

## Expert Review Panel for Sound Transit Phase 3 (ST3)

### SUMMARY OF MEETING

November 9 – 10, 2015

Mayflower Park Hotel (Nov. 9) and Pike Place Market Atrium Loft (Nov. 10); Seattle, WA

**Panel members present:** Jim Jacobson, Chair; Mark Hallenbeck, Susan Haupt, Kimberly Koenig, William Lorenz, Steve Lundin, Siim Sööt, Richard Walker, Mark Weed; **Administrator:** John Howell

**Panel member absent:** Jay Kline

**Presenters:** Stephanie Ball, David Beal, Eric Chipps, Andrea Forderer, Joe Gildner, David Huffaker, Ric Ilgenfritz, Karen Kitsis, Kathy Leotta, Brant Lyerla, Brian McCartan, Al McCoy, Ann McNeil, Geoff Patrick, Chris Rule, Brian Stout, Andrea Tull, and Aniekan Usoro of Sound Transit; Chris O’Claire (King County Metro); Peter Stackpole (Pierce Transit); Roland Behee (Community Transit); Sabina Popa (Everett Transit), Jeanne Acutanza (Transpo Group); Craig Helmann and Mark Simonson (Puget Sound Regional Council)

**Members of the public who commented:** Will Knedlik, Dick Nelson

#### MONDAY, NOVEMBER 9, 2015

##### Welcome and Follow-up from July Meeting

*Chair Jim Jacobson and Administrator John Howell*

- The July meeting summary notes are in a bulleted format that aims to be faster to read and a little shorter. Any corrections or suggestions should be sent to John Howell.
- The panel’s website includes all the meeting materials available before the meeting. The materials handed out at the meeting will be added, as well.

##### Update Since Last Panel Meeting

*Ric Ilgenfritz (Sound Transit)*

See presentation slides, “Sound Transit 3: Activities Since Last Expert Review Panel Meeting.” Additional information and responses to panel members’ questions were as follows:

- **Project list.** The Board expanded the ST3 candidate project list in August to about 100 projects and studies, based on comments from board members and jurisdictions.
- **Board workshop.** The December 4 Board Workshop will be a crucial step for the Board to review all the project templates, including how each project performs against the criteria the Board has set. After internal review, the templates will go to the Board at the December 4 meeting.

*Panel comment:*

- Given the Board Workshop date, the panel should issue a letter shortly after its meeting if there are comments that would impact consideration of the project templates.

## Capital Cost Estimating and Cost Management Throughout Project Development

### ST3 Capital Cost Estimating

*David Beal (Sound Transit)*

See presentation slides, “ST3 System Plan: Capital Cost Estimating and Management.” Additional information and responses to panel members’ questions were as follows:

- *Lessons learned.* Sound Transit changed cost estimating procedures after the first phase (Sound Move), when many projects required Board approval of higher costs. Most ST2 estimates have been close to actual costs.
- *Partnerships.* Sound Transit does not assume partnerships in early planning but meets with jurisdictions to discuss potential partnerships. Sometimes jurisdictions want additions to a project without having to share the cost.
- *Vehicles.* The cost of vehicles is included in capital budgets, and vehicle replacement is sometimes a separate project. Sound Transit tracks trends in the cost of vehicle stock.
- *Early estimates.* In the early stages, Sound Transit uses a cost estimate in the “high middle” of the estimated range to address differing cost levels. Contingencies are high initially to account for unknowns, but are reduced to 10 percent by the time a construction contract is released.
- *Provisional projects.* In Sound Move there were several provisional projects that would be built if funds were available. ST2 did not include such projects because the board felt that provisional projects raised expectations that typically were not met. For ST3, the Board could add provisional projects, but only if the additional work could be completed in the timeframe of the plan for ST2/ ST3. Otherwise, additional projects would need voter approval.
- *Options.* Where there are different possible alignments and the choice might depend on partnerships, such as for the route north to Everett, the Board could explain the project in the ballot measure by describing the possible options. This occurred in ST2 for East Link in downtown Bellevue. For the ST3 ballot measure, three areas have significantly different alignment options: north to Everett, downtown Seattle to Ballard, and downtown to West Seattle.

### Contingency Management and Cost Estimating

*Aniekan Usoro and Andrea Forderer (Sound Transit)*

See presentation slides, “ST 3 System Plan: Contingency Management & Cost Estimate.” Responses to panel members’ questions on contingency were as follows:

- *Allocated contingency.* Sound Transit has a contract contingency for each contract, which is part of the allocated contingency. Once the contract is approved by the Board, the agency manages the approved contract contingency based on authority level assigned at various staff levels. Any request over \$500,000 for professional services and \$1 million for construction contracts needs CEO approval. Any excess budget at the contract or work breakdown structure (WBS) level is transferred to either project Allocated or Unallocated contingency. For example, the total amount of allocated contingency has gone up on South 200th Link Extension in part because bids came in lower, so the risk associated with those contracts has gone down, and the excess

budget allocated to those contracts at the WBS level was moved into contingency. (See the “Contingency Status” chart under “Tracking & Reporting on Contingency.”)

