

Sound Transit Expert Review Panel

March 23, 2007

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Dear Madams and Sirs:

This letter provides you with additional comments from the Sound Transit Expert Review Panel (Panel) on key assumptions and methodologies being used by Sound Transit to prepare recommendations for a Sound Transit 2 (ST2) ballot proposition that will be submitted to voters in the fall of 2007.

At the conclusion of their meeting on January 4th and 5th earlier this year, the Panel decided to divide its comments into two parts. Since the Sound Transit Board was meeting the following week to make a preliminary decision about an ST2 investment plan for public review, we prepared an initial letter summarizing our comments on major policy issues. In that letter, dated January 8, 2007, we stated that we would draft a

second letter with more technical findings. This letter provides our more detailed comments from the January meeting.

As a reminder, the agenda for the Panel's January meeting included review of capital cost updates for potential projects, the risk analysis completed by Sound Transit, coordination between Sound Transit and the Regional Transportation Improvement District (RTID), updates to the ST2 financial plan, and public outreach efforts.

Estimates of ST2 Costs Per Household

During the January presentation regarding Sound Transit' public outreach efforts and the results from their annual public opinion survey, there was discussion about the estimated cost per household for the 5/10 of one percent sales tax increase. Sound Transit staff stated that it has been estimated that the cost of ST2 to residents of the region for the 5/10 option will be approximately \$125 per household. The written materials provided to the Panel made the following statement:

“The estimated annual new cost per household is \$125 (2007 dollars), or 5 cents for every \$10 retail purchase.” (*Sound Transit 2 Preliminary Draft Package*, Dec. 14, 2006; two-page color summary).

Sound Transit staff indicated that the cost per household is based on a detailed computation that estimates the share of the sales tax *paid directly* by the residents of the region. In estimating the cost, Sound Transit relied on a recent King County ballot measure (2006) and publicly available information on the State Department of Revenue web site.

Some citizens have questioned the veracity of the estimate. Given the importance of cost per household estimates, the Panel felt that it would be advisable to give the methodology additional scrutiny. The issue we've addressed is whether the above Sound Transit statement seems factually correct. In this section, we are not commenting on the estimated total cost of all ST projects.

The Panel reviewed the detailed calculations and sources of data used by Sound Transit to develop their cost per household estimate. Based upon the expertise of Panel members familiar with alternative methods to estimate the new cost per household, the Panel concludes that Sound Transit's calculations are reasonable. The cost estimate provided by Sound Transit is similar to our independent estimate of the cost per household made from Bureau of Labor Statistics data on household expenditures in the Seattle area. We note that the Sound Transit statement cited above makes it clear that the agency is referring to “new” costs only. As some citizens point out, the \$125 estimate does not include previous obligations.

We recommend, however, that in the future Sound Transit make reference to an “average” household when communicating this information. The cost per household varies greatly and is largely based on household expenditures (income). Alternatively,

some transit agencies communicate the costs for typical users, whose incomes are generally lower than the region-wide average. The cost per household for typical transit users may, in fact, be less than \$125.

The Panel does not feel it needs additional information on the estimated cost per household.

Forecasting Right-of-Way Inflation

In January the Panel received a briefing on the capital cost inflation forecasting completed by the Sound Transit finance staff. In general, Panel members felt the forecasting methodology was sound. However, there were a number of questions about the right-of-way inflation forecast.

Forecasting right-of-way costs for projects in major metropolitan areas that will extend for a decade or more can be quite challenging. In a growing metropolitan area with limited amount of land for urban development the increases in land values may exceed general inflation rates. Conversely, during periods of economic distress, land values may decline. This makes estimating of right-of-way costs particularly difficult. The volatility of right-of-way costs may affect the overall project costs and thereby may be a vital part of the reliability of the cost estimates communicated to citizens of the region. The Panel therefore would appreciate more information about the proportion of the total cost estimates that are attributed to right-of-ways costs and the methodology used to estimate the inflation index.

