Transportation Commission

TRANSMITTAL

June 27, 2019

RE: Eastgate Transportation Study Final Report and Next Steps

Honorable Mayor Chelminiak and City Councilmembers:

Transportation Commission members appreciate your trust and confidence in selecting us to oversee the Eastgate Transportation Study. As we have explored opportunities to address vehicle congestion in the Eastgate and Factoria areas, we have been guided by Council direction and the expectation of Bellevue voters through the Neighborhood Safety, Connectivity and Congestion Levy. Our work, documented in this final report, is a technical analysis of what congestion could look like in 2035 and the benefit of specific intersection and corridor projects intended to reduce growth in vehicle congestion. We endorse the projects described in this report and we encourage their implementation.

The Final Report

At our June 27, 2019 meeting, with a vote of XX in favor and XX opposed, the Transportation Commission approved the Eastgate Transportation Plan Final Report, and hereby transmits the report to the City Council.

Council Direction and Neighborhood Safety, Connectivity and Congestion Levy

On November 28, 2016, then mayor John Stokes proposed to Council that a traffic study be performed in the Eastgate/I-90 Interchange area along 148th - 150th Avenues SE to identify improvements that could ease traffic congestion. Council concurred and directed the Transportation Commission to prepare a recommendation for projects that could reduce congestion. Council suggested that a detailed traffic analysis incorporate planned transportation projects and land use assumptions. Our final report responds to this Council direction.

Identifying the Existing Problem and Looking to 2035

Our work began with an objective look at existing conditions, using metrics, standards and guidelines to determine locations where congestion occurs and to describe the magnitude of the congestion at key arterial corridors and intersections. We used a forecast year of 2035 for a long-range analysis of the 148th/150th Avenue SE corridor between SE 28th Street and Newport Way, and the Richards Road/Factoria Boulevard corridor between SE 32nd Street and SE 38th Street. The forecast for 2035 included Bellevue CIP transportation projects and the capital and service projects planned by WSDOT, King County Metro and Sound Transit. Assumptions about land use for 2035 were derived from potential development under the existing zoning.

Metrics and Evaluation

Early in the process we developed an objective methodology, informed by data, to help us develop and evaluate project concepts to address 2035 congestion. From this framework and analysis emerged a list of infrastructure projects that address vehicle level-of-service at intersections and along corridors.

There are no adopted level-of-service standards against which to evaluate project performance for long-range planning. However, we did use metrics derived from our previous work on Multimodal Level-of-Service. For purposes of describing the performance – in terms of congestion reduction – we used the volume/capacity

ratio and delay at intersections, and the vehicle travel speed/travel time along a corridor spanning several intersections. The combination of these helped to describe the future situation for vehicles at intersections, and importantly, for vehicles moving along a corridor. These metrics are not standards in the regulatory sense, but they provide an indication of where congestion is likely to be challenging for commuters, especially in the PM peak time period, and they helped in evaluating and comparing the performance of projects.

Benefits and Costs

We describe the benefits of recommended congestion reduction projects in terms of the vehicle delay that would be reduced in 2035, versus not doing the project. Each project was separately evaluated, but it is their cumulative value to reduce delay along a corridor that is the compelling story. For instance, our recommended intersection projects along the 148th/150th Avenue SE corridor could nearly double the southbound travel speed versus doing the 2035 Baseline. Smaller reductions in future delay may be expected along Factoria Boulevard and at other isolated intersections.

We used "planning level" cost estimates to help describe the cost-effectiveness of a project. We wanted to avoid recommending a project that looked promising for congestion relief but would be unreasonably expensive to build due to right-of-way needs, environmental constraints, or construction costs. As a result, several project concepts that we analyzed did not pass the "reasonableness" test for congestion-reduction benefits relative to the costs. We document these projects in our final report but we do not recommend they be implemented.

Project Concepts

The Commission identified potential project concepts by first looking at intersections and corridors that either now, or in the future (2035), show signs of congestion as determined by the metrics described above.