- *Estimates to actuals.* The average current estimate of major ST2 link projects is 7 percent over realigned estimates (see table, “Major ST2 Link Projects”). Since 2009, revenues have rebounded. ST2 projects are still affordable within the financial plan. The project with the biggest percent increase over original estimates is the Operation and Maintenance Facility for East Link, because the agency had to expand the facility after the project development started, which increased the cost.
- Most construction bidding is design-bid-build lump-sum contracts. If unforeseen conditions arise, Sound Transit utilizes the construction contract contingency to address them as change orders.

*Panel comments:*

- *Comparison to peers.* Sound Transit has done an excellent job in looking at various contingencies. However, panel members were interested in how Sound Transit’s contingencies compare to those of peer agencies.
- *Contracting approach.* A panel member was interested in further discussion on the design-bid-build approach. (See the Tuesday summary, when Sound Transit provided further information.)

## **Operations and Maintenance (O&M) Costs**

### **Background**

*Al McCoy (Sound Transit)*

- For the 2008 forecast of light rail O&M costs, Sound Transit did not have much experience to draw on. The current estimates are based on its operations experience.
- There is not much detail available on what amount of service was assumed in the 2008 forecast, except that both service hours and inflation were included.

### **Estimates**

*Stephanie Ball (Sound Transit)*

See presentation slides, “ST3 Cost Estimating Methodology – O&M.” Responses to panel members’ questions were as follows:

- *Tax/Excise tax* is on total farebox revenue, calculated as the average fare per boarding. Other transit agencies have this tax at 1.96 percent.
- *Vehicles.* Vehicle replacement cost is part of capital costs, rather than in O&M cost.
- *Security and labor.* Sound Transit does a conservative estimate for security costs. For labor, they use the current model projection. Most labor is contracted; only Tacoma Link drivers are Sound Transit employees. Security is provided by a private firm and by the King County Sheriff’s Office.
- *Overhead.* Overhead is added on top and has been 7 percent in the past. Sound Transit is assuming 10 percent overhead for ST3, given the growth of the system.
- *Comparison to ST2.* For ST3 O&M estimates, Sound Transit is using more detail for insurance and liability and looking at more components than for the ST2 estimates.

*Panel comments:*

- It is hard to know if Sound Transit delivered the amount of service that was voted for in ST2 if no one knows how much service was assumed.

### **Comparison of Forecasts to Actuals**

*David Huffaker (Sound Transit)*

See presentation slides, “Expert Review Panel: Cost Performance.” Responses to panel members’ questions were as follows:

- *Repair cost.* In all modes Sound Transit has benefitted in cost performance from new facilities and vehicles. Sounder and ST Express are now beginning to see increased repair and mid-life maintenance costs (in O&M budget). There is a separate capital budget for fleet replacement.
- *Operating cost.* There is a time gap between developing budgets and getting costs from partners who operate ST Express buses and Link light rail. Sound Transit owns the light rail maintenance facilities and is responsible for contracting for security, which enables the agency to better manage costs.
- *Adding service.* If costs are coming in under budget, Sound Transit can reallocate some service from underperforming routes/trips and to more crowded service. Adding service has a long lead time because of the need to work out changes with the operating partners. In 2016, Sound Transit will add ST Express bus hours that were deleted in the recession. Sound Transit runs special service for large events, but otherwise tries to avoid adding trips that would not be a permanent addition.
- *Express or A/B service.* There is not the infrastructure to support sophisticated express or A/B service as in Eastern cities. There could be Link trains that skip stops, but the value and impact to customers need to be considered. Skip-stop service would not change speed or capacity.
- *Tunnel.* As buses are rerouted out of the Downtown Seattle Transit Tunnel (DSTT), Sound Transit plans to increase light rail service, especially mid-day. In the last service change, 13 bus routes came out of the tunnel; seven more will do so in March 2016. The signal priority for the tunnel will change to prioritize light rail when University Link opens in 2016. Metro built and owns the tunnel. However, the assumption was that the tunnel would change to light rail in the future.
- *Cost and recovery.* The Link cost per boarding is coming down and there is better farebox recovery. Sound Transit makes public monthly farebox recovery and performance metrics data, and provides the cost per boarding quarterly.

