

## Key Findings

- ST2 would spend about \$22.8 billion, yet serve only 0.4 percent of all trips in 2030.
- ST2 would shift only 0.84 percent of passenger vehicles from the road to transit by 2030.
- ST2 would spend \$22.8 billion to reduce VMT by only 0.867 percent.
- The cost for ST2 to serve one additional trip would be about \$368,000. Under Transit Now, the cost for King County to serve one additional trip is about \$10,000.
- The ST2 proposal would be 37 times less efficient than a traditional bus system like the one in King County.
- ST2 would increase traffic congestion for passenger cars and freight trucks by about 25 percent across the I-90 bridge.
- ST2 would reduce lane capacity on I-90 by 20 percent during the morning and afternoon peak commute periods.
- ST2 would eliminate subarea equity protections.
- Not counting CO<sub>2</sub> emitted during construction, ST2 would reduce regional CO<sub>2</sub> emissions by up to only 1.11 percent. The same reduction could be achieved through purchasing carbon offsets for only \$2.3 million.

## 2008 Citizens' Guide to Sound Transit, Phase 2

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### Introduction

This November, voters in King, Pierce and Snohomish Counties will again decide on whether to expand Sound Transit's regional mass transportation system. The new Sound Transit proposal (ST2) would add 36 miles of light rail, expand the Sounder commuter rail by four daily round trips between Tacoma and Seattle and expand the Express bus system by 17 percent.<sup>1</sup> Sound Transit officials say that, if passed, ST2 would cost about \$17.8 billion through 2023 and \$22.8 billion through 2037.<sup>2</sup> The proposal would impose a 0.5 percent sales tax increase within the Sound Transit district, which incorporates most of King, Pierce and Snohomish Counties. The total sales tax rate would vary among jurisdictions, but Seattle would rise from 9 percent to 9.5 percent.<sup>3</sup>

The new proposal is Sound Transit's second attempt to expand on the agency's first phase, Sound Move (ST1), which voters approved in 1996.

Sound Move imposed a ten-year 0.4 percent sales and use tax and a 0.3 percent Motor Vehicle Excise Tax (MVET). In 1996, Sound Transit promised voters it would build 25 miles of light rail for a cost of about \$5 billion in year-of-expenditure (YOE) dollars, to be completed by 2006.<sup>4</sup> Today, Sound Transit officials say they can only build 17 miles of light rail for about \$15 billion and will not be finished until around 2020.<sup>5</sup>

In other words, Phase 1 is smaller, \$10 billion over budget and 14 years late from what was originally promised to voters. In addition and regardless of telling voters it was a "ten-year plan," Sound Transit officials will collect the 0.4 percent sales tax in perpetuity, even after the first phase is complete in 2020.

Sound Transit officials first asked voters to expand its system in 2007 through a combined \$47 billion roads and transit ballot proposal, also known as Proposition 1. But voters rejected the measure and Sound Transit officials went back to the drawing board.

<sup>1</sup> Resolution No. R2008-10, Exhibit A, Sound Transit, Adopted July 24, 2008. Available online at: <http://future.soundtransit.org/documents/Reso2008-10%20Exhibit%20A%20Plan%20Document.pdf>

<sup>2</sup> Multibillion-dollar rail, bus plan is up to voters, Seattle Post Intelligencer, July 24, 2008. Available online at: [http://seattlepi.nwsourc.com/local/372210\\_soundtransit25.html](http://seattlepi.nwsourc.com/local/372210_soundtransit25.html).

<sup>3</sup> Based on current local and state sales tax rates calculated by the Department of Revenue.

<sup>4</sup> Sound Move, The 10-Year Regional Transit System Plan, May 1996.

<sup>5</sup> Sound Transit, University Link Financial Plan, June 2006.

Now, Sound Transit officials have trimmed the number of projects, shortened the estimated completion schedule and shed the road building portion of the package for a second attempt at the ballot. The following discussion builds on Washington Policy Center's original six-part series of analysis on Proposition 1 and describes Sound Transit's latest ballot proposal.

