



Jim Jacobson, Chair, ST3 Expert Review Panel  
93 Pike St., Suite 315  
Seattle, WA 98101

February 2, 2016

Dear Chairman Jacobson:

Once again, Sound Transit values the work of all the members of the Expert Review Panel, and your ongoing contributions to the developing high-capacity transit system plan that Sound Transit is developing for the central Puget Sound region. This letter provides Sound Transit's response to the Panel's comments in your letters of November 25, 2015 and January 21, 2016.

#### O&M Cost Comparisons

The Panel asked to review, in addition to the projected and actual costs of transit services, the projected and actual hours required to provide the committed service levels. The two attached tables present that information for the ST2 planned service levels for Link light and ST Express bus systems. The Sounder commuter rail system plans expressed service in the number of round-trips per day rather than service hours. All round-trips planned for in the Sound Move phase (nine) have been implemented. The ST2 plan added 4 additional round trips on the south commuter rail line, of which one has been implemented. The remaining three round-trips are schedule to begin operating in 2017/2018.

This information will also be discussed by Sound Transit staff at your upcoming February 8/9, 2016 meeting.

#### Capital Replacement Reserves

Funding of capital replacement and mid-life maintenance requirements is calculated as 1.5% of the total ST3 capital program deposited annually to a reserve beginning the year after full program implementation (all projects completed and in-service). This calculation is consistent with the method established for ST2, however for ST3 this amount is being used as a placeholder until the ST3 system plan adopted. Once the ST3 Plan is finalized, this calculation will be replaced with a more refined estimate based on the useful lives, original cost, and other factors related to the actual mix of assets included in the plan. Although the FTA provides general asset management guidance, it does not have specific guidelines regarding capital replacement and mid-life maintenance costs and timelines, though they do publish expected useful lives of project elements.

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## Access to Sound Transit Stations

Station access is a high priority for the Sound Transit 3 program identified by the Board of Directors. The evaluation measures for each ST3 candidate project include several that are of interest for purposes of measuring the potentiality of non-motorized access to stations:

- The estimated percentage of anticipated non-motorized access is related to the character of the station area using station-area typologies.
- The ease of non-motorized access is estimated using the intersection density in the station vicinity, as well as the existence of barriers near potential station locations such as highways. Regardless of forecasted population, this measure is related to the likelihood that future land uses will be conducive to short, non-motorized trips typically associated with dense street networks and short blocks.

During project development, these measures can be refined to evaluate the number of people with access to the station. Further analysis would factor in the exact street network, topography, and average walking and bicycling speeds once station areas can be more precisely located.

Sound Transit continues to coordinate and refine these assumptions with local jurisdictions requesting additional parking in station vicinities, and transit partner agencies to provide the network and level of future bus service. We agree that including the station and corridor evaluation measure "population and jobs within a half-mile" benefit the analysis and the Sound Transit Board's decision-making. Existing and future estimates of population and employment are calculated within a half-mile radius of each representative station location. This is not only a reasonable walking and bicycling distance but conveys significant other benefits to the affected people and locations. For that reason, the population and employment estimates are classified under socioeconomic benefits.

ST is also taking steps to incorporate more scope elements within corridor projects as well as create funds to improve access to existing and funded high capacity transit stations.

Potential station locations for ST3 candidate projects include an Access Allowance of up to \$4.5 million that can be used to improve the ease and safety of access beyond the project scopes that have typically included. Additionally, several bus-rail transfer facilities and their associated right of way and construction costs have been incorporated into the cost of potential stations with a high volume of anticipated transfers.

The System Access Fund (project #R-05) would prioritize improvements for non-motorized modes, additional bus-rail transfer facilities, and pick-up/drop-off locations. Additionally, the Sounder Access Program (project # S-15) would primarily build additional parking in the less-dense areas in the South corridor.

As for private transportation services, new technologies are likely to make shared-use mobility and transportation network companies a popular mode of access to stations. Capital costs to Sound Transit would be programmed in the station design for ST3 candidate projects, ensuring that sufficient pick-up/drop-off space is included. For existing stations, the System Access Fund currently includes \$6 million to provide additional pick-up/drop-off space. Other significant opportunities to improve ridership and lower costs to Sound Transit include partnerships for demand-response service with private providers, and developing fare media that potentially can be used for private and public services, making transfers as seamless as possible.

