Sound Transit 3:

~~A Mass Transit Guide~~

The Regional Transit System Plan for Central Puget Sound

DRAFT

June ~~2~~ ~~20~~ 22, 2016

Table of Contents

SOUND TRANSIT 3: INTRODUCTION

The Sound Transit 3 System Plan will improve and expand the regional mass transit system by connecting the major cities in King, Pierce and Snohomish counties with light rail, Bus Rapid Transit (BRT), express bus, and commuter rail.

Sound Transit's mission is to plan, build and operate mass transit service throughout central Puget Sound. The initial phase of the regional mass transit system, called Sound Move, was approved by voters in 1996. The second phase, Sound Transit 2, was approved in 2008. Under these plans, the regional light rail system will more than double in length from just over 20 miles today to over 50 miles by 2023. Service is also increasing on the 83-mile Sounder commuter-rail line from Everett to Lakewood, and ST Express buses continue to serve major highways in the region.

Even with these improvements, transportation continues to be one of the area's biggest challenges with approximately 800,000 more people expected to call this region home in the next 25 years. By 2040 the region will also support 800,000 new jobs. In the past year alone, the region's population grew by 52,000 people - making daily commutes longer and more congested.

In response, Sound Transit 3 provides the next phase of high-capacity transit improvements for central Puget Sound. With this plan, the light rail system will more than double again to 116 miles with over 70 stations. Light rail will expand north to Everett, south to Federal Way and Tacoma, east to downtown Redmond, south Kirkland, and Issaquah, and west to Ballard and West Seattle. Sound Transit 3 will also invest in Bus Rapid Transit (BRT) in two corridors: connecting Lynnwood to Burien via I-405 and SR 518 to serve Eastside cities as well as Tukwila and Burien; and on SR 522 between ~~Woodinville~~ Bothell and Shoreline with service extending to Woodinville, and connecting to Link light rail via Northeast 145th Street. The plan also includes a program to improve bus speed and reliability in specific corridors. Finally, the plan will expand Sounder commuter rail, including an extension to serve Joint Base Lewis-McChord and DuPont.

The Sound Transit 3 plan was developed through an open public process over a three-year period. During that time, Sound Transit coordinated closely with cities and counties, the state of Washington, the Puget Sound Regional Council (PSRC), and local transit agencies. In addition, Sound Transit received tens of thousands of public comments that helped shape the plan.

SOUND TRANSIT 3: BUILDING ON SUCCESS

The new investments proposed in the Sound Transit 3 plan will build on Sound Move and Sound Transit 2, creating more connections to more places for more people. When complete, the system will connect 16 cities with light rail, 30 cities with Bus Rapid Transit/ST Express bus and 12 cities with commuter rail across Pierce, King and Snohomish counties.

The Sound Transit 3 plan is consistent with established regional land use and transportation plans. The PSRC developed and adopted VISION 2040 as the region's strategy for directing growth in an environmentally responsible way, while fostering economic development and providing efficient transportation. The PSRC also adopted Transportation 2040 as the region's comprehensive long-range regional transportation plan. Grounded in VISION 2040's growth management and transportation policies, Transportation 2040 provides a multimodal plan for investing in roads, ferries, transit and freight mobility through the year 2040. The Sound Transit 3 Plan builds on and is consistent with these regional plans.

As the Regional Transit Authority, Sound Transit is responsible for regional high-capacity transit system planning in the context of Transportation 2040. Sound Transit updated its Regional Transit Long-Range Plan in 2014. Sound Transit 3 is the next phase of high-capacity transit improvements for central Puget Sound.

THE SOUND TRANSIT 3 PLAN

Link Light Rail

Sound Transit launched Link light rail as part of Sound Move and is expanding Link under the voter-approved Sound Transit 2 plan. New light rail service opened to Capitol Hill and the University of Washington in March 2016, increasing ridership on the existing system. Also in 2016 Sound Transit will begin service to Angle Lake, 1.6 miles south of Sea-Tac Airport, adding a major new transit hub in South King County.

By 2021, Link will open new service to the University District, Roosevelt and Northgate. Two years later in 2023, Link will reach Shoreline, Mountlake Terrace, Lynnwood, Mercer Island, Bellevue, and Overlake — nearly doubling the light rail system to over 50 miles.

Sound Transit 3 will deliver major projects in steady succession, adding over 60 miles of new light rail serving 37 new stations, four expanded stations and two provisional stations. The provisional stations will be built if additional funding becomes available from grants, cost savings, additional subarea tax revenue or financial capacity, or contributions from other parties not currently assumed in the financial plan.

North Corridor

Sound Transit 3 extends light rail north from the Lynnwood Transit Center to downtown Everett via the Southwest Everett Industrial Center. The line is scheduled to open in 2036 and includes six stations serving the areas of West Alderwood Mall, Ash Way, ~~128th Street SW (~~Mariner~~),~~ Southwest Everett Industrial Center, SR 526 near Evergreen Way and the area at the existing Everett Station. Additional parking will be provided at ~~s 128th Street SW (~~Mariner~~)~~ and Everett stations. A light rail operations and maintenance facility will be located in the north corridor. A seventh station, Airport Rd/SR 99 is a provisional station that will be built if additional funding becomes available from grants, cost savings, additional subarea tax revenue or financial capacity, or contributions from other parties not currently assumed in the financial plan.

Central Corridor

Sound Transit 3 adds two light-rail extensions in Seattle. The first extends light rail from downtown Seattle to West Seattle with stations serving the sports stadiums, SODO, Delridge, Avalon and Alaska Junction. In addition, light rail extends to Ballard with a new subway through downtown Seattle and South Lake Union with stations serving the International District/Chinatown, Midtown, Westlake, Denny, South Lake Union, Seattle Center, Smith Cove, Interbay and Ballard.

Connections to the existing Forest Street operations and maintenance facility will be built to service vehicles operating in this corridor. Three infill stations will be added serving Northeast

130th Street, South Graham Street and South Boeing Access Road near I-5, with parking provided at the South Boeing Access Road station.