### **Integration of ST3 and Regional Transit Operators**

*Karen Kitsis (Sound Transit), Chris O’Claire (King County Metro), Peter Stackpole (Pierce Transit), Roland Behee (Community Transit), Sabina Popa (Everett Transit), and Jeanne Acutanza (Transpo Group)*

### **Downtown Seattle Transit Tunnel and Surface Bus Coordination**

See presentation slides, “Downtown Seattle Transit Coordination.” Additional information and responses to panel members’ questions were as follows:

- *Purpose.* Downtown Seattle is a challenging environment for transit because of the topography. The transit tunnel was built to help facilitate transit movement. More than 64,000 people live in the 10 neighborhoods the City of Seattle considers to be “downtown.”
- *Partners.* Five agencies are collaborating collaborate through the Downtown Seattle Transit Coordination process regarding transit in downtown Seattle, including the tunnel: King County Metro, Sound Transit, Community Transit, Washington Department of Transportation (WSDOT) and the City of Seattle (Seattle Dept. of Transportation). This effort started in 2014. Pierce Transit is not part of this collaboration because they do not operate service into downtown Seattle.
- *Removing buses from tunnel.* The Center City Mobility Plan is a planning effort led by the City of Seattle and that includes Metro and Sound Transit to explore opportunities to improve mobility in downtown Seattle. It includes analysis of how to phase out joint bus-rail operations in the DSTT, including improvements to the surface streets to optimize bus travel. Strategies to move buses faster on surface streets include: routing to make right turns, painting bus-only lanes, and street improvements. Currently there is about a six-minute increase in travel time for buses formerly in the tunnel. There have been changes in rider behavior related to boarding and departing locations, and moving from one form of transit to another. Even so, there has been an increase in riders.
- *Future tunnel.* At the end of ST2, light rail in the tunnel will operate every four minutes. The design limit for operations in the tunnel allows for trains as frequently as 2.5 minutes, with 30 seconds added for operating headway. ST3 candidate projects include a possible second rail-only tunnel, ways to reduce headway in the DSTT, and surface improvements. Even if a second tunnel were built in downtown Seattle for ST3, the DSTT would still need to be exclusively for light rail. There will need to be an agreement between Metro and Sound Transit to change the ownership of the DSTT.

*Requests from the panel:*

- The current proportion of downtown transit riders on buses versus trains.

*Panel comments:*

- Rights of way and layover space will be key for transit in downtown Seattle, along with how people get in and out of downtown via Interbay and Westlake (either on light rail or future bus rapid transit [BRT]).
- There needs to be a way to track transfers—where they occur, and how long trips take.

**Integration of Regional Bus Services and ST3 Link System Build-Out**

See presentation slides, “ST3 System Integration Efforts.” Representatives of each agency presented their lessons learned in ST2 integration and opportunities for ST3. Additional information and responses to panel members’ questions were as follows:

**Metro.** Additional information and responses to panel members’ questions were as follows:

- *Regional context.* Planning at the regional level occurs at the Puget Sound Regional Council (PSRC). Transit is a topic at every monthly Transportation Policy Board (TPB) meeting.

- *Integrating with Link.* Planning for integration with the University Link station is an example of how such planning should continue to develop. Metro is looking at how to use buses to serve the Link station and to reallocate bus capacity that would duplicate Link. More riders will need to transfer to reach downtown Seattle. However, Link will provide more frequent service. For integration with Link at Northgate, there will be a small increase in parking and improvements in the way parking is configured.
- *Transfer points.* Focusing on key nodes, not just the terminus, is also important. There will be many critical transfer points, including Mercer Island, Delridge and many others. These transfer points will need to accommodate both high passenger volumes and bus facilities.

**Everett Transit.** Additional information and responses to panel members' questions were as follows:

- Everett Transit is the local provider for Everett and provides limited service to Mukilteo.
- *Integrating with Link.* The agency is looking at feeder service to/from Lynnwood, and a 1,000-stall parking lot expansion at Everett Station has been included in the ST3 candidate projects. The lot is southeast of downtown Everett. The 1,000 stalls would be approximately an 80 percent increase in the current parking and would mainly serve riders of regional service to Seattle.

**Community Transit.** Additional information and responses to panel members' questions were as follows:

- *Current and planned service.* Community Transit serves Snohomish County with local bus service and Swift BRT, and also has express commuter lines that run into Boeing-Everett, downtown Seattle and the University District. Annual ridership exceeds 10 million people per year. The agency's Long-Range Transit Plan, adopted in 2011, was developed in collaboration with the county's 19 jurisdictions. The plan is built around a network of multimodal corridors, including five Swift BRT lines, which will integrate with the future Link alignment. Community Transit is currently in Project Development for the second Swift line connecting Boeing to the Bothell high-tech area, to open in 2018.
- *Integrating with Link.* The agency now carries 10,000 people in daily trips to downtown Seattle and the University District. When light rail reaches Lynnwood, they plan to realign much of this service.
- *Parking.* There are parking stalls at Lynnwood. The Sound Transit extension will add another 500 stalls. A survey of users of the current parking lots shows that half are making short trips of up to two-and-a-half miles to reach the lots. Community Transit is working to ramp up and increase frequency of feeder service so more commuters will use that service instead of parking.
- *Interface and layover.* Bus and pedestrian interface at light rail stations is crucial. Any delay of buses has an economic impact. Community Transit is in discussion with Seattle for layover locations in downtown Seattle. The agency has requested a nearby layover location for Lynnwood Transit Center as part of ST2 design work. There is also conversation on getting priority lanes in Lynnwood for Swift BRT to serve Lynnwood Link.