The Panel recognizes that tracking neighborhood-level right-of-way costs and providing an overall index is unusually difficult and likely an unwise exercise. While construction costs (materials) typically do not vary from neighborhood to neighborhood, land values typically do. It is not realistic to conduct a neighborhood-by-neighborhood assessment of land value trends, the major component of right-of-way costs. Still an inflation index is necessary and the ST document *Capital Cost Inflation Forecasting Roads & Transit* (October 5, 2006) estimates an average rise of 4.6%.

Page eight (8) of the *Capital Cost Inflation Forecasting* document states that residential median sales prices were established by weighting the average of median sales prices “from areas where Sound Transit construction is or will occur.” The report then goes on to describe the different weights for seven different Seattle neighborhoods. In light of the fact that much of ST2 will largely be built in suburban communities, the city of Seattle weights used to derive the index may not be indicative of the area where most of the land for ST2 will be acquired. In many markets suburban land values rise more rapidly than city values because they start from a lower base and also because there is more development activity than in the central city. Moreover there appears to be a discrepancy between the right-of-way inflation estimate of 4.6% used in the text on page 7, and the graph on page 8 (ST document cited above). The graph seems to show a 3% index with a 2% contingency.

The Panel would appreciate further clarification about the estimated right-of-way index. We are not asking for more detailed analysis by sub region or neighborhood. Such an effort would be very resource intensive and could yield large variations that would be difficult to interpret.

I-90 Floating Bridge

The Panel would like to thank Sound Transit and their consultants for the presentation regarding the light rail transition onto the floating bridge. The work conducted by the Sound Transit team indicates that considerable effort is being made to reduce the uncertainty in this unique application of light rail on a floating bridge. However, until the project moves further into the design process there will continue to be some remaining unanswered questions about this important segment of the proposed east side light rail line.

For example, as the work progresses, we encourage the ST Board to explore with staff further analysis of the ongoing maintenance issue as it pertains to the service life of the rail in the bridge transition joints due to flexing. Given the unique nature of light rail operation on a floating bridge, this entire system may be best served by physical modeling at some point during the design phase of the project.

At our meeting in January Panel members requested a more detailed explanation of how the electrical retrofit will be accomplished on the bridge for future light rail operation.

A review of the report for the SR 520 Bridge replacement also raises questions regarding the I-90 Bridge. What is the current service life of the I-90 bridge and what effect will the light rail have on its future life? What effects will severe conditions mentioned in the SR 520 report, such as winds as high as 92 mph, seismic vulnerabilities, and potential tsunamis, have on the I-90 floating bridge and the bridge approaches as it relates to light rail operations?

We encourage continued analysis of the light rail operation on the I-90 floating bridge prior to significant expenditures on the rest of the corridor. As we have stated before, if there would be a major problem with the operation of light rail on the floating bridge the function of the entire corridor would be affected.

Federal Environmental Review for East Link Light Rail

At the January meeting Sound Transit staff indicated that the East Link light rail project is proceeding toward a project-level National Environmental Policy Act (NEPA) environmental analysis. The presentation, along with written documents ([Sound Transit Staff Report, Motion No. M2006-87, 12/14/06](#)), indicates that the NEPA-required scoping process took place last Fall, and that the NEPA Draft Environmental Impact Statement (DEIS) will only compare light rail alignment and station location alternatives to a No-build alternative, but will not include analysis of a less capital-intensive bus alternative.

It would be helpful for the Panel to see documentation of Federal Highway Administration (FHWA) and/or Federal Transportation Administration (FTA) concurrence with this direction. Several Panel members have experience with federal New Starts project NEPA reviews, and FTA typically requires equivalent, detailed analysis of alternatives that meet the Purpose and Need Statement for the project in a project-level DEIS. A lower capital cost, high-capacity bus alternative is usually among the alternatives included in the analysis.

With the limited environmental review of the ST2 project proposals to this point, it will be important for the Panel to know that Sound Transit staff and Board are clear about the scopes of project-level NEPA review efforts that lay ahead, if receipt of federal funds is possible or there are other points of federal nexus, such as use of the I-90 bridge.

Potential ST2 Revenues

In our January 2007 letter, as in previous letters, the Panel noted the potential additional revenue sources available to Sound Transit for ST2 capital investments. The January letter described the variety of private investment opportunities that might be available to Sound Transit. The Panel has felt that it is important to carefully review the revenue options that are available to Sound Transit.

