

# Expert Review Panel Meeting Summary

March 7, 2008

Mayflower Park Hotel, Seattle, Washington

**Panel Members:** Darlene Cimino-DeRose, Alan Kiepper, Steve Lundin, Tom Schmitt, Siim Sööt (Chair); Alonzo Wertz; John Howell (Panel Administrator)

## ***Speakers:***

**Sound Transit staff:** David Beal, Don Billen, Joni Earl, Ahmad Fazel, Ron Lewis, Brian McCartan, Geoff Patrick, Greg Walker, Doug Wentworth

**PR Americas:** Paul Arnold

**WSDOT:** Theresa Greco

**Members of the public:** Will Knedlik, Don Padelford

## ***Introductions***

The meeting began at 8:45 AM with a welcome from the Panel's Chair, Dr. Siim Sööt. Panel members and members of the audience introduced themselves.

Dr. Sööt thanked the Panel members for being willing to continue their work and travel to Seattle for meetings. He reminded all attendees that the Panel's purpose is not to be an advocate or opponent of the Sound Transit plan, but to review the agency's methodology and assumptions. He noted that the Seattle region seems not to have been affected by the housing slump that has had an impact across the nation. This is good in terms of the economic health of the Seattle area, but a challenge in that the construction industry may not be as competitive for contracts. Transit construction also faces challenges from the region's unique geography and topography. Seattle's hourglass shape presents a need for tunnels, but the deep water bodies and glacial soils can pose engineering challenges. Looking at the area's demographics, the factor most affecting the need for transit is the number of workers, and regional forecasts show the number of jobs increasing.

## ***Background and Recent Events***

### **Joni Earl, Sound Transit**

**Election results.** Ms. Earl thanked the Panel members for returning, and provided an overview of events since the ballot measure that included ST2 went to voters in November 2007. The Proposition 1 "Roads and Transit" ballot measure failed by a vote of 56 percent, with a 55.6 percent "no" vote in Snohomish County, 55.2 percent "no" in King County, and 57.4 percent "no" in Pierce County.

**Survey results.** A week after the vote, Sound Transit had research firms conduct a public opinion poll and set of stakeholder interviews to get a better understanding of the ballot results. Those polled said that transportation is the number one concern in the Puget Sound region. Ms. Earl noted that this result is different from statewide polls conducted by various groups, where the top concerns are education and health. In the poll for Sound Transit, respondents said that the

Roads and Transit package was too big and too expensive. When asked what the cost was, 67 percent of those polled were not sure. Other poll results included a preference to vote separately on roads and transit measures, and a desire for more agency accountability. There was good support for transit, but some lingering distrust of Sound Transit, given the agency's early history. With respect to the roads portion of Proposition 1, respondents were not sure the large number of projects could be delivered. In general, those polled wanted the transportation plans to be based on a long-term vision but preferred that implementation be through incremental projects.

**Planning approach and schedule.** In order to more clearly tie Sound Transit's proposed projects to its long-term vision, the agency has been working to update the needs assessment from 2005. This will help to more clearly tie the plans to the needs in each corridor.

Sound Transit staff proposed to the Board four options for when to take a new measure to the ballot: Spring 2008, Fall 2008, Fall 2009 and Fall 2010. To act for Spring 2008 would have required using the same ST2 package just as it was in the Fall 2007 ballot. The Board took that option out of consideration. Judging from the experience in other cities, it would be optimal to have the vote after the first light rail segment under Sound Move begins operating. The initial segment will open in the fall of 2009, though it won't begin at the airport until December 2009. However, the Board thinks that the best timing for the ballot measure would be in a larger election year (2008 or 2010), not an off year. If the Board wants a new approach to the package (i.e. inclusion of projects that were not included as part of the planning for Proposition 1), it would take until 2009 or 2010 to have the package ready.

The Board is considering its next steps carefully, with a view to making sure that the package to go to voters is well documented and solid. It will still be corridor based, but is likely to be a 12-year plan focused on the most congested corridors. Sound Transit staff are looking at what can be delivered by 2020 at 0.2 percent, 0.3 percent and 0.4 percent tax rates. The concept is to deliver a smaller, faster, greener plan that will provide more immediate results.

**Activities in the legislature.** The state legislature has a short session this year. There was a bill to create a different governance structure for transit in the Puget Sound region, but it was not passed out of committee. There has been discussion in the legislature on tolling, and the question was raised as to whether transit in general could receive some of the toll funds. A bill establishing the framework for tolling is likely to pass. An implementation team, including Bob Drewel from the Puget Sound Regional Council (PSRC), will have further conversations about how to put tolling into effect.

**SR-520 floating bridge.** Sound Transit is a participant with Washington Department of Transportation (WSDOT) and the University of Washington on the planning for the bridge rebuild and expansion. Sound Transit is the co-lead in the environmental impact statement (EIS) work, and is on the mediation team attempting to find agreement on the design and alignment of a new bridge. There is an important question about how to interface with the transit station Sound Transit is building at Husky Stadium, and where the Montlake Bridge will connect.

**Transit demand.** Demand for transit in the region is growing. Sound Transit had 12,000 riders in 2007. The Sounder trains to the south now are standing-room only for PM peak trips, as are

many of the express buses. There are challenges at many of the park-and-ride lots with having enough parking spaces.

### **Questions from the Panel**

Q. Is tolling contemplated only for SR-520, or also along for the I-90 bridge and/or others? This choice can affect traffic flow and the number of trips. Ideally, tolling should encourage people to live and work in the same community.

A. One of the key questions the legislature is considering is using tolling on both bridges, with a conversation focused on what is now being called variable pricing. It appears that there is public support for tolling a particular highway element, such as a bridge, but more education is needed on using pricing strategies to help manage traffic congestion. WSDOT is beginning a high-occupancy toll (HOT) lane pilot project on Highway 167 on a nine-mile stretch from Renton to Auburn in King County. This four-year pilot project will enable single-occupancy vehicles to travel in the high occupancy vehicle (HOV) lane by paying a toll, using an electronic transponder. The project will start this spring.

