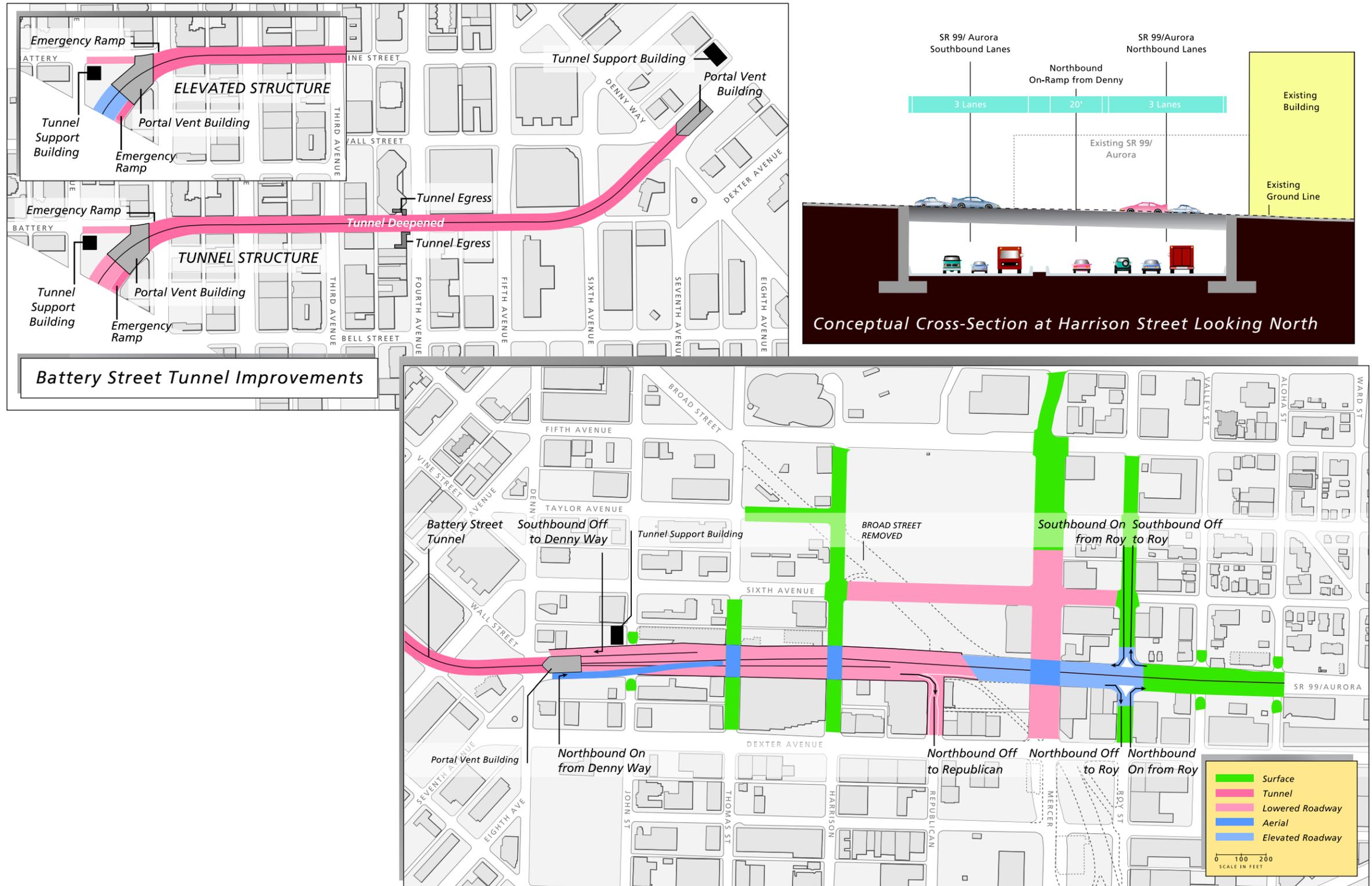
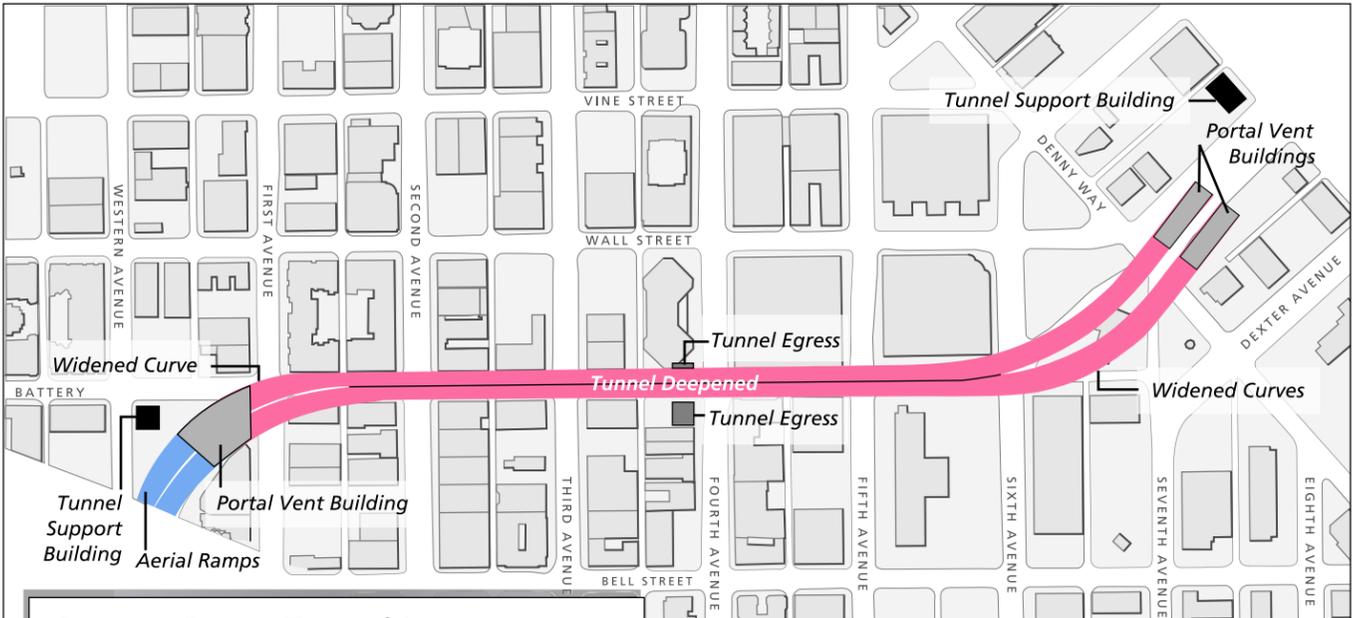
