CAPITAL DELIVERY COST SAVING OPPORTUNITIES

Over the past year, Sound Transit Link project teams have identified over 500 potential cost savings opportunities and will continue to identify and assess new potential opportunities that could potentially be applied to projects in planning and design. Some of these opportunities, referred to as "Lever 1" opportunities, can be easily implemented as project refinements through the course of the planning and design process. Others are a bit more challenging and require coordination with other Sound Transit departments ("Lever 2" opportunities) or require concurrence from third parties and/or the Sound Transit Board ("Lever 3" opportunities). The most challenging cost savings opportunities to implement are those that would phase or defer segments of projects and/or construct a minimum operable segment ("Lever 4" opportunities).

Examples of "Lever 1" opportunities that can be incorporated into project planning or design:	• Optimizing West Seattle Link Extension guideway and Duwamish Crossing • Minimizing Graham Street Infill canopy cover on platform
Examples of "Lever 2" opportunities that require coordination with other ST departments such as Transit Operations before being incorporated into planning and design:	• Eliminating tail tracks at Tacoma Dome Link Extension's terminus station • Relocating an Everett Link Extension pocket track
Examples of "Lever 3" opportunities that require coordination and consensus from third parties and/or the Board:	• Removing Avalon Station from the West Seattle Link Extension alignment • Shifting the Everett Link Extension Line 2 terminus from Mariner to Ash Way station
Examples of "Lever 4" opportunities that would phase or defer segments of projects.	• Constructing Everett Link Extension to Southwest Everett Industrial Center • Constructing Ballard Link Extension to Smith Cove