Q. Is Ron Sims involved in and supporting the planning effort for the new Sound Transit package?

A. He is active on the Sound Transit Board, and has been engaged in the conversation about tolling. He is very interested in tolling and believes the majority of the funds collected should go to transit. He had concerns about the ST2 package that was on the Fall 2007 ballot, including the extension of light rail to Tacoma.

Q. What date do you expect to open service to the University of Washington station at Husky Stadium? What's your target date for opening at Northgate?

A. The University of Washington station at Montlake will open in 2016. For Northgate, the new schedule suggests that service will begin in 2020 or maybe 2019.

Q. For the Sound Move vote, Sound Transit said that if funds were available, light rail would be extended from the University of Washington to Northgate. Is Sound Transit now proposing to go only as far north as Northgate in the next Sound Transit phase?

A. We looked at the best options for a light rail terminus in the next phase of work (ST2), and the choices are Northgate or Lynnwood, in order to have a stop that could function as a hub and feed passengers to buses, with sufficient parking. We can't set a terminus north of Northgate without going into Snohomish County. This is the challenge for the north corridor. Although express buses can be an effective system, they are not resonating yet with elected officials in the counties.

Q. Does this mean that the north subarea would receive limited benefit from the revised ST2 plan?

A. Sound Transit is proposing a number of investments in this subarea for added parking, two or three direct access ramps, additional parking at transit hubs, and access improvements at the Mukilteo and Edmonds stations for Sounder. The Sounder station in Everett is too far west to draw a larger ridership.

In our region, we won't be able to put in the kind of bus rapid transit (BRT) that has a dedicated right-of-way. But we can work with WSDOT on improving HOV performance, add "next bus" signs, address traffic flow, etc. In terms of subarea equity, to go further north would require Snohomish County to put their funds into extension in north King County. The challenge is that the core of the system, which is in the center of the area in King County, needs to be built first and is expensive.

Q. Is there an effort to reformulate the Regional Transportation Investment District (RTID) package?

A. The conversation in the legislature has been that counties can form a local transportation benefit district, and that if a county does not, the local cities can do so. There is a bill in the House Rules Committee now that would preclude RTID from going to the ballot in 2008.

Q. What does it tell you that 67 percent of the people polled did not understand the cost of the ballot measure last fall? What will you do differently next time?

A. The research question asked what the plan on the ballot cost, using specific dollar amounts. Not many recalled the number. Part of the problem was that during the campaign there were four different sets of numbers used by the proponents and opponents, including current dollars, year of expenditure (YOE) dollars, and numbers with and without a tax roll-back. Staff is looking at the finance plan and ways to make clearer statements about what is paid for in Sound Move and what is in ST2.

Q. The Sound Transit Citizen Oversight Panel has raised a concern about rising operating costs, especially for the ST Express service and Link light rail system in Tacoma. They suggest that the inflation factor of 5 percent that Sound Transit used for ST2 is too low based on recent history. Is Sound Transit reconsidering use of 5 percent as the inflation factor for ST2?

A. The numbers that the COP has reviewed include costs for both operations and additions to service and facilities. There are still a lot of one-time costs that show up in operations budgets as new facilities are added (for example, payments for Sound Transit's portion of the bond debt for the downtown transit tunnel, which reopened last fall). In some years there has been a big increase in our partner agencies' operating costs. In the long term, the 5 percent annual increase applied to the baseline operating budgets (excluding one-time expenditures) should be sufficient. Once the Sound Move system is complete, the 5 percent inflation factor should be solid. The key outlier that needs to be tracked is the price of gas.

Q. Was a sensitivity analysis done on operation and maintenance costs? Would it help to show when the anomalies need to be accounted for?

A. Brian McCartan can address the question on sensitivity analysis. The partner agency contracts come up in 2009. We're suggesting that the Board form an operations task force to look at these issues and cost containment. There is pressure in the region on bus bases, and on the cost of the contract with Amtrak for train operation.

Q. Regarding the public's understanding of the cost, it might put the number in context to compare it to other services the government provides, such as education or police protection.

A. For a 0.4 percent tax package, the cost per household is roughly \$100.

## Comments from the Panel

- In San Diego there was a lot of skepticism in the public about light rail before the system was constructed. But once it started operating, there was much stronger public support.
- In public information about the plan, it might be worth noting that the federal government funded a larger part of the cost for local/regional transit in the past than they do now.
- In public information about the cost of the proposed plan, you might want to acknowledge that along with the direct cost per household, there may also be an indirect cost as businesses pass along their cost increases to consumers.
- Fundamentally, the number for the overall size of the package needs to be solid. If there's uncertainty as to whether the true total cost is \$18 billion or \$43 billion, the public won't then trust the \$100 per household figure.

## *Update on Sound Move*

### **Ahmad Fazel and Ron Lewis, Sound Transit**

**Initial light rail segment.** The initial segment of Link Light Rail is 14 miles of double track with 12 stations, running from downtown Seattle to Tukwila. The project budget is \$2.4 billion in YOY dollars, of which Sound Transit has incurred \$1.8 billion. Sound Transit estimates that the final construction cost will be \$2.3 billion, that is, under budget. Construction is roughly 87 percent complete. Nine days of float remain in the schedule, but most of the schedule risk work is done.

Mr. Fazel reviewed the status of each part of the initial segment (see Tab 6 in the meeting notebook). He noted that the downtown Seattle transit tunnel opened on time in September 2007, but that in the first three months, it had to be closed briefly twice—to fix a glitch in the life safety equipment and in the signal system. The station at Tukwila will have a park-and-ride. Sound Transit just awarded that contract at the end of February. The City of Tukwila wanted more parking, so there will be a second park-and-ride.