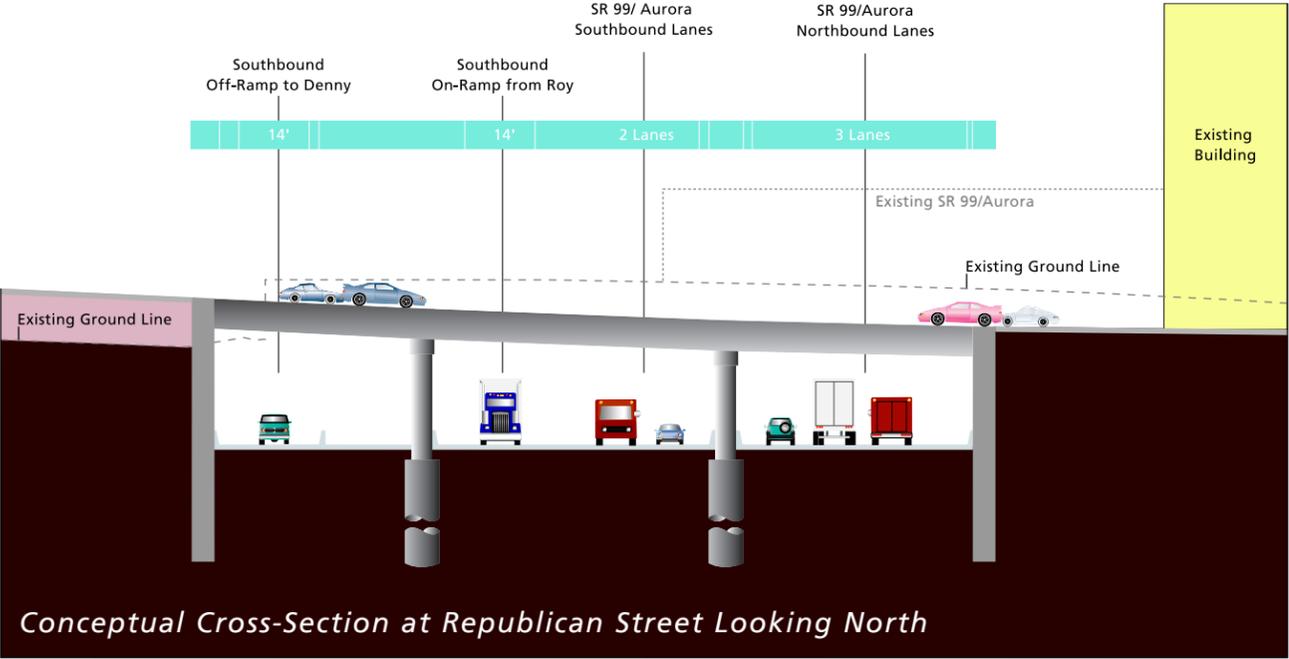


