



**Washington State
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February 13, 2007

The Honorable Christine Gregoire
Governor, Washington State
PO Box 40002
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The Honorable Mary Margaret Haugen
Chair, Senate Transportation Committee
PO Box 40466
Olympia, WA 98504-0466

The Honorable Judy Clibborn
Chair, House Transportation Committee
PO Box 40600
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The Honorable Dan Swecker
Senate Transportation Committee
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The Honorable Fred Jarrett
House Transportation Committee
PO Box 40600
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This responds to your letter of January 30, 2007 in which you asked for WSDOT's assistance in evaluating the surface/tunnel hybrid proposal for replacement of the Alaskan Way Viaduct that has been placed by the Seattle City Council on an advisory ballot scheduled for March 13.¹

Based on our review, WSDOT cannot recommend to you approval of this proposal as an acceptable viaduct replacement option because of serious safety and operational problems found during our technical review. We recommend that this proposal not be advanced for further study. The attached technical memo reviews the key components of the surface/tunnel hybrid proposal and provides detail regarding our concerns.

The Surface/Tunnel Hybrid on the March 13, 2007 City of Seattle Ballot

Governor Gregoire completed her findings, as requested by the legislature, on viaduct replacement alternatives on December 19, 2006. Her evaluation considered a cut-and-cover tunnel alternative and an elevated alternative each as developed in the project's Supplemental Draft Environmental Impact Statement (SDEIS). She recommended that

¹ The January 30 letter was also addressed to Jane Garvey, chair of the Expert Review Panel appointed by the Governor, etc. On Friday, February 9, we received a copy of a response from Ms. Garvey on the panel's behalf that it would not be able to complete a meaningful and adequate review of changing proposals in time to meet a deadline of February 13.

an advisory ballot be held in the City of Seattle to determine citizen preference on which alternative to pursue.

On January 5th, the City of Seattle presented to WSDOT a new proposal for achieving the project with a four lane tunnel. Shortly thereafter, a revised new proposal now known as the surface/tunnel hybrid was presented to the City Council which voted on January 19th to place it and the elevated structure alternative on advisory ballots for city voters set for March 13.

WSDOT's Review of the Surface Tunnel Hybrid

We have examined the City's description of the surface/tunnel hybrid to consider what opportunities it offers and what problems it presents. The viaduct project consultant team as well as WSDOT's own staff have conducted the review. For purposes of the review the Seattle Department of Transportation has answered several questions. Our work has also drawn on the collaboration the State and the City have developed over years of working together on the planning and engineering that underlie the project's environmental review process. The conclusions of our review have not, however, been developed with the City so that the review can be independent of the City's opinions and judgments. As noted above, the attached technical memorandum addresses in detail the questions raised in the Jan. 30th letter. Listed below are WSDOT's key findings:

1. Safety

In this particular tunnel environment, WSDOT would not approve the use of shoulders as travel lanes. Operating the proposed tunnel for seven peak travel hours a day with two eleven foot lanes, a twelve foot shoulder operating as a travel lane and no shoulders (apart from a two foot "shy" between traffic and the tunnel walls) is not satisfactory. The lack of full-time shoulders would degrade safety and diminish traffic flow as compared to the appropriate tunnel design that would include access to shoulders at all times.

The unacceptable attributes of a tunnel operated for traffic at peak hours in a lane configuration without shoulders would include:

- Lanes blocked by disabled vehicles and collisions (where otherwise it would be possible to move blocking vehicles to a shoulder).
- Increased response times of police and emergency vehicles to incidents in the tunnel.
- Increased numbers of vehicle collisions with the tunnel wall.

- Access to emergency exits could be hindered or blocked.

These are not the characteristics that should be incorporated into new construction of a major state highway carrying over a hundred thousand trips a day to be constructed at a cost of billions of dollars and intended for decades of future use.

Several deviations from standard roadway specifications would be required to build and operate the tunnel in the fashion suggested by the City for its surface/tunnel hybrid proposal. We are aware of no new construction project at WSDOT that has been based on such a significant level of deviation from the full shoulders and 12 foot lane widths usually required. Further, our agreement with the Federal Highway Administration concerning projects and facilities funded with federal financial assistance would require its approval of these significant design deviations. WSDOT assesses the proposed variances based on the classification, and geometric and operational characteristics. FHWA makes an independent assessment and may deny, ask for additional mitigation, or approve the departure based on the authority of their oversight.

2. Roadway Capacity

A roadway configuration for the SR 99 corridor that does not include three lanes and shoulders at all times does not meet the state's safety standards or the capacity requirements in the corridor and would not be approved by WSDOT. Whatever the theoretical capacity of the proposal when it is operating flawlessly, the practical fact is that the effects of vehicle breakdowns and other limiting factors from the operating configuration will often diminish the useable capacity of the proposed tunnel. It will not, therefore, reliably meet the capacity objective.

3. Transit Capacity

Every alternative for the viaduct replacement envisions significant new transit investment. Looking out to the planning horizon of the year 2030, the project planning for the cut-and-cover tunnel and elevated structure alternatives have already assumed that one of every three trips added to today's trip level will be provided by transit and every new commute period trip to downtown Seattle will be served by transit. This will require significant new investments in transit capital and operating expenditures, none of which are provided for long term in the projected costs of replacing the viaduct.

4. Freight Capacity

You also asked how the surface/tunnel hybrid would meet needs for freight movement. We believe that the new proposed surface/tunnel hybrid presents a number of concerns for trucking that cannot be set aside without careful new analysis. Given the concerns for

reliability from the peak-hour no shoulders operation of the tunnel, slower trip times are definite possibilities. Moreover, trucks using the tunnel will find longer steep grades than had been planned for the cut-and-cover tunnel alternative, another issue for truck speed, efficiency and reliability.

5. Constructability

The City's new surface/tunnel hybrid proposal is based on achieving a very short (and therefore cost-minimizing) construction duration. The schedule proposes completely closing the viaduct and the SR 99 corridor for 33 months. This schedule presumes that over \$2 billion worth of work would be completed in a 33 month period. (The closure duration for the elevated structure is three months.)

6. Impacts on Waterfront Businesses

The compressed construction schedule would likely bring more severe interruptions to local businesses than those assumed in previous project planning. More work on the construction plan and more discussions with affected waterfront businesses would have to be carried out before this approach could be incorporated into the project plan.

Estimated Cost of the Surface/Hybrid Option

As noted in their January 30th letter, the Expert Review Panel was unable to respond to the request in your letter to review the cost estimate for the surface/tunnel hybrid proposal. In September, WSDOT's expert consultants required almost two weeks to make several adjustments to its previous cost estimates. The revisions examined inflation scenarios, minor project design adjustments, and re-evaluation of several risk elements. Here, the task of providing a new estimate would be much larger because fundamental changes in design are embraced by the new proposal. In support of this task, we were unable to provide a sufficient level of design development and refinement, nor provide certainty about numerous other project assumptions in the time available.

We hope that this letter and the accompanying materials will prove useful in your deliberations.

Sincerely,



Douglas B. MacDonald
Secretary of Transportation