East Corridor

Sound Transit 3 extends light rail throughout the Eastside, connecting Redmond, Bellevue, south Kirkland and Issaquah to each other and to the rest of the regional system. Eastside investments include two stations serving southeast Redmond and downtown Redmond along with a new light rail line from south Kirkland to Issaquah via Bellevue. Four stations are included on the latter light rail extension serving south Kirkland, the Richards Road area, Eastgate near Bellevue College, and central Issaquah. A fifth station, the Lakemont provisional station, will be built if additional funding becomes available from grants, cost savings, additional subarea tax revenue or financial capacity, or contributions from other parties not current assumed in the financial plan. Additional parking will be provided at the southeast Redmond, south Kirkland, and central Issaquah stations.

South Corridor

Sound Transit 3 extends light rail south from Kent/Des Moines to Federal Way, with stations serving South 272nd and the Federal Way Transit Center. From there, light rail will continue south to Pierce County, with stations in south Federal Way, Fife, east Tacoma and at the Tacoma Dome. Parking will be added at the South 272nd, Federal Way Transit Center, South Federal Way, and Fife stations. A light-rail operations and maintenance will be built in the south corridor. Sound Transit 3 also includes an expansion of Tacoma Link to Tacoma Community College, with six stations.

Bus Rapid Transit (BRT)

Sound Transit 3 adds Bus Rapid Transit (BRT) in two corridors either in principally exclusive right-of-way or in managed toll lanes that provide substantially equivalent speed and reliability at speeds equal to or better than uncongested highway speeds. In addition to higher speeds, Bus Rapid Transit riders gain the advantage of reliability and frequent service: every 10 minutes in the peak periods and every 15 minutes during off-peak hours of operation.

Sound Transit 3 will establish BRT service on the I-405 corridor from the Lynnwood Transit Center to the Tukwila International Boulevard light rail station, and from there via SR 518 to the Burien Transit Center. Bus Rapid Transit will operate in the Express Toll lanes between Totem Lake and Bellevue Transit Center and from the Bellevue Transit Center to south Renton. Vehicle access to the express toll lanes is limited and managed by Washington State Department Of Transportation (WSDOT) to ensure that BRT service can operate at 45 miles per hour or greater at least 90 percent of the time during the peak hour commute. On SR 518,

BRT will operate on principally exclusive right-of-way between Tukwila International Boulevard Station and the Burien Transit Center.

New inline freeway stations which allow buses to stop within the freeway right-of-way to pick up/unload riders will be built ~~at Northeast 85th Street in central Kirkland~~ at Northeast 85th Street and ~~Northeast NE 44th Street in north~~ Northeast NE 44th Street Renton. Additionally, a new transit center and parking garage will be built in south Renton. Bus Rapid Transit service will also connect with existing freeway stops and transit centers in Lynnwood, Canyon Park, in the vicinity of UW Bothell, Brickyard Park-and-Ride, Totem Lake, downtown Bellevue, Tukwila International Boulevard Station and Burien Transit Center. Parking will be added at Totem Lake, Northeast 44th Street ~~Northeast 44th Street~~ north Renton and south Renton, and Sound Transit will coordinate with third parties regarding potential transit-oriented development opportunities at these locations. New bus-only lanes will be added on Northeast 85th Street between Northeast 6th Street and I-405 in Kirkland. Sound Transit will coordinate with WSDOT regarding implementation of the I-405 Master Plan, including additional capital projects to improve bus speed and reliability for high-capacity transit service, should funding become available.

Bus Rapid Transit service that uses Business Access Transit (BAT) lanes on SR 522 will connect riders with the Link light rail station in Shoreline at I-5 and Northeast 145th Street, as well as I-405 BRT service near University of Washington Bothell and with service connections to Shoreline. This project will also include capital improvements on Northeast 145th Street at intersections. Additional parking will be provided in Lake Forest Park, Kenmore, and Bothell. This will improve transit options for residents of Shoreline, Lake Forest Park, Kenmore, Bothell and Woodinville areas.

ST Express Bus Service

Sound Transit's regional express bus system, which led the nation in number of commuter bus boardings for 2015, will continue building ridership in heavily-travelled corridors not served by rail and Bus Rapid Transit. Sound Transit 3 maintains interim express bus service in future High Capacity Transit (HCT) corridors, with an emphasis on long-haul connections between population and employment centers and providing riders with access to rail hubs.

Sound Transit 3 includes funding for capital improvements for interim express bus service to improve bus speed and reliability. This includes funding for capital investments for traffic signal and bus priority improvements on Madison Street BRT and facilities used by Metro's RapidRide C and D lines to move more people more efficiently through the heavily congested Ballard and West Seattle corridors while light rail is under design and construction. Sound Transit 3 ~~also contribute to the Madison Street BRT in Seattle and~~ provides investments for capital improvements for bus connections from east Pierce County to the Sumner Sounder station and along Pacific Avenue/SR 7 in Pierce County. Sound Transit 3 also includes frequent

ST Express bus service between Lakewood and the Tacoma Dome. Also, a park and ride facility will be built in north Sammamish.

The Bus-on-Shoulder program provides opportunities for buses to use shoulders on freeway and state highways during periods of congestion in general traffic and/or HOV lanes. This program requires coordination and further study with transit partners, WSDOT and the Federal Highway Administration to determine specific potential locations. Freeways that could be included in the program are I-5, I-405, SR 167, I-90 and SR 518. Improvements include capital infrastructure to enable the overall Bus-on-Shoulder program to operate efficiently.

Sound Transit works closely with transit and transportation partners, including Community Transit**,** Pierce Transit, Everett Transit, City of Seattle, King County Metro and WSDOT to extend the benefits of rail and Bus Rapid Transit services to more communities throughout the region by enabling our transit partners to redeploy bus hours in corridors as they become part of the regional high-capacity transit network through light rail transit and BRT projects. As rail corridors are built and extended, Sound Transit bus service funding for those corridors will be reallocated to operating costs for light rail services.

