SOUND TRANSIT
TRANSIT OPERATIONS TASK FORCE
Meeting Summary
September 25, 2008

Call to Order

The meeting was called to order at 11:18 a.m. by Chair Dow Constantine in the Ruth Fisher Boardroom, 401 South Jackson Street, Seattle, Washington.

Roll Call

Chair
(P) Dow Constantine, King County Council Vice Chair

(P) Fred Butler, Issaquah Deputy Council President
(P) Deanna Dawson, Edmonds Councilmember
(P) Dave Enslow, Sumner Mayor
(P) John Marchione, Redmond Mayor
(A) Julia Patterson, King County Council Chair

Report of the Chair

Chair Constantine announced he had attended the Puget Sound Regional Council (PSRC) Executive Board meeting prior and announced that the Executive Board found that the ST2 Plan was in conformity with the PSRC Destination 2030 plan.

He gave an overview of the revised Task Force schedule for the next four months; the revised schedule calls for an additional meeting in January. October's topic will be on regional parking capacity, November's meeting will feature a policy discussion on how Sound Transit currently contracts out the service and maintenance of the Sound Transit fleet. In December, the Task Force will have a policy discussion on a parking policy, and in January the Task Force will have a policy discussion on Sound Transit's bus fleet composition.

Minutes of the June 26, 2008 Meeting

It was moved by Boardmember Butler, seconded by Boardmember Marchione, and carried by the unanimous vote of all members present that the June 26, 2008 minutes be approved as presented.

Fleet Composition – Upcoming Decisions 2009

Bonnie Todd, Transportation Services Director and David Huffaker, Transportation Finance Planner gave a PowerPoint presentation on upcoming decisions affecting the Sound Transit revenue fleet for Sounder Commuter Rail, ST Express Bus and Link Light Rail.

Mr. Huffaker discussed the passenger vehicles for Tacoma Link, Central Link and Sounder. Tacoma Link has three vehicles running on electric power that began running in 2003. Central Link has 35 vehicles that are 50% larger than the Tacoma Link cars and will have a larger capacity. Central Link vehicles will go into service in July 2009. Sounder includes 11 locomotives, 18 cab cars with controls for working with a locomotive, and 40 coaches.

Mr. Huffaker described the ST Express service; the service is characterized by long trips and low or no turnover, so buses with higher seating capacity are more suitable. He noted that the average trip length for ST Express is 16 miles, whereas the average trip length for a King County Metro bus is four miles. The ST Express buses also travel at high speeds, and normally use the freeway in their routes. Sound Transit

currently has 240 coaches being operated by all three transit partners. The fleet currently consists of 143 standard coaches, and 97 high capacity coaches.

Mr. Huffaker explained that Sound Transit is eligible for grants for vehicle replacement on vehicles that are at least 12 years or 500,000 miles. He explained that the maintenance history of each bus is monitored and the fleet as a whole is monitored for maintenance issues so that buses can be prioritized for replacement.

Mr. Huffaker then described the considerations for fleet changes; the bus fleet must fit with partner resources, including equipment and spare parts, employee training and fuel type. He explained that maintenance base capacity limitations are also a factor; longer buses require more space, whereas a double-decker bus may have maintenance equipment considerations.

The Task Force then looked at fuel choice options and the fuels used by Sound Transit buses last year. Mr. Huffaker explained that the diesel fuel used by the Sound Transit fleet is ultra low sulfur diesel (ULSD). Sound Transit and Metro also worked together to use biodiesel, but the use of that fuel is being phased out due to performance and cost issues. Hybrid diesel buses operated by Metro use the ULSD fuel but the hybrid drive reduces the amount of fuel consumption. Buses using compressed natural gas (CNG) are currently being used in the Pierce Transit fleet.

Mr. Huffaker also talked about alternatives to fuel; he explained that the agency is not currently looking at electric trolleys or electric plug-in buses because they are not practical for the long distances served by Sound Transit routes. Other options are available, but are not developed to the point that they are a choice in the next few years.

Chair Constantine asked if any transit agencies use fuel cell buses; Mr. Huffaker responded that Vancouver, BC is using those buses currently.

Mr. Huffaker compared the emission levels of particulate matter of different types of fuel; the levels of toxic hydrocarbons, nitrogen oxide and carbon monoxide. Clean burning ULSD fuel has the lowest levels of carbon monoxide and toxic hydrocarbons, and CNG buses have the lowest nitrogen oxide levels.

Boardmember Enslow asked which of the areas being measured were the most important; Mr. Huffaker responded that all are undesirable, the data may show that CNG buses no longer have a specific advantage over the ULSD fuel.

The Task Force looked at fuel operating cost comparisons for a 40 foot bus. The analysis showed that standard costs for buses using ULSD fuel are $0.67 per mile, and standard costs for CNG buses are $0.72 per mile. Mr. Huffaker noted that Pierce Transit currently has a favorable long term contract for CNG through 2011 that reduces the operating costs to $0.31 per mile.

Mr. Huffaker also discussed other operating costs associated with the CNG buses. Pierce Transit provided operating cost information that shows that without the cost of fuel included, operating costs for CNG buses are about 50% higher, with the fuel included, operating costs are 10% lower. The 1994 Orion buses are 15% more expensive to operate including fuel costs. In order to expand the fleet outside of the buses operated by Pierce Transit, a large investment would be required to retrofit additional maintenance bases with CNG capabilities, a cost of $20 million. Mr. Huffaker explained that it would be cheaper to build a CNG capable maintenance base from scratch. The conclusion based on the analysis was that the potential operating savings for CNG buses don't outweigh the upfront capital costs and other operational issues.