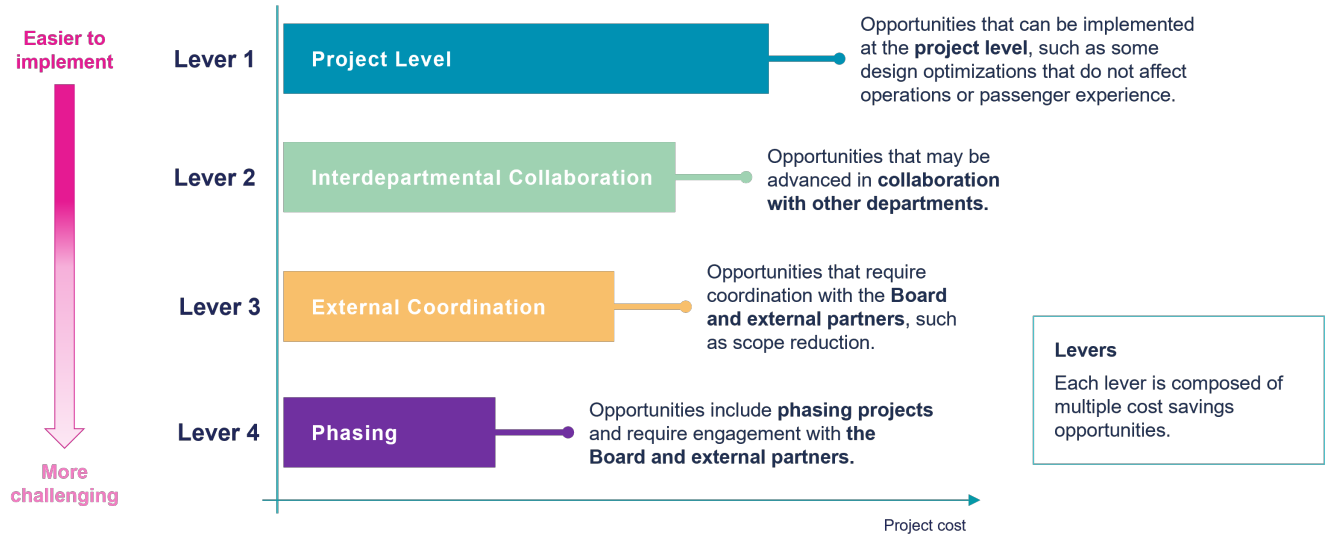


Figure 1: Cost saving levers introduction graphic

STATUS UPDATE ON COST SAVINGS FOR LINK PROJECTS

The following exhibit summarizes the overall range of cost savings that could be realized by applying each of the four levers to the four ST3 Link projects that are currently in planning and design (based on savings identified by the Capital Delivery Department Cost Savings Workplan in 2025). As projects progress from planning to final design (i.e., West Seattle Link Extension), greater design certainty is achieved and more information is available on corridor conditions—with this comes additional opportunities to find further cost savings.

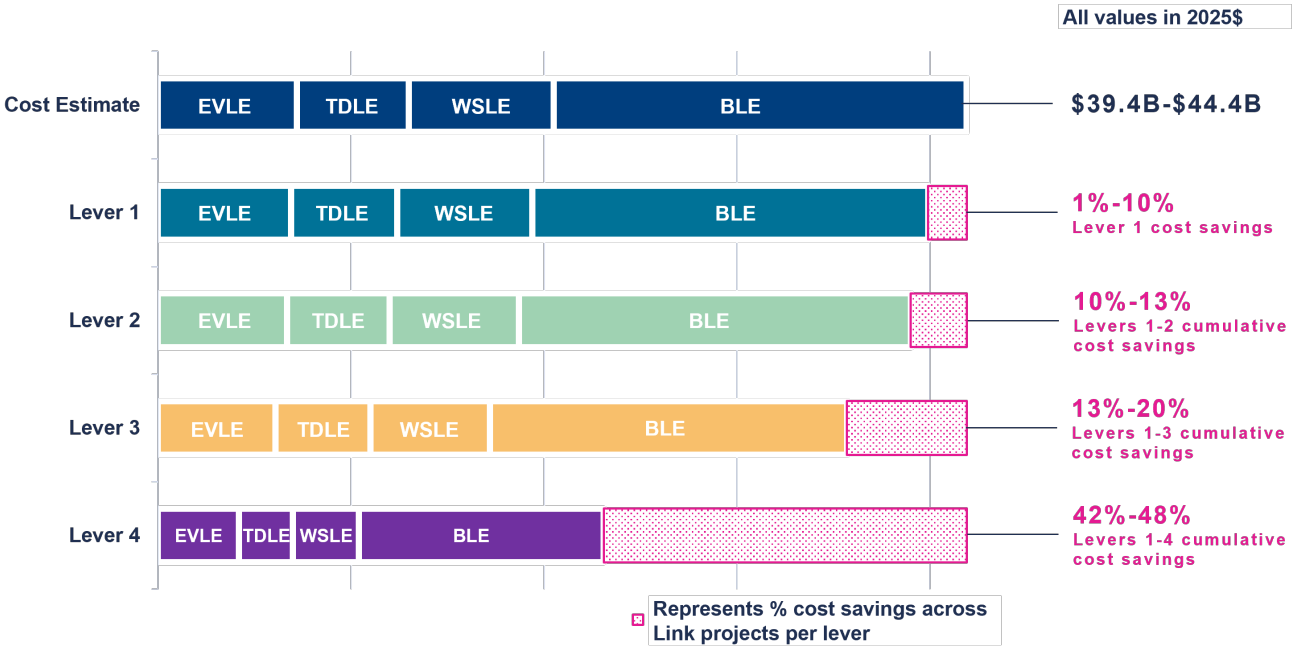
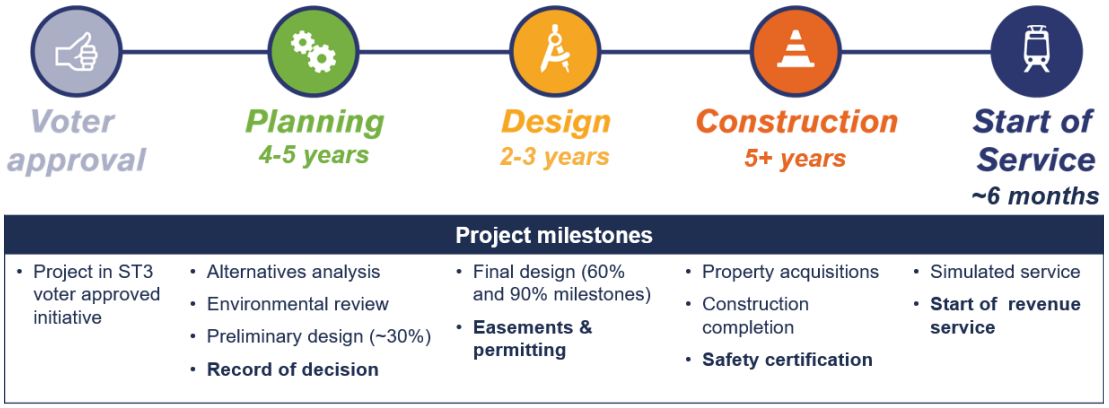