Sound Transit has now received 16 of the 35 light rail cars ordered, and is testing them with the signal and the communications system. The agency also has an option for an additional 27 cars if needed. The manufacturer is Kinkisharyo, a Japanese company. The final assembly is taking place in Everett. In August, the agency will start testing the vehicles running at up to their top speed of 55 miles per hour. Each vehicle needs to have 1,500 miles of testing before Sound Transit will accept it for use with passengers.

Challenges of note have been completing the punch list for the downtown Seattle transit tunnel, and adding stations in a way that doesn't affect operation of the tunnel systems. Also, for Beacon Hill there were challenges in maintaining the project schedule. However, the agency is doing the needed testing now in the Rainier Valley and Tukwila so that when Beacon Hill is ready, testing can be concentrated there.

**Airport Link.** This segment is a 1.7-mile distance from the Tukwila station to Sea-Tac Airport. Mr. Lewis reviewed the elements and their status (see Tab 6 in the meeting notebook). Because the airport is a Port of Seattle facility, some parts of the work are being managed by the Port.

The biggest challenge so far has been for the Airport Station package. This included the airport station, pedestrian bridge to the airport parking garage, a pedestrian bridge over International Boulevard and a plaza, plus track work. When the contract was advertised in December 2006, there was only one bid. At \$95.3 million, this bid was significantly higher than the engineer's estimate of \$51.8 million. Sound Transit did not award the contract. After performing a cost analysis, Sound Transit split the package into two: the station concrete and track work, and the finishes (including the roof truss, wind screening, elevators and escalator).

Sound Transit awarded the contract for the concrete and track work in August 2007. That work is now underway. For the station finishes package, Sound Transit conducted value engineering, with the full collaboration of the bidding contractor. A number of elements were redesigned. Changes include reducing the windscreen, changing some screens from transparent to metal, making the emergency stairs open-air, and changing the roof truss finishing. The Port of Seattle and City of SeaTac reviewed the revised station design and approved it. The Port chose to take on the contract for the pedestrian bridge into the airport, so that bid was separated.

The staff proposed two options to the Sound Transit Board in February 2008: completing negotiations with the single bidding company (Mowat Construction), or bidding the new station finishes package. The Board directed the staff to work with Mowat for a sole source contract. The proposed price for the negotiated station finishes contract is \$37.336 million. The total cost for the Airport Station, including both contracts and a \$2 million contingency, is \$74.026 million, or \$20.5 million over the original budget. The Board approved a lifetime budget amendment of \$25.5 million for Airport Link.

**University Link.** This segment includes 3.2 miles of tunnel and two stations—Capitol Hill and University of Washington – Husky Stadium. Design is 60 percent complete. The construction period will be six-and-a-half years. With financing, the expected total cost is \$1.8 billion in YOE dollars.

The Federal Transit Administration invited Sound Transit to submit a grant application for this project. The Bush Administration's proposed budget includes this project. Sound Transit anticipates receiving the grant agreement this summer. There is only one other full funding grant in the nation—in Denver.

The challenges for this project include the timely execution of the federal grant agreement, and getting the university's approval on construction. Sound Transit hopes to advertise the first major tunnel contract in December 2008. Our experience has been that when there is competition in the bids, they come in, on average, 6 percent below the engineer's estimate.

### **Questions from the Panel**

#### **Initial light rail segment**

Q. Has the signal system in the downtown Seattle tunnel been tested yet for mixed rail and bus?

A. Not yet. So far we have tested each mode. We will test both together later this year while the tunnel is closed for the night.

Q. What have been the greatest risks to the schedule float?

A. The coordination of the Beacon Hill construction contractor and communications contractor has caused some delays. There was a period when both needed to work in the tunnel and station at the same time. We needed to be sure they were coordinating on use of the space, working different schedules if needed.

Q. Will there be testing of the first track at Beacon Hill?

A. Initially, we will test the track by pulling a vehicle through. Once the power is on, we will test again. The substation is already in place, so the system can be electrified once the track is ready.

### **Airport Link**

Q. Are you looking at opportunities for privatizing the station?

A. We have not looked at this for the station itself but are working with the City of SeaTac on the plaza next to the station. The city plans to buy the property and coordinate a public-private transit-oriented development project there.

Q. Bay Area Rapid Transit (BART) has had good results with public-private partnerships for the stations themselves.

A. We will look at this possibility for the University station.

Q. What is the difference in the amended Airport Link budget for the Administration line?

A. It was \$5 million originally, and \$12.2 million as amended. This line includes staff salaries and insurance. Administration costs for the central section has gone down, since staff are now working on other segments. Overall, the administration cost is roughly the same.

Q. What do you take out of this experience about negotiating contracts that you might apply in future Sound Transit work?

A. For design work, we now give architects a budget to keep up with market conditions. Even the contractor for the station was surprised at the costs that came in from the subcontractors. For University Link, we're keeping track of the civil construction market. The market is tough for building materials because of all the building going on in the region. We have struggled to get a contractor who would provide equipment per the specifications Sound Transit must meet. Also, for University Link, we are separating the station finishes from construction, so one contract will be with a building contractor and the other with a construction civil contractor. We are watching the trends worldwide in the availability and price of materials. Some have gone up significantly. It was very helpful to have the contractor in the room as the station building was being redesigned so they could suggest alternatives that would be less expensive.

### **University Link**

Q. The university is starting to look at rebuilding Husky Stadium. Are you coordinating with them on how this might impact the station?

A. Yes, Sound Transit's designers are working with the university.

Q. Does your agreement with the university include the alignment to go further north in ST2?

A. Yes. The university has been concerned about the potential impacts of vibration on their research facilities.

Q. With respect to your agreement with the University of Washington, if ST2 does not move forward, can you separate out only the Sound Move costs?

A. Ninety-five percent of the cost is for the real estate. The tunnel easement for ST2 is a small portion of the payment to the University. We are also paying \$5 million for the university to participate in design work.

Q. Is the schedule for University Link dependent on the resolution of SR-520 issues?

A. The schedule for the University-Husky Stadium station is independent, but it would not preclude a future connection related to 520.

