

Agency Progress Report Capital Programs



**U District Station
Northgate Link Ext.**



**120th Ave. Station
East Link Ext.**



Hilltop Tacoma Link Ext. OMF



OMF East

December | 2019



Editor's Note

Sound Transit's Quarterly Agency Progress Report summarizes projects and major contracts status, risk, and performance for capital projects.

Due to timing differences in the production of the APR and the ST financial statements, actual cost data presented in the APR may not match the quarterly financial statements. However, the actual cost data is reconciled to the financial statements on a monthly basis.

We always appreciate any suggestions you might have for future refinements to this document. To be added to the distribution list for this report or to make suggestions, please contact Aniekan Usoro at (206) 398-5000.

The Agency Progress Report can also be found on the web at <http://www.soundtransit.org/get-to-know-us/documents-reports/agency-progress-reports>.

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Agency Progress Report

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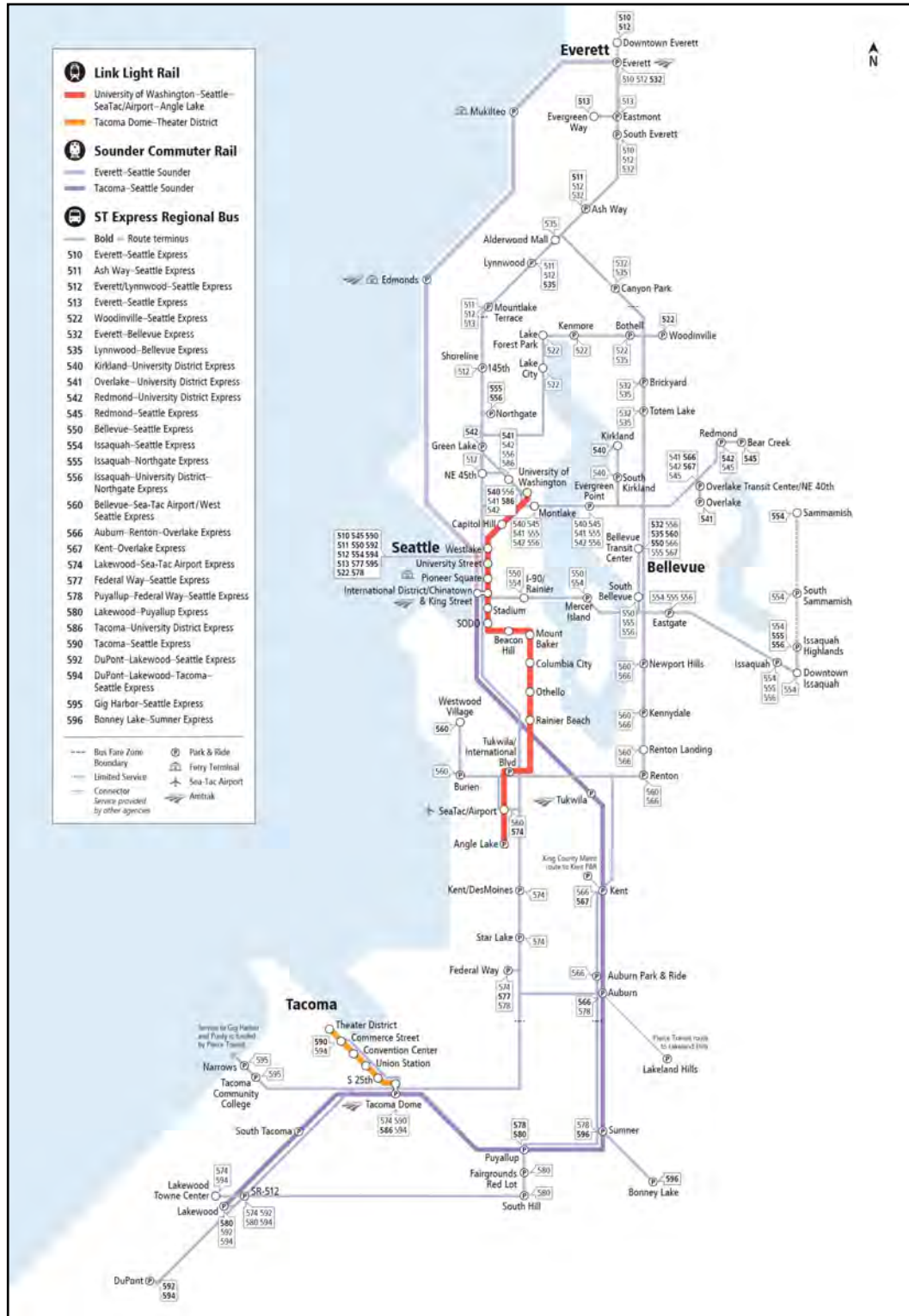
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SOUND TRANSIT CURRENT SERVICE



SOUND TRANSIT FUTURE SERVICE



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Agency Activities and Monitored Issues

Board Identifies Two Additional Alternatives for West Seattle and Ballard Link Extensions

In October, the Sound Transit Board identified two additional alternatives to study in the West Seattle Link Extension and Ballard Link Extension Draft Environmental Impact Statement (DEIS): the Yancy/Andover Elevated option and a SODO Partial Elevated option.

These alternatives will be analyzed in the DEIS along with the options the Board approved for study in May. Those original selection can be found at <https://www.soundtransit.org/system-expansion/west-seattle-ballard-link-extensions>.

Sound Transit will prepare the DEIS, followed by a public and agency comment period, in late 2020 and early 2021, respectively.

FFGA Transmittal and TIFIA Final Installment

In mid-December, the U.S. Department of Transportation notified Washington State's federal delegation of its intent to award the agency the \$790 million Full Funding Grant Agreement (FFGA) Sound Transit has been seeking for the Federal Way Link Extension project.

Accordingly, the Federal Transit Administration transmitted the \$790 million FFGA to Congress, which started the formal 30-day notification period.

They also awarded the final installment under the \$1.99 billion Transportation Infrastructure Finance and Innovation Act (TIFIA) Master Credit Agreement that Sound Transit signed with USDOT's Build America Bureau in 2016. In addition to the FFGA dollars, this fourth TIFIA installment, totaling \$629 million, will help fund the Federal Way Link Extension.



Top picture: Downtown Redmond Link Extension Groundbreaking

Bottom picture: Early design images (from design build contractor) of future downtown Redmond Station

Sound Transit Breaks Ground on Downtown Redmond Link Extension

In October, Sound Transit broke ground on Downtown Redmond Link Extension, which will add 3.4 miles and two stations, extending light rail from the Redmond Technology Station into southeast Redmond and downtown Redmond. Upon opening in 2024 riders will enjoy fast, frequent and reliable service between the Eastside and Seattle, the University of Washington, Sea-Tac Airport and south Snohomish County.

Agency Activities and Monitored Issues (continued)

Sound Transit Has a New Deputy CEO

The agency named Mary Cummings as a new Deputy CEO and Chief Administrative Officer. She will work alongside Deputy CEO and Chief System Officer Kimberly Farley.

Cummings held a number of executive roles at Verizon during the company's major startup and growth periods. She then transitioned to higher education, working at Carnegie Mellon University and Waynesburg University near Pittsburgh. She held several vice president and senior vice president roles at the university, and she also served as interim CFO.

Sound Transit Introduced On-demand Bike Lockers

To accommodate the growing number of cyclists using our system, Sound Transit introduced on-demand bike lockers in December at UW Link Station and added them at SODO and Rainier Beach stations as well. Sound Transit had previously leased key-access bike lockers to riders at SODO and Rainier Beach, and has now replaced those with electronic card-access BikeLink lockers.

