



# Memorandum

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**Date:** October 6, 2015  
**To:** Sammamish City Council  
**From:** Ben Yazici, City Manager  
**Re:** Sahalee Way Alternatives Analysis Report

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## **Background:**

This project is included in the City's adopted 2016-2021 Six Year Transportation Improvement Program with a planning level total cost estimate of \$15.7 million for a 3-lane configuration from SE 25<sup>th</sup> Way and the northern city limit. The proposed lane configurations considered in the initial project include sidewalk and bike lanes, and a center turn lane or island where needed.

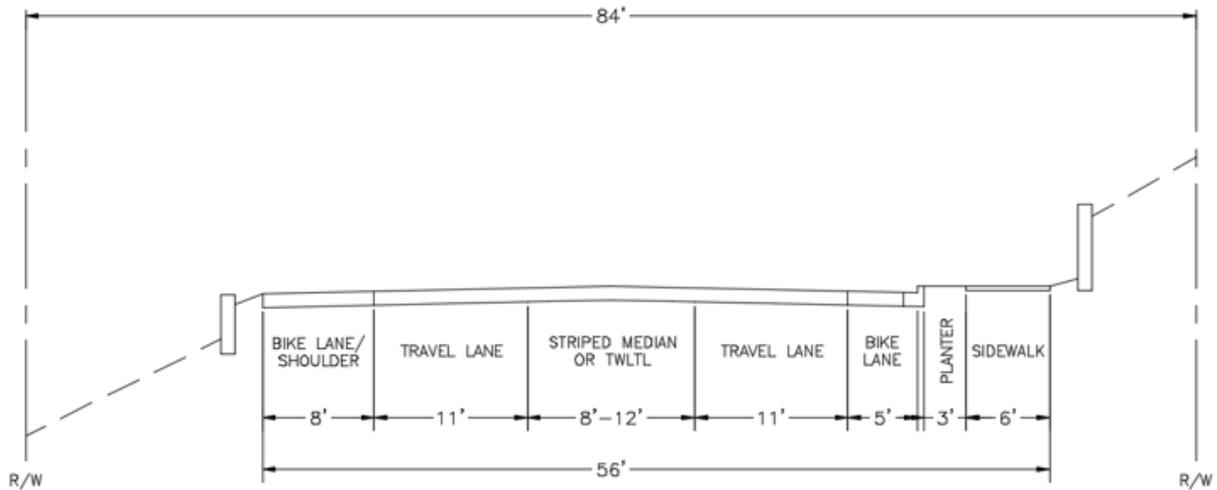
On May 5<sup>th</sup>, 2015, Council approved a contract with Pertect Inc., for the creation of a preliminary design report for the Sahalee Way corridor. The purpose of the report is to analyze traffic data using updated peak traffic forecasts provided by the updated Comprehensive Plan, and recommend the major elements necessary for this project to satisfy the City's transportation concurrency requirements. The analysis considered both 3-lane and 5-lane roadway configurations with planning-level cost estimates completed for each. Additionally, the intersection at NE 28<sup>th</sup> Place was analyzed for both traffic signal and roundabout improvements. At the request of the Council's Transportation Committee, the scope of the study was extended to include the intersection at Hwy 202 (which is controlled by WSDOT) within the King County roadway section.

With the report completed, staff is seeking Council's direction for the scope of the final engineering design. The report recommends the 3-lane base option to satisfy concurrency. Additional corridor enhancements, while not required for concurrency, are presented for Council's consideration.

## **Alternatives Analysis Recommendations:**

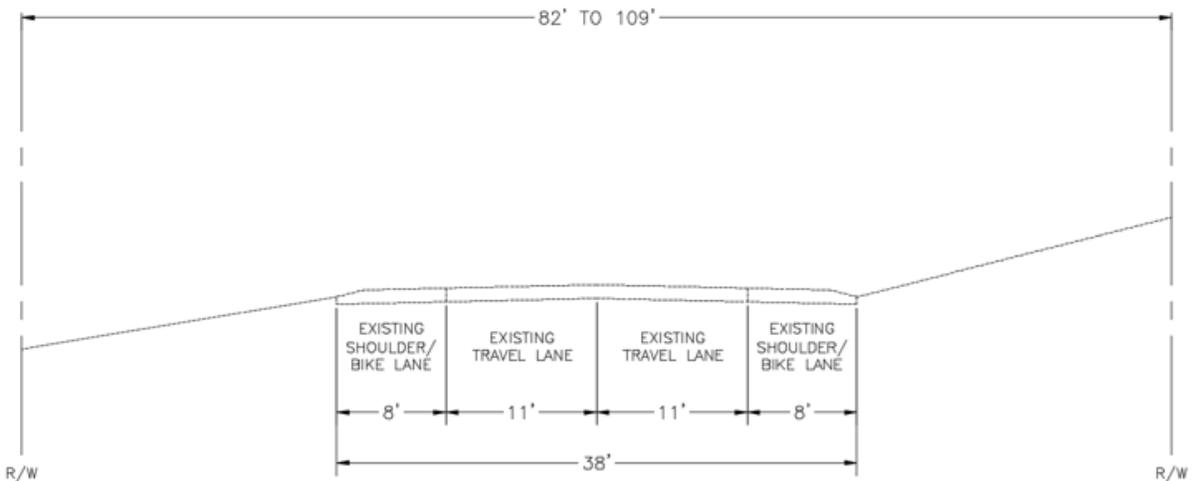
The Alternatives Analysis Report recommends a 3-lane configuration for a base option that satisfies concurrency requirements by increasing the corridor capacity to meet the City's transportation level of service standards. This base option has a current total project cost estimate of \$14,160,000. The section between NE 25<sup>th</sup> Way and NE 37<sup>th</sup> Street includes a sidewalk on the

west side, a 3-foot planter strip, an 11-foot travel lanes, striped two-way left turn lane, and bike lanes (the east side being an 8-foot combined bike lane/shoulder), see figure 1 below.