Q. What SR-520 options are being considered?

A. The discussions with stakeholders have expanded the number of options to 12. The agencies involved are now trying to reduce to three alternatives. They are holding workshops in late March to refine the alternatives.

### ***Needs Assessment Update***

#### **Greg Walker, Sound Transit**

Review of the needs assessment is part of Sound Transit's process for deciding on the package to take back to the voters. (See Tab 7 in the meeting notebook.) Sound Transit had Parsons Brinckerhoff review the full needs assessment study that was developed in the early planning for ST2. Parsons updated key information with new data from the Puget Sound Regional Council (PSRC) for planning to 2040.

The analysis included a review of how Sound Transit is serving current customers. The Sounder commuter trains now have standing room only in peak periods, with more than 1,000 riders and a maximum of 980 seats in seven cars. Sound Transit has one of the highest boardings for commuter trains in the nation. There are seven trains each in the AM and PM, with five of the seven afternoon trains full. For parking, half the lots for the Sound Transit system are full, and another 28 percent are approaching full. Generally, once a parking lot is 85 percent full, it is perceived as full.

The update of demand includes charts of highway travel time and reliability for the PM peak. The low reliability for most major routes points to the need to expand the transit network. PSRC's projections of regional growth in population and employment show strong growth, with employment up by 48 percent by 2030. There are also some differences by location. The jobs growth for East King County is projected at 57 percent, while the population growth in that area is only 37 percent. In Seattle the jobs growth is 31 percent and the population growth is 19 percent. The transit demand forecasts by location show the number of trips (vehicles and transit) at certain points on a regional map. The projections include 161 percent growth in trips on I-5 crossing the Ship Canal, and 152 percent growth in cross-lake trips on SR-520.

In sum, the current systems will be at or beyond capacity in only 10 to 12 years. Regional population and employment are expected to grow significantly. The consequences of inaction include less mobility, lower environment quality and reduced economic opportunity. The conclusion is that investment in high-capacity transit is needed in key corridors.

### **Questions from the Panel**

Q. Is there any monitoring of parking lots for Sound Transit riders to determine when they are full?

A. No, but reviews show that parking is at or approaching capacity at 80 percent of the Sounder stations and 74 percent of the ST Express bus park-and-ride lots.

Q. Why does the chart show that the Bellevue express buses are at the lowest percentage of full?

A. Sound Transit has more buses on that route, so is able to spread the riders out more.

Q. Do you have data on the reliability of travel times for vehicles in the HOV lanes where express buses travel?

A. WSDOT would have this information. Sound Transit will get it and send it to the Panel.

Q. On page 13 of the Summary Needs Assessment technical memorandum, the population density numbers are remarkably high.

A. The table is for population and employment together.

Q. Where the materials use the term “fixed guideway transit,” does this include HOT lanes?

A. No.

### **Comments from the Panel**

- In the slide labeled “Sounder Reliability and Demand,” the bar chart comparison to other U.S. commuter rail systems needs to include the Long Island Rail Road. They are one of the busiest in the country.
- The industry standard to judge transit buses as “full” is 50 percent standing, though it is lower for express buses that have longer trips.
- The population and employment growth forecasts are intriguing, since they seem to show more employment than population. It appears that the region has a very large percentage of the population in the labor force. But if the employment growth percentage is right, the population growth forecast would be expected to be higher.

### **Panel Information Request**

- Dr. Sööt would like to have a telephone conversation with the staff involved with the population and employment density numbers, and the extensive origin and destination tables in the Parsons Brinckerhoff technical memorandum.
- The Panel would like to see the information from WSDOT on HOV travel time reliability.

### ***Methods of Updating Costs to Year 2007 Dollars***

#### **David Beal, Sound Transit, and Paul Arnold, PB Americas**

In late 2006, the Panel reviewed Sound Transit’s methodology for updating the cost estimates to 2006 dollars. Now the agency is updating the numbers to 2007 dollars (see handouts). Sound Transit has three levels of costing. Level 1 is for big and complex corridor projects in advanced engineering. These have a cost estimate plus contingency added, and include Northgate and East Link. Level 2 are big and complex corridor projects that are still in the conceptual engineering stage. Level 3 are lower cost projects with conceptual analysis based on defined scopes.

To update the costs, Sound Transit returned to the five cost indices reviewed last year—three national and two state-level. The national indices were more weighted to transit. The roads indices have several components that do not apply to transit and which have seen very large price increases, such as asphalt. Last year to adjust costs from 2005 to 2006 dollars, the cost index review suggested a 9.6 percent increase. This year, to adjust from 2006 to 2007, the index review suggests a 7.0 percent increase.

### Questions from the Panel

Q. Why is East Link considered to be a Level 1 project? The alignment has not yet been chosen; Sound Transit is still working with a representative alignment.

A. For the purposes of planning, Sound Transit is using high-end alternatives for the segments from I-90 to downtown Bellevue, and for the Overlake Transit Center, in order to cover the potential range of costs.

Q. Are any of the indexes for the Seattle region? We've noted that the economy in Seattle isn't slowing as much as it is elsewhere in the nation.

A. The WSDOT index is statewide. The Oregon one is generally for the Pacific Northwest. The Building Cost Index is done for multiple cities, and we're using the index for Seattle.

Q. Level 3 projects are noted as having defined scopes. But with many of the small projects, such as park and ride lots, isn't there still flexibility?

A. The dollar figure is tied to the project template. The cost index work just tells us how much to inflate the costs we're working with.

Q. Why is the civil cost index (3.2%) so much lower than what you're proposing (7%)?

A. Each index uses different components and weight. Some include labor; some don't. That is why we reviewed a number of indices. Also, we're using the index only to change cost estimates from 2006 dollars to 2007 dollars. For long-range planning purposes, we're using the forecasting methods the Panel has reviewed.

Q. In dollars, what does the 7 percent represent in total?

A. Taking out Northgate and East Link, the total capital cost is approximately \$9 billion, so 7 percent is \$630,000.

Q. The sensitivity analysis the Panel reviewed earlier said that the schedule could absorb one year of delay without budget impact. Does the delay caused by the ballot measure's failure mean that you've already had your year's worth of delay?