Sounder Commuter Rail

Sound Transit 3 includes funding to extend Sounder commuter rail service during peak hours from Lakewood to new stations at Tillicum and DuPont, increasing access near Joint Base Lewis-McChord. Parking is provided at both of these stations.

The Sounder south line capital improvement program helps meet growing demand for service by increasing system capacity and enhancing service. This program includes expanding platforms to accommodate up to 10-car trains, allowing Sound Transit to run longer trains and carry more riders. Access elements include improvements for pedestrians, bicyclists, buses and private vehicles, prioritized under Sound Transit's System Access Policy. In addition, track and signal upgrades and other related infrastructure will provide capacity for additional trips. Sound Transit will negotiate with Burlington Northern Santa Fe and affected organizations for additional trips to serve growing ridership along the Sounder south line, within available financial resources.

New parking and other access improvements are included at the Sounder north line's Edmonds and Mukilteo stations.

Planning for the Future

The plan includes studies to continue planning beyond Sound Transit 3 to expand the regional high-capacity transit system even farther, consistent with the regional transit system envisioned in Sound Transit's Long-Range Plan. Additional investments must be approved by voters. Sound Transit 3 includes a series of high-capacity transit planning studies that will help narrow the range of alternatives, evaluate potential routes and station locations, inform local comprehensive planning, prepare for environmental review and engineering, and position the Sound Transit Board to evaluate options to inform future updates to the Long-Range Plan.

High-capacity transit (HCT) studies in the Sound Transit 3 plan include connecting West Seattle to Burien and onto Renton via Tukwila; light rail connections across northern Lake Washington between SR 522 and SR 520, including connections between Ballard to the University of Washington and to the Eastside; commuter rail to Orting; HCT extension from Tacoma Dome to Tacoma Mall, and connections from Everett to North Everett. The Sound Transit 3 Plan also includes an environmental study examining multiple options to determine the mode and alignment for a HCT route from Bothell to Bellevue, including along the Eastside Rail Corridor and/or I-405, and planning for a future system expansion to continue implementing Sound Transit's Long-Range Plan.

PROGRAMS AND POLICIES

In addition to the projects described above, Sound Transit 3 also includes a series of programs and policies that will work together to provide a high-capacity transit system that:

- is accessible by walking, biking, transferring from other transit services, vehicle drop-off and pick-up, and parking;
- supports transit-oriented development;
- improves the system through innovation and technology;
- is sustainable.

These elements are provided at the individual project level and system-wide. For more details on these policies, consult Appendix D.

System Access

To serve the region's 3.7 million future residents, the Sound Transit Board of Directors has made multimodal access as a priority for Sound Transit 3. People will access the 116 miles of light rail, Sounder commuter rail stations north and south, and hundreds of thousands of annual ST Express Bus service hours, by walking, biking, parking, transferring from partner transit services, or using pick-up and drop-off areas.

With this plan, Sound Transit will combine robust, dedicated funding for access to the regional system, with ongoing planning that responds to evolving needs. The access investments included in the Sound Transit 3 plan conform to surrounding land uses, and the investments levels are based on the station type and location. Some stations are located in urban areas where pedestrian and bicycle access is needed. Other stations are located in suburban areas where travel by car is more common. Likewise, some stations are system hubs, where improvements to bus and rail transfers are emphasized. The Sound Transit 3 plan dedicates funding to improve safe and convenient access to existing and future Sound Transit bus and rail stations including resources to facilitate integration with partner services:

Project-level

- Bus-rail integration allowances: Integration with other transit services is a priority for the region. To facilitate convenient passenger transfers between modes, the cost estimates for the light rail projects described in the Sound Transit 3 plan include approximately $100 million ($2014) in integration allowances to build off-street facilities at key stations for buses to lay over and maintain consistent schedules. As Sound Transit expands light rail, Bus Rapid Transit, and express bus corridors, there will be more opportunities to create convenient transfers for bus riders.

- Access Allowance: Also included in the cost estimates for the light rail and bus rapid transit projects, each new Sound Transit 3 station has an Access Allowance based on the type of station (i.e., suburban, urban) of up to $4.5 million ($2014). In total, the cost estimates include approximately $270 million ($2014) in new Access Allowances for station areas that create safe, direct walking and bicycling routes to surrounding neighborhoods, businesses, and community gathering places.

- Parking access: Where identified in the project descriptions, funds are included for additional parking for transit riders. Sound Transit will evaluate potential locations for parking before implementing projects, including an analysis of access demand and how the investment will conform to surrounding land uses. Sound Transit has conducted pilot programs to provide reserved parking spaces for a small fee and real-time information about the availability of open parking spaces at some lots. In Sound Transit 3, the agency will work to make these options available throughout the region so that more people can predictably find a parking space rather than drive to work when they realize parking is full. This is consistent with Board-adopted policy that anticipates charging a reasonable price for parking that will help pay for new access infrastructure, while dedicating these earning towards further investments to additional local access improvements.

System-wide

- Sound Transit 3 System Access Fund: The System Access Fund provides an additional $100 million ($2014) allocated equally among Sound Transit's five sub-areas to fund projects such as safe sidewalks and protected bike lanes, improved bus-rail integration, and new pick-up and drop-off areas that provide convenient access so that more people can use Sound Transit services. Funds will be allocated based on an evaluation

of the needs of customers using Sound Transit existing and planned bus and rail stations. Sound Transit will partner with cities and other Sound Transit stakeholders to leverage grants and matching funds and create the best access solutions for each station. The System Access Fund includes funding to survey riders and conduct studies to help prioritize the most beneficial projects, whether retrofitting stations to accommodate growth or enhancing connections to neighborhoods.

