

Section 9: Bottleneck/Segment Improvement Options

What are Bottleneck/Segment Improvement Projects?

Bottleneck improvement projects are stand-alone projects that contribute to the long-term vision for the SR 167 Corridor. They are projects that target congestion problems at locations where congestion is most pronounced. These projects are considered strategic capacity expansion improvements. The analysis indicates that improvements in these critical areas will help to relieve congestion throughout the corridor and, by so doing, will provide a safety benefit to the traveling public as well.

On a corridor that will ultimately require an investment well in excess of a billion dollars, the prudent approach is often to address the most critical locations first as part of an incremental strategy that will ultimately result in full corridor build out.

As previously noted in this document, the majority of the collisions that occur within the SR 167 corridor are congestion related. Evidence of this is by the high preponderance of rear-end collisions. Constructing improvements that increase capacity and reduce congestion should reduce collisions.

How Were the Bottleneck/Segment Improvement Projects Selected?

WSDOT worked closely with the SR 167 Corridor Working Group (CWG) to assess bottleneck locations in the corridor. In addition, WSDOT surveyed local freight haulers who use the corridor on a daily basis. This input was used to help refine and prioritize the bottleneck improvement locations. Nine improvement strategies were carried forward for analysis and conceptual design. Some of the identified bottleneck improvements have been included in the state's long range

highway plan for many years. To date, these improvements remain unfunded.

What are the Funding Options for the Bottleneck/Segment Improvement Projects?

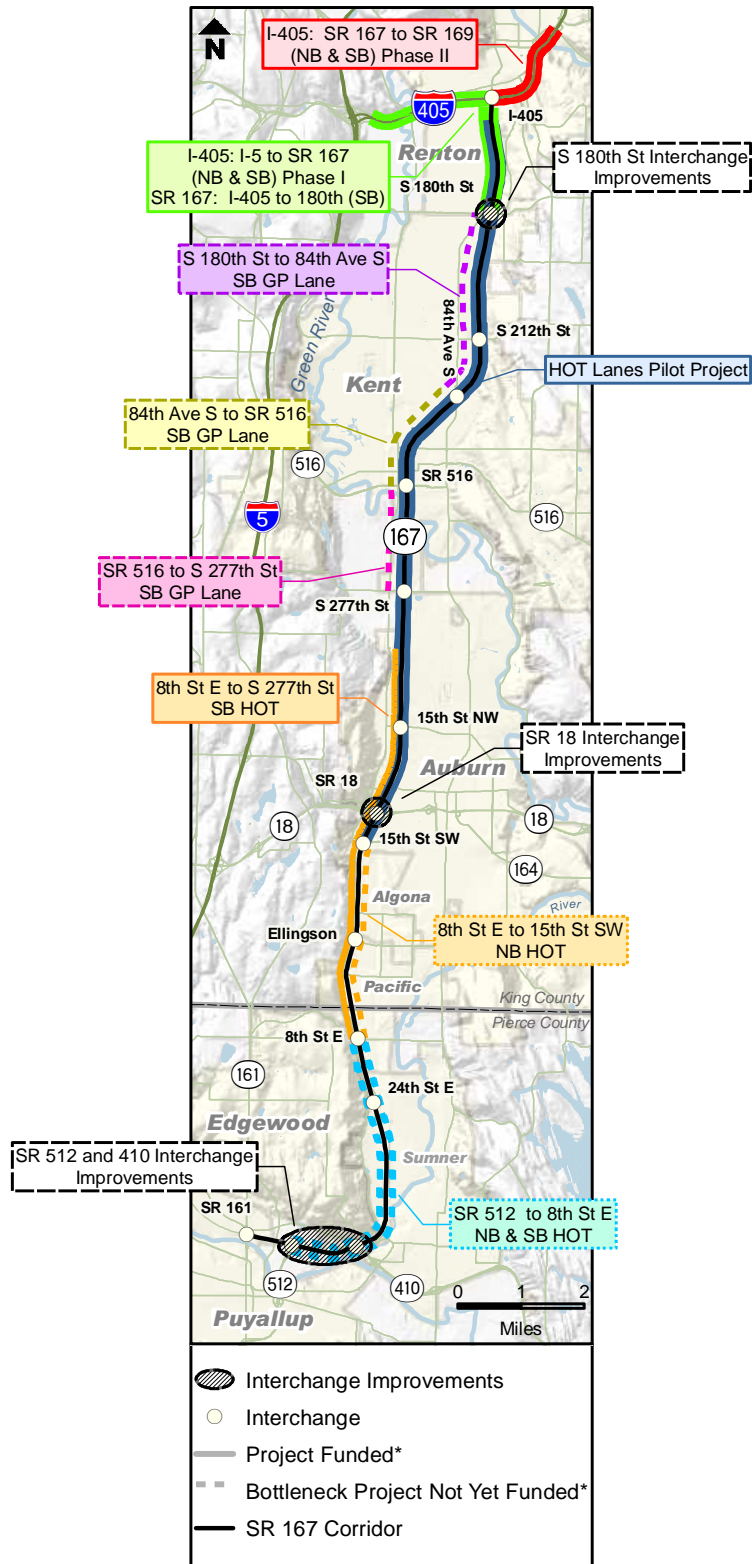
How to secure new funding for transportation improvements has been a hotly debated topic in this region. Passage of the nickel gas tax in 2003 and the nine and a half cent gas tax in 2005 (Transportation Partnership Account [TPA]) funneled billions of dollars to state highways in the central Puget Sound region. While this was an unprecedented investment in transportation by the state, it was not nearly enough to address all the critical needs of the region. Additional funding will be required and could come from one of the sources listed below.