Exhibit 5-4

Lowered Aurora



Battery Street Tunnel Improvements
CURVES WIDENED ON BOTH ENDS

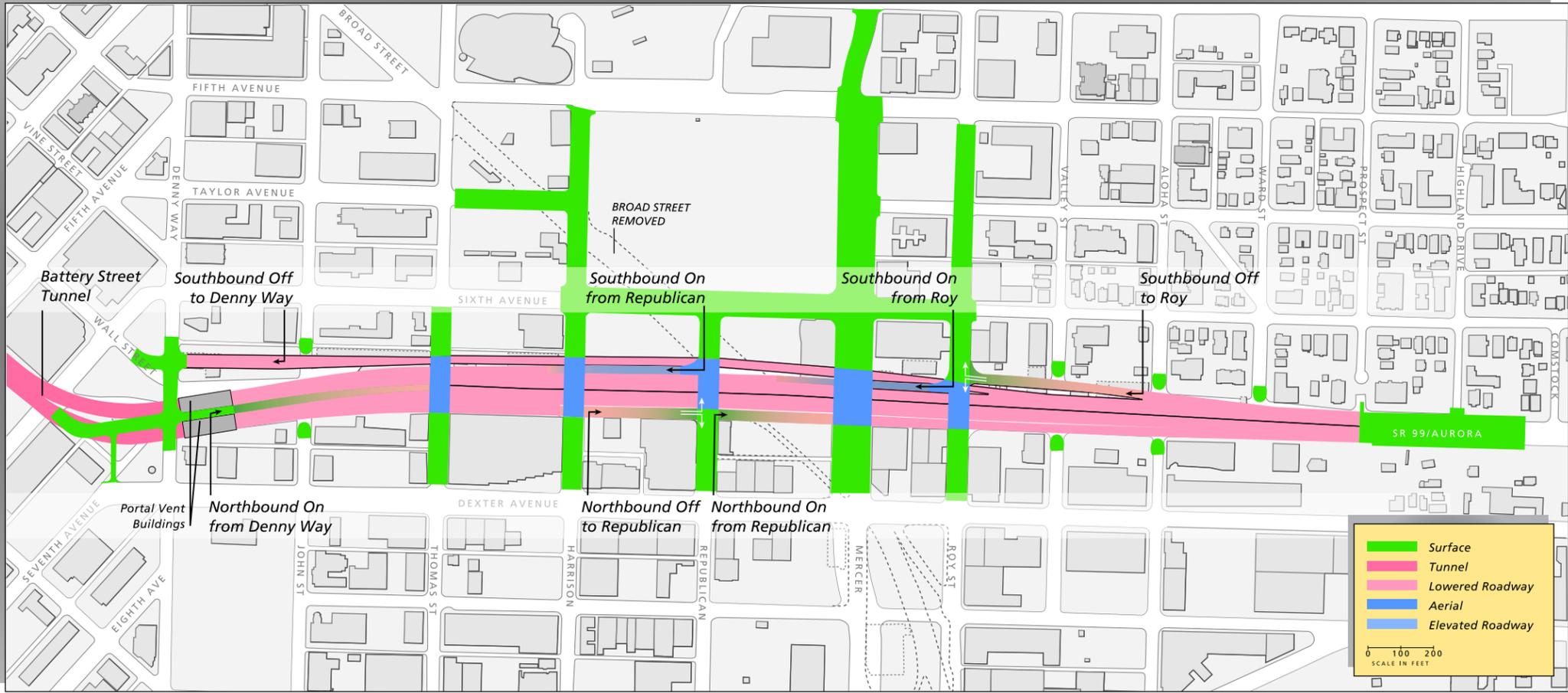


Conceptual Cross-Section at Republican Street Looking North

a wide waterfront promenade, broad sidewalks on both sides of the street, bicycle lanes, and parking.

Elevated Structure Alternative

The Elevated Structure Alternative would rebuild the Alaskan Way surface street in approximately the same location as today, as shown in Exhibit 5-3. In most areas, a four-lane roadway would be built with two lanes in each direction. Left-hand turn pockets may be built between S. King Street and Yesler Way. Short-term parking would continue to be provided under the new elevated structure. Alaskan Way would have a single streetcar track, bike lanes, on-street parking, and sidewalks. For the Elevated Structure Alternative, the roadway and sidewalk design has changed due to the increased width of the elevated structure. Specifically, sidewalks along the west side of Alaskan Way would be narrower than they currently are today. This change is discussed in more detail under the question, "How would conditions for pedestrians and bicyclists change?"



How would the Battery Street Tunnel change?

In the Draft EIS, only fire and life safety improvements were proposed to the Battery Street Tunnel for the Tunnel Alternative, and the Rebuild Alternative did not include any improvements to the Battery Street Tunnel. Both the Tunnel and Elevated Structure Alternatives now evaluate several safety improvements to the Battery Street Tunnel, as shown in Exhibit 5-4.

The project partners are now proposing to lower the roadway in the Battery Street Tunnel to increase the tunnel's vertical clearance to 16.5 feet to improve conditions for trucks, which occasionally damage the tunnel or get stuck. Fire and life safety conditions would be improved by adding emergency exits, upgrading electrical systems, adding ventilation, upgrading the fire suppression system, and improving the tunnel to meet current earthquake requirements. The long-term benefits of these proposed improvements are safer roadway conditions for drivers on SR 99.

How would conditions north of the Battery Street Tunnel change for vehicles?

Currently, drivers access SR 99 in the area north of the Battery Street Tunnel by using the ramps at Denny Way or making right turns on or off of SR 99 from several city streets. In this area, east-west street connections are currently limited between the South Lake Union and Queen Anne neighborhoods. Mercer Street is a one-way eastbound roadway that currently crosses under SR 99. Broad Street also crosses under SR 99.

The same improvements are proposed for both the Tunnel and Elevated Structure Alternatives, as shown in Exhibit 5-4. With either alternative, SR 99 would be lowered up to 45 feet between the Battery Street Tunnel and Republican Street. Roadway improvements would continue up to Aloha Street. Lowering SR 99 would change several access points in this area. Access to and from SR 99 would be eliminated at John, Thomas, Harrison, and Valley Streets. Cul-de-sacs would be built at John, Valley, and Aloha Streets.

Drivers would have direct access to SR 99 at the following locations:

- Northbound on from Denny Way
- Southbound off to Denny Way
- Northbound off to Republican Street
- Right-turn only northbound and southbound on and off access at Roy Street

The new access points at Republican and Roy Streets would be safer than the existing side street connections to SR 99 because they would provide separate lanes for drivers to gradually accelerate to get up to speed with SR 99 traffic or decelerate to merge with city street traffic. This would improve roadway safety and overall traffic flow on SR 99 compared to existing conditions.