This more than doubles the secure bike parking options at those two stations; locker spaces at SODO increased from 13 to 32, and at Rainier Beach from 16 to 34. UW Station was built with 286 rack spaces; the new installation added 60 BikeLink locker spaces and a retained a total of 234 rack spaces.

These new bike lockers will be available by the hour on a first-come, first-served basis, in contrast to Sound Transit's existing bike lockers, which are leased annually. Sound Transit contracted with BikeLink to install and operate the lockers, which cost 5 cents per hour. A BikeLink access card costs \$20 and comes with \$20 in credit.

Sound Transit Board Appointed a New Board Chair

Sound Transit Board appointed current Board member and Vice Chair Kent Keel as the new Board Chair beginning Jan. 1, 2020. Keel, the former University Place Mayor and current University Place Council Member, joined the Sound Transit Board in 2017 and is one of four Pierce County representatives in the 18-member body. He succeeds outgoing Chair and retiring Board Member John Marchione, the outgoing Redmond mayor, one of 10 King County representatives on the Board.

Sound Transit Prepares for Connect 2020

Sound Transit spent much of Q4 2019 focused on rider outreach in preparation for Connect 2020. This construction project, which ties the future East Link tracks to the current tracks at International District/Chinatown Station, requires 10 weeks of single-track service and causes a major service disruption for riders. Connect 2020 starts January 4, 2020

In the lead-up to Connect 2020, Sound Transit executed a complex communications strategy to encourage riders to plan ahead and to explain the impending service changes, including a mandatory transfer at Pioneer Square Station across a temporary center platform.

Sound Transit also began early construction prep work for Connect 2020. The advance work required closing service between Capitol Hill and SODO stations during two weekends, Oct. 12-13 and Oct. 26-27. During this time, free shuttle buses were provided between the stations, and ST staff served as Ambassadors in the field to assist riders.

Agency Activities and Monitored Issues (continued)

I-976 Update

At its Nov. 21 meeting, the Sound Transit Board discussed I-976, the statewide ballot initiative that passed in the Nov. 5 election.

I-976, which seeks to limit one of Sound Transit's revenue streams, car tabs, to \$30, and calls the agency to retire all its bonds, could conceivably cost Sound Transit \$7.2 billion in MVET and rental car tax revenue through 2041. I-976 would simultaneously increase project costs with project delays.

Presenting to the Board, Sound Transit General Counsel Desmond Brown and Sound Transit CFO Tracy Butler outlined potential legal and financial scenarios.

Brown noted that state law, as clarified by past Supreme Court decisions and reflected in the initiative itself as well as voter pamphlet language produced by the Attorney General, requires continued collection of Sound Transit's MVET until the retirement of bonds that the agency has promised to pay back with MVET revenues.

Butler elaborated on the ramifications of I-976's cost pressures, presenting several hypothetical project delays to note that inflation and increased interest costs would require the collection of an additional \$25 billion in taxes from local taxpayers. She estimated that existing Sound Transit taxes would have to be extended approximately 12 years. After the meeting, Sound Transit Board Chair John Marchione issued the following statement:

"While I-976 passed statewide, it failed within the Sound Transit District. The current estimate of 53 percent opposition is almost identical to the 54 percent who adopted the Sound Transit 3 program in 2016. For the second time in just three years, the district voters who actually pay Sound Transit's motor vehicle excise tax have endorsed its continuation to finance the transit expansions our region so desperately needs.

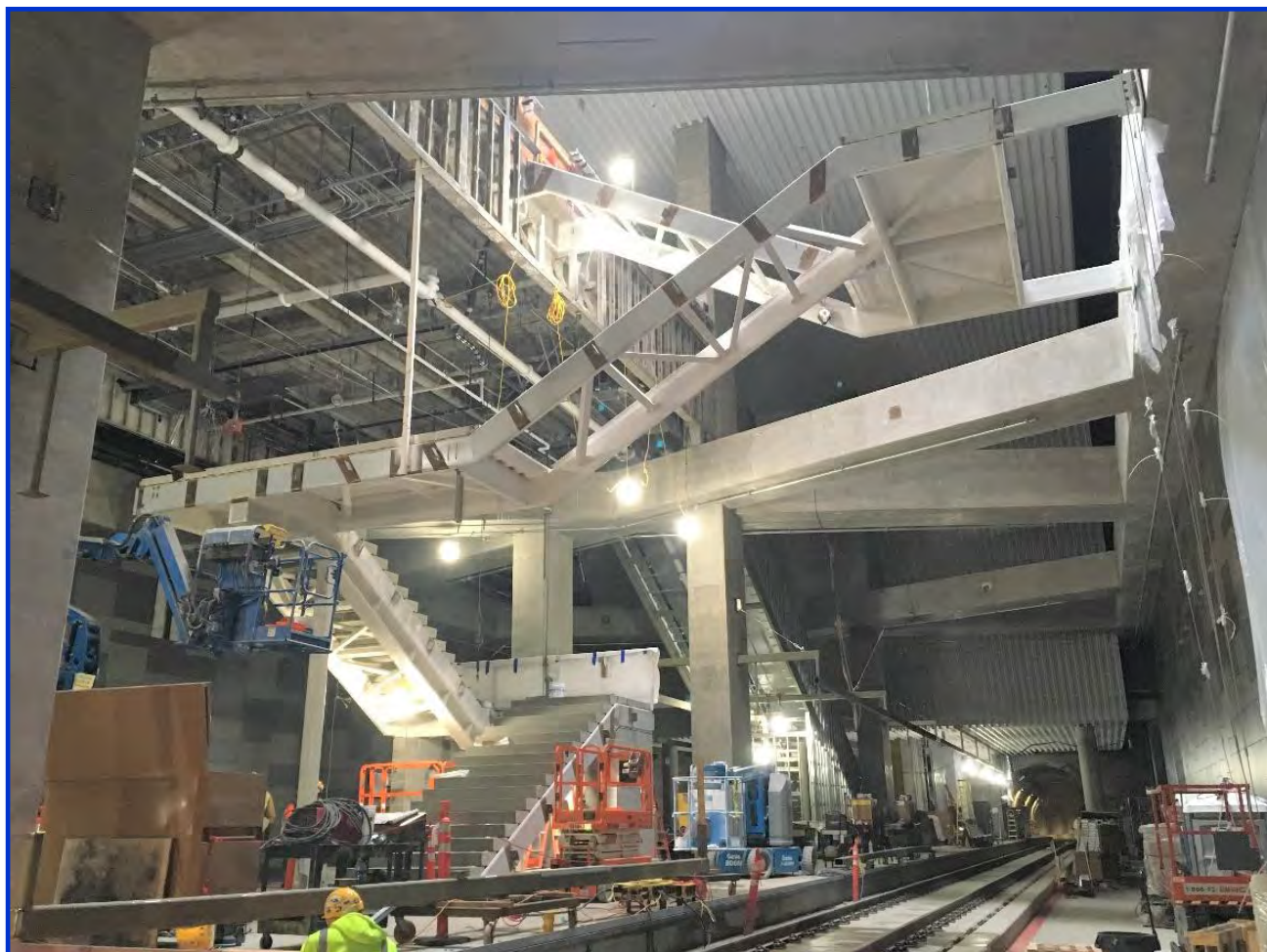
The initiative and the Attorney General's voter pamphlet summary both make clear that state law requires the MVET to be collected until Sound Transit's bonds are repaid. We intend to continue fulfilling our obligation to advance critical voter-approved projects and services while we monitor litigation and closely review legal issues surrounding this initiative. No action by the Board is needed or prudent at this time.