### **Another ST2 proposal violates Sound Move policy**

With a new proposal, the Sound Transit board is violating its own promise to roll back Sound Move taxes. As part of ST1, which passed in 1996, Sound Transit promised voters a certain level of accountability because its taxing authority did not include an expiration date. In other words, Sound Transit officials wanted to ensure taxpayers that there was a process by which the new taxes would eventually end. So Sound Transit officials included this critical taxpayer protection clause, which voters ultimately accepted:

*“Any second phase capital program which continues local taxes for financing will require voter approval within the RTA District. If voters decide not to extend the system, the RTA will roll back the tax rate to a level sufficient to pay off the outstanding bonds and operate and maintain the investments made as part of Sound Move.”<sup>6</sup>*

Since voters indeed rejected a “second phase capital program” with the failure of ST2 last November, and according to Sound Transit's own policy, the agency should roll back ST1 taxes to operating and maintenance (O&M) levels. By moving forward with another ST2 tax proposal, Sound Transit is violating its own taxpayer protection clause that voters accepted in 1996.

### **ST2 eliminates subarea equity protections**

Approved with the passage of ST1, the Sound Transit district is separated into five subareas (Snohomish County, North King County, South King County, East King County and Pierce County) and employs the principle of subarea equity. Subarea equity is arguably the strongest accountability limitation placed upon Sound Transit. It requires taxes collected within a subarea to be spent in that subarea to ensure a proportional distribution of spending. In other words, taxes collected in Bellevue can only be used for projects in Bellevue and cannot be used on projects in other subareas, like Federal Way.

Buried in the ST2 ballot proposal however, Sound Transit officials have reserved certain exceptions that render many accountability measures, including subarea equity, meaningless. The new ST2 measure says this:<sup>7</sup>

“In the event that a subarea's revenues are insufficient to cover its costs, the agency's currently approved policies provide the Sound Transit Board with these options:

- Modify the scope of the projects;

<sup>6</sup> Sound Move, The 10-Year Regional Transit System Plan, May 1996.

<sup>7</sup> Resolution No. R2008-10, Exhibit A, Sound Transit, Adopted July 24, 2008. Available online at: <http://future.soundtransit.org/documents/Reso2008-10%20Exhibit%20A%20Plan%20Document.pdf>

*The principle of subarea equity greatly restricts Sound Transit on how it can spend tax collections. But the agency's policies create an incentive to underestimate costs as a way for Sound Transit officials to avoid the limitations of subarea equity.*

- Use excess subarea financial capacity and/or inter-subarea loans;
- Extend the time to complete the system;
- Seek legislative authorization and voter approval for additional resources.”

The principle of subarea equity greatly restricts how Sound Transit spends tax collections. The agency's policies already create an incentive to underestimate costs as a way for Sound Transit officials to avoid the limitations of subarea equity.

Because the Sound Transit board is unelected, ST2 would further untie the agency from the promises it makes, and would allow the board to shift money among subareas without additional voter input.

As the agency's statement above suggests, these policies have already been approved by the Sound Transit board and are in place. Sidestepping the subarea equity limitation is highly controversial so Sound Transit officials appear to be looking for insulation. By placing them as part of the ST2 proposal, Sound Transit hopes to have them publicly ratified in effect, if the measure passes.

### **Compared to Traditional Bus Service, Passenger Demand Does Not Justify Costs**

Sound Transit officials estimate that the new ST2 package would carry an additional 163,000 daily trips by 2030.<sup>8</sup> But Sound Transit also estimates that about two thirds of those trips would come from the existing transit system. Sound Transit officials estimate that only 62,000 daily trips would be new.<sup>9</sup>

The Puget Sound Regional Council (PSRC) estimates that drivers and transit users will make about 15 million total trips per day in King, Pierce and Snohomish Counties by 2030.<sup>10</sup> This means if ST2 passes, the expanded system would serve only 0.4 percent of all trips in 2030.

Comparing new daily trips (62,000) to how much taxpayers must pay (\$22.8 billion) shows that the cost for Sound Transit to create one additional trip is about \$368,000.

To put this new spending in perspective, King County recently passed Transit Now, which will expand its bus system by 20 percent. King County officials estimate that Transit Now will serve up to an additional 60,000 trips per day, by 2016.<sup>11</sup> King County also estimates the cost of Transit Now will be about \$50 to \$75 million per year, or about \$600 million by 2016. This means the cost for King County to serve one additional trip is about \$10,000.