The proposed Partially Lowered Aurora improvements would improve east-west connections for drivers and pedestrians by adding bridges over SR 99 at Thomas and Harrison Streets. These bridges would have two lanes in each direction and include sidewalks on both sides of the roadway. Mercer Street would continue to travel under SR 99 as it does today, but it would become a two-way street and would be widened to have three lanes in each direction with a center turn lane and sidewalks. In addition, Broad Street would be closed and backfilled from approximately Fifth Avenue N. to Ninth Avenue N., allowing the street grid to be connected. Sixth Avenue N. would be extended to connect Harrison Street to Roy Street, and Taylor Avenue N. would be extended to connect to Harrison Street.

How would other design choices in the north section change conditions for vehicles?

In the north section, the choice could be made to widen the curves on both ends of the Battery Street Tunnel and build the Lowered Aurora improvements, as shown on the previous page in Exhibit 5-5.

If the curves at both portals of the Battery Street Tunnel are widened, the distance drivers could see ahead of them would increase, which could marginally improve tunnel safety by improving visibility for drivers, which may reduce the number of collisions in

the Battery Street Tunnel. However, ongoing study on this issue indicates that the potential for reducing collisions is likely small.

The Lowered Aurora improvements would extend to Comstock Street and lower SR 99 up to 25 feet, as shown in Exhibit 5-5. Lowering SR 99 would change several access points in this area. Access to and from SR 99 would be eliminated at John, Thomas, Harrison, Valley, and Ward Streets. Cul-de-sacs would be built at John, Valley, Aloha, and Ward Streets. Drivers would have direct access to SR 99 at the following locations:

- Northbound on to SR 99 from Denny Way and Republican Street
- Southbound off to Roy Street and Denny Way
- Northbound off from SR 99 to Republican Street
- Southbound on to SR 99 from Roy Street and Republican Street

Mercer Street would cross over SR 99 on a bridge (Mercer Street currently crosses under SR 99), and four city streets (Thomas, Harrison, Republican, and Roy Streets) would be connected with new bridges. For Lowered Aurora, Mercer Street would also be widened to a two-way street with three lanes in each direction but would cross over SR 99. In addition to the improvements proposed for Partially Lowered Aurora, Lowered Aurora would also include bridges at Republican and Roy Streets. These bridges would have two lanes in each direction with sidewalks on both sides of the roadway. The new bridges would improve east-west access across SR 99. Lowered Aurora would include all of the east-west connections proposed for the Partially Lowered Aurora improvements and also connect Thomas Street to Taylor Avenue N. and extend Republican Street to Sixth Avenue N.

How would the alternatives change conditions for freight?

Freight access would be maintained by both alternatives. New ramps would be built at S. Atlantic Street and S. Royal Brougham Way. These ramps, called the SODO Ramps, would improve freight connections

Why are freight connections and movements important considerations for the AWV Project?

SR 99, the Alaskan Way surface street, and E. Marginal Way are important freight routes that provide direct access to the Port of Seattle and the Duwamish Manufacturing and Industrial Center, which is a major hub for international and interstate freight in the Puget Sound region.

SR 99 also provides important connections to the Ballard Interbay Northend Manufacturing and Industrial Center in north Seattle. SR 99 provides an important connection between these two major industrial centers.

between the Duwamish industrial area, Harbor Island, SR 519, and I-90. In addition, a new loop ramp would be added near S. Atlantic Street. This ramp would facilitate the movement of freight across SR 99 from the Port industrial area and the Burlington Northern Santa Fe Railway (BNSF) Seattle International Gateway (SIG) Railyard.

Continuing to the north, both alternatives propose to replace the ramps to and from Elliott and Western Avenues. The new ramps would be wider than the existing ramps, which would make it easier for drivers to maneuver trucks on these ramps. Closing the Battery Street ramps in this area would eliminate crossing traffic, improving traffic flow and safety for all vehicles on SR 99.

For the Tunnel Alternative, hazardous and flammable cargo would not be allowed in either the new tunnel along the central waterfront or the Battery Street Tunnel. This type of cargo is not permitted in the Battery Street Tunnel today. Instead of traveling on SR 99 through downtown, freight carrying hazardous or flammable cargo would be required to use another route, such as the Alaskan Way surface street. This route is expected to affect fewer than 80 one-way trips per day and add 5 to 10 minutes to total truck travel times.

How would the alternatives change conditions for transit?

For the Tunnel Alternative, transit access would change for buses entering downtown from the south. Buses traveling from the south on SR 99 currently enter and exit downtown by using the ramps at Seneca and Columbia Streets. With the Tunnel Alternative, these ramps would no longer be provided, so buses would likely access downtown via the new ramps to Alaskan Way near S. King Street. The ramps provided near S. King Street would extend transit service coverage to a larger portion of the downtown area—particularly the Pioneer Square area. Bus travel times to most areas would remain similar to existing conditions, depending on the rider's final destination. Bus travel times to areas near the Pioneer Square area could decrease, though travel times to areas toward

the north end of downtown might increase since the buses would enter the street grid farther south.

For the Elevated Structure Alternative, transit access and travel times would be similar to existing conditions for buses entering downtown from the south. Buses traveling from the south on SR 99 would continue to enter and exit downtown by using the ramps at Seneca and Columbia Streets.