Significantly reducing revenues would leave no alternative to cutting and delaying critical projects and services that provide our citizens with a path out of ever-worsening congestion. This would harm our commuters, our economy and our environment at the same time our population growth, gridlock and climate challenges intensify. The greatest threats would fall upon completing light rail extensions to places like Tacoma, Everett, West Seattle, Ballard, South Kirkland and Issaquah, and to expanding Sounder commuter rail service within Pierce County and South King County in response to rising demand."

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Progress Report

Link Light Rail Program



*Public Staircase Installation at the U District Station
(Northgate Link Extension)*

December | 2019



Prepared by Project Control & VE | Design, Engineering & Construction Management



University Link Extension (U-Link): This project is a 3.15-mile light rail segment which is located entirely underground with tunnels traveling from Pine Street, under the I-5 freeway to an underground station at Capitol Hill, continuing north beneath SR 520 and the Montlake Cut to an underground station on the University of Washington campus, near Husky Stadium. The Sound Transit Board adopted the baseline capital budget of \$1.76B in July 2008. Revenue Service began on March 19, 2016.

Northgate Link Extension: The University of Washington Station (UWS) to Northgate project is a 4.3-mile extension of light rail from the UWS north under campus via twin-bored tunnels to an underground station at NE 45th Street continuing to an underground station at NE 65th Street and via tunnel, retained cut and elevated sections to Northgate. Revenue Service date is September 2021. The Sound Transit Board adopted the baseline capital budget of \$2.13B originally in 2012 and revised the baseline budget to \$1.89B in October 2015.

Lynnwood Link Extension: Lynnwood Link Extension extends light rail 8.5 miles to Snohomish County along I-5 from Northgate Mall in Seattle to the Lynnwood Transit Center, with four new light rail stations. The configuration includes at-grade, elevated, and retained cut/fill alignment. The Sound Transit Board adopted the baseline capital budget of \$2.77B on May 24, 2018.

East Link Extension: East Link Extension expands light rail to East King County via I-90 from Downtown Seattle to the Overlake Transit Center area of Redmond, with stations serving Rainier Avenue/I-90, Mercer Island, South Bellevue, Downtown Bellevue, Overlake Hospital, the Bel-Red corridor, Overlake Village and the Redmond Technology Center (formerly Overlake Transit Center). Revenue service to the Redmond Technology Station is forecast for June 2023 with a tunnel route in Downtown Bellevue. The Sound Transit Board adopted the baseline capital budget of \$3.67B in April 2015.

Downtown Redmond Link Extension: This project builds a new light rail from the Redmond Technology Station to downtown Redmond by 2024. Light rail will travel along SR-520 with two new stations in southeast Redmond, at Marymoor Park, and downtown Redmond. The ST Board adopted the baseline capital budget of \$1.53B on October 25, 2018.

West Seattle and Ballard Link Extensions: The West Seattle & Ballard Link Extensions are voter-approved projects under the ST3 Plan. West Seattle segment includes 4.7 miles of light rail from downtown Seattle to West Seattle's Junction neighborhood. It includes five light rail stations. The route will run primarily on elevated guideway with a new rail-only

bridge over Duwamish River. The Ballard segment includes 7.1 miles of light rail from downtown Seattle to Ballard's Market Street area. It includes nine light rail stations. The route will run through a new downtown Seattle rail-only tunnel, elevated guideway, and a rail-only bridge over Salmon Bay. The current budget for these projects through completion of Preliminary Engineering is \$286M.

Federal Way Link Extension: The Federal Way Link Extension adds approximately 7.8 miles of light rail from the Angle Lake Station in the City of SeaTac to the Federal Way City Center. The extension generally parallels SR 99 and I-5 freeway with stations at Kent/Des Moines, South 272nd Star Lake park-and-ride and the Federal Way Transit Center. The Sound Transit Board adopted the baseline capital budget of \$2.45B on September 27, 2018.

Hilltop Tacoma Link Extension: The Hilltop Tacoma Link Extension is a 2.4 mile extension of the existing Tacoma Link system from the Theater District in downtown Tacoma to the Hilltop neighborhood. The extension will travel at-grade along Stadium Way, North 1st Street, Division Avenue, and Martin Luther King Jr. Way. The Sound Transit Board adopted the baseline capital budget of \$217.3M in September 2017.

Tacoma Dome Link Extension: This project will extend light rail from the Federal Way Transit Center in the City of Federal Way to the Tacoma Dome area in the City of Tacoma a total distance of approximately 9.7 miles, generally along or near I-5 with three elevated stations at South Federal Way, Fife, and East Tacoma, and one at-grade/retained station at the Tacoma Dome. The budget for this project through completion of Preliminary Engineering in June 2019 is \$125.7M.

Link Operations and Maintenance Facility East: This project located in the City of Bellevue, includes a 160,000 square foot operations and maintenance facility that will maintain, store and deploy and expand light rail fleet, including seven LRV service bays, a LRV wash facility and storage for up to 96 light rail vehicles. The ST Board adopted the baseline capital budget of \$449.2M in July 2016.

Light Rail Vehicle (LRV) Fleet Expansion: This project includes the design, manufacturing, inspection, testing and delivery of 152 low floor LRVs for service requirements of Northgate, East Link and Lynnwood Link Extensions. The Sound Transit Board adopted the baseline capital budget of \$733M originally in 2015 and revised the baseline budget to \$740.7M in April 2017 to allow for the procurement of 30 additional vehicles.

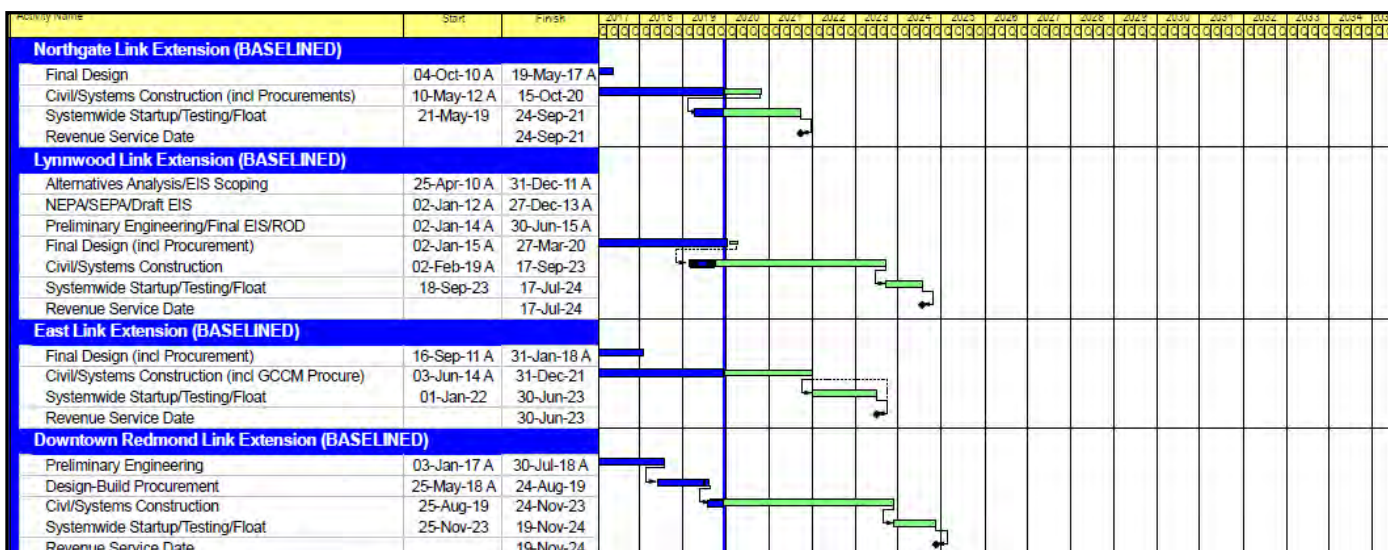
Program Budget

Project figures for active projects are represented in millions below.