Accounting for costs (operating and capital) and benefits (number of new trips), shows the ST2 proposal is about 37 times less efficient than a traditional bus

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Destination 2030 Update, Technical Appendices, Puget Sound Regional Council, April, 2007. Available online at: <http://www.psrc.org/projects/mtp/pubs/D2030techappendicesFinal.pdf>

<sup>11</sup> About Transit Now, King County Metro. Available online at: <http://www.metrokc.gov/kcdot/transitnow/about.stm>

system like the one in King County.

## **ST2 Will Not Reduce Traffic Congestion**

Trips do not equal riders. For example, a rider who makes a round trip commute to and from work counts as two trips. If that same rider took a bus to lunch and back, he counts as making four total trips during the day.

Because daily trips can double, triple and sometimes quadruple count the same individual, trips should be adjusted to estimate unique riders. The standard assumption is that single riders will equal 45 percent of trips.<sup>12</sup> To look at it another way, 45 percent assumes less than half of total trips in a day will be the same person making a round trip. This does not capture all of the double counting of a single rider, but it is closer to accurately estimating how many different individuals will ride a transit system.

This estimation shows that ST2 will likely only serve the equivalent of about 27,900 new individual riders per day by 2030.

For Sound Transit to appreciably reduce traffic congestion, it must shift large numbers of drivers from the roadways to its transit system. By 2030 there will be about 3.33 million cars in Pierce, King and Snohomish Counties.<sup>13</sup> The equivalent of 27,900 riders is not insignificant. But assuming that each new rider would equal one car, ST2 would only shift 0.84 percent of all vehicles from the road to its system by 2030.

In another measure, Sound Transit estimates that ST2 will reduce daily Vehicle Miles Traveled (VMT) from 99.4 million miles in 2030 to 98.5 million miles in 2030.<sup>14</sup> This means Sound Transit officials want to spend \$22.8 billion to reduce the daily Vehicle Miles Traveled by only 0.867 percent.

The PSRC estimates that traffic congestion will more than double by 2030.<sup>15</sup> Based on Sound Transit's own estimates, the ST2 measure would have no effect at reducing traffic congestion.

## **Less is More?**

Sound Transit officials say the new ST2 package is smaller than the first version defeated by voters last November.

While the scope of projects is smaller, 36 miles of light rail instead of 50, and the project schedule is shorter, the proposed sales tax increase is the same (0.5 percent) as what Sound Transit proposed in 2007.

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<sup>12</sup> The American Public Transportation Association has used this conversion factor in the past to translate trips into individual riders.

<sup>13</sup> 2030 household projections calculated by the Puget Sound Regional Council's Destination 2030 update. Available online at: <http://www.psrc.org/projects/mtp/pubs/D2030techappendicesFinal.pdf>. Assumed the regional vehicle ownership rate equals 1.81 cars per household.

<sup>14</sup> Sound Transit 2 Planning, Sustainability Assessment of Sound Transit 2 Plan, Sound Transit, August, 2008.

<sup>15</sup> Puget Sound Regional Council's Destination 2030 update. Available online at: <http://www.psrc.org/projects/mtp/pubs/D2030techappendicesFinal.pdf>.

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This means voters would get much less in public services for the same tax increase Sound Transit proposed in last year's failed Proposition 1.

## **New ST2 Proposal Still Increases Congestion on Interstate 90**

One of the more controversial projects in Sound Transit's proposed second phase (ST2) is reconfiguring the center lanes of Interstate 90 (I-90) to accommodate up to 19 miles of light rail between Seattle and Bellevue. Known as East Link, the proposal includes replacing the two center High Occupancy Vehicle (HOV) lanes that cross the bridge with light rail, a form of high capacity transit (HCT).

Sound Transit says the East Link Project would not reduce the number of lanes on I-90.<sup>16</sup>

This is not true.

During the morning peak commute drivers today have a total of five westbound lanes (three general purpose and two HOV lanes). With Sound Transit's proposed reconfiguration, capacity would fall to only four westbound lanes. The same reduction would occur during the eastbound commute in the afternoon. This would be a 20 percent reduction in lane capacity during the morning and afternoon peak commute periods.