At the January meeting Panel members also noted that Sound Transit has additional taxing authority granted under its state enabling legislation. State law provides Sound Transit with the authority to impose an additional sales tax on car rentals. Sound Transit currently imposes this tax at .8%, which generates approximately \$2.2 million annually. However, Sound Transit has the authority to increase the sales tax on car rentals up to a maximum of 2.172% without voter approval. Imposing an additional tax on car rentals at the maximum level would generate another \$3 - \$4 million annually. While this represents a relatively small amount of additional annual revenue, borrowing against that revenue stream over thirty years would generate between \$55 - \$60 million.

The Panel notes that any incremental revenue would strengthen Sound Transit's financial flexibility.

Sensitivity Tests

The Panel has previously recommended that Sound Transit conduct sensitivity analyses as part of its financial plan. In July 2006, staff provided the results of certain sensitivity tests relating to revenues, expenditures (operating and capital) and funding sources, each viewed in isolation. Conclusions relating to those presentations can be found in the Panel's letter from October 2006. In that letter, the Panel noted that it would be worthwhile to prepare sensitivity tests on multiple factors occurring at one time, as well as revenue growth rates and interest rates.

At the January 2007 meeting Sound Transit staff presented the results of its sensitivity analyses. The Base Case was assumed to be estimated costs without any contingencies. The staff materials indicated that for the first three sensitivity tests, “the purpose...is to determine how the removal of these contingency factors affects the results of the model when applied to the ST2 program.” The primary conclusion of this method was that it is important to maintain the estimated \$1 billion in contingencies imbedded in the ST2 Plan.

Since the Panel has had many conversations about the cost of Right of Way (ROW), staff was asked about the impact of changes in ROW costs on the financial plan (as referenced above). Staff indicated that estimated ROW costs are the least certain portion of the analysis. The Panel suggests more work be done to test sensitivities in this area.

Staff also presented the results of multiple variable sensitivity analyses, testing changes in inflation, revenue growth and interest rates simultaneously. These results reveal that there is very limited flexibility in the ST2 finance plan for fairly small changes in these factors. For example, if cost inflation increases by .25%, sales tax growth decreases by 0.20% and interest rates rise by .25%, projected debt service coverage in several subareas falls below 1.0 times. The sensitivity analyses have not yet been used to determine which area of the finance plan has the greatest overall impact on the projected results. Panel members suggest that this would be a useful exercise.

Debt/Equity Ratios

Staff presented some information relating to Sound Transit’s legal requirement to establish a debt-equity ratio for the agency. Panel members were shown a graph that estimates what the projected ratio will be through the year 2037. When asked, staff indicated that they have not yet conducted outside research (such as conversations with the rating agencies) in an effort to assess how the agency’s projected ratio of 40% compares to market standards. Panel members suggest that additional research be done prior to making a recommendation to the Sound Transit Board.

Use of the Sound Transit Annual Survey


One of the most important parts of any transit planning study is public involvement. Many techniques are used to assess overall preferences with respect to future transportation investment in a region, as well as to identify the determinants of satisfaction or dissatisfaction with current agency actions. In January Panel members received an overview of the different public outreach activities that have been used as part of the planning for ST 2. The Panel has been impressed with the level of commitment Sound Transit has made to provide opportunities for the public to make their views known about the appropriate direction of transit investment in the region.

The Panel does want to provide some caution, however, with respect to telephone survey methodology, especially as it relates to the interpretation of the results. It is important to remember that the validity of any survey is directly related to how the questions are framed.

We look forward to Sound Transit's response to these issues, as well as the comments from our January 8, 2007 letter. The Panel's next meeting will be April 5th and 6th. We anticipate receiving a briefing on the ST2 recommendations Sound Transit staff will be taking to their Board for final approval later in April.

Thank you for the continued opportunity to work on this important issue. If you have any questions regarding this letter please let us know. You can reach the Panel members via our Administrator, John Howell, at 206-223-7660, ext. 102, or john@cedarrivergroup.com.

Sincerely



Mike Meyer
Chair

cc. Expert Review Panel Members

Senator Ed Murray

Bob Drewel, Executive Director, Puget Sound Regional Council