Transit-Oriented Development (TOD)

Development around transit investments represents a significant opportunity both to shape communities that attract jobs and housing opportunities affordable at a range of incomes, and to improve equitable access to opportunities for current and future residents. Under this plan, Sound Transit will implement a regional equitable TOD strategy for diverse, vibrant, mixed-use and mixed-income communities consistent with transit-oriented development plans developed with community input by the regional transportation planning organization within Sound Transit's boundaries, such as the 2013 *Growing Transit Communities Strategy.* The plan allocates funds to support collaborative planning for TOD at the transit capital project development stage, as well as for planning and pre-development activities on agency-owned properties that may be developed as TOD. Sound Transit will specifically promote equitable TOD by:

Project-level

- TOD allowance: The cost estimates for the projects described in the Sound Transit 3 plan Section estimates include project allowances to fund appropriate TOD planning activities for each location expected to have surplus property.

System-wide

- TOD Fund: The Sound Transit 3 plan includes a TOD fund of $20 million($2014) to incorporate TOD considerations during land acquisition to ensure that, where possible, property that may later become surplus is supportive of its reuse for TOD;
- Working with local governments, housing authorities, non-profit developers, and others to inclusively plan for mixed-use, mixed-income transit communities, consistent with the *Growing Transit Communities Strategy* and other applicable regional plans and policies;
- First offering surplus properties that are suitable for housing for transfer at no cost, sale, or long-term lease to local governments, housing authorities, and non-profit developers to develop affordable housing as provided in statute; and

- Contributing $20 million (dollars in year of expenditure) to a regional revolving loan fund to support affordable housing creation.

Innovation

Transit, like all other industries, is in a constant state of development and change. While light rail, commuter rail and BRT are efficient ways to move large numbers of people around our region, the region needs to continue investing in technologies and innovations to make transit even more effective, efficient and convenient for more people. As new transportation technologies and approaches develop, Sound Transit will work to integrate them with its high-capacity transit services and facilities to create a robust and reliable, yet adaptable, network of regional mobility options.

System-wide

Sound Transit 3's Innovation and Technology Fund invests $75 million ($2014) in research and development of programs and technologies to:

- Deliver real-time service availability and travel option information to customers where and when they need it;
- Ensure transit accessibility and ease of use for riders of all ages, abilities and income levels;
- Make fare payment fast and convenient;
- Understand and meet the needs of employers and bulk-purchasers of transportation services;
- Better manage vehicle and bicycle parking for transit customers;
- Identify ways of improving the connectivity between transit facilities and the communities they serve;
- Partner with other public and private mobility providers including ferry, local transit, bikeshare, carshare, rideshare, shuttle and mobility-on-demand services;
- Identify and adopt best and emerging practices to better serve customers and enhance the environmental, social equity and economic benefits of high capacity transit;
- Maximize the ability of future transportation technologies such as driverless cars to complement and expand the reach of high-capacity transit; and
- Evaluate and implement other technologies to improve rider experience and/or save operating costs.

Sustainability

Sound Transit's mission to build, operate and expand regional transit is essential to central Puget Sound's sustainable future. Sound Transit is committed to making long-term investments that improve the region's economy, communities, and environment.

For Sound Transit, sustainability is both about fulfilling the agency's mission as a transit provider, as well as how that mission is accomplished. The proposed Sound Transit 3 expansion projects promote a sustainable central Puget Sound region by enabling more people to travel affordably and reliably throughout the area's growing communities on environmentally-friendly buses and trains.

Under this plan, Sound Transit will implement the goals articulated in its sustainability plans. Sustainability approaches will be integrated into all aspects of agency activities consistent with Board-adopted policy—from planning and design to construction and operations. Sound Transit's ongoing sustainability efforts include its commitment to environmental stewardship. Sound Transit Sustainability policies and plans contemplate that the agency will:

<u>Project-level</u>

- Sustainability Allowance: The project cost estimates include allowances to implement green building and infrastructure designs and meet third-party green building and infrastructure standards, where applicable.

<u>System-wide</u>

- Reduce the greenhouse gas emissions and air pollution generated during construction and operation of the Sound Transit 3 System Plan;
- Procure and manage fleets that demonstrate increasing fuel efficiency, including alternative fuels and low- and no-emission vehicles;
- Work to make the agency's electricity use carbon-neutral and maximize energy efficiency;
- Pursue innovative sustainability features and approaches over the duration of the Sound Transit 3 plan as industry best practices and national standards continue to evolve;
- Plan, design and construct a transit system that is resilient to the long-term impacts of climate change and other natural hazards; and
- Invest in technologies or services that can meet the agency's sustainability goals and/or reduce long-term operating costs.

Sales and Use Tax Offset Fee *to Support Educational Outcomes in the Sound Transit District*

As required by RCW 81.112.360, new ST3 projects are subject to a sales and use tax offset fee equal to 3.25% of the total payments made by Sound Transit to its contractors on construction contracts on which no other sales or use tax is paid by Sound Transit. This fee is equivalent to the sales tax that Sound Transit would have remitted to the state if ST 3 projects were not eligible for a statutory sales tax exemption applicable to the construction of public road and transit facilities. The offset fee will be deposited into a Puget Sound Taxpayer Accountability Account until Sound Transit has paid $518 million. Pursuant RCW 43.79.520, the Legislature can appropriate funds from the account for distribution to King, Pierce, and Snohomish Counties. The counties must use the appropriated funds to support services to improve educational outcomes in early learning, K-12, and higher education within the Sound Transit District. The educational services include, without limitation, services for youths that are low-income, homeless, or in foster care, or other vulnerable populations. Counties receiving distributions under this section must track all expenditures and uses of the funds. The law requires that to the greatest extent practicable, a county's expenditures must follow Sound Transit's subarea equity policy.