By reconfiguring the center lanes, the WSDOT estimates Sound Transit's plan to place light rail on Interstate 90 would reduce overall vehicle capacity on the bridge by 15 percent during the morning peak commute and 8 percent during the afternoon.<sup>17</sup>

This means light rail would increase vehicle delay on the bridge by 27 percent during the morning peak drive, and 24 percent during the afternoon peak. ST2 would cause average westbound vehicle speeds to fall 21 percent during the morning peak commute, and eastbound drivers in the afternoon would see a 17 percent decrease in speed.<sup>18</sup>

Freight vehicles would experience a much worse result. During the morning peak drive, the number of freight trucks able to cross into Seattle would drop 24 percent. Leaving Seattle during the afternoon peak drive, trucks would see a 19 percent reduction in capacity.<sup>19</sup>

## **Conclusion**

There is no doubt that mass public transportation is part of the solution to reduce traffic congestion, especially in dense population centers. But allocating

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<sup>16</sup> Assertion that light rail will reduce the number of lanes on the I-90 bridge, Sound Transit, August, 2008. Available online at: [http://future.soundtransit.org/documents/080408\\_I-90\\_Lanes.pdf](http://future.soundtransit.org/documents/080408_I-90_Lanes.pdf).

<sup>17</sup> Part IV: Light Rail and Interstate 90, Michael Ennis, Washington Policy Center, 2007. Available online at: [http://www.washingtonpolicy.org/Centers/transportation/policynote/07\\_ennis\\_partiv.html](http://www.washingtonpolicy.org/Centers/transportation/policynote/07_ennis_partiv.html).

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

large amounts of public money to expand a transit program that will serve less than one percent of all trips taken is not efficient.

Public sector spending decisions are typically based on perceived value and whether taxpayers believe they are receiving a proportional benefit from the service purchased. In other words, the social value of \$22.8 billion should be equal to its economic costs. The difficulty is defining the social value. Is a transit system that carries less than one percent of all daily trips worth more or less than doing something else or even doing nothing at all?

If the public value of traffic congestion relief is high, then the economic costs of ST2 do not justify the increase in spending. Sound Transit officials understand this predicament and instead try to point to other public benefits of ST2.

One of the most convincing arguments to support ST2 is the environmental aspect of shifting drivers to public transit to reduce greenhouse gas emissions and the region's reliance on oil.

Sound Transit officials say that by 2030, ST2 would reduce annual CO<sub>2</sub> emissions between 99,552 and 178,333 metric tons.<sup>20</sup> That is an annual reduction of between 0.71 percent and 1.11 percent of total regional CO<sub>2</sub> emissions.<sup>21</sup>

To look at it another way, consider that CO<sub>2</sub> emissions have monetary value and thus can be measured to show whether spending \$22.8 billion is justified for such a small reduction.

Terrapass, a nationally known firm that sells carbon offsets, charges \$5.95 per 1,000 lbs of carbon reductions.<sup>22</sup> Converting metric tons to pounds, shows the same CO<sub>2</sub> reduction claimed by ST2 could be achieved by purchasing carbon offsets for between \$1.3 million and \$2.3 million.<sup>23</sup> Far less, than the \$22.8 billion Sound Transit officials are proposing.

This means Sound Transit's relationship with any environmental rewards is so slight that its ability to justify spending \$22.8 billion is greatly diminished.

It should also be noted that the same environmental concerns and the rise in fuel prices is also driving technology.

The shift to zero emissions and super fuel-efficient vehicles is under way. Any environmental benefits from ST2 over ordinary passenger vehicles will simply disappear, by some estimates, within ten years, once alternative energy/fuel sources are deployed. In fact, both presidential candidates, in different ways, have plans to fast track this shift in technology.

In the end, voters will have to decide for themselves what is important and whether the new ST2 proposal is worth the costs and increased long-term tax burden.

<sup>20</sup> Sound Transit 2 Planning, Sustainability Assessment of Sound Transit 2 Plan, Sound Transit, August, 2008.

<sup>21</sup> Ibid.

<sup>22</sup> Based on pricing information found on its website: [www.terrapass.com](http://www.terrapass.com).

<sup>23</sup> Using a conversion calculator, convert metric tons to lbs, divide by 1000, and then multiply by 5.95.

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