Regional Funding

During development of the SR 167 Corridor Plan, three Central Puget Sound counties (King, Pierce and Snohomish) worked to develop a project list for roadway improvements that was put before voters of the three counties in November 2007. This effort, known as the Regional Transportation Investment District (RTID), was undertaken based on direction from the state legislature. One of the primary tenets of RTID was that tax dollars raised in a county will be invested in that county. Each County Council was in charge of developing the proposed project list for its respective county.

The CWG and WSDOT used the travel demand modeling data and other information that was developed to support the SR 167 Corridor Plan to determine how to achieve the greatest congestion relief on SR 167 in King County within constrained funding limits. The Pierce County Council chose not to invest regional funding on SR 167 between Puyallup and the King/Pierce County line, so only improvements in King County were considered.

Exhibit 9-1
SR 167 Corridor Bottleneck Improvement Projects Identified



GP = General Purpose HOT = High Occupancy Toll
 NB = Northbound SB = Southbound
 *Color will vary

Source: WSDOT

The ballot measure was placed before voters on November 6, 2007. It failed to pass by a wide margin. However, there may be other opportunities in the future to generate regional funding for highway improvements and the work done to support the RTID ballot measure may again be of value.

State Funding

State funding, primarily from the state gas tax and vehicle licenses, permits, and fees has also been directed to the SR 167 Corridor. In 2003, the state gas tax was increased by a nickel. One of the improvements selected by the state legislature to be funded by this gas tax increase was the extension of the northbound HOV/HOT lane on SR 167 between 15th Street NW and 15th Street SW. That improvement is now under construction and nearly completed.

In 2005, the state gas tax was again raised, this time by nine and a half cents. A project list determined by the state legislature was approved and funding from this gas tax increase is dedicated to those projects. SR 167 was again a benefactor of this tax increase as two improvements are now funded. The first is associated with the I-405 investments and builds a general purpose southbound lane on SR 167 between S 180th Street and I-405. The second investment on SR 167 extends the HOV/HOT lane in the southbound direction to 8th Street E in Pierce County.

Additional state funding directed to the SR 167 Corridor will be dependent on another infusion of dollars from the state legislature. As proceeds from both the nickel and nine and a half cent gas tax increases have already been directed to specific projects across the state, state funding for future work on SR 167 will be dependent on another state level transportation revenue increase. Currently, there is no indication from the state legislature when they may consider another revenue increase for transportation purposes.

