

POLICY NOTE

Review of the Draft 2024 State Highway System Plan

By Charles Prestrud, Director, Center for Transportation

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Key Findings

1. After a lapse of sixteen years WSDOT has prepared a draft State Highway System Plan. In the past this document has provided the basis for development of the legislature's transportation budget and helped inform local and regional transportation plans.
2. Unlike prior editions of the plan, the new draft does not include a list of state highway projects, cost estimates, or a timeline for implementation. As a result, the plan is not compliant with the requirements set forth in RCW 47.06.050.
3. The draft plan does not appear to effectively advance state transportation policy goals that call for relieving congestion and supporting economic vitality. The sparse information the plan provides indicates that congestion would become significantly worse, causing adverse economic impacts.
4. The draft plan does not address important policy questions WSDOT now faces, especially HOV operating policy (occupancy requirements, hours of operation, etc) and tolling policy (when and where state highways should be tolled and what toll rates should be charged).
5. Rather than describing the highway improvements needed to address performance deficiencies, the draft plan proposes to abandon the traditional Level of Service performance measure and allow increased traffic congestion.

Introduction

For several decades the State Highway System Plan was the most important planning document WSDOT produced. That plan consisted of a list of all the highway improvements WSDOT intended to implement over the succeeding twenty years along with cost estimates for each project, a phasing plan for construction, and identification of the performance objectives that would be addressed.

The plan was usually updated every three or four years to reflect new travel demand forecasts, projects that had been completed, and changes in funding such as increases in the state fuel tax, discontinuation of the motor vehicle excise tax, or new Federal transportation funding. The plan served as the starting point for development of the legislature's transportation budget as well as providing essential input to regional and local plans.

For reasons that have not been explained, following the 2007 edition of the plan no update was prepared until late in 2023. As a result, the 2007 plan had become far out of date and no longer useful for policy makers or legislative budget discussions.

Content of the 2024 State Highway System Plan

Unlike all previous editions of the plan, the 2024 draft does not include a list of projects, project cost estimates, or timelines for implementation. Instead, the plan presents three broadly defined funding scenarios representing policy choices among highway preservation, system expansion, and safety and efficiency.

Assessment of the draft plan is difficult because the plan does not provide any detail about what improvements are in each of the scenarios or what impacts could realistically be expected. Rather than showing what highway system improvements and operating policies are needed to "address system deficiencies" and to "ensure acceptable operating conditions" as called for in state law,¹ the draft plan obscures or fails to disclose system performance trends and instead recommends lowering performance standards. That approach is not consistent with the highway system priorities in the RCW and doesn't provide legislators and local policy makers the information they need to make transportation

¹ RCW 47.06.050, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.06.050&pdf=true>.

investment decisions. The plan emphasizes highway system preservation and maintenance, which WSDOT has shown to be woefully inadequate, but the evaluation and comparison of other plan elements is very incomplete.

Conformance with RCW requirements

The draft plan refers to the requirements set forth in statute and even quotes RCW 47.06.050 which says “A primary emphasis for [the Highway System Plan] is the relief of congestion...”² But the plan does not appear to relieve congestion. In fact, from the scant performance information provided it seems likely congestion would become much worse under all three of the scenarios. Omission of this information is a serious shortcoming. The requirement to address and relieve congestion is also specified in RCW 47.04.280(d)³ and in 47.05.010.⁴ The draft plan is deficient both in its failure to address that RCW priority and in its failure to provide the information needed to understand the performance impacts of the recommended scenario or the alternatives.

In addition to being vague, the process used to arrive at the plan recommendations is also inconsistent with RCW guidance for plan preparation. In 47.06.050(1) the RCW requires a state highway system plan, “...which identifies program and financing needs and recommends specific and financially realistic improvements...” But the draft plan does not list or describe any specific improvements. The RCW also requires, “A capacity and operational improvement element...” which recommends “...specific improvements and strategies necessary to achieve operational objectives.”⁵ But the draft plan fails to define operational objectives, or show what improvements and strategies would address system deficiencies.

The draft plan relies on input gained through what appears to be a non-statistically valid public outreach process to recommend allocating funds “between safety and efficiency strategies and highway expansion projects at a 2:1 ratio”. From the very limited information provided it isn’t clear that ratio would be the most effective for achieving the policy goals in the RCW. This is also inconsistent with RCW 47.05.035 that directs WSDOT to use a “cost-benefit analysis by which the department can determine the relative mobility improvement and congestion relief each mode or improvement under consideration will provide...”⁶ The RCW also stipulates that the analysis should be conducted “to meet current and future long-term demand within a corridor or system for the lowest cost.”⁷ The draft plan does no such thing.