A. Not really. Everything slides forward a year, including the revenues.

Q. In Sound Move, what elements have been outside the cost estimates?

A. The only contract that came in measurably higher was the Sea-Tac airport station, discussed earlier in this meeting. The Sound Move program was running about 7 to 8 percent *under* budget before that. We have information on this that we could send to the Panel.

### ***Comments from the Public***

**Will Knedlik** thanked the Panel members for continuing the review of Sound Transit's planning. The ballot measure for ST2 was defeated by 56.6 percent last fall, and will be defeated when it comes to a vote again. More voters than this percentage were confused. Mr. Knedlik said that the ballot measure would have been 50 years of taxes at \$142 billion, plus \$16 billion for Sound Move, for a total of \$157 billion.

Mr. Knedlik encouraged Sound Transit to include in the ballot title the total tax costs, including both the new ST2 and Sound Move. For the Sound Move vote in 1996, Sound Transit said that there would be a tax rollback if the program were not reauthorized. Mr. Knedlik noted that the ST2 proposal was defeated, but there has not been a move to roll back taxes.

Mr. Knedlik also noted that the Sound Move ballot title promised an annual, comprehensive performance audit, but said that there has been no performance audit, except by the State Auditor.

Mr. Knedlik noted that while ST2 planning has been underway, Burlington Northern Railroad has expressed its intent to sell its 42 miles of track on the East side to the Port, which could be used for commuter rail. He believes that this opportunity changes the picture considerably, but that Sound Transit has not acknowledged this appropriately. He questioned the basis for Sound Transit's proposed \$50 million contribution to the East side rail project (the old BNSF line), when it's not clear what the funds will be used for.

Mr. Knedlik said that in Sound Move, the costs were "drastically off" by understating the capital costs. For the proposed work, the costs are off by understating the operating costs.

**Don Padelford** said that Sound Transit's decision not to consider HOT lanes as defacto fixed guideway is a mistake, since buses would have priority.

### ***Potential Elements of an Updated ST2.1 Plan***

#### **Greg Walker, Sound Transit**

There was a Sound Transit Board workshop in January 2008 to consider service concepts for a 12-year ST2 plan. (See Tabs 5 and 8 in the meeting notebook). The Board indicated that it prefers a multimodal plan. In early March, there was a second Board workshop to look at the core package of projects for the plan, and the projects that could be added or subtracted depending on the tax level the Board chooses. At 0.3 percent tax, there is little opportunity to advance the vision or to add fixed guideway. The 0.4 percent tax is a core investment level. At 0.5 percent, the plan could be more extensive.

The ST2 update would have a smaller light rail element, a significant expansion of Sounder service (90 percent increase in the south corridor), a more robust expansion of ST Express buses (25 percent increase), and significant increases in parking/access at ST Express park-and-ride lots and Sounder stations. Mr. Walker reviewed the proposed plan for each corridor (see meeting handout).

- **North corridor:** The proposed plan includes some Sounder station improvements at Mukilteo and Edmonds, and a new station at Broad Street to serve the northern end of downtown Seattle. A BRT-level of express bus service would be provided all day on I-5 from Everett to Seattle. On SR-99, there would be “swift bus” service, with Business Access and Transit (BAT) lanes. This service would be operated by the regional transit companies. The North Corridor plan also includes the First Hill Connector streetcar between the International District and Capitol Hill in Seattle.
- **South corridor:** The main investment would be to build up the Sounder line from 18 trains per day to 30, and to expand from seven-car to eight-car trains. Light rail would extend south of the airport to South 200<sup>th</sup>. There would be enhanced express bus service but no new direct access ramps.
- **East corridor:** At 0.4 percent tax option, light rail could be extended to Overlake Hospital. Sound Transit is working with the cities of Bellevue and Redmond, and with Microsoft, to build a BRT level of service from Redmond to the Bellevue light rail station. It would take advantage of right-of-way as it becomes available. Sound Transit refers to this as the partnership corridor. There would be a BRT level of service over Lake Washington. The Burlington Northern Santa Fe (BNSF) line of 42 miles from Renton north to the town of Snohomish is an opportunity for partnership to run a pilot commuter rail service. The town of Snohomish is out of the Sound Transit district. There is a bill in the legislature directing Sound Transit to study the BNSF corridor. One challenge is that there would not be a link for the BNSF line to the Bellevue light rail station, since they are on opposite sides of I-405.

If the proposal were to be funded at the 0.5 percent tax, there would be more light rail, implemented more quickly. At the lowest proposed investment level (0.3 percent tax), there would be limited capacity for light rail extension, and subarea borrowing needed for the Northgate Link extension. The core service plan for Sounder allows a start-up period with the expanded service in place by 2017. For Link light rail, the increase in service would occur in 2020. For ST Express bus, there will be 50 percent service growth in the north, 23 percent in the east, and 17 percent in the south. Overall there is a 25 percent increase in ST Express service.

The staff expects to have a draft plan for Board review in late March or early April. In June or July, Sound Transit plans to submit the required cost-benefit analysis to PSRC. A finding of conformity from PSRC would then allow the Board to act on whether to go to the ballot in Fall 2008.

### **Questions from the Panel**

#### **North corridor**

Q. Have you run ridership models on the proposed new express bus routes? Have you considered using Northgate as a transfer point between express bus and light rail between Everett and Seattle?

A. We have not completed ridership modeling yet. The overall transit demand analysis screen lines for the Everett/Seattle route show a high number of trips. To transfer at Northgate. Between bus and light rail, would require a major ramp and facility investment. In working with WSDOT staff Sound Transit determined that it would be too costly to include such a facility in the package of improvements.

Q. Are you getting information from WSDOT on travel times and congestion in the HOV lanes on I-5 to be sure that express bus would offer a travel time benefit?