PUTTING THE SYSTEM IN PLACE

Project Delivery – Implementing the Plan

Based on public feedback throughout the development of the Sound Transit 3 plan, Sound Transit has been asked to identify ways to deliver projects faster. Major capital projects must go through multiple phases before transit services can start, including planning, environmental review, preliminary engineering and final design, property acquisition, permitting, third-party agreements, construction and start-up/testing programs. In addition, to ensure accountability and transparency about project development and delivery, engaging the public and stakeholders throughout these phases is critical. Working closely with project delivery partners who have land use, permitting, oversight or regulatory authority is central to maintaining project schedules.

Early Deliverables

The schedule for the plan includes multiple projects that will be delivered early in Sound Transit 3. These early deliverable projects are anticipated to be completed by 2019 to 2025. These projects include bus-on-shoulder opportunities, contributions to bus speed and reliability improvements for RapidRide C and D and Madison Street Bus Rapid Transit in Seattle, Pacific Avenue/SR 7 in Pierce County, in east Pierce County, Lakewood to Tacoma Dome service, parking for north line Sounder at Edmonds and Mukilteo, and a park-and-ride facility in north Sammamish. Bus Rapid Transit on I-405 and SR 518, and on SR 522 and Northeast 145th Street are also included.

Delivering Light Rail, Sounder, and ST Express Bus

Link light rail from Kent/Des Moines to Federal Way is scheduled to open in 2024, and the scheduled opening from Angle Lake to Kent/Des Moines has been adjusted to open at the same time. Link light rail from Redmond Technology Center to downtown Redmond is scheduled to open in 2024. Further extension south from Federal Way to Tacoma and an extension between downtown Seattle to West Seattle are scheduled to open in 2030. Link Light rail north from Lynnwood to Everett via the Southwest Everett Industrial Center is scheduled to open in 2036. The plan anticipates a new extension between downtown Seattle and Ballard to open in 2035. Infill stations are slated to open in 2031 at South Boeing Access Road, South Graham Street, and Northeast 130th Street. An extension of Tacoma Link to Tacoma Community College is scheduled for 2039, and a Link light rail line from south Kirkland to Issaquah is scheduled for 2041.

The extension of Sounder from Lakewood to DuPont is scheduled for 2036. The South Sounder Capital Improvements Program will provide funding for a series of improvements from 2024 to 2036.

ST Express Bus service will continue throughout the plan to provide interim service in future high-capacity transit corridors. Sound Transit will work closely with its transit partners to coordinate, integrate, and maximize bus service and restructure those services in response to new rail service.

Schedule Accountability Tools

To help maintain project delivery schedules, Sound Transit will work with project delivery partners to develop tools to provide clarity about project phasing requirements and schedules. Examples of these tools could include early agreements on permits needed for projects; establishment of project teams to obtain agreement on project scopes and schedules; or model term sheets to outline decisions related to the identification of preferred routing and profile choices.

Sound Transit will also seek to have third parties assign a single point of accountability for projects to ensure a streamlined and accountable process. Sound Transit will work with individual project partners to establish a common set of project goals based on the plan scope, schedule, and budget, and to identify the preferred project as early as possible in the environmental review process.

Sound Transit will ask local agencies to coordinate permit actions with federal, state and other agencies, including using the mitigation commitments described in the environmental documents and/or Record of Decision during permitting for mitigating potential environmental impacts of a project rather than using a city or county's authority to impose additional mitigation measures. Sound Transit will also seek code amendments and other agreements to facilitate the preparation, filing and diligent processing of any required permits, modifications, or renewals of permits, as soon as practicable, with the goal of receiving land use permit decisions within 120 days of submittal and other technical permit decisions sooner.

To further assist the region in meeting Sound Transit 3 delivery schedules, Sound Transit will work with project partners to develop and publish a master implementation schedule – a Schedule Dashboard – for all projects. This schedule will be reviewed and updated at regular intervals by the Board. Sound Transit staff will report schedule performance to the Sound Transit Board of Directors and the public, including factors contributing to schedule improvements or degradation.

THE SOUND TRANSIT DISTRICT

After the formation the Sound Transit District, state legislation in 2010 provided that when territory is annexed to a city located within the boundaries of the District, that new city territory is simultaneously included within the boundaries of the Sound Transit District. Such newly annexed territory is subject to all applicable Sound Transit taxes and other liabilities and obligations, notwithstanding any other provision of law.

The Sound Transit District is more than 1,000 square miles with a population of over 2.8 million people. There are more than 50 cities in the ~~d~~District, which includes most of the urban areas of King, Pierce and Snohomish counties.

Sound Transit is governed by an 18-member Board of Directors made up of local elected officials including mayors, city council members, county executives and county council members from within the Sound Transit District, and the Secretary of the Washington State Department of Transportation.

Annexations

After voters within the ~~d~~District have approved a ballot proposition authorizing local taxes to support implementation of the Sound Transit 3 plan, the Sound Transit Board may approve resolutions calling for elections to annex areas outside, but adjacent to, the Sound Transit District.

The legal requirements to annex areas into the Sound Transit District include the following:

> *The Sound Transit Board may call for annexation elections after consulting with any affected transit agencies and with the approval of the legislative authority of the city or town (if the area is incorporated) or with the approval of the area's county council (if it is unincorporated).*
>
> *Citizens in areas to be annexed are provided an opportunity to vote on proposed annexation and imposition of taxes at rates already imposed within the Sound Transit District boundaries.*
>
> *If approved by the voters, changes to the Sound Transit District boundaries may require changes in the make-up of the Sound Transit Board membership. Board membership must be "representative" of the proportion of the population from each county that falls within the Sound Transit District.*

Extending service outside the Sound Transit boundaries

Sound Transit may extend new services beyond its boundaries to make connections to significant regional destinations and allow areas outside of the ~~d~~District to function as part of the regional system. Such service extension would require agreements with the affected local transit agency and/or other appropriate government agencies.

Sound Transit will enter into agreements with agencies beyond the ~~d~~District boundary to integrate fares. This will allow flexible transfers among various operators and prevent people who live outside the ~~d~~District from being penalized financially for making regional trips by transit instead of by automobile.