Figure 2: Status update on cost savings for Link projects

PROJECT STATUS UPDATES

Major ST3 capital projects must advance through planning, design, and construction phases before they are open to riders. During the planning phase, Sound Transit develops and evaluates alternatives, conducts environmental review (often with the Federal Transit Administration), and progresses design to define the project to be advanced into final design. During final design, project teams continue to refine project details, obtain property, and secure permits for construction. Additional cost savings can be found during this phase due to greater design certainty and a more thorough understanding of site conditions. Construction schedules, which often overlap with design, can also vary widely depending on the complexity of a project.



Timelines are general guidance and vary based on project scale and complexity

Figure 3: General project phases and milestones

The table below (**Table 1**) provides a summary of the ST3 Link projects and their current status of design development and environmental review. As shown, the first 6 projects are actively in planning and design. The Tacoma Community College Link and South Kirkland Issaquah Link projects are not yet in the planning phase. Project summary pages for the first 6 projects, as well as the OMF North and South projects are included in the pages that follow.

Table 1: Status of Design & Environmental Review by Project

Project	Status of Design & Environmental Review
West Seattle Link Extension	In advanced preliminary engineering Record of Decision received: April 2025
Ballard Link Extension	In advanced conceptual engineering Draft Environmental Impact Statement anticipated: Q2 2026
Everett Link Extension	In conceptual engineering Draft Environmental Impact Statement anticipated: Q3 2026
Tacoma Dome Link Extension	In advanced conceptual engineering Final Environmental Impact Statement anticipated: Q1 2027
Graham St. Infill Station	In preliminary engineering Environmental review completion anticipated: Q4 2026
Boeing Access Road Infill Station	In preliminary engineering Environmental review completion anticipated: Q2 2027
Tacoma Community College Link	Planning phase not yet started
South Kirkland Issaquah Link	Planning phase not yet started

WEST SEATTLE LINK EXTENSION

The West Seattle Link Extension (WSLE) project includes 4.1 miles of aerial, at-grade and tunnel guideway and 1 at-grade, 1 elevated, and 2 tunnel stations between Alaska Junction and SODO. In 2042, total daily trips on the project itself would range between 24,000 and 27,000 for all Build Alternatives depending on land use, economic, and bus service level assumptions.

WSLE cost estimates were updated in 2024 using a bottom-up method typical of the ~30% design milestone of the project. Previous estimates completed for the ~10% design milestone used a Unit Cost Library (UCL) based method. The 2024 update showed substantial cost growth from the previous estimate due to inflation, as well as two key areas:

(1) Greater estimating accuracy from bottom-up method better reflects unique corridor challenges and cost drivers.

(2) Specific project scopes elements, particularly the high-level fixed bridge over the Duwamish and a complex transfer station at SODO.