A. As long as HOV is mixed traffic, express bus cannot offer better service than the existing traffic flow. WSDOT is also looking at tolling as a way to manage congestion. They assume 1 percent per year of degradation in service from the HOV lanes.

Q. In concept when you say “BRT-like,” what would it look like?

A. It would not have a dedicated right-of-way, but would rely on the HOV lanes. However, it would include some HOV access ramps, separate stations, and higher frequency service all day, with 10-minute headways at peak periods and 15-minute headways at other times.

Q. From the proposed Broad Street Sounder station, would there be a local bus to take riders up the hill to the main downtown streets?

A. The hill is not too steep at that point, but a connector bus could be considered.

### **South corridor**

Q. Would an express bus terminal be usable for light rail in the future?

A. No, but local buses will also make use of these terminals.

Q. How would you characterize bus service in the plan on I-405?

A. Not as BRT, but as express bus. I-405 from Renton to Bellevue has the most congested traffic, according to WSDOT.

Q. A lesson we heard from Sound Transit’s experience with Sound Move was about the challenge in reaching agreements with BNSF to allow commuter railroad service to be added to their rail lines.

A. This is a high-risk area. The railroad additions will not be an element of the final plan unless Sound Transit has a term sheet agreement with BNSF.

Q. Are there costs for commuter rail that need to be inflated?

A. This will need to be part of the agreement with BNSF.

### **East corridor**

Q. How is the BNSF line in terms of ridership forecast? Is the pilot through 2030?

A. The forecast is low in this corridor. We haven’t modeled the pilot yet, but it would be through 2020.

Q. What is the assumption about a light rail maintenance base on the East side?

A. The fleet projection is within the capacity for the Forest Street base, so there’s no plan for an eastside base. Forest Street can accommodate 104 cars, and the fleet projection for the updated ST2 is for 100 cars.

Q. Does the plan presume aerial light rail in Bellevue? If Bellevue wants a tunnel, would there be a local improvement district to pay for it?

A. The approximate cost to add a tunnel in Bellevue is \$370 million. There was a local improvement district for the Seattle downtown tunnel when it was built, but it was 80 percent federally funded.

### **Overall**

Q. The ST2 package was easy to understand because it was primarily light rail. This new package is harder to grasp because it's a mix of light rail, express bus, BRT and commuter rail.

A. We will need to look at how to present the plan. The new plan does provide a variety of services to reach people throughout the region.

Q. The Panel in several of its letters has encouraged Sound Transit to get written agreements with local jurisdictions on the scope of projects. Has there been any effort to go back to local jurisdictions?

A. Not other than the discussions about the BNSF rail line. Our concept is that if the plan is approved by the voters, the projects included in the package are what the public will get.

Q. Didn't the City of Tukwila negotiate with Sound Transit to add more improvements than you had planned?

A. Yes.

Q. Is your planning based on the existing network?

A. It is based on the existing network and the vision established by the 2030 long-range plan that was adopted as part of the planning for ST2. When the new draft plan is proposed by the Board, we will go back and rerun the ridership model with the proposed projects.

Q. How does the package perform compared to the original ST2?

A. Since the new package has a shorter timeframe, there is less time to build the ridership. Otherwise, it is similar.

### **Comments from the Panel**

- A potential risk in the new plan is that it is challenging to explain it in a way that will be meaningful to the public.
- Since the nation's economy is slowing down, a case can be made that approval of the ballot measure will create jobs.
- Partnerships with local governments are important because their approvals are a key part of Sound Transit's ability to accomplish projects.

### **Panel Information Requests**

- The Panel asked for detail on the ability of the Forest Street maintenance base to serve as the only base for light rail, with none on the east side.
- When Sound Transit reruns the transportation network with the new proposed plan, the Panel would like to see those numbers and assumptions.

## **Update on I-90 Structural Review**

### **Review Work – Theresa Greco, WSDOT**

Ms. Greco is now the WSDOT project director for the I-90 corridor and the close-out of Sound Move. Recently, the Chair of the House Transportation Committee in the legislature asked for an updated analysis and review of the I-90 bridge.

Ms. Greco reviewed what has been done to date with regard to studying light rail on the bridge. The current bridge was designed in the early 1980s. The request at that time was for a design that would be able to accommodate light rail in the future. It was designed for the type of trains that the BART system uses. A 2001 study by KPFF modeled the use of light rail on the bridge. In 2005, WSDOT conducted load tests on the bridge. Based on the results of those tests, WSDOT approved the use of the bridge for light rail with some weight mitigation measures, such as using a lighter-weight rail and concrete. Their new analysis is to confirm the 2001 and 2005 studies. Sound Transit has also conducted additional analysis, including proposed methods for controlling stray current corrosion.

WSDOT is looking to confirm the load tests with the impact of the proposed weight mitigation measures, with special emphasis on the transitions. WSDOT has assembled the project team, including experts in corrosion inspection and in stray current. The review will begin in April and will report at the legislative Joint Transportation Committee (JTC) meetings in May and July/August, with a final study report in September 2008.

### **Stray Current Control – Don Billen, Sound Transit**

WSDOT and Sound Transit have done modeling and looked at detailed data on the lake level variations. Ventilation studies for existing tunnels suggest installing jet fans at one end. The traction power simulations that have been done will inform the stray current work. Stray current is a regular part of light rail design. For the I-90 bridge, the review will include current cathodic protection, stray current control and attachment to the bridge deck. Sound Transit is building a model and doing simulations to determine the level of stray current that might be expected. The results will suggest the additional level of control that is required. These control requirements will be considered in preliminary engineering.

### **Questions from the Panel**

Q. What is the “stray current” issue?

A. A light rail system generates stray current that needs to be controlled. What is unique with a bridge is that the activity is on water. So protection measures will be needed to contain the stray current.

Q. Will there be a scope or list of items to be reviewed for this work?

A. Yes. WSDOT is coordinating the work. The work will include creation of a panel of experts to review analysis that has been completed to date. WSDOT has a draft scope of work. Sound Transit will conduct the work with WSDOT review.