Project	Authorized Project Allocation	Commitment to Date	Incurred to Date	Forecast to Complete	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
University Link Extension	\$1,756.0	\$1,519.1	\$1,514.9	\$31.4	\$1,550.5	\$205.5
Northgate Link Extension	\$1,899.8	\$1,680.3	\$1,568.6	\$167.0	\$1,847.3	\$52.5
Lynnwood Link Extension	\$2,771.6	\$2,202.7	\$579.8	\$569.0	\$2,771.6	\$0
East Link Extension	\$3,677.2	\$3,081.0	\$2,279.9	\$596.2	\$3,677.1	\$0
Downtown Redmond Link Ext.	\$1,530.0	\$862.6	\$110.0	\$667.4	\$1,530.0	\$0
West Seattle and Ballard Link Ext.	\$285.9	\$96.1	\$53.0	\$189.8	\$285.9	\$0
Federal Way Link Extension	\$2,451.5	\$1,511.1	\$336.7	\$940.5	\$2,451.5	\$0
Hilltop Tacoma Link Extension	\$217.3	\$192.6	\$102.8	\$24.8	\$217.3	\$0
Tacoma Dome Link Extension	\$125.7	\$55.3	\$20.6	\$70.3	\$125.7	\$0
Link O & M Facility: East	\$449.2	\$361.7	\$282.1	\$87.6	\$449.2	\$0
LRV Fleet Expansion	\$740.7	\$668.4	\$169.1	\$72.3	\$740.7	\$0
Total Link	\$15,904.9	\$12,230.7	\$7,017.6	\$3,416.2	\$15,646.9	\$258.0

Program Schedule

Schedules for active projects are summarized below.

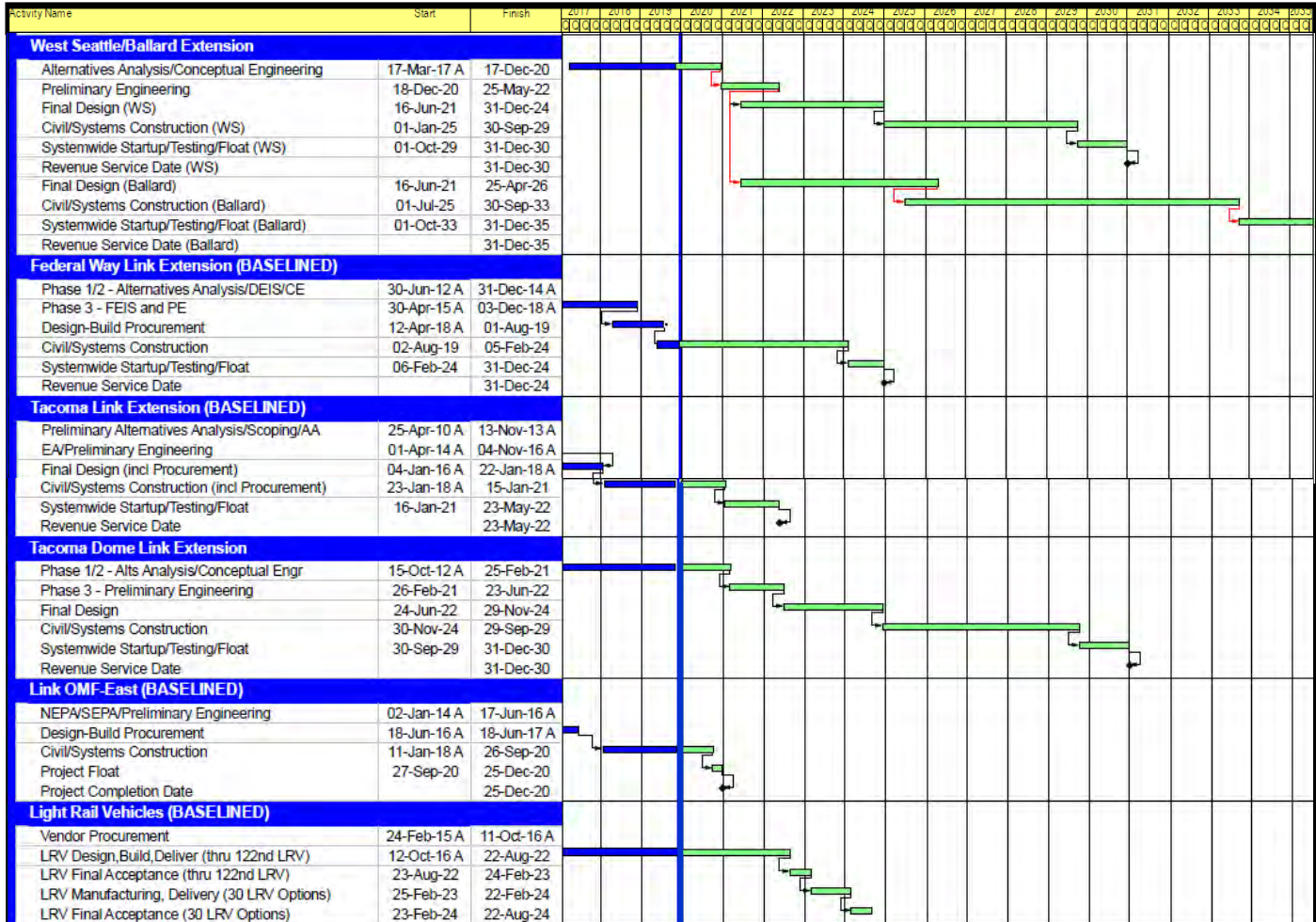


Link Light Rail Program Overview



Program Schedule

Schedules for active projects are summarized below.



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Link Light Rail University Link Extension

Project Summary

Scope

Limits 3.15-mile extension of the Initial Segment light rail transit (LRT) system from the Pine Street Stub Tunnel (PSST) in downtown Seattle to University of Washington (UW) campus near Husky Stadium.

Tunnels Two twin bored tunnels. Two contract segments: U220 starts at Husky Stadium, continues beneath SR 520 and the Montlake Cut south to the Capitol Hill underground station. U230 commences at Capitol Hill Station and proceeds south under the I-5 freeway to the PSST.

Stations Two underground center platform stations – Capitol Hill (U240) and University of Washington (U250). U240 is approximately 65' underground with three station entrances. U250 is about 100' below ground, with three station entrances and connections to the UW campus by a pedestrian bridge.

