



Transportation Commission

Attachment B

TRANSMITTAL

June 27, 2019

From: Lei Wu, Chair, Bellevue Transportation Commission

RE: Eastgate Transportation Study Final Report

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 the Transportation Commission unanimously 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 directed the Transportation Commission to conduct an analysis and prepare a recommendation for projects that could reduce congestion. Our final report documents our work and responds to Council direction and the expectation of the community expressed through their approval of the Neighborhood Safety, Connectivity and Congestion Levy.

Identifying the Existing Problem and Looking to 2035

We began with an objective look at existing conditions, using accepted metrics, standards and guidelines to determine locations where congestion occurs and to describe the magnitude of the congestion. We used a forecast year of 2035 for a long-range analysis of 27 intersections and 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 2035 Baseline 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 evaluate the performance of project concepts compared to the 2035 Baseline. From this analysis emerged infrastructure projects that address vehicle level-of-service at intersections and along corridors.

There are no adopted level-of-service standards for long-range planning against which to evaluate project performance. However, we did use metrics derived from our previous work on Multimodal Level-of-Service. To describe the performance in terms of congestion reduction we used the volume/capacity ratio and delay at intersections, and the vehicle travel speed along corridors. While these metrics are not standards in the regulatory sense, they provide an indication of where congestion is likely to be challenging for commuters, especially in the PM peak time period, and they help to evaluate and compare the performance of projects.

Benefits and Costs

We describe the benefits of recommended congestion reduction projects in terms of the vehicle delay reduced in 2035, or the speed increased, compared to the 2035 Baseline. 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 the 2035 Baseline. Smaller reductions in 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 and we do not recommend they be implemented.

Project Concepts

The Commission identified project concepts by first looking at intersections and corridors that 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 and helped inform the design of project concepts. Most of the projects we endorse add 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 will continue to coordinate with WSDOT on the potential implementation of this design.

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, expanding infrastructure is usually necessary to accomplish congestion reduction, however it is not sufficient. Our recommendation acknowledges that transportation demand management (TDM) is an effective tool to reduce the drive-alone rate, and thus the vehicle demand on the system during peak periods. A robust approach to TDM can reduce vehicle delay in Eastgate/Factoria by 3-5 percent.

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. One of

these is the westbound approach to Factoria Boulevard on SE 38th Street where commuters and residents would benefit from an additional left-turn lane.

South Bellevue Community Center

In our efforts to 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 projects to address those challenges.

Conclusion

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 approach to mobility is a comprehensive multimodal strategy.

The transportation system in Eastgate/Factoria 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 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 assignment from Council. 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 construction. These projects will also be included in the 2020 annual update of the Transportation Improvement Program (TIP) and they will be eligible for the next update of the Transportation Facilities Plan (TFP).

Our work revealed that congestion exists along corridors outside our immediate study area. In particular, we heard from the community that Richards Road/Factoria Boulevard between SE 26th Street and Coal Creek Parkway is congested in peak commute periods. We recommend a Factoria Boulevard Corridor Study be added to the CTPL and the TIP with the intent of undertaking 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.