BENEFITS OF THE PLAN

~~*The following benefits will be summarized below once the Sound Transit 3 System Plan project elements have been finalized. More detailed information will be able to be found in Appendices C and D to the plan once they are completed.*~~

Transportation Benefits (Please see Appendix A for more information.)

Transportation improvements are clearly linked to the growth, development, quality of life and economic vitality of our region. Sound Transit 3 proposes a range of transit improvements building on the investments Sound Transit has already made that serve increasing numbers of riders every year.

Transit investments create value within a community that goes beyond where or how many projects are built. Personal mobility, regional connections, the availability of transportation alternatives and impacts on growth patterns, quality of life and the economic well-being of the region are all measurable outcomes. The regional transit improvements included in Sound Transit 3 have many benefits for people throughout the Puget Sound region and will further the realization of the long-term growth management and quality of life goals embodied in the PSRC's Vision 2040 and Transportation 2040 plans, Sound Transit's Regional Transit Long-Range Plan and local land use plans and policies.

System Reliability

Reliability means arriving at the same time every time, regardless of gridlock on the roads or snow on the ground. Reliability is a critical factor in how people plan their travel and budget their time. Transportation system reliability has continued to decline in the Puget Sound region for several decades, both for car drivers and for transit riders whose travel times also suffer from worsening congestion in HOV lanes. This is primarily related to increases in the severity of traffic congestion and the greater likelihood of congestion occurring at any time of day or on any day of the week.

When people need to arrive somewhere by a specific time, whether to be on time for work, to catch a plane or to make a child's day care pick-up, they know that if the trip involves one of the region's most congested corridors at peak hours they should allow a great deal of extra time to get there.

The road network is reaching saturation, where even small increases in traffic result in large degradation in travel time.

Highway reliability

Reliability on streets and highways is affected by many factors including collisions, stalled vehicles and weather conditions, but the most important factor in the Central Puget Sound region is the volume of traffic and delays caused by congestion.
Hours of delay on the central Puget Sound region's freeways nearly doubled between 2010 and 2015, increasing by 95 percent. Delay increased by 18 percent between 2014 and 2015 alone.

As detailed in Table 1, WSDOT tracks reliability on the freeways for major commutes between pairs of cities, and calculates "95 percent reliable travel times" -- that is, the amount of time a driver needs to plan for to be sure of arriving on time 19 times out of 20. WSDOT data, compiled annually in major corridors, shows reliability on the region's highways to be steadily declining.

Table 1: Existing regional highway travel time reliability

Route Description	Existing Time at Posted Speeds	Average (Median) Peak Travel Time	Time to Ensure 95% On-Time Arrival	Additional Time for On-Time Arrival	% Additional Time for On-Time Arrival
Everett to Seattle	24 min	52 min	76 min	24 min	46%
Seattle to Everett	23 min	44 min	63 min	19 min	43%
Bellevue to Everett	23 min	47 min	62 min	15 min	32%
Overlake to Seattle	13 min	30 min	60 min	30 min	100%
South Lake Union to Ballard	10 min	19 min	27 min	8 min	42%
Bellevue to Overlake	5 min	7 min	12 min	5 min	71%
Bellevue to Issaquah	9 min	18 min	22 min	4 min	22%
Seattle to Federal Way	22 min	33 min	52 min	19 min	58%
Tacoma to Federal Way	12 min	14 min	16 min	2 min	14%
Tacoma to Lakewood	5 min	6 min	16 min	10 min	167%

Notes:
Highway times shown are from WSDOT 2015 Corridor Capacity Report, except for Ballard, which is from City of Seattle data.

Transit reliability

Sound Transit's Link light rail operates almost entirely on exclusive right of way. Most right of way is grade separated, with no interference from traffic. Even where there is no grade separation, Link light rail operates in its own right of way with specially programmed traffic signals that very seldom require trains to stop at intersections. This allows the service to maintain a very high level of reliability at all times of day. By contrast, Sound Transit's express buses rely heavily on regional HOV lanes that are performing worse each year. Between 2012 and 2014 alone, the Washington State Department of Transportation reported major deterioration of HOV lane travel times, as shown in Appendix C.

Link Light Rail Capacity

The capacity of rail transit is determined by a combination of the size of the vehicles, the number of vehicles on each train and how frequently the trains run. As with highway capacity, when speaking of rail capacity the important measure is the number of passengers that can be carried during the peak period, when the service is most in demand. This is usually referred to as "peak passengers per hour in the peak direction." The passenger moving capacity of the ST3 light rail system is quite large, especially in comparison to a roadway of similar width with mixed traffic. Table 2 shows the capacity of the light rail system.

Table 2: Link light rail system capacity (passengers per hour)

Peak frequency (minutes)	4-car trains per hour (1 direction)	Seated capacity: 74 per car (1 direction)	Comfortable capacity: 150 per car (1 direction)	Standard peak capacity: 200 per car (1 direction)	Standard peak capacity (2 directions)	Standard peak capacity (2 directions, 2 tunnels)*
3	20	6,000	12,000	16,000	32,000	64,000
4	15	4,440	9,000	12,000	24,000	48,000
6	10	2,960	6,000	8,000	16,000	32,000

*Assumes construction and operation of new downtown tunnel

With Sound Transit 3, between 657,000 and 797,000 trips will be taken daily in the region, approximately twice the number of trips taken today.

The following table summarizes the annual boardings and passenger miles projected for Link light rail, Sounder commuter rail, Bus Rapid Transit, and ST Express bus in 2040 with the ST3 Plan.

Table 3: Summary of Sound Transit ridership by mode (boardings)

	2014 Annual Riders	2040 Annual Riders with ST3	2040 Annual Passenger Miles with ST3
Link light rail	11.9 million	152 - 188 million	1,380 - 1,735 million
Sounder commuter rail	3.4 million	8 - 11 million	190 - 255 million
ST Bus Rapid Transit	n/a	7 - 9 million	51 - 58 million
ST Express Bus	17.7 million	9 - 10 million	79 - 91 million
Total	**33.0** million	**176 - 218** million	**1,700 - 2,139** million

Travel time savings

Looking ahead to 2040, after ST3 investments are completed, the region's transit riders are projected to save 16 to 22 million hours a year.