An Engineering Design Services consultant started work in summer 2025. They validated the design and key cost saving measures while also identifying additional cost saving measures, leading to additional project cost estimate reductions.

Unique Project Cost Drivers

- One Link transfer Station (SODO)
- High-level fixed bridge over the Duwamish
- Connection to OMF-C
- Tunnel stations in West Seattle Junction
- ROW costs reflect location in high-density urban corridor

Key Cost Saving Opportunities

*More than **150 cost saving opportunities***

Lever 1	$375M-$470M savings

- SODO Station optimizations
- Guideway & Duwamish Crossing optimizations
- Alaska Junction Station optimizations

West Seattle Link Extension

Guideway: 4.1 miles aerial, at-grade, and tunnel

Stations: 1 at-grade, 1 elevated, and 2 tunnel

Project Cost (2025$)	$7.1B - $7.9B
Design Status (% Completion)	30% Advanced Preliminary Engineering

Milestones

- **ROD:** Completed April 2025
- **Start of Final Design:** Anticipated Q3 2026
- **Start of Construction:** Anticipated 2028 / 2029

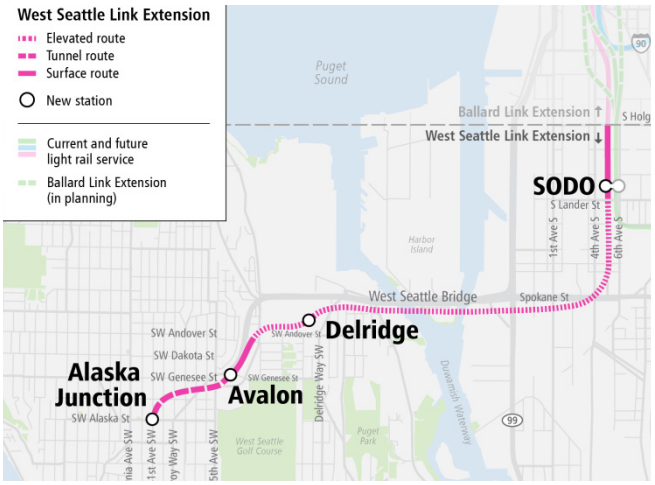


Fig 4: WSLE Alignment Project Map

Lever 2	$185M-$230M savings

- Trackwork optimization
- Crossover reconfiguration
- Tail track removal

Lever 3	$1.5B-$1.9B savings

- Shift Delridge Guideway north
- No Avalon Station

All values in 2025$

BALLARD LINK EXTENSION

The Ballard Link Extension project (**BLE**) includes 7.7 miles of tunnel, at-grade and elevated alignment including 7 tunnel, 1 retained cut and 1 elevated station.

Cost estimates for the project were last updated for 2022 Draft EIS using the Unit Cost Library approach before the 2025 estimate which used a bottom-up estimating approach.

The 2025 estimate showed substantial cost growth from the previous estimate predominantly due to the inflation factors discussed in the introduction and two other key factors:

(1) the bottom-up estimating approach more accurately captured quantities (particularly for the tunnel alignment and stations) and unique construction challenges in the project corridor; and

(2) project scope changes between 2022 and 2025 including additional property costs and a new tunnel segment and station.

Unique Project Cost Drivers

- Real Property costs in downtown Seattle
- Cut and cover and mined crossovers in a dense urban core
- 3.9 miles of twin bore tunnel (guideway) through downtown Seattle and Ballard and 7 tunnel stations
- Tunnel station costs
- Challenging geotechnical conditions

Key Cost Saving Opportunities

*More than **115 cost saving opportunities***

Lever 1	**$800M-$900M savings**

- Westlake Station Optimization: $70M-$80M
- Seattle Center Optimization: $420M-$470M