- *Boundary area.* Everett Station serves the north boundary of the Sound Transit area. Many people who go there to use transit come from other cities, such as Marysville and Arlington. Much of Community Transit’s service is outside the Sound Transit area.

**Pierce Transit.** Additional information and responses to panel members’ questions were as follows:

- Pierce Transit operates in urbanized parts of Pierce County.
- *Integrating with Link.* For ST3 they will partner on bus-rail integration. There is parking at Tacoma Dome station jointly owned with Sound Transit and WSDOT.

### **General discussion**

- *Taxing authority:* Responses to a panel member’s question on taxing capacity were:
  - Pierce Transit is at six-tenths of 1 percent sales tax. They have had two failed tax increase measures.
  - Community Transit’s tax is at nine-tenths. The Legislature granted them authority to go to 1.2 percent, and a measure proposing adding three-tenths was on the November 2015 ballot and was ahead in ballot counts. [*Note:* The ballot measure passed.] They do not envision making a substantial investment in new parking, but expect to increase the frequency of service.
- *Parking:* Metro is considering options to make more efficient use of its parking resources, including a range of management practices. Metro is also participating in the Regional Parking Management Working group, which is considering parking management options for the region. After completing analysis, Sound Transit has introduced paid permit parking linked to ridership—requiring the use of an ORCA card at least three times a week. Some people use Sound Transit’s parking for vanpooling, carpooling or other purposes than riding transit.
- *Partnerships for station access and enhancements:*
  - Sound Transit is talking with the cities where stations will be located about opportunities on pedestrian/bike access and bus layover locations.
  - Community Transit is updating its long-range plan. For ST2 and 3, they have initiated engineering studies and identified needs. They assume there will be a contribution for integration projects from Sound Transit with the remainder from a federal contribution.
  - Metro’s Long-Range Plan will show an increase in the number of riders expected to transfer. Layover facilities are important not just for connecting buses, but for drop-off riders. Who pays for these enhancements is an important issue. Metro does not have funding to do so.

### *Request from the panel:*

- The analysis Sound Transit mentioned regarding how much people are willing to pay for parking.

### *Panel comment:*

- Kudos on the customer interface that provides on-demand information and on the ORCA card that works on multiple agencies’ transit.

## ST3 Candidate Project List

*Karen Kitsis, Kathy Leotta, Andrea Tull, Chris Rule, and Eric Chipps (Sound Transit)*

The meeting handout, “Sound Transit 3: Candidate Projects List (Draft)” shows the candidate project list with the Board’s recent updates and additions. Additional information and responses to panel members’ questions were as follows:

- *North corridor.* The biggest change to the project list was to add the 1,000 stall parking facility in Everett. There is high interest in additional parking and BAT (business access transit) lanes on SR522, which would extend an existing BAT lane. The BAT lane would be a multijurisdictional partnership.
- *Central corridor.* The project list includes four options for Ballard – Downtown Seattle, including combinations of tunnel, elevated and at-grade. One challenge is the means to cross the Ship Canal. The City of Seattle is interested in Sound Transit’s help to rebuild the century-old Ballard Bridge. The city would like to add stations at Highway 99 and Harrison St., which would make stations one-half mile apart instead of the typical one mile apart elsewhere for Link. Another project extension is from West Seattle south to Burien. Additional parking is proposed at the Tukwila station. There will be a large parking facility at the new station at Angle Lake/South 200<sup>th</sup>, which will be an interim terminus. However, that parking will not lessen the demand for parking at Tukwila.
- *East corridor.* Added potential projects including more parking in Issaquah, a new park-and-ride in the Sammamish area, and BRT on the Eastside Rail Corridor from Totem Lake/Kirkland to Bellevue.
- *South corridor.* The Board added six projects in Pierce County, which would extend to the outer edges of the Sound Transit area. Two are partner projects to which Sound Transit would make a contribution. There are two projects to extend Sounder: to DuPont and on a spur to Orting. Sound Transit projects that Sounder ridership will increase even with Link extended to Tacoma Dome. The agency will work with its partners on the connections.
- In all, 24 new projects were added to the list.

## Public Comment

*Dick Nelson, President, Integrated Transportation Research*

- Mr. Nelson is a former member of the state House of Representatives and was a sponsor of legislation for regional transportation that authorized Sound Transit.
- *Least-cost.* He sponsored legislation for least-cost planning, now in the Washington Administrative Code (WAC 468-86-080), and has researched this planning methodology. A basic concept is that transportation planners need to consider both costs and benefits of all options being considered. He suggested that the panel ask the PSRC, Sound Transit and Metro why they are not following the least-cost planning required by state law.
- *Mode.* Mr. Nelson noted that the current draft candidate project list assumes the mode is light rail. However, to follow least-cost planning, the agency should identify all modes and methods of transportation for the corridors, analyze the cost and benefits of each, and then analyze the effects of variations in travel behavior.