2 Ibid.

3 RCW 47.06.050, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.04.280&pdf=true>.

4 RCW 47.05.010, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.05.010&pdf=true>.

5 RCW 47.06.050, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.04.280&pdf=true>.

6 RCW 47.05.035, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.05.035&pdf=true>.

7 Ibid.

Curious definition of scenarios

The draft plan defines three highway programs:

- Highway Repair
- Safety and Efficiency
- Highway Expansion

But those groupings are not consistent with the way WSDOT manages its programs nor is it consistent with how the legislature prepares a transportation budget. This confuses the trade-offs the draft plan presents and makes it hard to determine what is included in each grouping. The combination of safety and efficiency is especially problematic. The draft plan indicates this includes “operations, walking, bicycling & rolling, environment, and transportation demand management.” Those are separate programs which often have separate funding sources. Elsewhere in the document transit is included in the safety and efficiency grouping, but the transit improvements are not described nor is it apparent how highway system efficiency would be increased. The transit performance trends of the last four years show transit mode share on most state highways has fallen to under two percent, so there is reason to doubt additional state investment in transit would increase system efficiency or reduce vehicle miles traveled as the plan implies.

The comparison of scenarios in the plan raises more questions than it answers. For example, among the scenarios the estimated reductions in greenhouse gas are very similar, only varying by 1.4% from highest to lowest. That small difference may very well be within modelling error, and the plan provides no information by which to gauge the significance of the numbers presented. In contrast, the plan asserts there would be very large savings from safety improvements, but no description is provided as to how the numbers were calculated. Curiously, the pictogram on page 27 of the plan (labeled as figure 8) does not provide an estimate of congestion related costs or savings. Given the importance of congestion relief in the RCW and the substantial economic and environmental benefits from efficient traffic flow, this is a serious omission.

The footnote under the pictogram informs us, “These figures were developed based on the 2021 budget for the purposes of long-range planning.” What the footnote does not mention is that in the 2022 session the legislature passed the “Move Ahead Washington” package which provides \$17 billion dollars in state funding for transportation projects and programs with an emphasis on transit, highway maintenance, and non-motorized (cycling, walking, etc) programs. Thus, the information in the draft plan does not reflect the benefits and funding implications of the significant expenditures which have already been approved.

Lack of clarity on what highway improvements are included

On page 20 the draft plan says, “WSDOT analyzed how different investment scenarios would affect outcomes, including: How many highways or bridges would close?” That is a very important question, but the draft plan doesn’t tell us what highway facilities would close under any of the scenarios! Was this information provided to the individuals who provided input on the scenarios? Or were they

expected to express a preference based only on general scenario descriptions without knowing what highway improvements were included or deleted?

The very low level of funding recommended for highway expansion suggests that many projects currently included in state, local, and regional plans would not be funded. If that is the case the deleted projects need to be identified. This is particularly important if the plan is serious about integrating the state plan with regional plans as indicated on page 17. Without a project list, which has been a central part of all previous state highway system plans, there is no way to tell whether the state plan is in alignment with regional plans. In fact, the WSDOT project lists have always been an important input to development of the regional plans prepared by MPOs and RTPOs, as well as an important resource for cities and counties as they develop their own plans. The absence of a project list in this draft plan greatly diminishes its usefulness.

Operating Policy questions unaddressed

For the last twenty years completion of the Freeway HOV system has been a top funding priority for WSDOT as well as a key component of the transportation system in the Puget Sound region. It has also become apparent the HOV operating policies that have long been in effect will not work well as demand grows in the future. This was recognized in the regional plan adopted by PSRC in 2018. In that plan WSDOT committed to addressing the question of HOV operating policy as well as addressing the growing needs on I-5 and other state highways in a “State Facilities Action Plan.” That was six years ago, but no “State Facilities Action Plan” has been produced nor does the draft State Highway System Plan address those key issues.

The draft plan mentions tolling, which has become an important strategy for financing major highway projects and for managing demand in high-demand corridors, but despite its importance, the draft plan provides no details about where and how tolling will be employed in the future.

System efficiency and economic impacts

Economic vitality is a policy goal in RCW 47.04.280⁸ and a goal of many regional plans. The draft plan alludes to this on page 16 where it cites the Washington Transportation Plan’s 2040 vision which includes “fostering commerce and economic opportunities for all.” However, the draft plan makes no attempt to quantify how (or whether) the plan’s recommendations would help achieve that outcome. If the plan allows congestion to become significantly worse, then the highway system will become less efficient and the economic impacts will be negative.