Q. If the study isn't complete until September, that will be after the Sound Transit Board might make a decision on the new package.

A. WSDOT will have a draft of the recommendations at the end of June, and will work with Sound Transit and the Joint Transportation Committee (JTC) as the Board is making its decision.

Q. Have you modeled the operation of light rail under adverse weather conditions on the bridge?

A. Some work has been done to look at changes in the lake level under different weather conditions. This work looked at the question of what speed the light rail could be operated given the joint design that exists and the lake levels.

Q. Has there been wind and wave analysis? Analysis of earthquake conditions?

A. Wind and wave will be analyzed in the final design. For earthquake, studies of the SR-520 bridge showed that wave action resulting from an earthquake is the main concern.

### **Panel Information Request**

The Panel would like to see the draft scope of work and objectives for WSDOT's work reviewing the I-90 bridge studies.

### ***Financial Conditions and Funding Capacity***

#### **Brian McCartan and Doug Wentworth, Sound Transit**

There are no financial planning results to show yet. The approach to financial planning for the new ST2 has been to keep some of the planning assumptions from the original ST2, and experiment with modeling approaches. (See meeting handout.)

**Lessons from initial ST2.** What Sound Transit learned from analysis of the Proposition 1 vote was that the package was too large and would take too long to put in place. Sound Transit is considering a shorter period of time at a lower tax rate. There was also feedback that voters did not prefer a sales tax, but would rather have a funding source closer to the user costs. Sound Transit does not currently have a tool to isolate a user tax base. So for now, the agency is still looking at sales-tax-based approaches for funding.

Another theme from the public feedback was a desire for stronger accountability measures. Comparing Sound Transit to other transit systems nationwide, Sound Transit's accountability measures are robust. But a cost growth measure could be added.

There was public confusion about the size of the package, with the opponents restating the cost as a larger number. Sound Transit needs a better way to communicate the cost. For ST2, Sound Transit provided the costs in both constant dollars and YOY dollars. But this caused confusion. The opponents added the cost of interest over the life of the bonds, additional revenue, and Sound Move costs. This approach raised a lot of questions. It is incumbent on Sound Transit to communicate the costs and size of the package accurately and in ways the public finds meaningful. Staff are looking at modeling to structure the plan so it is more transparent, and on creating clarity about the cost of projects in the plan.

**Tax revenue sources.** The sources currently authorized are: sales tax up to 0.5 percent, rental car tax up to 1.9 percent, and an employee tax up to \$2.50 per head. The motor vehicle excise tax (MVET) is a current tax source, but will not be available in the future as a result of a voter initiative that capped the amount that could be charged.

The fourth slide in the handout shows what the total revenues for 2009 – 2020 would be at different tax rates. Cutting the program back from an ending date of 2027 to 2020 also reduces the revenue.

**Financial planning assumptions.** The assumptions have not changed from those for the initial ST2 plan, except to retool them for the shorter time period. For the federal funds, the assumption is for \$600,000 for the Northgate extension. This is the same level of funding as Sound Transit’s current “New Starts” grant. Fares and ridership assume growth.

In tax revenue growth, Sound Transit is assuming 5 percent per year for sales tax, and slightly less on MVET. It will be six months after approval of the ballot measure before Sound Transit would start collecting the tax dollars, not three months as was projected previously. Sound Transit is maintaining the same contingencies as before.

Changes to the financial model include converting from 2006 to 2007 dollars for the base costs, and shortening the inter-subarea borrowing and financing because of the shorter time period.

#### **Questions from the Panel**

Q. The per-head employee tax – is that \$2.50 maximum per month or per year?

A. Per month.

Q. What percent of total revenue comes from sales tax?

A. Sales tax provides a high of 70 percent. MVET is one-tenth of a percent.

Q. How do you fill the gap between the total amount needed and tax revenue?

A. The gap is filled by bonding. There are also Sound Move taxes that will not be needed by the Sound Move program, so could be applied to ST2.

Q. Could you finish Sound Move without this money?

A. If there’s no ST2, we would have to retire the Sound Move bonds, extinguish the debt and operate the existing system.

Q. What does “Additional Maximum Capacity” mean in the chart labeled “ST Tax Revenues (currently authorized sources)”?

A. These rows show what is possible if Sound Transit used the top allowable rates in each category.

Q. What is the rating of your bonds?

A. Sound Transit would issue the bonds, so our credit ratings would apply: AAA and AA. The strongest ratings are for bonds backed by both the MVET and sales tax pledge, so they get a AAA rating. The second lien is pledged just against sales tax; that is the AA rating. We have a

high credit rating for a transit agency. The bonds we would issue for ST2 would not include MVET, since that tax will no longer be available to us.

Q. Given the turmoil in the credit market, are you considering changing any of your assumptions?

A. No.

Q. What are you paying now?

A. Five percent. But we want to use a conservative assumption for the long term.

Q. Are you assuming federal “New Starts” funding for Northgate but not for East Link?

A. Yes. The grant assumptions are the same as before, but the total amount is reduced because we’re looking at a 12-year rather than a 20-year period.

Q. Is Sound Transit actively knocking on doors to find public-private partnerships to help fund some of the projects?

A. As projects come up, we will identify potential partners. We’re at the stage of evaluating the potential now rather than talking to partners. We have also looked at the experience of systems in Denver, Houston and Oakland.

Q. Will the new U.S. economic forecast be available in time for the Board’s decision?

A. Possibly. The new forecast usually comes out in June or July.

Q. Joni Earl said that although operation and maintenance costs have been higher than projected, these higher rates stem from some anomalies, and that she feels comfortable with the rates in your plans. But if the Express bus service for ST2 is to be implemented incrementally, won’t Sound Transit experience the same one time anomalies? How does this affect your assumptions?

A. We are assuming a little over 5 percent annual average increase in the cost of baseline service. This is the rate of growth from providers that we have experienced. We are also analyzing the potential for Sound Transit to bit out the maintenance services for buses and rail.