- He voiced concern about the potential projects for light rail service between Ballard and downtown Seattle and West Seattle, and Ballard to the University District, since the hills in these areas may be too steep for light rail.

*Panel comment:*

- A panel member suggested that the panel discuss in the next day's meeting the guidelines for the projects on the potential projects list. Since additions extending to the end of Sound Transit's limits would attract riders from outside the area, there is a question as to whether the projects fit the scope of the sales tax measure.

### **Issues and Questions**

Mr. Howell summarized the following list of questions and possible comments from the day's meeting:

1. Comment on the use of contingencies, in terms of the lessons learned from Sound Move and ST2 experience and the system in place to deliver projects on budget.
2. A question design, bid, build contracts and lump sum payments.
3. A question on service assumptions for ST2 and how those drove O&M cost estimates.
4. Questions on whether there is consideration of the potential for express service on light rail.
5. A question on how cost numbers for O&M relate to ridership.
6. A question on the proportion of riders in the downtown Seattle tunnel on buses versus trains.
7. Comment on the well-designed customer interface.
8. Comment on system integration, how assumptions are built into scope, and who funds capital.
9. Requested the study on paying for parking.

Panel members added the following topics:

11. Question about not having reserve or replacement costs in the operations budget, only in the capital budget, where it seems hidden.
12. The question of traveler behavior with transfers, and whether there is a way to avoid losing riders.
13. Questions about parking related to Seattle light rail facilities, and whether the city should allow for additional parking at stations.

David Beal said that a Sound Transit staff member would come to the meeting the following day to answer the questions about the bid process.

## **TUESDAY, NOVEMBER 10, 2015**

### **ST3 Project Templates**

*Kathy Leotta and David Beal (Sound Transit)*

See presentation slides, "Candidate Project Template Formats and Evaluation." Additional information and responses to panel members' questions were as follows:

#### **Sample Templates**

- The project templates will be presented to the Board at the December 4 workshop, then released to the public.

- *Access costs.* One of the cost tables shows information the Board requested: funding for parking access, transit-oriented development, and non-motorized access within station areas. Since there are many unknowns at this stage, these costs are in the form of an allowance, such as \$X per mile of sidewalk improvement for bike access. The project manager will update the cost estimates when more is known about the project.
- *Partner costs.* The cost table does not show the costs of transit partners. Sound Transit provides an allowance for station access, but if local needs are higher, the local partner will need to provide funding. There is also a separate Access Fund project for existing and new stations. The assumption is that access improvements are costs shared with the jurisdictions. The Access Fund provides reimbursement to the jurisdiction or transit agency.
- *Contingency and reserve.* The “Cost” number includes some contingencies. “Cost with Reserve” includes extra allowance for unknown risks. The system plan will use the Cost with Reserve numbers. However, the Cost number is what will guide the particular project. The reserve portions may be combined into one pot for more flexible use once the plan is approved. Contingencies and reserves work the same way in function but differ in who authorizes them. Using contingency is a staff action; use of reserves requires a Board action. There is also a program reserve managed at the program level.

*Panel comments:*

- Consider adding transit partners’ estimated costs for bus access at stations to the project costs.
- Local jurisdictions might assume that Sound Transit can fund local access needs., but the jurisdictions need to provide part of this funding, along with any needed zoning changes, etc.

**Evaluation Measures**

- *Scoring.* Sound Transit revised the evaluation criteria so that most are now quantitative, as the Expert Review Panel suggested. The quantitative criteria have a number score; the qualitative criteria scores are “high” and “low.”
- *Measures.*
  - System Integration has a quantitative measure (number of daily bus connections with one-half mile of the station) and a qualitative one (potential integration opportunities with transit partners).
  - Station access includes assumptions about feeder buses and vanpools.
  - Non-motorized Access includes a quantitative measure of the number of intersections within half a mile of the station, and a qualitative assessment of barriers and other issues.
  - For Land Use and Transit-Oriented Development, three measures are blended into a low to high rating: (1) local plans and policies (including support for development and land that could be redeveloped); (2) real estate market support (nearby demand, nature of apartment and office development, development within one-quarter mile); and (3) Density of activity units (as used by PSRC) within one-half mile of the station.
  - Industrial activity is captured in the measure of employment density within one-half mile of the station. It is a socioeconomic measure.

- *Level of review.* At this time, the review is at a broad level, rather than that of individual trips. Direction of trips is not relevant to station location; it is ridership modeling that looks at origins and destinations.
- *Consistency in region.* Sound Transit works with PSRC to make sure the measures track with the regional plans.