Lever 2	**$1B-$1.1B savings**

- Denny Station Crossover and Optimization $330M-$370M

Lever 3	**$2.7B-$3.0B savings**

- Consolidate Denny and SLU Stations: $1.5B-1.7B

Ballard Link Extension

Guideway: 7.7 miles tunnel, at-grade, and elevated

Stations: 1 retained cut, 1 elevated, and 7 tunnel

Project Cost (2025$)	$20.1B - $22.6B
Design Status (% Completion)	10-15% Advanced Conceptual Engineering

Milestones

- **DEIS publication:** Q2 2026
- **Modify/confirm PA:** Q3 2026
- **FEIS publication:** Q2 2027
- **ROD / Select project to be built:** Q3 2027

Fig 5: BLE Alignment Project Map

All values in 2025$

EVERETT LINK EXTENSION

The Everett Link Extension (**EVLE**) project is currently in the Draft EIS (DEIS) phase. EVLE cost estimates were updated in 2024 for the 10% design milestone using a bottom-up method. Previous estimates completed for the Alternatives Development phase used a Unit Cost Library (UCL) based method.

The 2024 update showed cost growth from the previous estimate due to the inflation factors as well as two key areas:

(1) Greater estimating accuracy from bottom-up method better reflects unique corridor designs and cost drivers.

(2) Specific project scope elements, particularly the Mariner Station (2 Line terminus) and multiple long-span bridge crossings of I-5 and SR 526.

Unique Project Cost Drivers

- 2 Line terminus station at Mariner Station requires two platforms and three elevated tracks
- Two long-span bridge crossings of I-5, three long-span crossings of SR 526
- More aerial guideway than assumed in earlier phases, which is more expensive
- Additional property acquisitions needed to maintain compatibility with potential WSDOT expansion
- Special track and track access points located on aerial guideways are more expensive than if they were located on at-grade guideway

Key Cost Saving Opportunities

*More than **80 cost saving opportunities***

Lever 1	$300M-$350M savings

- Ash Way Station Optimization: $25M-$30M
- Avoid Large Retail $55M-$70M

Lever 2	$500M-$600M savings

- West Alderwood Pocket Track: $70M-$85M savings

All values in 2025$

Everett Link Extension

Guideway: 16 miles; 11.5 miles aerial, 4.5 miles at-grade

Stations: 6 aerial and 1 provisional (unfunded)

Project Cost (2025$)	$6.8B - $7.7B
Design Status (% Completion)	19% Advanced Conceptual Engineering

Milestones

- **DEIS submitted:** Q3 2026
- **Board selects preferred alternative:** Q1 2027
- **Board selects project to be built:** Q4 2027
- **ROD:** Q1 2028

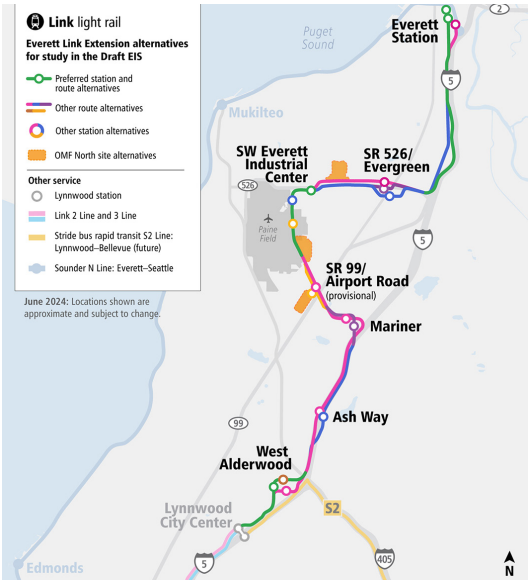


Fig 6: EVLE Alignment Project Map

Lever 3A	$850M-$1.1B savings

- SW Everett Industrial Center Guideway Optimization: $65M-$80M savings
- Shift Line 2 terminus from Mariner to Ash Way station: $180M-$200M capital savings ($250K-$400K annual O&M savings)