Systems 27 LRV; direct fixation tracks, signals, traction electrification, and SCADA communications

Budget \$1.948 billion including finance cost (capital subtotal of \$1.756 billion)

Schedule Revenue Service began March 19, 2016



Map of Project Alignment

Key Project Activities

- Certificate of Occupancy (C of O): University Link continues to operate under a temporary certificate of occupancy until all permit requirements are fully met. All C of O for stations has been issued. The request for system/tunnel C of O for the University Link, continues to await for Seattle Department of Transportation's approval. Seattle Fire Department has recommended for its approval.
- Miscellaneous follow-on commitments and restoration work remains including but not limited to the following: Additional UW escalator work, decommissioning of monitoring wells, restoration of the systems staging area on Pine Street, power reliability and vibration monitoring and other follow up on various minor commitments from the Record of Decisions.
- Before and After Study is complete. Finalizing report and is working with FTA on various clarifications. This report is now anticipated to be completed in 1st QTR 2020.
- *This will be the last update on this project in the Agency Progress Report.*

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

University Link's projected Estimated Final Cost (EFC) including Finance Cost remains at about \$1.75B. As the project inches closer to close out, the timing for expenditure becomes less predictable. This period, the project expenditure was negligible, total project expenditure remain at \$1.51B (Finance Cost excluded). Current activities continues to pertain to close out and miscellaneous follow on work. The Construction EFC continues to be approximately \$1.02B. This trend continues to hold as the project is substantially complete with only miscellaneous follow on scope and commercial issues remaining. The Total Incurred to Date for the Construction Phase is approximately \$997M and LRV is at about \$99.2M. Cost of LRV repairs were excluded from this project and tracked independently.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$115.2	\$113.6	\$84.0	\$84.0	\$88.2	\$25.4
Preliminary Engineering	\$24.4	\$24.3	\$24.3	\$24.3	\$24.3	\$0.0
Final Design	\$77.9	\$90.3	\$86.8	\$86.8	\$88.0	\$2.3
Construction Services	\$68.5	\$94.8	\$86.6	\$86.6	\$88.4	\$6.4
3rd Party Agreements	\$18.6	\$18.6	\$11.7	\$11.3	\$13.2	\$5.4
Construction	\$1,180.0	\$1,158.2	\$1,000.2	\$996.3	\$1,019.7	\$138.5
Vehicles	\$103.9	\$103.9	\$99.2	\$99.2	\$101.9	\$2.0
ROW	\$167.3	\$152.3	\$126.4	\$126.4	\$126.8	\$25.5
Capital Total	\$1,756.0	\$1,756.0	\$1,519.1	\$1,515.5	\$1,550.5	\$205.5
Finance Cost	\$191.7	\$191.7	\$191.7	\$174.9	\$191.7	\$0.0
Project Total	\$1,947.7	\$1,947.7	\$1,710.8	\$1,690.3	\$1,742.2	\$205.5

Totals may not equal column sums due to rounding of line entries.

Construction commitment under the SCC format remains relatively unchanged at about \$1B. Construction SCC expenditures to date is approximately \$984 this period and miscellaneous follow on work project level commitments prior to close out. Total capital cost incurred to date including non-construction cost (SCC 60 thru 90) is now just over \$1.51B or about 86% of total project budgeted scoped (Finance Cost excluded). Total project cost incurred to date at the end of this period including Finance Cost is at \$1.69B. The financing cost Incurred to Date is about \$175M. University Link EFC continues to be projected to close out with at least \$205M under budget excluding financing cost.

Link Light Rail University Link Extension



Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$626.8	\$450.5	\$456.5	\$456.4	\$461.6	(\$11.2)
20 Stations	\$366.3	\$350.8	\$349.2	\$347.3	\$353.1	(\$2.4)
30 Support Facilities: Yards,	\$7.0	\$24.8	\$23.5	\$23.5	\$24.8	\$0.0
40 Sitework & Special Conditions	\$59.0	\$67.4	\$55.9	\$55.2	\$55.2	\$12.2
50 Systems	\$69.6	\$116.4	\$102.0	\$102.0	\$101.9	\$14.6
Construction Subtotal (10 - 50)	\$1,128.8	\$1,009.9	\$987.1	\$984.5	\$996.6	\$13.3
60 Row, Land, Existing Improvements	\$167.3	\$126.6	\$126.4	\$126.4	\$125.8	\$0.8
70 Vehicles	\$99.8	\$100.2	\$99.9	\$99.9	\$100.2	\$0.0
80 Professional Services	\$306.4	\$346.6	\$305.7	\$304.1	\$316.5	\$30.1
90 Unallocated Contingency	\$53.7	\$172.8	\$0.0	\$0.0	\$11.5	\$161.3
Capital Total (10 - 90)	\$1,756.0	\$1,756.0	\$1,519.1	\$1,514.9	\$1,550.5	\$205.5
100 Finance Cost	\$191.7	\$191.7	\$191.7	\$174.9	\$191.7	\$0.0
Project Total	\$1,947.7	\$1,947.7	\$1,710.8	\$1,690.3	\$1,742.2	\$205.5

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Link Light Rail Northgate Link Extension

Project Summary

Scope

Limits The Northgate Link Extension consists of 4.3 miles of light rail extending from the University of Washington to Northgate.

Alignment The extension begins at UW Station, continues under UW campus, then north to a portal at NE 94th Street, then transitioning to an aerial structure north to Northgate Mall.

Stations U District Station (UDS)
Roosevelt Station (RVS)
Northgate Station and Parking Garage

Systems Signals, track electrification, and SCADA communications

Phase Construction

Budget \$1.899 Billion

Schedule Revenue Service: September 2021



Map of Project Alignment

Key Project Activities

- **U District Station/UW Campus (N140):** On Brooklyn Avenue and 43rd Street, crews commenced excavation for light pole conduits and continued electrical build-out for power, lighting and fire alarm in the north elevator machine room. Crews continued installing elevator 1 at the south end of the station. L&I inspected Elevator 2 at the north end for construction use.
- **Roosevelt Station (N150):** Staff obtained L&I sign off on Escalators 1-8. Crews continue punchlist and change order work throughout the station. The Standard Radio canopy was fully installed at the south entrance. Landscapers commenced installation of trees and plants at the south entrance and at the 12th Avenue and north entrance planters.
- **Northgate Station (N160): Station:** The electrical contractor is continuing with ceiling light conduits at the platform level and installing power panel and lighting panel in the Main Electrical Room. Mid-American continued work on escalator 1 rail tensioners. Escalator 1 is estimated to be 95% complete.
- **Trackwork (N180):** Northbound and Southbound track is complete throughout work areas across the Northgate alignment. Crews continue installing the Pedestrian Cross Panels at the north and south ends of the trackway.
- **Environmental:** Environmental and safety site walks conducted on all Northgate contracts.

Closely Monitored Issues

N830 Northgate Systems Construction: The construction staff is monitoring ongoing difficulties with the subcontractor schedule at Northgate Station. The subcontractor is not achieving what is reflected in the schedule.

Project Cost Summary

The project cost is summarized in two cost categories. The first table summarizes cost in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes the project in accordance with the FTA's Standard Cost Category (SCC) format. The figures in both tables are shown in millions.