The following tables illustrate the reduction in vehicle miles traveled (VMT) and the expected travel time savings for the region's drivers and transit riders, achieved by the investments included in the ST3 plan.

This analysis is based on two scenarios for traffic in 2040: one with ST3 projects and one without ST3 projects. Accordingly, the numbers are estimates based on best practices. In the simplest terms, every car not driven because the driver chooses to travel by transit either reduces congestion or leaves space for another vehicle.

Table 4: Projected regional vehicle miles traveled reduction due to ST3

	Auto Vehicle Miles Traveled Reduction in 2040 with ST3
Reduction in annual vehicle miles traveled (switched to transit)	314 - 411 million
Reduction in annual trips in auto (switched to transit)	19 - 24 million

These two measures use the methods required by the Federal Transit Administration (FTA) for estimating environmental and congestion relief benefits for FTA New Starts funding applications. They are described in detail in the most recent edition of the *Final Interim Policy Guidance - FTA Capital Investment Program* (August 2015).

Table 5: Projected travel time savings for transit riders

	Transit Riders Time Savings in 2040 with ST3
Daily Hours Saved	51,000 - 67,000
Total Annual Hours Saved	16 - 22 million

Notes: These annual time savings include savings for both existing transit riders and new transit riders.

Combined Regional Rail Access

The reach of the regional transit investments made in Sound Transit 3 will be much greater than just the immediate vicinity of rail stations and transit centers.

Map 2 in Appendix C shows the access to the regional light rail and commuter rail systems when all ST3 improvements are in service. It depicts the geographic coverage of ¾-mile walk access and 2½-mile park-and-ride access to the rail stations, and the reach of existing local bus services (including average ¼ mile walk distance to the bus) that would allow access to the rail system with one transfer.

Approximately 84 percent of Sound Transit District residents and 93 percent of district employees would have convenient access to the region's high-reliability rail system in 2040.

- ~~Transit benefits~~
    - ~~Transit ridership; Transit capacity~~
    - ~~Travel time savings and reliability~~
    - ~~Transit system accessibility~~
    - ~~Activity center drive-alone travel reductions~~

Social, Mobility, Environmental and Economic Benefits

(See Appendix D for more information)

ST3 improvements can provide substantial benefits to all within the region, including minority, low-income, disabled, elderly, transit- dependent residents, and for those who are unable to or who prefer not to drive access to a variety of destinations throughout the region. Especially important for low-income households, Sound Transit 3 investments may make it possible to reduce the number of cars per household, and/or to reduce the annual number of miles driven and costs of vehicle operations and maintenance. For those who cannot drive or afford an automobile, Sound Transit 3 investments will greatly expand their ability to travel quickly and reliability throughout the region, whether they can walk or cycle to a Sound Transit station or stop, or connect via local transit or demand-responsive services.

When residents can access transit and other services without using their cars, they spend less money on transportation and consume less gasoline, which can help reduce air pollution and greenhouse gas emissions. Sound Transit 3 projects are projected to reduce the number of private vehicle miles traveled (VMT) by 362.2 million miles annually by 2040 (midpoint of range of 314-411 million miles annually). This would further reduce transportation-related greenhouse gas emissions by more than 130,000 metric tons annually in 2040.

Expanding transit can help reduce transportation-related air pollution and the diseases associated with them. The ST3 Plan represents an important step towards addressing the challenges of climate change by offering a reliable, low carbon transportation choice.

The ST3 Plan will provide all-day, reliable connections for travelers in the region's most congested corridors, which will cut travel time and costs, support jobs and the regional economy, and support job creation, as detailed in Appendix D. According to models developed by the Washington State Office of Financial Management, ST3 would support over 78,000 direct jobs and more than 144,000 indirect jobs over the 25-year period of construction, for a total of over 223,000 jobs. (A job is defined as full-time employment of one person for one year.)

- ~~Environmental benefits:~~
    - ~~Vehicle miles traveled (VMT) reduction~~
    - ~~Reduced fuel use~~
    - ~~Greenhouse gas emission reduction~~

PAYING FOR THE SYSTEM

Financial Plan framework

State law authorizes funding for regional transit investments through authorization of voter-approved taxes, a rental car tax, and other financing. The Sound Transit 3 plan will be funded by a combination of existing local taxes (nine-tenths of one percent sales and use tax, eight-tenths of one percent car rental tax, three-tenths of one percent of motor vehicle excise tax [end in 2028), along with new voter-approved local taxes (an additional five-tenths of one percent sales and use tax, eight-tenths of one percent of motor vehicle excise tax, and property tax of twenty-five cents per $1,000 of assessed valuation), an additional rental car tax of up to 1.372 percent if authorized by the Board; federal grants, and fares. Sound Transit will issue bonds backed by local tax collections within the Sound Transit District to help implement the Sound Transit 3 Plan.

Funding

The Sound Transit 3 plan is built on the following funding elements (all dollar values include inflation and represent year of expenditure dollars.) See Appendix A for more information.):

- *Sound Move* and Sound Transit 2 Surplus: Revenue generated from Sound Transit's existing taxes (nine-tenths of one percent sales and use tax, eight-tenths of one percent car rental tax, and three-tenths of one percent of motor vehicle excise tax [end 2028]), will continue to be used in addition to grants, fares and other miscellaneous sources. The revenue generated from this surplus that is available to be applied to the Sound Transit 3 program is estimated to be $8.6 billion.
- Sound Transit 3 tax revenues: The plan will seek voter approval to raise an additional five-tenths of one percent sales and use tax, a motor vehicle excise tax eight-tenths of one percent, and property tax of twenty-five cents per $1,000 of assessed valuation. Revenue from these taxes is estimated to generate $27.7 billion.
- Federal support: The Sound Transit 3 plan assumes an additional $4.7 billion in federal grants, supplementing local resources. These federal grants for capital programs include Federal Transit Administration formula grants and full funding grant agreements. No state or other federal grants are assumed for implementing the Sound Transit 3 plan.
- Bonding: Because transit facilities provide benefits over a long span of time, it is reasonable to finance a portion of their construction over a period of time that extends well beyond the construction timeframe. Sound Transit's debt financing capacity will be calculated by evaluating all revenues and deducting total operating expenses for net revenues available for debt service. The Sound Transit Board recognizes that its future bondholders will hold first claim against taxes pledged as repayment for outstanding bonds. The Sound Transit 3 plan includes an estimated $11.0 billion in bond financing.