Lever 3B	$1B-$1.3B savings

- Defer a station: $150-300M savings

TACOMA DOME LINK EXTENSION

The Tacoma Dome Link Extension Project (**TDLE**) will extend light rail 8.5 miles from South Federal Way to the Tacoma Dome area in the City of Tacoma with four elevated stations at South Federal Way, Fife, Portland Ave, and the Tacoma Dome area. The project connects the region to employment, services, and educational opportunities in Pierce County and vice versa; and will be the first light rail line to serve a Tribal Reservation in the U.S. The project is currently planned to open in 2035 and is forecasted to carry up to 36,000 daily riders. The Draft EIS was published in December 2024, and the Board identified the preferred alternative in June 2025. The team is advancing the preferred alternative through preliminary engineering and will publish the Final EIS in Q1 2027.

TDLE cost estimates were updated in 2024 for the 10% design milestone using a bottom-up method. Previous estimates completed for the Alternatives Development phase used a Unit Cost Library (UCL) based method. The 2024 update showed cost growth from the previous estimate due to the inflation factors as well as greater estimating accuracy from bottom-up method to better reflect unique corridor designs and cost drivers.

Unique Project Cost Drivers

- 8.5 miles of mostly aerial guideway: limited ability for at-grade construction increases structural and foundation requirements.
- Complex bridge structure over the Puyallup River
- 4 aerial stations requiring structural and vertical access elements.
- Large environmental mitigation due to effects to existing ecosystems.
- ROW lower than other projects due to less expensive real estate

Tacoma Dome Link Extension

Guideway: 8.5 miles

Stations: 4 elevated

Project Cost (2025$)	$5.4B - $6.1B
Design Status (% Completion)	10-15% Advanced Conceptual Engineering

Milestones

- **Publish FEIS:** Q1 2027
- **Record of Decision:** Q3 2027
- **Final Design:** 2027-2029
- **Start of Construction:** 2029/2030

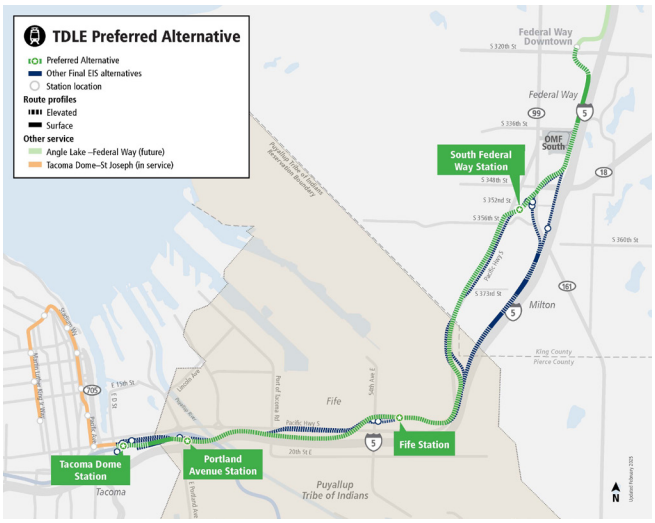


Fig 7: TDLE Alignment Project Map

Key Cost Saving Opportunities

*More than **65 cost saving opportunities***

Lever 1	$280M-$320M savings

- Eliminate mezzanines at stations: $30-40M
- Optimize vertical circulation to ridership: $25-30M

Lever 2	$440M-$500M savings

- Eliminate tail tracks $40M-$50M
- Convert stormwater vaults to pipe systems: $40-$50M

Lever 3	$740M-$830M savings

- Defer one station: $180M-$200M

All values in 2025$

INFILL STATIONS

The Graham St and Boeing Access Rd (BAR) station projects (**Infill Stations**) include two new light rail stations on the existing 1 Line.

Graham St Station is a new at-grade station on Martin Luther King Jr Way at S Graham St in Seattle's Rainier Valley, and Boeing Access Rd Station is a new elevated station on the west side of E Marginal Way just north of S 112th St in Tukwila.