The Estimated Final Cost (EFC) for the project as of this reporting period is \$1,847.3M, which is \$52.5M below the current project budget, unchanged since last period. This period approximately \$17.8M was incurred, primarily on the major construction and construction support contracts.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$144.9	\$144.9	\$79.8	\$80.2	\$129.5	\$15.4
Preliminary Engineering	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$0.0
Final Design	\$132.2	\$132.2	\$124.6	\$120.4	\$132.7	-\$0.5
Construction Services	\$118.3	\$118.3	\$103.1	\$90.0	\$116.9	\$1.4
3rd Party Agreements	\$11.8	\$11.8	\$8.4	\$7.3	\$11.4	\$0.4
Construction	\$1,343.0	\$1,343.0	\$1,248.1	\$1,154.2	\$1,335.1	\$7.9
ROW	\$112.3	\$112.3	\$101.3	\$101.3	\$106.7	\$5.6
Project Contingency	\$22.2	\$22.2	\$0.0	\$0.0	\$0.0	\$22.2
Total	\$1,899.8	\$1,899.8	\$1,680.3	\$1,568.6	\$1,847.3	\$52.5

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$595.6	\$548.2	\$517.7	\$510.2	\$531.7	\$16.5
20 Stations	\$376.1	\$425.1	\$435.4	\$407.3	\$455.4	-\$30.3
30 Support Facilities: Yard, Shop	\$5.3	\$6.1	\$6.5	\$6.5	\$6.5	-\$0.3
40 Sitework & Special Conditions	\$140.8	\$230.7	\$170.4	\$162.2	\$194.1	\$36.6
50 Systems	\$110.9	\$98.5	\$107.6	\$56.9	\$117.1	-\$18.6
Construction Subtotal (10 - 50)	\$1,228.7	\$1,308.6	\$1,237.6	\$1,143.0	\$1,304.8	\$3.8
60 Row, Land, Existing Improvements	\$119.9	\$110.9	\$101.3	\$101.3	\$105.5	\$5.4
80 Professional Services	\$420.7	\$431.6	\$341.4	\$324.3	\$424.3	\$7.3
90 Contingency	\$130.4	\$48.7	\$0.0	\$0.0	\$12.7	\$36.0
Total (10 - 90)	\$1,899.8	\$1,899.8	\$1,680.3	\$1,568.6	\$1,847.3	\$52.5

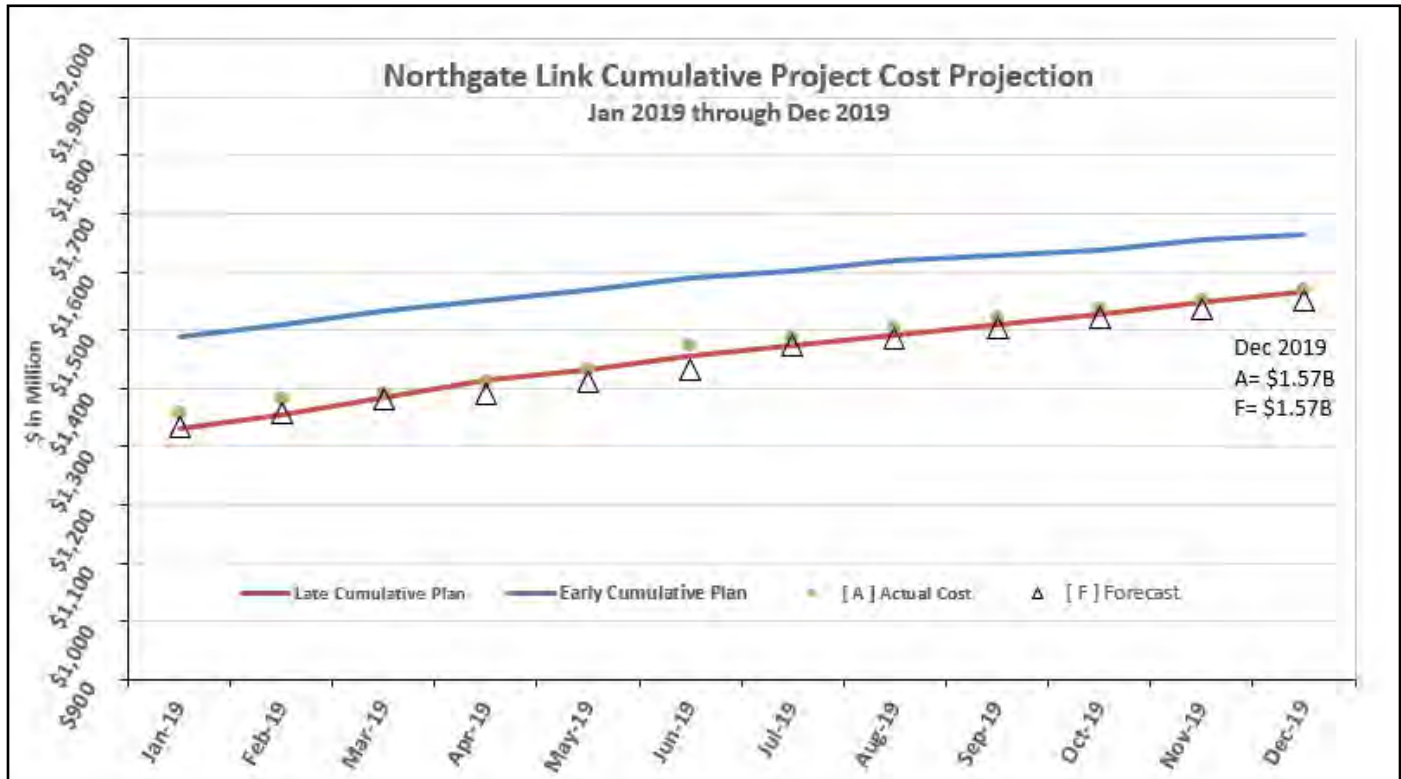
Link Light Rail Northgate Link Extension



Project Cash Flow Projection

The Northgate Link cost aligns with the planned expenditures as construction activities continue.

Total project cost to date reached \$1.57 B of which about \$1.15 B (74%) is attributed to construction. The project cost matched its forecast of \$1.57 B by December 2019, reflecting continued active construction activities.



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks. The top project-wide risks are:

- Insufficient operations and maintenance staff to support testing and commissioning activities (no impacts to date).
- The recent work associated with Brocade core switch replacement has identified a project risk that the existing moxa switches may not interface with the CISCO switches. This causes the redundant network to not failover automatically. OT and IT are currently testing the setup and working on a solution which needs to be monitored.
- Lack of new LRV availability: 40 new Siemens Light Rail Vehicles (LRVs) are required in order for Northgate Link to enter into Revenue Service. These LRVs are being procured through a separate project outside of the Northgate Link Extension. Currently, the LRV manufacturer, Siemens, is behind schedule with their early car production and delivery. Continued delays will lead to a scenario where not enough LRVs will be tested and ready for Northgate Link Revenue Service.

Contingency Management

The Northgate Link project budget was baselined in 2012 with a total contingency of \$396.2M.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA has been fully depleted and all major contracts have been awarded.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties.

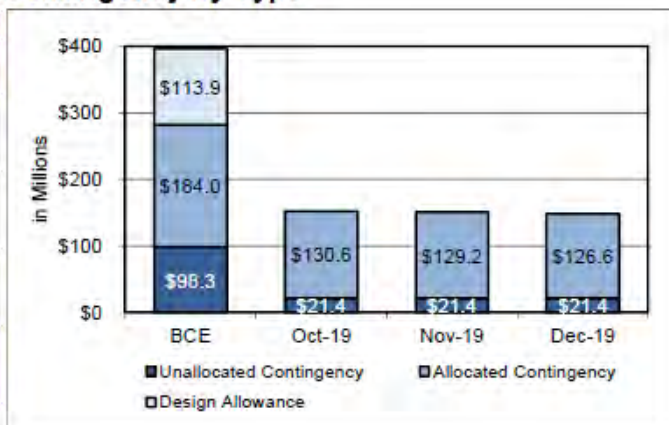
In this period, AC decreased by \$2.6 M, due to change orders on design, construction management, and construction contracts. UAC was unchanged in this period. The overall UAC balance remains well above both the minimum and the buffer zone contingency levels.