*Panel comments:*

- *Measures.*
  - A way to evaluate Travel Time would be to compare the travel time for a trip on the currently available transit to what it would be with the ST3 service.
  - The number of nearby intersections is not a good measure of Non-motorized Access. GIS data could provide the number of people within walking or biking distance. Or use sidewalk data for the walking distance. The measures could also include an assessment of land use near the station.
  - Adding park-and-ride access to the Non-motorized Access assessment would help give a sense of which stations would have available parking and which would be walk/ride/drop-off only.
  - To measure transit need/use by a large employer, consider employment density wider than one-half mile. Such employers may have parking lots so large they run shuttles.
- *Communication.* To help policymakers and the public understand this complex information it would be helpful to use verbal, visual and graphic means, and a fairly simple initial document that has links for those who want to dig deeper for more detail. Meeting with the communications staff and doing a dry run before the Board workshop might be helpful.

**Coordination with Jurisdictions**

- *Letters.* Sound Transit plans to send letters to jurisdictions, as they did for ST2, asking for their acknowledgement of the project scope in the jurisdiction and inviting comments. For ST2 approximately 80 percent of jurisdictions responded. When jurisdictions were interested in adding to a project at a later date, they recognized that a partnership would be needed. Sound Transit is contacting every jurisdiction where a potential ST3 project is located before the December Board workshop. After the Board workshop, they will send a formal letter. The letters will not be as strong as a term sheet because the projects are not specific enough yet.

*Panel comments:*

- Since elected officials and some staff may have changed since the ST2 letters were sent, it might be wise for Sound Transit to remind the jurisdictions about the information they saw and acknowledged in 2006.

**Follow-up to Panel's Questions on Contracting**

*Joe Gildner (Sound Transit)*

Mr. Gildner is Executive Project Director in Design, Engineering and Construction Management at Sound Transit. He provided the following information about contracting:

- *Bids.* For contracts using the design-bid-build approach, contractors provide a lump sum bid. Sound Transit has less detailed information about unit costs.
- *Design-bid-build basics.* The three fundamentals in this type of contract are:
  - Agree on the scope for quantity.
  - Agree on the change order process and impact analysis.
  - If the contractor requests a change, consider if it is really change in scope and if the request impacts the fundamentals of the contractor's work. They negotiate the value of the scope change.

## **Population and Employment Forecasting**

*Craig Helmann and Mark Simonson (PSRC)*

See the slide presentation from PSRC, "Sound Transit Expert Review Panel, November 10, 2015." Additional information and responses to panel members' questions were as follows.

### **Tolling**

- ST3 tolling assumptions are consistent with *Transportation 2040*, the regional Long-Range Transportation Plan. The next plan update will be in 2018.
- PSRC is checking the current experience in tolling highways against the assumptions in the Transportation Plan. So far, the assumptions perform well but need to be refined with peak and nonpeak experience.

### *Panel comments:*

- It is not likely voters will accept peak tolling of I-5. A gas tax or vehicle-miles-traveled charge might be accepted.
- There was concern about the outcomes from extensive tolling.

## **Population and Job Projections**

- *Difference from Sound Transit area.* The Sound Transit area consists of urbanized areas of the three counties. PSRC data are for the full counties plus Kitsap County, which is not part of the Sound Transit area.
- *Employment projections.* The projections for jobs in the Sound Transit area are higher than those of federal data sources for the counties for two reasons: (1) PSRC includes jobs besides wage and salary jobs (including non-covered jobs and military enlisted personnel), and (2) the Sound Transit service area includes all the Regional Growth Centers in the three counties, so there is a higher concentration of jobs. Most of the non-covered jobs are self-employed, religious organization employees, corporate officers, or other groups not counted as wage and salary workers.
- *Part-time jobs.* It is not clear if there is a larger share of part-time workers in the region.

### *Panel comments and questions:*

- *Out-of-area riders.* In other cities, the best place to board a train is at or near the end of the line. Some of the ST3 potential projects would extend light rail or Sounder to near the Sound

Transit's boundaries. If trains fill up with people from outside the area, it will be unfair for those paying Sound Transit taxes who want to use transit.

- Does the modeling include people who commute into the Sound Transit area from outside it?
- *Population.* The population forecasts are challenging because a lot of numbers are interpolated from the census.
- *Employment.* Forecasting employment is challenging because of the occasional "tech bubble" and the growing trend in part-time workers. Part-time work has increased from 12 percent of workers in 1955 to 18 percent in 2015. Some futurists predict there will be more part-time workers because of mechanization and other changes in the labor market.
- Another factor is the increase in workers who hold multiple jobs. Can transit accommodate the needs of these workers?

### **Ridership Forecasting and HCT System Constraints**

*Brant Lyerla (Sound Transit)*

See the slide presentation, "Ridership Forecasting." Additional information and responses to panel members' questions were as follows.