The Infill Stations completed Conceptual Engineering (<10% design) in Winter 2025. In February 2026 the projects moved into Preliminary Engineering with a completion estimated in twelve months or February 2027. The final conceptual engineering-level estimates are being finalized. They will be ready by the end of February 2026.

Ridership in 2046 with the full buildout of ST3 at Graham St Station is estimated to be 2,700-4,100 daily boardings (net 1,200-2,000 boardings due to reductions to adjacent stations) and at Boeing Access Rd is estimated to be 1,600-2,100 daily boardings.

Estimates for cost saving opportunities will be refined during Preliminary Engineering.

Graham St Station

Guideway: existing 1 Line; Station: 1 at-grade

Project Cost (2025$)	$175M-$200M
Design Status (% Completion)	10% Preliminary Engineering

Boeing Access Road Station (BAR)

Guideway: existing 1 Line; Station: 1 elevated

Project Cost (2025$)	$425M-$475M
Design Status (% Completion)	10% Preliminary Engineering

Milestones	Graham St	BAR
DCE Approval	Q4 2026	Q1 2027
Board Action to Advance Project	Q3 2026	Q1 2027
Advancing Workplan Opportunities for cost reductions	Q1 2026	Q1 2026

Unique Project Cost Drivers

- One new crossover is needed for the Graham St station in order to meet ST headway standards, with potential long-term value for operational flexibility
- Operations and construction costs of constructing new stations on the existing 1 Line during active operation, resulting from work restrictions needed to maintain an acceptable level of service along the 1 Line (both stations)
- Property for stations was not acquired during Central Link construction, and utilities were not relocated to create buildable station footprints (both stations)
- ROW costs reflect locations in developed urban areas (both stations)
- Traction power substation potentially needs to be replaced (Boeing Access Rd)
- ROW costs for adding automatic pedestrian gates and refuge islands (Graham St)

INFILL STATIONS (CONT.)

Key Cost Saving Opportunities

Graham St Station: 9 opportunities	*Boeing Access Road Station: 6 opportunities*
Lever 1	
• Replace embedded rail with direct fixation track: $0 (Risk and schedule improvement) • Eliminate canopy cover on the platform: $1M-$2M • Use pre-cast platform panel segments with no deep foundation: $500K-$1M	• Eliminate canopy cover on the platform: $1M-$2M • Move Traction Power Substation outside station envelope: $0 (Risk and schedule improvement)
Lever 2	
• Only provide pedestrian access from one side of the platform: $500K-$1M • Do not install a new crossover: $2.7M • Do not realign southbound track to create tangent at station: $5.5M-$7M	• Do not provide escalators for vertical circulation (only stairs/elevator): $6M-$13M • Do not install a new crossover: $8.5M
Lever 3	
• 50% increase in construction efficiency with extended night closures of the 1 Line: $2M-$4M • Remove pedestrian gates: $1.5M-$2M • Replace sidewalks in kind and do not acquire additional property to meet current City of Seattle standards: $500K-$1M	• 50% increase in construction efficiency with extended night closures of the 1 Line: $4.7M-$9.4M • Do not provide park and ride, off-street transit, or pick-up/drop-off facilities: $24M

Fig 8: Graham St Station Project Map

Fig 9: Boeing Access Rd Station Project Map

OMF NORTH AND SOUTH

The Link Operations and Maintenance Facility South and North (**OMF Program**) is part of Sound Transit's efforts to expand its light rail network to 116 miles and more than 80 stations across central Puget Sound as laid out in the Sound Transit 3 (ST3) expansion plan. This expansion includes the Operations and Maintenance Facility South (OMF South), which is located in Federal Way, Washington, and the Operations and Maintenance Facility North (OMF North), which is anticipated to be located in Everett, Washington. These facilities will provide essential maintenance, storage, and operations support for Sound Transit's growing fleet of light rail vehicles (LRVs).