Contingency Status (Monthly)

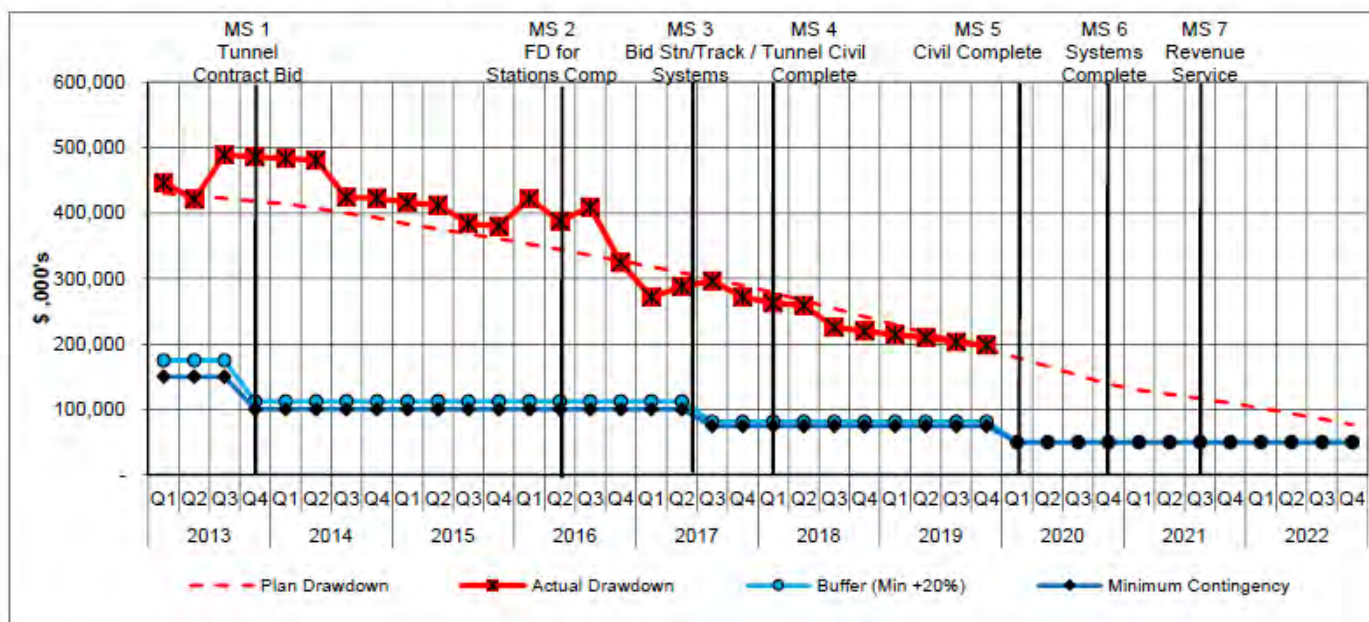
Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$113.9	6.0%	\$0.0	0.0%
Allocated Contingency	\$184.0	9.7%	\$126.6	42.7%
Unallocated Contingency	\$98.3	5.2%	\$21.4	7.2%
Total:	\$396.2	20.9%	\$148.0	50.0%

Table figures are shown in millions.

Contingency by Type



Contingency Drawdown (Quarterly)



Link Light Rail Northgate Link Extension

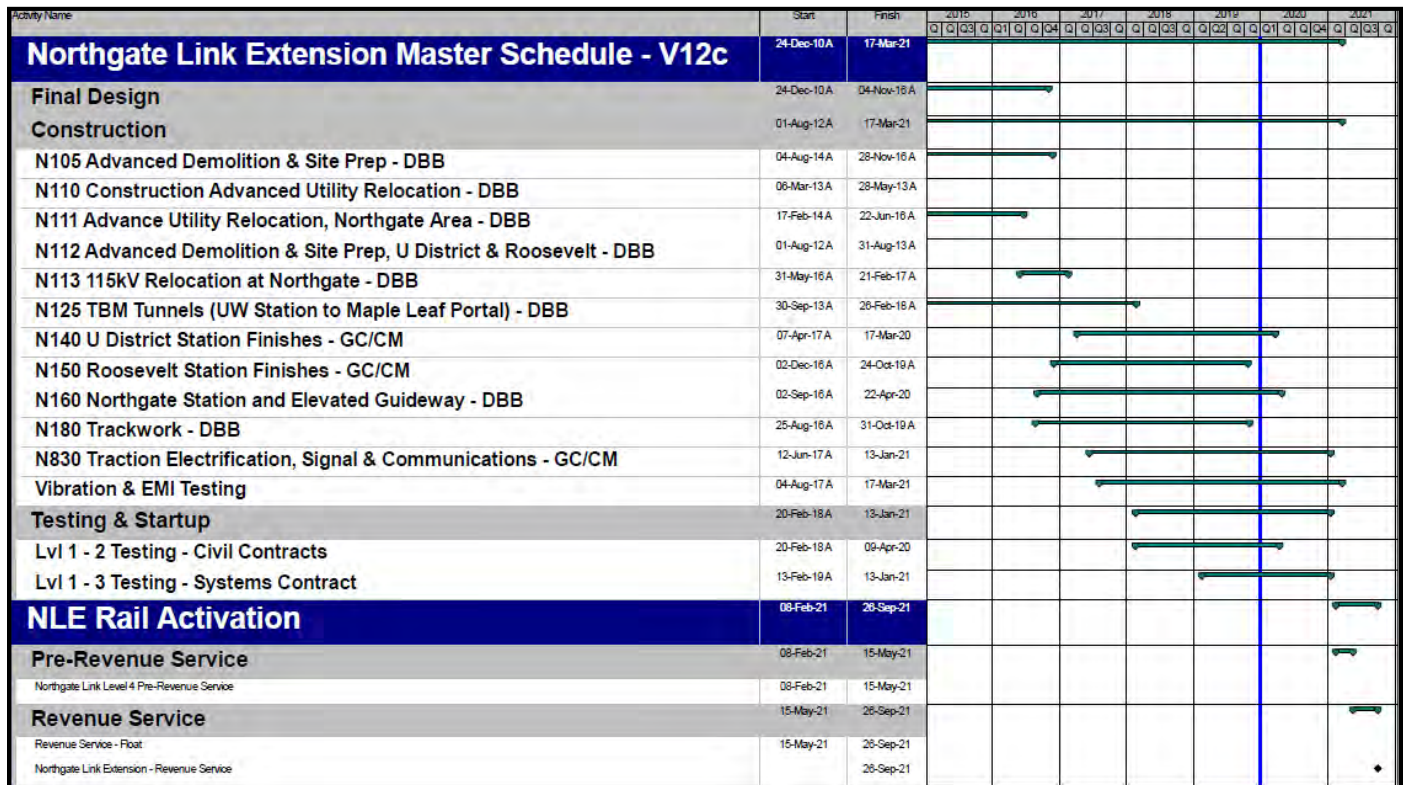


Project Schedule

In December 2019, the physical percent complete for all Northgate Link construction contracts increased from 91.5% to 92.7%.

Completion of the civil construction remains in late 3rd QTR 2020. The systems schedule as experienced some slippage with the forecast completion now in January 2021. Sound Transit is working with the contractors to mitigate the slippage.

The Revenue Service Date remains late September 2021.