Other Funding

There is some potential for funding from other sources that may be secured in the future to make improvements to the SR 167 Corridor. Federal funding distributed through a regional grant process managed by the Puget Sound Regional Council could potentially be directed to SR 167. Funding from private developers whose traffic impacts would affect SR 167 is also a possibility. While funding from these sources is possible in the future, it is unlikely this funding will be available at sufficient levels to make a significant contribution towards implementation of the capacity improvements outlined in the plan.

Which Bottleneck/Segment Improvement Projects Were Identified?

As discussed in Section 8: Long-Term Improvement Options, the source of funding for transportation improvements in many ways will influence project selection. If regional funding is the source, strict subarea equity rules may be imposed which place limitations on where generated tax dollars can be directed. The bottleneck/segment projects listed below represent those improvements that were developed for the 2007 RTID ballot measure. As the political landscape changes from year to year, the list of projects is also likely to change.

Alternatively, state funding is not subject to subarea equity requirements. For that reason the list associated with state funding includes an improvement in Pierce County that was not part of the 2007 RTID ballot measure. See Exhibit 9-1 for the location of the bottleneck projects.

Regionally funded bottleneck improvement projects in priority order

The following list of projects, in prioritized order, was included on the RTID ballot measure in November 2007. A considerable amount of transportation modeling analysis was done to arrive at this list of projects. This list should be revisited if there is another effort to pass a regional transportation ballot measure in the future.

The assumptions of the related bottleneck/segment projects and their opening year are described in greater detail in **Technical Memorandum 7: Evaluation and Final Screening of SR 167 Corridor Options.**

1. Add an additional northbound HOV/HOT lane between 8th Street E and 15th Street SW. This improvement, in conjunction with the state funded improvement in the southbound direction, would complete the HOV/HOT lane system on SR 167 in King County. It is anticipated this managed lane system will increase throughput on SR 167 by over 10% during the peak periods.
2. Add an additional southbound lane between S 180th Street and 84th Avenue S.
3. Add an additional southbound lane between SR 516 and S 277th Street. The addition of this southbound lane will provide a much longer distance for safe merging movements between on-ramp traffic at SR 516 and off-ramp traffic at S 277th Street. This additional capacity should also reduce the collision experience along this segment of SR 167.

State funded bottleneck improvement projects in priority order

When the project list was developed for the regional ballot measure, county boundaries were an important consideration. However, state funding is under no such constraint. If state funding becomes available, the CWG and WSDOT feel the highest priority congestion relief improvement for the SR 167 corridor should be completing the HOV/HOT lane system in both directions south to SR 410. When the study area is looked at in total, this is the improvement that provides the most significant congestion relief.

Following completion of the HOV/HOT lane system, the bottleneck/segment improvements listed in priority order on the previous page plus project numbers four and five below should be implemented. In addition to those improvements, two additional interchange improvements that are tied together should be considered for funding as priority project number six.

4. Add an additional southbound lane between 84th Avenue S and SR 516 to complete the connection between projects #2 and #3 above. This would complete the fourth southbound general purpose lane between I-405 and S 277th Street.
5. Add an additional northbound lane between S 277th Street and I-405. This can be phased in separate bottleneck projects between interchanges.

Key Findings of This Section

- Completing the bottleneck/Segment improvement projects would contribute to the long-term vision for the SR 167 Corridor. They are projects that target congestion problems at locations where congestion is most pronounced.
- WSDOT worked closely with local and state agencies, the SR 167 Corridor Working Group, local Native American tribes, and other interested parties to assess bottleneck locations in the corridor.
- Additional funding will be required to complete the bottleneck/segment improvement projects. Funding could come from one or a combination of the following sources:
 - Regional funding, such as the Regional Transportation Investment District (RTID)
 - State funding
 - Other funding, such as from federal funding distributed through grant funds or from private developers whose projects directly impact the SR 167 Corridor
- The following bottleneck/segment improvement projects identified during the screening process were:
 - Completing the HOV/HOT lanes south to SR 410
 - Adding an additional southbound lane between S 180th Street and 84th Avenue S
 - Adding an additional southbound lane between SR 516 and S 277th Street
 - Adding an additional southbound lane between 84th Avenue S and SR 516
 - Adding an additional northbound lane between S 277th Street and I-405