Mr. Huffaker then presented a comparison of the operating costs for 60-foot standard diesel buses versus 60-foot hybrid diesel buses. The cost per mile to operate a hybrid diesel bus is $1.07, while the cost per mile to operate a bus using standard diesel is $1.15. This represents a savings of 20% by using hybrid buses when other operating expenses such as replacement cycles are taken into account.

Chair Constantine asked about the upfront costs of the hybrid diesel buses and their longevity; Mr. Huffaker responded that King County Metro has been using the hybrid buses and expects them to run at least as long

as a standard diesel bus. He also noted that the batteries required by the hybrid buses can be replaced as needed and not on a schedule.

Mr. Huffaker showed a comparison of emissions for the hybrid diesel buses, standard diesel buses and CNG buses. The hybrid system has lower nitrous oxide emissions than both the CNG buses and the standard diesel buses.

Boardmember Dawson asked if the fuel economy numbers are based on city streets or highway; Mr. Huffaker responded that the numbers are from New York, and probably represent driving on city streets. He said that the agency would look into the numbers for the Sound Transit hybrid buses versus the Metro hybrid buses.

The Task Force reviewed the different bus options available for future replacements. The 40-foot standard bus, 60-foot articulated bus 45-foot over the road bus, and 42-foot double decker bus were reviewed based on size, fuel options, makers, capacity and capital costs. Mr. Huffaker noted that the 60-foot hybrid buses are around $200,000 more than standard 60-foot buses, but that over time, the capital cost savings of the standard buses are overshadowed by higher operating costs. Mr. Huffaker also noted that the agency is trying to maximize capacity as much as possible but operations and environmental factors are also considerations. He explained that each bus was evaluated based on a cost per seat per mile and that the cost for each different option would be presented. The analysis also takes into account the amount of time for loading as well as compatibility with partners.

Mr. Huffaker first reviewed the 40-foot bus; Sound Transit currently operates 143 40-foot buses. Mr. Huffaker noted that due to new low-floor designs, future buses will have 37 seats in each bus. The cost for a 40-foot bus is $475,000, which equates to $0.0449 per seat per mile. The bus requires a small amount of space for storage at the maintenance base, but the lower number of seats is a disadvantage.

Mr. Huffaker then talked about the 60-foot standard diesel buses and 60-foot hybrid buses. Sound Transit currently operates 63 60-foot standard diesel buses and 22 60-foot hybrid buses. Both coaches have 58 seats; a 60-foot standard diesel bus costs $570,000 and a 60-foot hybrid bus costs $775,000, although government grants can help with the increased cost. The costs per seat per mile are $0.0457 for the 60-foot standard diesel buses and $0.0378 for the 60-foot hybrid buses. Both take up a larger area in maintenance bases and require longer bus maintenance bays. The buses are also not as popular with riders but do have higher capacity than the 40-foot buses and the 60-foot hybrid buses have lower emissions.

Mr. Huffaker also reviewed the 45-foot over the road, or long haul, buses. The agency currently owns 20 of these buses, all operated by Pierce Transit. The buses seat 57 and cost $560,000, for a cost per seat per mile of $0.0288. The benefits include high capacity, longer operating life and low operating costs. The dwell time, or time needed to load and unload passengers, is longer due to the design of the bus that reduces the number of doors. Accessibility has also been an issue, wheelchairs are loaded toward the back.

Mr. Huffaker reviewed the double decker bus that is currently being used in Las Vegas, Victoria BC and by Community Transit. The capacity is 73 seats, approximately 15 seats more than another high capacity bus. The cost of the bus is $730,000 for a cost per seat per mile of $0.0354. The higher capacity and smaller amount of space needed in a maintenance base are advantages, but the buses might require alteration of the maintenance base bays.

Boardmember Dawson remarked that the public likes the double decker bus and the size of the bus may help with some of the maintenance base capacity issues.

Mr. Huffaker showed a chart evaluating each bus model based on capacity, infrastructure impacts, environmental factors, total cost per seat mile, loading time and compatibility with partners. The 40-foot buses ranked low for capacity, and the 60-foot buses ranked low for infrastructure impacts because of the affects on maintenance bases due to their larger size. The double decker bus also ranked low for compatibility with partners.

Mr. Huffaker also showed another similar chart evaluating each bus model under the assumption that a new maintenance base was built. The chart showed that issues with infrastructure impacts and compatibility with partners could be reduced.

Boardmember Marchione asked how the buses would rank based on rider comfort; Mr. Huffaker confirmed that the 40-foot and 60-foot buses would be ranked lower, but issues with capacity or the need for the 40-foot buses on some routes would supersede rider comfort in some cases. Ms. Todd noted that the evaluation factors are listed in order of importance, with capacity at the top. Boardmember Dawson asked that customer satisfaction be added to the chart.

Mr. Huffaker noted that up to 50% of the fleet is scheduled to be replaced in the next few years. He also spoke about the impacts that a positive vote on the ST2 plan could have on the Sound Transit fleet. There is funding in the ST2 plan for an immediate service increase, and funding for an increase in the fleet and in maintenance base capacity.

Next Meeting:

Thursday, October 23, 2008, 11:00 a.m. to 12:45 p.m., Ruth Fisher Boardroom, 401 South Jackson Street, Seattle WA.

Adjourn

There was no other business; the meeting was adjourned at 12:33 p.m.

Dow Constantine
Transit Operations Task Force Chair

ATTEST:

Katie Weiss
Board Coordinator