## Ridership Forecasts

The Panel's comment that the Puget Sound Regional Council (PSRC) has modified the regional population and employment forecasts is correct. PSRC developed a new dataset called Land Use Vision version 1 (LUV.1) (January 2015). Sound Transit is incorporating this dataset into the Stage 1 increment of our ridership model that will be used in the development of the system plan. Comparing the previous land use dataset called Land Use Targets (April

2014) and the new LUV.1 dataset, the regional employment estimate for 2040 was reduced by about 202,000 jobs. Reductions were spread throughout the region. Some of the largest reductions include Ballard, central Seattle including Capitol Hill, Rainier Valley, Renton, Redmond, north Tacoma including Tacoma CBD and Puyallup. There were also some noticeable increases in some districts like Seattle CBD. The employment reductions include a large number of jobs from the Construction/Resource sector. Sound Transit does not include these jobs in calculating growth rates for Stage 1 because these jobs are more transient in nature. After subtracting the Construction/Resource sector jobs, total regional employment was reduced by about 89,000 jobs for 2040.

These lower regional employment estimates for 2040 resulted in lower growth rates from the base year 2014 to the future year 2040. The lower growth rates resulted in lower Stage 1 2040 transit trip estimates by about 12,000 daily trips for the region. The largest reductions are in Seattle including Ballard, University District and central Seattle including Capitol Hill. Reductions are also evident in West Seattle, Rainier Valley, Renton, Redmond, and north Tacoma. The Seattle CBD increased. The changes in Stage 1 ridership are consistent with the changes in employment growth seen in the new LUV.1 dataset.

In its letter, the Panel also asked for information regarding the origins and destinations for forecast trips using the Lynnwood-to-Everett light rail corridor and the I-405 Bus Rapid Transit corridor. This information is now under development and will be presented at the Panel's February 8-9 meeting.

### Cost-Effectiveness and Travel Time Comparisons

For the Sound Transit Board's evaluation of a DRAFT ST3 system plan, staff will prepare an evaluation of cost-effectiveness (such as "annualized cost per annual project rider") for the major light rail corridors and extensions. This will provide information for the Board to judge how the corridors perform individually and as part of a long-range regional system.

A comparison of ST3 projected rail travel times to 1) current and future auto travel times, and 2) current and future transit travel times is being prepared for presentation at your February 8/9, 2016 meeting.

### Light Rail Operations

The Link light rail system is being designed as a two-track system, with sufficient crossovers and other special trackwork located to permit trains to get around "blockages" and other problems during service disruptions of various kinds. However, those locations are not sufficient to permit an A/B-type skip-stop system or true express service. Looking around the country, skip-stop service occurs most often in systems with frequent sections of fairly lengthy rail guideways with three or more tracks and peak period express service often requires four tracks if express trains are running in both directions. To the extent that Sound Transit has considered these types of operating plans, we have eliminated them as impractical alternatives at this stage of system development.

Sound Transit staff will present a description of alternative light rail system operating plans; including how the various corridors travel through downtown Seattle and to what other corridors they might be connected, at the Panel's February 8/9, 2016 meeting.

### Integration with Bus at Rail Stations

While Sound Transit still in an early stage of system planning, many project cost estimate for the ST3 candidate projects include an allowance for bus/rail integration that will provide for improved off-street bus facilities at key station areas. This approach is described in the Access section above. These allowances include costs for right-of-way and capital items. The representative locations for these facilities, as shown in the ST3 Candidate Project Detail

Sheets, were identified based on potential opportunities for higher levels of transfer volumes between rail and bus. Sound Transit continues to consult with our transit partners, including King County Metro as they complete their agency's Long-Range Plan to refine these locations and costs as we assemble a DRAFT ST3 System Plan.

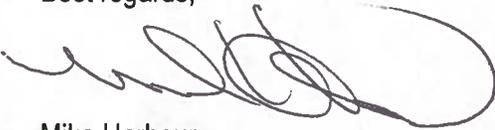
### Project Discussions with Outside Agencies

As the Panel suggested in your January 21<sup>st</sup> letter, Sound Transit is having discussions with strategic regulators and potential jurisdictional ST3 project partners to discuss efficient ways to achieve project goals during the stages of project development. An example of this is ongoing discussions with WSDOT about potential use by light rail transit of highway right-of-way and shoulder-running of buses on the highway system.

As you know, in early December 2015, Sound Transit sent letters to all our district jurisdictions and other agencies requesting their acknowledgement of the candidate ST3 project scopes and cost estimates. Sound Transit invited other comments, as well. We understand that the Panel has seen all the responses received by Sound Transit. There will be an opportunity at your upcoming meeting to ask questions regarding the many comments received.

Once again, Sound Transit thanks the Expert Review Panel for providing your independent oversight as Sound Transit plans for a third major expansion of high capacity transit in the Puget Sound Region. We look forward to your upcoming February 8-9 meeting. Please contact us with any remaining questions at this stage of our planning efforts.

Best regards,



Mike Harbour  
Deputy Chief Executive Officer  
Sound Transit

Cc: Expert Review Panel Members  
Sound Transit Chair Dow Constantine  
Secretary Lynn Peterson, WSDOT  
Josh Brown, President, PSRC