For both alternatives, transit entering and exiting downtown from the north would continue to access SR 99 at Denny Way. The new bridges over SR 99 and changes to street connections could affect some transit stops and routes. Existing transit stops along SR 99 between Denny Way and Roy Street could no longer be used. Alternate routing using the connections at Roy Street and Republican Street could maintain service to these areas. If alternate routing at Roy and Republican Streets were used, bus travel times could increase by 1 or 2 minutes.

Both alternatives would replace the existing waterfront streetcar tracks located along Alaskan Way. The Tunnel Alternative would replace the existing one-track system with a two-track system. The two streetcar tracks would be provided in the center of the Alaskan Way surface street, and vehicles would share a lane with the streetcar. A two-track streetcar system could provide better streetcar service along the waterfront than the existing system. With two tracks, the streetcar could also become part of an expanded system that could stretch farther up the waterfront or could connect with neighborhoods to the east.

With the Elevated Structure Alternative, the existing one-track streetcar system would be replaced with a similar system. The streetcar track would be placed on the east side of Alaskan Way, with a passing track located on the east side of the corridor, between Union and Pike Streets. This streetcar configuration would replace the existing system but most likely wouldn't provide the same opportunities as the Tunnel Alternative for future expansion.

How would vehicle access to the ferry terminal change?

Currently, people driving to the ferry get there via the Alaskan Way surface street, often by taking a left at Yesler Way. When Colman Dock is full, drivers wait for the ferry in the northbound lane of Alaskan Way. Drivers leaving the ferry use Marion Street or Alaskan Way.

Tunnel Alternative

The Tunnel Alternative would change where drivers wait for the ferry when Colman Dock is full. Ferry holding would be provided east of Alaskan Way near Railroad Way S. or S. Royal Brougham Way.

In addition, the number of lanes on Alaskan Way would be increased from two lanes in each direction to three lanes in each direction from about Railroad Way S. to Yesler Way (in the southbound direction, the third lane would begin at Columbia Street). At Yesler Way, a left-turn lane would be added, which would provide two left-turn lanes for northbound drivers entering Colman Dock. The proposed improvements on Alaskan Way would maintain access to Colman Dock, and they could make ferry loading and unloading operations more efficient.

The proposed changes to ferry access described above are different than the proposed improvements evaluated in the Draft EIS. The primary change from the Draft EIS is that we are no longer proposing to build a permanent ferry access roadway connecting to the ferry terminal out over Elliott Bay. The ferry access roadway would have required constructing a permanent over-water pier between S. Washington Street and Yesler Way. The permanent over-water pier is no longer being proposed because we have been able to provide similar access that minimizes aquatic effects to Elliott Bay. A temporary over-water bridge would still be required in this location to accommodate ferry traffic during construction.

Elevated Structure Alternative

The Elevated Structure Alternative would also change where drivers wait for the ferry when Colman Dock is full. Ferry holding would be provided east of Alaskan

Where can more information on the temporary over-water ferry access bridge be found?

In **Chapter 7, Questions 5, 19, and 20** discuss construction effects of the temporary over-water ferry access bridge for traffic, habitat, and stormwater runoff.

Way near Railroad Way S. or S. Royal Brougham Way. As described for the Tunnel Alternative, the permanent over-water pier described in the Draft EIS is no longer being proposed. A temporary over-water bridge would be required between Pier 48 and Colman Dock to accommodate ferry traffic during project construction.

How would conditions for pedestrians and bicyclists change?

South Section

In the south section, pedestrian and bicycle access for both the Tunnel and Elevated Structure Alternatives would be similar to conditions described in the Draft EIS. Currently, bicyclists and pedestrians can use the Waterfront Bicycle/Pedestrian Facility, which runs along the east side of the surface street from S. Royal Brougham Way up to Broad Street. For both alternatives, bikes and pedestrians would travel instead on a new sidewalk-level pedestrian/bike path on the west side of the corridor. The path would be 15 feet wide—5 feet wider than the existing bicycle/pedestrian facility—and it would be separated from traffic by a sturdy barrier. Starting in the south section, the new path would begin about two blocks south of the current facility—around S. Massachusetts Street—and continue north along the west side of E. Marginal Way. It would then cross under the SODO Ramps at S. Atlantic Street and S. Royal Brougham Way and continue north to the central waterfront. Bicyclists who prefer not to use this facility could also ride in traffic lanes, as many do today.

For both alternatives, pedestrian and bicycle facilities in the south section would connect with the planned west terminus of the Mountains to Sound Greenway Trail. This trail is a shared-use path that begins in Ellensburg, on the east side of the Cascade Mountains, and currently ends just east of Seattle’s International District. When the Mountains to Sound Greenway Trail is complete, trail users would connect with the Waterfront Bicycle/Pedestrian Facility either by crossing over SR 99 on the S. Atlantic Street overpass or by traveling north on First Avenue S. and then connecting to Alaskan Way’s sidewalks and bike lanes

on intersecting surface streets. This connection would be an important addition to our area’s nonmotorized transportation system.

Central and North Waterfront Sections – Tunnel Alternative

Along the central and north waterfront, pedestrian and bicycle access for the Tunnel Alternative would be similar to what was described for the Draft EIS Tunnel Alternative. The existing sidewalks along both sides of Alaskan Way and the Waterfront Bicycle/Pedestrian Facility currently located on the east side of Alaskan Way would be replaced with new, 4- to 5-foot-wide striped bicycle lanes on each side of Alaskan Way and a variety of new pedestrian facilities. Between S. Washington Street near Colman Dock and Union Street, the 20-foot-wide existing sidewalk along the water’s edge would be replaced with a 70-foot-wide mixed-use area that would include a roadside sidewalk and a waterfront promenade, separated by a broad space for landscaping and public activities.