This can be seen in the attached “boomerang” graph, which shows how vehicle throughput decreases when a freeway becomes congested. As speeds drop the volume of traffic accommodated can decrease by 40% or more. That not only means a huge lost-time penalty for travelers, it also imposes a cost on commerce, increases vehicle emissions, and reduces the return on the public’s large

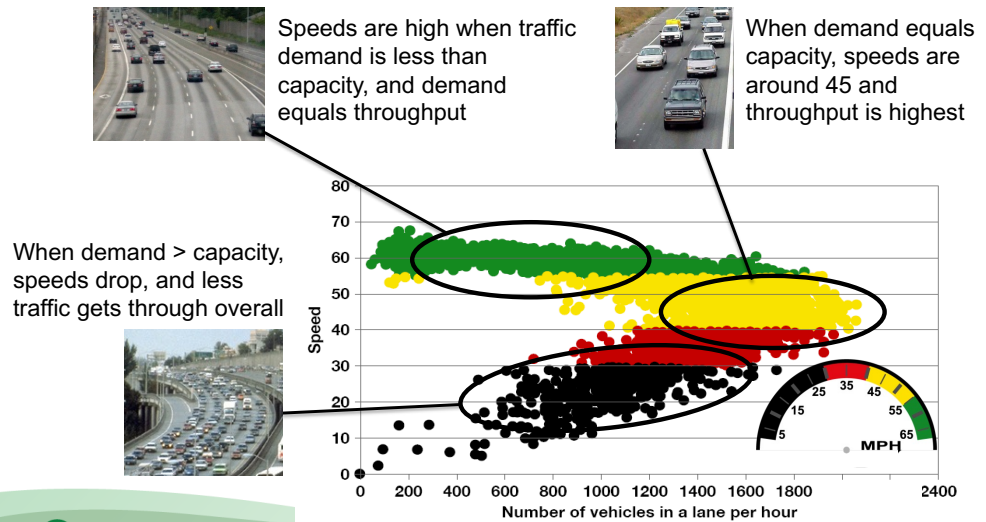
8 RCW 47.04.280, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.04.280&pdf=true>.

investment in the state highway system. If economic vitality, regional prosperity, and individual opportunity are goals, then the plan must show how it will relieve congestion and increase system efficiency. If the plan doesn't address congestion then it isn't compliant with state policy goals.

Washington's Toll Facilities – I-405 Express Toll Lanes

How Price is Used to Manage Traffic

- This graph shows the relationship between speed and throughput
- Based on observed traffic on I-405 in all lanes
- On express toll lanes, price is used to manage demand



Washington State Department of Transportation

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Moving away from the standard Level of Service methodology

The draft plan proposes to abandon the traditional Level Of Service (LOS) measure in favor of a multi-modal approach that makes congestion a lesser consideration. That change raises a bunch of sticky questions the draft plan mentions but doesn't really resolve. Among the problems with that approach is that it doesn't comply with the RCW requirement "to meet current and future long-term demand." As can be seen in the WSDOT LOS map attached below, by 2030 much of the highway system in the Puget Sound region is forecast to operate at LOS "E" or worse. Re-defining LOS to allow more congestion would not change the reality of lost system efficiency and the high societal costs that go along with it. To be effective the plan needs to do more than move the goalposts or add new multi-modal objectives.

9 Powerpoint slide from a WSDOT I-405 Express Toll Lanes presentation, circa 2013.



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Stewardship

In RCW 47.04.280 stewardship is established as a transportation system policy goal. The RCW defines stewardship as, “To continuously improve the quality, effectiveness, resilience, and efficiency of the transportation system.”¹¹ That is certainly a laudable goal. It is not, however, a goal which the draft plan appears to do much to achieve. As discussed above, by allowing congestion to significantly worsen the plan would result in a transportation system that is less efficient and less effective. Nor does the plan provide the information needed to determine whether the substantial investments in the plan would be cost-effective. This can be seen in the table on page 25 (labeled as figure 6) which compares three scenarios, but for two of them the stewardship entry says only “Draft, In Progress” with no data provided. The plan leaves “stewardship” very much an open question.

A bold vision?

Page 16 of the draft plan says it is “A bold vision for state highways”, but far from being bold, the vision that emerges is vague and short-sighted. The State of Washington is expected to gain more than a million new residents by 2040, and the RCW clearly calls for a plan that accommodates the mobility needs of those people and the businesses that will support the state economy. The draft plan, however, fails to show how that growing travel demand will be met. It refers to technology, transit, and demand management strategies but it doesn’t show how the billions of dollars it proposes to spend on those programs will achieve the policy goals established in the RCW. Rather, it focuses on lowering performance standards that would result in a less efficient highway system and diminished economic opportunities. That isn’t the vision called for in state law, nor does it reflect the vision in many city and regional plans.

Conclusion

The draft plan does not adequately address the state’s key highway policy and planning questions. To comply with the RCW requirement a State Highway System Plan is needed that includes a list of projects with cost estimates, a phasing and financing plan, and a description of how specific plan elements would meet identified needs. The draft plan does not provide the information needed by the legislature or local policy makers to select projects, develop transportation budgets, or ensure consistency among state and local plans.

11 RCW 47.04.280, accessed January 2024 at <https://app.leg.wa.gov/RCW/default.aspx?cite=47.04.280&pdf=true>.