- Fares: Sound Transit currently collects fare revenues from passengers using the system. As the Sound Transit 3 system is built out, the agency will continue to collect fares and other operating revenue. The Sound Transit 3 related fares and operating revenues are estimated to be $1.5 billion.
- Interest earnings: The Sound Transit 3 related interest earnings on net cash balances are estimated to be $333 million. Financial policies allocate these revenues to fund system-wide costs.

Estimated Costs

The Sound Transit 3 plan will cost an estimated $53.85 billion in capital and operating investments to expand the regional high-capacity transportation system. The capital and other associated costs that will be incurred from 2017 to 2041 are as follows (See Appendix A for more information):

- Sounder Commuter Rail capital: $2.23 billion
- Link light rail capital: $31.68 billion
- ST Express bus capital: $586 million
- Bus Rapid Transit capital: $1.81 billion
- System-wide activities: $2.62 billion
- Transit operations and maintenance: $5.21 billion
- Debt service: $6.99 billion
- State of Good Repair: $781 million
- Contribution to reserves: $908 million
- Contribution to system-wide: $1.03 billion

The capital cost estimates for the Sound Transit 3 plan were developed using standard cost-estimating techniques common in the transit industry and recommended by the Federal Transit Administration. They also reflect Sound Transit's experience in designing and building comparable facilities in the Central Puget Sound region. Sound Transit's cost estimating methods were reviewed by an independent Expert Review Panel that was appointed by the State of Washington.

Risk Assessment

Building a complex regional transit system over an extended period of time involves risk. Those risks and Sound Transit's approach to addressing them are summarized below.

- Tax base growth risks: The plan requires projections of revenue collections over an extended period of time. The agency relies on an independent revenue forecast that has been reviewed by the State's Expert Review Panel. The forecast projects sales tax revenue to grow at a compounded annual growth rate of 3.8 percent over the Sound Transit 3 plan.

- Federal funds risk: Sound Transit assumes the use of federal funds. These funds are contingent upon future Congressional authorization and may vary from initial Sound Transit 3 projects due to federal fiscal conditions, timing of Sound Transit 3 projects, and competition from other projects nationwide.

- Cost risk: The projects in Sound Transit 3 are based on conceptual engineering estimates. The risks for costs to grow beyond initial estimates include: faster than anticipated growth in construction costs; faster than anticipated growth in real estate values; the addition of new required elements or projects not currently included in the plan; and more expensive project elements. The Sound Transit Board will closely monitor and manage project scope and cost risks to minimize cost increases. In addition, the Sound Transit 3 plan includes contingencies within the project budgets that allow for uncertainties and unforeseen conditions that arise during the design and construction of the projects.

  The Sound Transit 3 plan also contains additional contingency to deal with revenue shortfalls or cost increases. The agency plans to maintain a 50 percent annual contingency (after payment of operating expense) above the amount necessary to pay debt service (1.5x net coverage policy). In the event that a sub-area'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;
  - Use excess subarea financial capacity and/or inter-subarea loans;
  - Extend the time to complete the system; or
  - Seek legislative authorization and voter approval for additional resources

Financial Policies

The Sound Transit 3 financial plan is based on the following principles, which are documented in the agency's financial policies and included in Appendix B. The financial policies also reflect the framework for completing Sound Transit 3 and provide tools for the Sound Transit Board to respond to future conditions. For more detailed information on revenues and expenditures, see Appendix A.

- Distributing revenues equitably: Local tax revenue generated in each of Sound Transit's five sub-areas generally will be used on Sound Transit projects and operations that

benefit that sub-area. Sub-areas may fund projects or services outside of the geographic boundary of the sub-area when the project benefits the residents and business of the funding sub-area.

- Financial management: To effectively manage voter-approved revenues and to efficiently manage the transit system, Sound Transit will maintain polices for debt and investment management, asset management, fares and operating expenses and grant management.
- Public accountability: Sound Transit will hire independent auditors and continue to appoint a citizen oversight committee to monitor Sound Transit performance in carrying out its public commitments.
- Voter approval requirement: The Sound Transit Board recognizes that the taxes approved by voters are intended to implement the system and to provide permanent funding for future operations, maintenance, capital replacement, and debt service for voter approved projects, programs, and services. The Board has the authority to fund those future costs through a continuation of the local taxes authorized by the voters. However, the Board pledges that after the voter-approved plan is completed, subsequent phase capital programs that continue local taxes at rates above those necessary to build, operate, and maintain the system and retire outstanding debt, will require approval by a vote of the citizens within the Sound Transit District.
- Sales Tax rollback: Upon completion of the capital projects in Sound Move, Sound Transit 2 and Sound Transit 3, the Board will initiate steps to roll back the rate of taxes collected by Sound Transit. Sound Transit will initiate an accelerated pay off schedule for any outstanding bonds whose retirement will not otherwise impair the ability to collect tax revenue and complete Sound Move, Sound Transit 2, or Sound Transit 3, or impair contractual obligations and bond covenants. Sound Transit will implement a sales tax rollback to a level necessary to pay the accelerated schedule for debt service on outstanding bonds, system operations and maintenance, fare integration, capital replacement and ongoing system-wide costs and reserves.