Between Union and Pike Streets, the existing 20-foot-wide sidewalk on the west side would be replaced by a 15-foot-wide sidewalk that would broaden to 25 feet between Vine and Broad Streets. On the east side, instead of the narrow existing sidewalks, a 20-foot-wide sidewalk would stretch from S. King Street to Pike Street. Between Pike and Pine Streets, the east side sidewalk would be 13 feet wide, and from Pine Street north to Broad Street it would narrow to 8 feet.

In addition, the Tunnel Alternative now includes constructing a new pedestrian connection linking the north end of Pike Place Market at Steinbrueck Park to the stretch of waterfront that includes the Seattle Aquarium and Pier 62/63. This new pedestrian connection, called the Steinbrueck Park Walkway, would improve conditions for people moving between the waterfront and the Pike Place Market area.

Taken together, these improvements would substantially improve pedestrian conditions by providing much more space along the waterfront for people to freely roam and continuous sidewalks on the east side, without the shade, noise, and view obstructions of the existing viaduct. Providing dedicated bike lanes

along Alaskan Way would improve safety by reducing conflicts between pedestrians and bicycle traffic; however, recreational bicyclists would no longer have an off-street bicycle path, as they do today.

Central and North Waterfront Sections – Elevated Structure Alternative

The Elevated Structure Alternative would reduce the width of the existing waterfront sidewalk throughout the central waterfront area. This is a change from the Draft EIS, which would have maintained existing conditions. The existing 20-foot-wide sidewalk between S. Washington and Pike Streets would be narrowed to about 15 feet to accommodate the width of the new viaduct, and there would be no additional public activity space. The 15-foot-wide sidewalk would continue north to about Wall Street, where it would widen to be approximately 30 feet wide up to Broad Street.

On the east side of Alaskan Way, the sidewalk between Yesler Way and Union Street would be 12 feet wide, broadening to about 20 feet at crosswalks and at some streetcar stops. However, the bases of the elevated structure’s support columns would be located partially within the sidewalk, effectively narrowing the sidewalk width next to the columns to about 8 feet.

North of Pine Street, a 9-foot-wide sidewalk would run along the east side of Alaskan Way, widening to about 17 feet at crosswalks. A single streetcar track would be located east of the sidewalk, and a shared-use bicycle/pedestrian path, about 13 feet wide, would be located east of the track, on the west side of buildings that front Alaskan Way.

Currently, bicyclists can either ride in the street in traffic lanes, or they can use the Waterfront Bicycle/Pedestrian Facility on the east side of Alaskan Way. For the Elevated Structure Alternative, this facility would be removed, and bicyclists would ride at street level in 4-foot-wide striped lanes from S. King Street to Pine Street. Between Pine and Broad Streets, bicyclists could use the shared-use bicycle/pedestrian path mentioned above. Pedestrians would share this facility

What is the 2030 Existing Facility?

We know it is highly unlikely that the viaduct would last until 2030. However, we study what traffic would be like if the existing facility were still around in 2030 because it provides a baseline that can be compared with traffic conditions for the proposed alternatives.

The year 2030 Existing Facility takes into account future population growth and other funded transportation projects such as Link light rail.

What is the PM peak hour?

The PM peak hour is the period when traffic is heaviest during the late afternoon commute. On SR 99, the PM peak hour occurs from 4:00 to 5:00 p.m. For this project, PM peak hour data were evaluated because overall traffic conditions in and around the project area are the most congested during that time of the day.

too, just as they share the Waterfront Bicycle/Pedestrian Facility today.

North Section

North of the Battery Street Tunnel, both alternatives propose the same enhancements for pedestrian and bicycle travel. The Partially Lowered Aurora improvements would connect Thomas and Harrison Streets over the top of SR 99, providing a continuous east-west route on streets that currently are bisected by SR 99. These two bridges would be built with sidewalks on both sides, which would provide improved pedestrian connections across SR 99 in this area. Additionally, Mercer Street would be widened, and pedestrian and bicycle travel would be expanded to include a sidewalk on the south side of the street and an 18-foot-wide pedestrian/bicycle path at sidewalk level on the north side. The enhanced bicycle and pedestrian facilities on Mercer Street could become a part of the City of Seattle’s planned Lake Union to Elliott Bay Trail, providing a direct nonmotorized route between two of Seattle’s shoreline neighborhoods. Overall, east-west pedestrian and bicycle travel between South Lake Union and the Seattle Center would be safer and much more direct than it is today.

How would other design choices affect bicycles and pedestrians?

Central – If the Steinbrueck Park Lid design were chosen for the Tunnel Alternative, it would build a new pedestrian connection linking the north end of Pike Place Market at Steinbrueck Park to the stretch of waterfront that includes the Seattle Aquarium and Pier 62/63. The Steinbrueck Park Lid would provide a new 130-foot-wide public open space between Stewart and Virginia Streets, compared to the Steinbrueck Park Walkway, which would be around 20 feet wide in this same area.

North – If the Lowered Aurora improvements were built, they would connect two additional streets (Republican and Roy Streets) compared to Partially Lowered Aurora. These new bridges would have sidewalks on both sides of the roadway, offering additional connections for pedestrians. Mercer Street would cross over SR 99 and would have a sidewalk on the south

side and an 18-foot-wide pedestrian/bicycle path at sidewalk level on the north side, similar to the proposed design for the Partially Lowered Aurora improvements.