Transportation modeling analysis revealed the location and magnitude of congestion issues and helped inform the project concepts to provide congestion reduction. Most of the projects we endorse are in the form of added capacity at intersections –turn lanes and thru travel lanes. One significantly helpful project would restripe the existing 150th Avenue SE bridge over I-90 to add a 4th southbound travel lane. As this is a WSDOT facility, city staff have and will coordinate with WSDOT on the potential implementation of this design.

Some intersection and corridor projects can be accomplished within existing city right-of-way. In some instances, redevelopment of adjacent private properties will be necessary to get the needed right-of-way as a condition of development approval.

We recognize that mobility for many people does not involve driving a personal vehicle. That is why we wanted to ensure that the projects we endorse provide for the planned facilities for people walking, riding a bicycle or taking transit. Each of the projects is designed to incorporate the planned facilities for non-motorized mobility. Providing for these mobility options helps ensure that the transportation system is equitable and accessible.

Finally, not all congestion reduction is accomplished by expanding infrastructure. Our recommendation acknowledges that transportation demand management (TDM) is an effective tool that the city uses in conjunction with employers in the Eastgate/ Factoria area to reduce the drive-alone rate, and thus the vehicle demand on the system during peak periods. This robust approach to TDM is shown to reduce vehicle delay at intersections and along corridors by 3-5 percent. TDM trip reductions are included in our analysis of future congestion and inform the need for infrastructure capacity projects.

Early Implementation

Some of our recommended projects may be implemented more quickly and inexpensively than others. Signal timing adjustments or other operational improvements, plus restriping the existing pavement to expand vehicle capacity could be accomplished within a few years. In our report we identify these early implementation projects and recommend that they move forward to design and implementation.

South Bellevue Community Center

In our efforts to better connect with the neighbors most effected by existing congestion and who would benefit from congestion reduction projects, we met three times at the South Bellevue Community Center (June 14, 2018, January 24, 2019, and June 27, 2019). This Bellevue Parks and Community Services facility was an ideal location for the Commission and the community to communicate about mobility challenges and the potential projects to address those challenges.

Conclusion

With regional and local growth continuing, our work in this study focused on minimizing the adverse effects of growth on mobility. Land use is not a variable that we manipulated through this study, so our focus was on the transportation system. Our recommended projects achieve congestion reduction versus doing nothing. We know that expanding vehicle capacity may not be enough, and that a long-term solution to congestion is a comprehensive multimodal strategy. However, the strategic investments we identify will provide measurable congestion reduction in the context of a multimodal approach to mobility.

The transportation system in Factoria/Eastgate is fragile. A collision, a snowstorm, a Seahawks game, or even a little rain can increase vehicle travel time, and that includes transit. An expanded, redundant and multimodal transportation system – both local and regional – coupled with demand management strategies are all needed to accommodate the anticipated growth, and to provide accessible, dependable and equitable mobility.

The Next Steps

The Transportation Commission submits this final report at the conclusion of our assigned task to identify congestion reduction projects for the Eastgate/Factoria area. However, additional work is needed to move these projects toward implementation.

We recommend the City Council initiate a Comprehensive Plan amendment to add our recommended projects to the Comprehensive Transportation Project List, in Volume II of the Comprehensive Plan. With Council direction, staff will work with us and with the Planning Commission to include the Eastgate and Factoria projects in the Comprehensive Plan – this is the first step toward making them eligible for additional design funding and implementation. These projects will also be included in the Transportation Improvement Program (TIP) project list and the Transportation Facilities Plan (TFP) when those documents are updated.

Our work revealed that congestion exists along corridors outside our immediate study area. In particular, we heard from the community that Factoria Boulevard between SE 38th Street and Coal Creek Parkway is consistently congested in peak commute periods. We recommend the undertaking of a comprehensive analysis of this corridor that may reveal congestion reduction projects that are effective and in keeping with land use/urban design objectives for Factoria.

Sincerely,

Lei Wu
Chair, Transportation Commission