*Figure 1 - Three-Lane base design proposed cross section (in Sammamish, facing south)*

The section north of NE 37<sup>th</sup> will remain as is, following the King County standard section. This includes 11-foot travel lanes and 8-foot shoulders for bikes and emergency parking, see figure 2 below.



*Figure 2 - Existing cross section North of NE 37<sup>th</sup> and in King County*

The 3-lane design employs several design elements to meet concurrency requirements, optimize existing conditions, and reduce retaining wall costs:

- A. Reduce striped median width between NE 28<sup>th</sup> Street and NE 25<sup>th</sup> Way, and elimination of the median from City Limit to NE 37<sup>th</sup> Street.
- B. No roadway changes north of NE 37<sup>th</sup> Way

- C. Construct sidewalk, planter strip, curb and gutter on west side only
- D. Maintain existing roadway centerline and top with new asphalt overlay.
- E. Maintain existing illumination
- F. Reduce planter strip width (3-feet vs. 5-feet)

Table 1 below shows optional enhancements to the 3-lane base option. These optional enhancements are not required for concurrency, therefore are not eligible to be paid for with transportation impact fee revenues:

*Table 1 – Three-Lane Enhancement Cost Estimates*

| Enhancement | Description                   | City of Sammamish Cost | King County Cost |
|-------------|-------------------------------|------------------------|------------------|
|             | Base 3-lane Configuration     | \$14,160,000           |                  |
| <b>A</b>    | Enhanced Pedestrian Crossings | \$45,000 each          | -                |
| <b>B</b>    | Bus Pullouts                  | \$320,000              | -                |
| <b>C</b>    | Widened Planter Strip         | \$820,000              | -                |
| <b>D</b>    | Right-Turn Lane               | \$480,000              | -                |
| <b>E</b>    | Raised Median Island          | \$160,000              | -                |
| <b>F</b>    | Widened Painted Medians       | \$2,730,000            | -                |
| <b>G</b>    | Truck Climbing Lane           | \$3,420,000            | \$2,390,000      |

The optional enhancements to the 3-lane base option are described below:

- A. Enhanced Crossings – Estimate shown is for a pedestrian-actuated flashing beacon controlled crossing. Staff would complete a warrant analysis during final design to evaluate specific locations, and coordinate with King County Metro.
- B. Bus Pullouts – Estimate is for all bus stop locations on the west side, and would allow busses to exit the travel lane. Staff would coordinate with King County Metro and the Microsoft Connector. East side would not have pullouts, as there will already be an 8-foot bike lane/shoulder allowing busses to exit the travel lane.
- C. Widen Planter Strip – Estimate includes widening 3-foot planter strip in base option to the standard 5-foot width. Either width will support grass and regular mowing.
- D. Right-Turn Lane – Estimate is for southbound NE 28<sup>th</sup> Street, and reflects walls and additional right of way acquisition. The adjacent property owner has requested that the project not impact his property, which right turn installation would do. The turn lane is not required for concurrency. Intersection function would improve slightly by allowing turning vehicles to decelerate outside of the through lane.
- E. Raised Median Island – Estimate is for curb, gutter and planting for the median island between NE 25<sup>th</sup> and NE 28<sup>th</sup>/233<sup>rd</sup> Ave SE. The base option of a striped median is easier for maintenance and for emergency crews responding to disabled vehicles blocking roadway (e.g. accidents and snow conditions).
- F. Widened Painted Medians – Additional walls are required to widen striped medians from 8-feet to 12-feet between NE 25<sup>th</sup> and NE 28<sup>th</sup>/233<sup>rd</sup> Ave SE and to add medians from City Limit to NE 37<sup>th</sup> Street.
- G. Truck Climbing Lane – City would be responsible for the total combined \$5.8 million cost estimate, as King County staff has told City staff that King County will not

contribute to the portion of the lane to be constructed in the County. The climbing lane up the hill north of NE 37<sup>th</sup> would save an average of 6.9 seconds/vehicle.

### **Intersection Delay and Corridor Travel Time Comparisons:**

The recommended 3-lane configuration satisfies concurrency requirements and meets the City's transportation level of service standards based on 2035 design year projections. Projected traffic volumes are higher in 2035, therefore the recommended 3-lane improvements will see approximately 10% higher corridor travel times than are currently experienced in both the northbound and southbound directions.

A 5-lane configuration offers similar performance but with some operational benefit. Compared with current conditions, it would reduce corridor travel times by 3% in the southbound direction PM peak hour. It would also reduce intersection delay by 6-seconds at NE 28<sup>th</sup>/NE 223<sup>rd</sup> and 15-seconds at NE 37<sup>th</sup>. The 5-lane configuration cost estimate is \$67 million for the portion in the City and an additional \$12 million in King County.

The State operated intersection of Sahalee Way NE and SR 202 could benefit from operation improvements. City AM peak hour delay could be reduced at SR 202 by extending the northbound green phase, but the magnitude of the affects is controlled by the State's signal timing. Further, PM peak delay could be reduced by widening the intersection for an additional eastbound right turn lane and an additional eastbound through lane. However, there would be additional right of way and wetland impacts in locations controlled by the State and King County.