2 How would the alternatives affect traffic?

Projected 2030 traffic conditions were updated since the Draft EIS was published to reflect changes to the alternatives. Adjustments were made to account for the removal of the southbound on-ramp from E. Marginal Way S. south of S. Atlantic Street, inclusion of the Elliott and Western ramps for the Tunnel Alternative, and new improvements proposed north of the Battery Street Tunnel. In general, the Tunnel and Elevated Structure Alternatives would operate similarly; the primary difference is that with the Tunnel Alternative, drivers would be able to enter and exit downtown via ramps near S. King Street as well as at the SODO Ramps near the stadiums. Traffic destined to downtown would use the Alaskan Way surface street to distribute traffic to downtown streets. With the Elevated Structure Alternative, drivers would enter and exit downtown as they do today via ramps at Columbia and Seneca Streets or they could use the SODO Ramps.

How would traffic be affected on SR 99?

The only notable changes to traffic along SR 99 in the year 2030 for both the Tunnel and Elevated Structure Alternatives would occur north of the Battery Street Tunnel, where the Partially Lowered Aurora improvements would alter traffic patterns and access points compared to alternatives studied in the Draft EIS.

The Partially Lowered Aurora improvements would improve traffic flow and safety on SR 99 by allowing vehicles to enter and exit SR 99 only at specific locations. They would also connect city streets over SR 99, which would improve conditions for drivers heading east or west.

Expected travel speeds north of the Battery Street Tunnel for both the Tunnel and Elevated Structure Alternatives are shown in Exhibit 5-6.

Exhibit 5-6

SR 99 Peak Hour Speeds
Shown as miles per hour (mph)

	2002 Existing Facility	2030 Existing Facility	2030 Tunnel	2030 Elevated Structure
SOUTHBOUND				
North of Battery St. Tunnel	40	35	35	35
Battery St. Tunnel	34	29	29	29
NORTHBOUND				
North of Battery St. Tunnel	33	28	40	40
Battery St. Tunnel	33	25	30	30

Travel speeds in the northbound direction show improved traffic flow during the PM peak hour when most traffic is using SR 99 to head out of downtown. Northbound traffic speeds are expected to increase with the improvements because vehicles would enter and exit SR 99 only at specific locations. In addition, traffic entering from the Denny Way on-ramp would be relocated to the left side of the roadway, reducing the conflicts between these vehicles and those trying to exit SR 99 on the right side of the roadway. These changes are forecasted to substantially improve traffic flow.

In the southbound direction, travel speeds on SR 99 during the PM peak hour are forecasted to be the same as the 2030 Existing Facility. All access to and from SR 99 would remain on the right side of the roadway in the southbound direction, although again, access points would be consolidated to two locations.

This exhibit shows congested intersections for the 2002 Existing Facility, 2030 Existing Facility, 2030 Tunnel, and 2030 Elevated Structure.

How would intersections be affected?

We reevaluated conditions at several intersections throughout the project area. These intersections are shown in Exhibit 5-7, and they include intersections located in the south section, near Colman Dock, along Elliott and Western Avenues, and north of the Battery Street Tunnel. In addition, we evaluated three new intersections north of the Battery Street Tunnel: Republican Street and Dexter Avenue N., Sixth Avenue N. and Republican Street, and Sixth Avenue N. and Mercer Street.

What are congested and highly congested intersections?

For the traffic analysis conducted for this project, congested intersections are intersections that cause drivers considerable delay. A driver might wait between 1 and 2 minutes to get through a traffic signal at a congested intersection. At a highly congested intersection, a driver might wait 2 minutes or more to get through the traffic signal.

What traffic information has changed since the Draft EIS?

Since the Draft EIS was published, the number of vehicles entering and exiting the Seattle Ferry Terminal at Colman Dock has been reduced. In the Draft EIS, the project team’s analysis assumed that 360 vehicles exited Colman Dock and 1,000 vehicles entered Colman Dock during the peak afternoon commute hour. In this document, the number of vehicles assumed to be exiting Colman Dock remains the same, but the number entering has been reduced to 540 vehicles to better reflect traffic counts observed in the area. By 2030, 530 vehicles are projected to exit Colman Dock and 680 vehicles are projected to enter Colman Dock during the peak afternoon commute hour. These updated numbers were used to reevaluate congestion at several intersections near Colman Dock.

To learn more about how traffic conditions have changed, please see Chapter 4 in 2006 Appendix C, *Transportation Discipline Report*.

Why are traffic noise levels modeled for the design year of 2030?

Year 2030 traffic volumes are used to model future noise levels.