#### **Changes to the Model and Sensitivity Tests**

- *Population and employment.* Sound Transit is beginning to use PSRC's new population and employment dataset for ridership forecasting. In sensitivity tests with a completed ST2 transit network, 2040 growth in population and employment resulted in 45 percent more growth in transit trips than would just the completed ST2 network on its own. Of the 785 zones in the forecasting method, about 20 are external. Some external zones reflect ferry transit.
- *Auto costs.* Sound Transit will change its assumption for additional future year automobile operating costs to reflect a per-mile charge for the additional revenue in the Transportation 2040 plan. The assumption will differentiate between peak and offpeak, using 4 cents per mile for peak and 2 cents per mile offpeak. This replaces the highway tolling assumption.
- *Ridership growth.* If an uncongested corridor becomes more congested, that change will have a bigger effect on ridership than if an already congested corridor does not have much change in congestion. The current-year model already captures the ridership and the cost of highway travel in the existing congested corridors.
- *Ridership in templates.* The ridership assumptions and estimates in the templates for ST3 projects are to help compare projects but do not necessarily show overall what ST3 would do.

#### *Panel comments:*

- If ST3 will add only 1 percent to 5 percent to total trips, that is a concern.
- Behavioral changes may occur that do not show up clearly in the model.

#### *Panel requests:*

- A panel member asked if the cost per rider could be improved, even if there were not a lot of new riders.

- There was a request for the total employment used for the base year. A prior presentation showed 1.5 million jobs in the Sound Transit area, but PSRC is showing 1.8 million jobs.
- Another request was for Seattle Central Business District employment data. The backcasting seemed very low for this district.

### **Downtown Tunnel Capacity**

- Buses will come out of the tunnel entirely for ST2.
- For ST2, East Link will operate in the existing downtown Seattle tunnel. With a potential second transit tunnel in Seattle, it has not been decided yet what the operating configuration would be.
- International District to Lynnwood requires more frequent service because the corridor is the largest transit market.

### *Panel comments:*

- A three-minute headway in the downtown tunnel (shown in the slide for ST3) may be hard to achieve.
- Studying passenger volumes/capacities systemwide during ST3 development (the last bullet in presentation slide) is very important.

### **Financial Planning Update**

*Brian McCartan and Brian Stout (Sound Transit)*

See slide presentation, “ST3 Finance Update.” Additional information and responses to panel members’ questions were as follows.

- *Time.* Time is an important lever in the planning (see the chart, “Four Key Plan Levers”) because every year assumed for the ST3 program adds more in tax revenue. Sound Move was for 20 years; ST2 for 15 years.
- *Tax.* Adding ST3, there would be an overlap of taxing. Taxes would not sunset; however, the Board can roll them back when bonds are retired. Sound Move/ST2 taxes will continue through 2023. If ST3 is approved, tax collection would start in 2017. The ballot measure rolls the three measures (Sound Move, ST2, ST3) together for tax collection.
- *Capital replacement.* The Board approved creating a sinking fund for capital replacement reserve. Proposals go to the Board as the need arises. ST3 has its own capital replacement program.
- *Federal grants.* The current financial plan assumes the federal government will pay for 10 percent. Sound Transit has one federal full-funding grant agreement (FFGA) open at a time. There is a federal share for University Link and a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan for East Link. Once the Board sets the ST3 program, staff will consider what projects could be proposed for a federal grant.
- *Flexibility.* Statute requires Sound Transit to be transparent to voters, but the ballot measure does not have to be prescriptive. There will be flexibility to include options for alignments.
- *Project reserves.* The templates show a project estimate plus a reserve as a range to account for uncertainty. One challenge is that a cost shown in a template may be seen as a promise to build for that amount. It is better to communicate about risk and keep a reserve in the project. If all

the reserves were combined now, there would need to be five reserves—one per subarea—which could change discussion from uncertainties about individual projects into questions of subarea equity.

- *Additions if funding allows.* It is better not to overpromise by talking about what could be done if money is left over. Once something is on the map, people come to expect it.
- *Revenue.* The ST3 ballot measure should be conservative regarding the estimate of how much revenue the taxes will generate.
- *New legislative requirements.* The new requirement about a regional transit authority's surplus property is complex, as it pertains to property Sound Transit owned as of January 2015 and will own in the future. The current plan for ST2 estimates \$140 million of surplus property. The amount for ST3 is unknown. For 80 percent of the parcels that are determined to be suitable for housing, Sound Transit must offer the property to local governments, housing authorities and non-profit housing developers. If they sell it, they must use the proceeds for affordable housing.
- The biggest impact in the new legislation is the sales and use tax offset fee. The dollar amount of \$518 million was negotiated as an estimated fee of 3.25 percent. Sound Transit will pay monthly into a fund to be used for K-12 education and assistance to disadvantaged populations.

*Panel requests:*

- A panel member asked what percent of the budget each allowed form of taxing (property tax, sales tax, Motor Vehicle Excise Tax) represents.

*Panel comments:*

- The Board might consider whether there should be some tax for people outside the Sound Transit area who would use Sound Transit's services as it extends to the border of its taxing area.
- Sound Transit might look at whether the new legislation on surplus property would allow Sound Transit to make a trade for other needed property.
- It is peculiar to have both a housing requirement and a tax offset in a transportation bill.

## **Public Outreach and Engagement**

*Geoff Patrick and Ann McNeil (Sound Transit)*

See presentation slides, "Results from Summer 2015 Public Comment Period." Additional information and responses to panel members' questions were as follows.