OMF South will be located on an approximately 70-acre site and will serve LRVs running on the Tacoma Dome and West Seattle Link Extension projects as well as support the entire system. It will provide space to store, test, commission, and maintain at least 144, 95-foot-long LRVs (or 72, 190-foot-long LRVs), and will include a Maintenance-of-Way Building and other support facilities. It will also provide mainline access to the building and yard.

OMF North will serve LRVs operating on the Everett Link Extension project as well as support the entire system. The facility will store, maintain, and deploy at least 152, 95-foot-long LRVs (or 76, 190-foot-long LRVs). OMF North is subject to environmental review under the National Environmental Policy Act and State Environmental Policy Act and is subject to final site selection and approval by the Sound Transit Board of Directors.

Unique Project Cost Drivers

- OMF South Project is currently within the Financial Plan (FP) – design to budget approach is being used to control budget to FP target
- 2023 Cost Savings Exercise resulted in seven opportunities, all completed to date.

Cost Saving Opportunities

- Cost opportunities for OMF North being assessed through network approach and optimization of specialized equipment between the sites
- Programmatic opportunities to be assessed

OMF South

Project Cost (2025$)	$2.2B
Design Status (% Completion)	30% Preliminary Engineering

OMF North

Project Cost (2025$)	$2.1B
Design Status (% Completion)	5% Conceptual Engineering

Milestones

- **Expected OMF South completion:** 2032

Fig 10: Maintenance Program Project Map

Current and future ridership summary

March 2026

The following tables provide Sound Transit system actual ridership by mode for 2025, the range of forecasted ridership for 2050 (Table 1), and project forecasts for ST3 light rail expansions, by project horizon year (Table 2). Project forecasts cannot be added or subtracted from the system forecasts.

Table 1: Sound Transit average weekday boardings by mode[1]

	2025 Actual	2050 Low Forecast	2050 High Forecast
Link (excluding T Line)	109,000	382,000	606,000
T Line	3,000	20,000	34,000
Sounder	8,000	17,000	37,000
Stride	-	31,000	51,000
ST Express	32,000	7,000	10,000

Table 2: Sound Transit Link project forecasts (projected riders)[2]

	Horizon Year	Low Forecast	High Forecast
West Seattle Link Extension	2042	24,000	27,000
Tacoma Dome Link Extension	2046	18,000	35,000
Ballard Link Extension	2046	90,000	147,000
Everett Link Extension	2046	28,000	51,000
South Kirkland–Issaquah Link Extension	2050	13,000	22,000

Assumptions

The 2050 low and high forecast ranges were developed by adjusting some input assumptions[3]: A new Road Usage Charge (RUC) mileage fee, proposed in the PSRC Regional Transportation Plan (2022), affects the choice to use transit and influences the forecasts. Additionally, PSRC is planning for a population increase of approximately one million by 2050; we adjust that assumption within the High and Low forecasts. Otherwise, the forecasts assume that the ST3 system is complete and that bus partner agency bus service leverages the expanded rail system, directing more riders onto the rail system.

Low forecast

- By 2050 there is a little less regional growth than planned.
- Parking costs in employment areas grow more slowly.
- Transit travel patterns remain like today with lower ridership due to more work from home, shopping from home, etc.
- Road Usage Charge is not implemented.

High forecast

- By 2050 there is a little more regional growth than planned.
- Parking costs in employment areas grow more quickly.
- Transit travel patterns somewhat recover to pre-pandemic levels.
- Road Usage Charge is implemented.

1. 2025 - ST Power BI Monthly Business Report, extracted February 6, 2026. 2050 - ST3 Forecast Update (October 2024)
2. Average weekday boardings are reported by month, not by year. These values were calculated by using a straight average of the reported average weekday boardings for the twelve months of 2025.
3. Except for WSLE forecast, where the range was developed primarily by adjusting the regional growth and RUC assumptions.