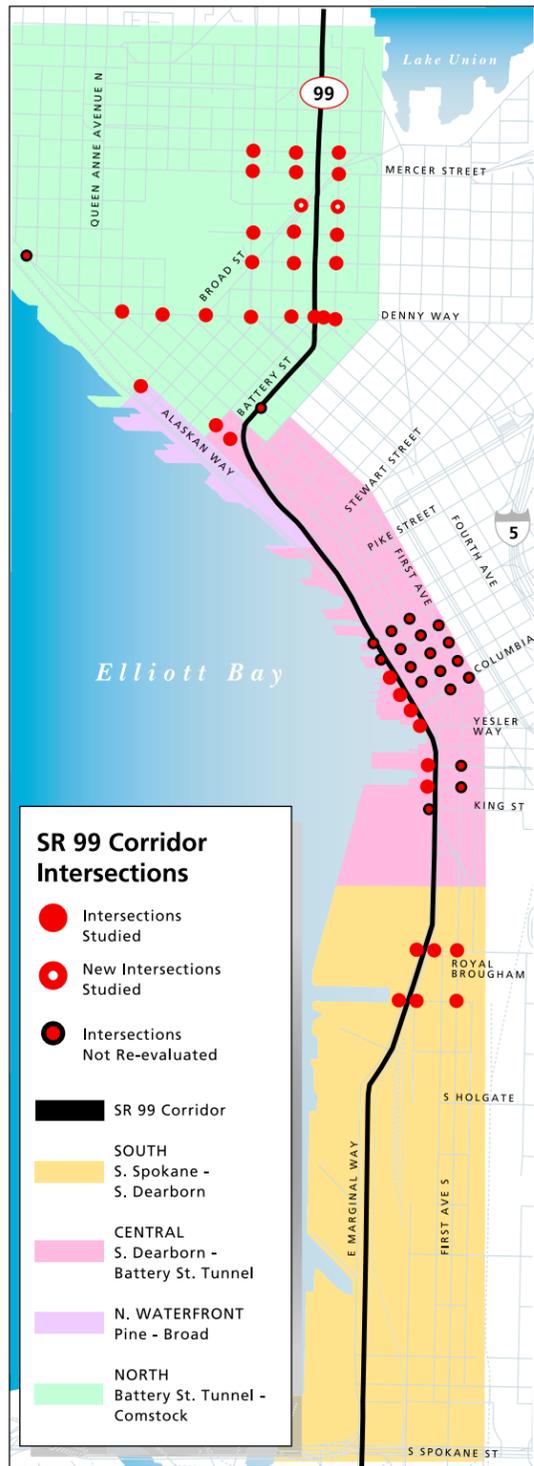
2004 and 2006 Appendix C

The 2004 and 2006 Appendix C, *Transportation Discipline Report*, provide additional information about traffic for the project.

Congested Intersections

During the PM Peak (4:00 - 5:00)

Intersections Studied



2002 Existing Facility



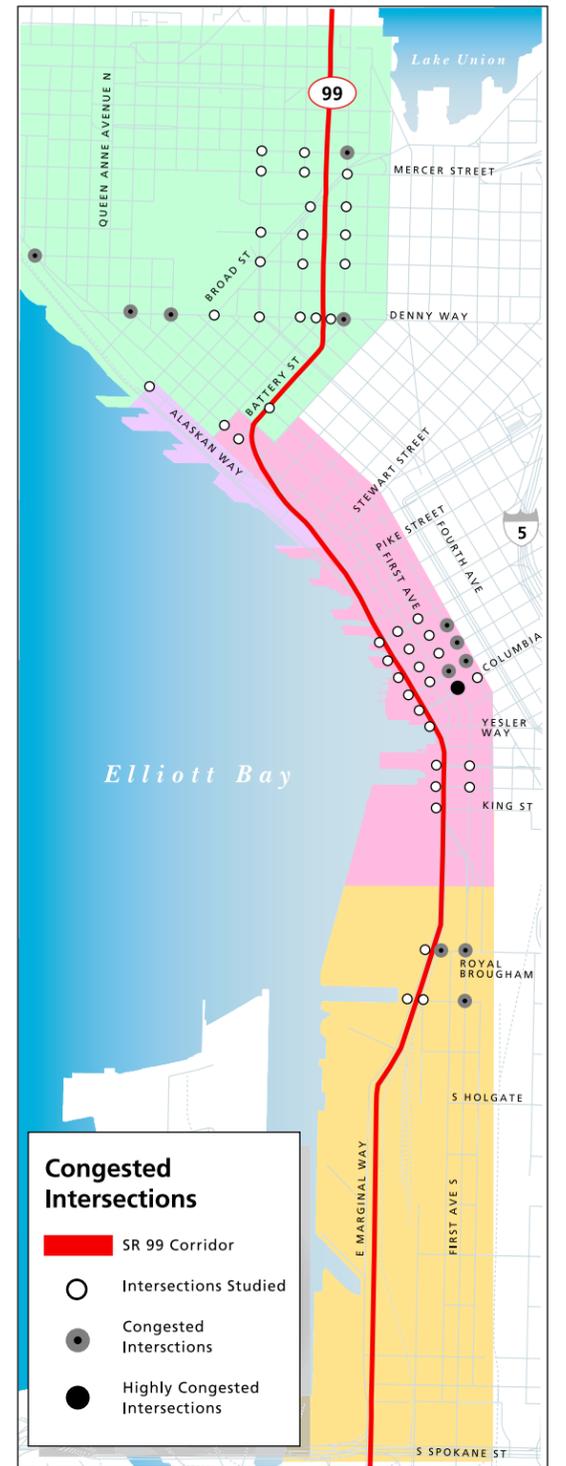
2030 Existing Facility



2030 Tunnel



2030 Elevated Structure



SR 99 Corridor Intersections

- Intersections Studied
- Intersections Not Re-evaluated
- New Intersections Studied

SR 99 Corridor

- SOUTH
S. Spokane - S. Dearborn
- CENTRAL
S. Dearborn - Battery St. Tunnel
- N. WATERFRONT
Pine - Broad
- NORTH
Battery St. Tunnel - Comstock

Congested Intersections

- Intersections Studied
- Congested Intersections
- Highly Congested Intersections

SR 99 Corridor