Q. Are you making any changes to the model?

A. Yes, we are separating the Sound Move program from the proposed ST2 projects. The previous model combined the two programs.

Q. Your growth rate assumption on revenue is 5 percent, but in your sensitivity analysis, for a one-year delay you are assuming 7 percent? Does last year’s defeat of Proposition 1 mean that you’ve been delayed one year already?

A. No, we have established a new baseline; we haven’t lost a year.

Q. Some are suggesting that the country may be entering a recession. Have you considered whether the anticipated economic conditions would suggest any changes to your underlying assumptions?

A. Unfortunately, one knows only in retrospect how long a recession will last. The best we can do is to run sensitivity analyses.

Q. If you had to predict what the Board will do regarding when to go back to the voters, would you say they will want to go on the ballot in 2008 or wait until 2010?

A. I don't have a clear sense of what they will do.

### **Comments from the Panel**

- It might be useful to describe to the public what the system will be if there is no ST2.
- The chart "ST Tax Revenues (currently authorized sources)" is a little confusing. The heading "Additional Maximum Capacity" needs to be restated more clearly, and it needs to be clearer that the numbers are in millions. It might be useful to set up a couple of citizen panels to review materials for the public, in order to get comments on the presentation and make sure the numbers are easy to understand.
- On the bond interest rate, Sound Transit is assuming 6 percent. But this is now, on average, the low end of the range. Many public agencies are now using 6.5 percent.
- Labor costs tend to increase more rapidly than other operating costs.

### **Panel Information Requests**

- Darlene Cimino-DeRose and John Howell would like to have a follow-up conversation on financial planning assumptions.
- Ms. Cimino-DeRose would like to have a conversation with Brian McCartan about what is meaningful now for the sensitivity analysis.

### ***Public Involvement Approach***

#### **Geoff Patrick, Sound Transit**

The current public involvement work involves a Web-based survey. Residents were sent a postcard mailer to encourage them to access the survey online or to call to receive a copy in the mail. (See Tab 9 in the meeting notebook for the postcard and survey.) The survey closes on March 9<sup>th</sup>.

Also underway is a second, scientific survey by telephone of 800 randomly selected voters, using the same questions as the online survey. The results will be available next week.

For the new ballot measure, there will be open-house-type meetings throughout the district with plenty of staff on hand to answer individuals' questions. There will be a mailer to explain the package, and an option to send questions and comments by e-mail. There may be another survey. The feedback from these techniques will help the Board in considering the package.

### **Questions from the Panel**

Q. In the phone survey, do the surveyors identify on whose behalf they are calling? The percentage of respondents who said that transportation is the region's biggest problem (56%) is surprisingly large. But if the survey is being presented as coming from a transportation agency, that might influence the answer.

A. The 56 percent was the result from the survey done right after the election. At the point where people were asked for the most important challenge, people may have known the topic of the survey. We will check and let the Panel know. The focus of the current surveys is on the importance of timing versus cost versus service, and testing some of the tradeoffs on time and

mode choices. We did modify the online survey to add a “no preference/don’t know” response choice after receiving some complaints that respondents had to answer every question before being allowed to move to the next one. In past surveys, the public has said the more service, the better. But at some point, people perceive the size of the package as too big.

Q. The November survey by EMC had a question on tolling that is not on the current survey, using a \$6 toll. Where did that number come from?

A. We are not probing tolls in this survey. WSDOT has done polling on tolls, however.

### **Next Steps**

Panel Administrator John Howell reviewed his list of issues raised during this meeting. Some he said are simply follow up issues, others may be topics the Panel wants to address in a summary letter. He will work with the Panel as to whether they want to write a letter and what additional information they would like to request. The issues were as follows:

1. Suggestions for sensitivity analysis – possibly on maintenance and operation costs, and/or on inflation.
2. Need for clarity in all communications with the public about the total cost of the package.
3. The lesson from Sound Move that where there is competition, there have been favorable bids, and the issue of encouraging Sound Transit to work now to develop packages.
4. Suggest more clarity with respect to the needs assessment graphs.
5. Clarify whether the ST Express service capacity chart accounts for standing or sitting passengers.
6. Questions on the population and employment numbers and forecasts.
7. Information from WSDOT on travel times in the HOV lanes.
8. Clarification on Table #8 on p. 13 of the Parsons Brinckerhoff technical memo on needs assessment, regarding density data.
9. Clarification on the origin and destination tables.
10. The significance of East Link being considered a Level 1 project, versus Level 2.
11. Possibly raising the need to resolve the scope for the light rail project through downtown Bellevue before the new ST2 vote.
12. Provide information on ST bid results versus estimates on the Link program to Panel members who requested it.
13. The Panel would like to see the revised ridership modeling when it is available..
14. Comment on the need to secure agreement with BNSF regarding Sounder service before ST2 proceeds to a vote.
15. Consider the memo Don Padelford provided to the Panel earlier in the day.
16. The assumptions on ridership for BNSF East side pilot, and the relation to other model choices.
17. Getting letters of agreement with jurisdictions, even if they are not full term sheets, on projects that were not in the initial Proposition 1 package.
18. The Panel would like to have a better understanding of the assumptions for the origin and destination charts.
19. How to characterize the performance of the proposed plan versus ST2.
20. The scope of work on I-90 structural review and stray current issues.
21. Preliminary results of I-90 review due in June at the same time as the Board is making its decision.

22. Brian McCartan and Doug Wentworth asked for suggestions on making the financial materials easy to understand.
23. The car rental tax and employee head tax options.
24. Darlene Cimino-DeRose and John Howell want to have a conversation with Sound Transit staff on the maintenance and operation and inflation issues.
25. Identifying the sensitivity analyses that Sound Transit should do.
26. Panel would like to see the results of the online survey and phone polling.
27. Panel would like the information WSDOT has developed on tolls.

As to future Panel meetings, there will need to be at least one, possibly two, more. The meeting adjourned at 4:40 PM.

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