- *Survey response.* The level of engagement was very good, with double the response rate of the last survey. Each of the corridors (North, Central, East, South) increased in the number of people responding. The most frequent ways people found the survey were by seeing an ad, getting a mailer and going to the Sound Transit website.
- *Interagency group.* Sound Transit has set up an Interagency Coordination Group of planning staff of all jurisdictions in the Sound Transit area.
- *Work with jurisdictions.* The corridor leads are working with local jurisdictions and partner transit agencies to gather feedback on the potential project list, and have met with WSDOT, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The

challenge in getting local jurisdictions to agree to projects' scope now is that the projects are still representative and will not be fully developed until after the vote and the completion of legal and environmental processes.

*Panel comments:*

- *Working group.* Transportation departments are very interested in intermodal opportunities. It would be a good idea to include WSDOT designers and roadway planners in interagency meetings.
- *Regulatory agencies.* Sound Transit should get in touch early with regulatory agencies, such as for water quality and stormwater treatment, to identify opportunities and reduce costs.
- *Jurisdiction agreements.* It would be advantageous to have conversations now with jurisdictions to find out if they agree with the relevant project scope and if not, what they do not agree with. That would put Sound Transit in the position to say that it would be able to do X that the jurisdiction wants only if the jurisdiction does Y to contribute. Also, Board members need to understand what a project would look like in their community.
- *Analysis.* At this stage, it is key to do a fatal flaw analysis to identify problems to be solved, such as light rail could go to Paine Field *if* someone can contribute X dollars or Y land.

**Public Comment**

*Will Knedlik, President, Eastside Rail Now*

Mr. Knedlik provided the following comments:

- Transportation Futures panel members are questioning PSRC's tolling assumptions. He said PSRC needs to account for the effect of smart cars on finances.
- Mr. Knedlik said that ST2 finances did not take into account that use of the I-90 floating bridge will cause premature aging, which he said will require \$5 billion to \$15 billion in replacement costs.
- He urged the panel to inquire into the plan's cost effectiveness, noting that the panel has an obligation to reject the ST3 plan if the financial plan is unrealistic.
- He was also concerned that the jurisdictions are not being given enough time to review ST3 projects. He said for ST2, Sound Transit contacted jurisdictions two-and-a-half years in advance.
- He suggested that the panel request a presentation from opponents of the plan.

**Next Steps**

- *Timing.* In order to provide a comment letter before the Board's December 4 workshop, Chair Jacobson and Mr. Howell will draft a letter in the next week containing key comments. That can be followed later with a more detailed letter with all of the panel's questions and comments. The panel members agreed with this approach.
- *Topics for December letter.* The panel members provided the following ideas for topics in the November/December letter:
  - The methodologies for O&M and for capital cost estimating reflect good cost estimating practice and industry standards. One panel member would like to express concern

about not showing depreciation and replacement costs in the O&M budget, which is the practice in the private sector, so they do not seem “hidden.”

- To achieve system integration with local transit operators, more needs to be in the project scopes about the cost of integration and who is responsible for what. The benefits need to be listed, as well.
- Sound Transit needs to be more direct with jurisdictions regarding project scope and ask jurisdictions to concur with the scope, even acknowledging the limited design work at this point.
- The project scopes need to show the benefit to riders, at least in a general way. Some of the projects added to the candidate project list do not appear to have significant regional value.
- *Topics for full comment letter.* Topics suggested for the later comment letter were:
  - There needs to be a better working relationship between Sound Transit and PSRC on the employment and population numbers that go into the model. Also, the model inputs need to be ones that everyone recognizes as reasonable.
  - Employment numbers should be built into the baseline. Tolling and parking assumptions and outcomes need to be confirmed.
  - The Board should have an estimate of operating expense per rider.
  - The staff needs to be prepared to answer questions about the choice of light rail over BRT.
  - Consider providing preservice in a corridor where Sound Transit will expand later in order to build rider interest and demand.
  - Reflect in the templates any opportunities for partnerships in sharing cost responsibility.
  - Provide an understanding of how travel times will improve with the ST3 projects.
  - In the evaluation measures, use a better metric for nonmotorized accessibility, such as the numbers of people who could walk and bike to the station.
  - There was a question on modeling of secondary feeder systems, such as vanshare.
  - The template information has the potential to overwhelm; consider using a summary sheet for the Board and public with links to dive deeper into details.
  - Mark Hallenbeck will follow up with PSRC and Sound Transit on sensitivity on tolling.
  - Siim Sööt will follow up on numbers built into baseline assumptions.
  - The panel would like to see the cost per rider. This might be a topic at the next meeting to learn how Sound Transit will provide this information.
  - Kimberly Koenig will follow up with Brian McCartan to schedule to review the Sound Transit financial model.
  - Susan Haupt will draft comments on outreach and on taking stock of opportunities well in advance, such as leasing air space for solar power.

The next panel meeting will be in January or early February, depending on the timing of Board decisions on the project list.