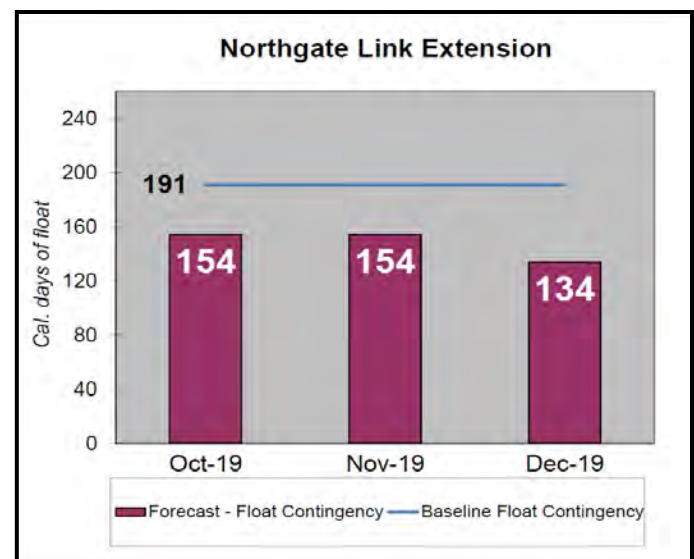


Project Float

Project float for the Northgate Link Extension decreased from 154 days to 134 days. Two factors account for this: slippage in the N830 Systems project schedule, and the addition of greater detail in the Rail Activation schedule. This greater detail incorporates discrete activities for the completion of the Safety Certification process and the Pre-Revenue testing phases.

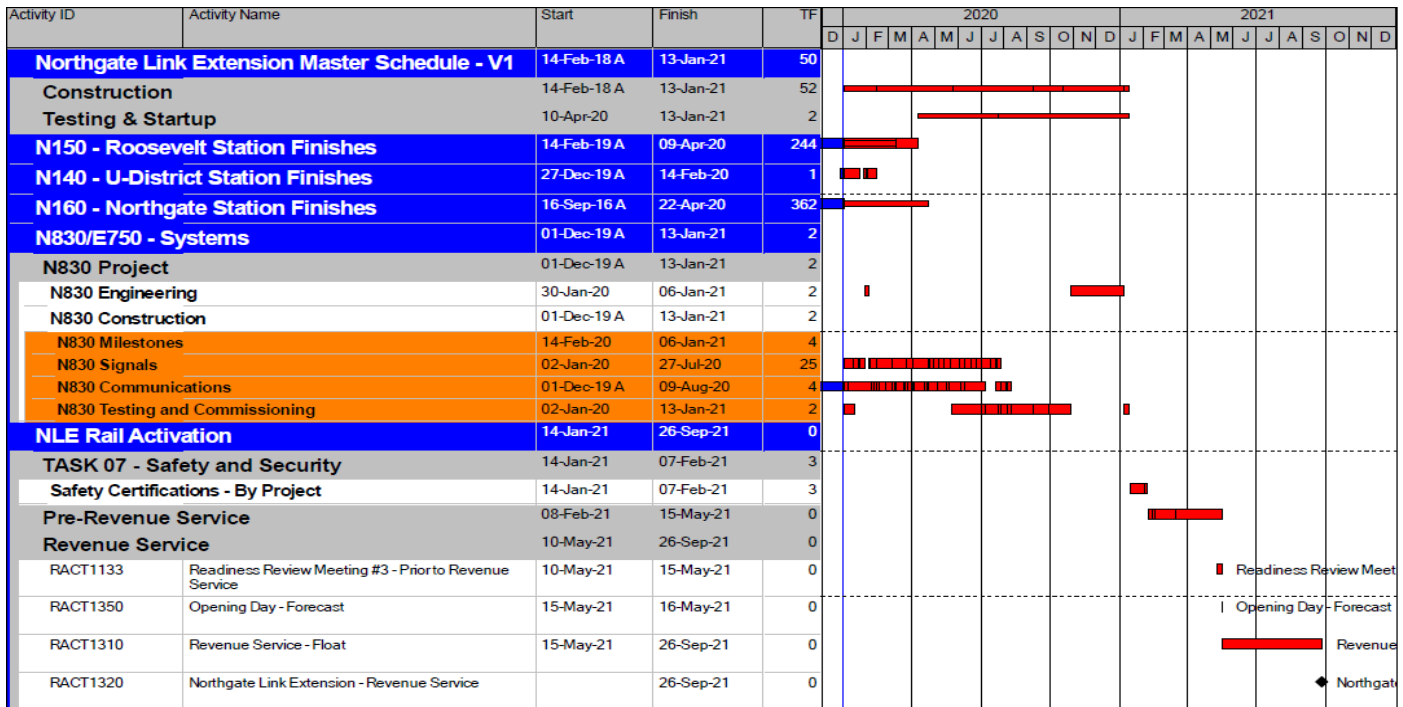
Improvements in the Systems work would return some of the 20 days of float lost. Continued refinement of the Rail Activation schedule will likely result in the use of some project float on a permanent basis.

The project schedule will be reevaluated following the Quantitative Risk Analysis Workshop in early February 2020.



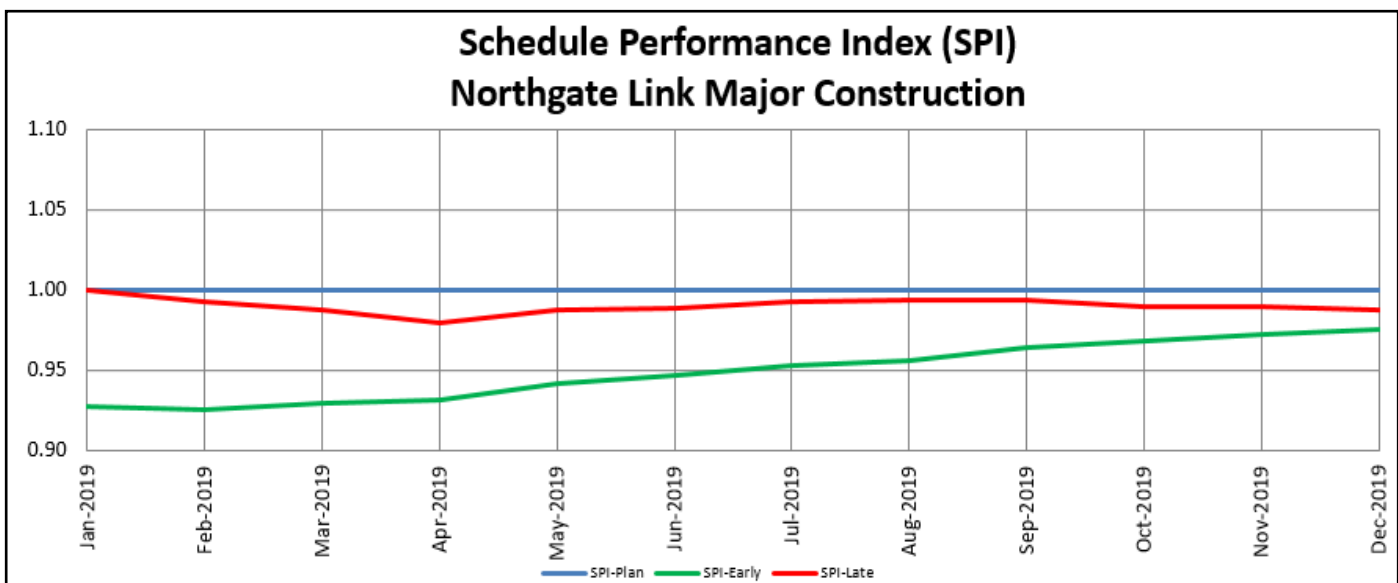
Critical Path Analysis

The critical path for Northgate Link continues to run primarily through the N830 Systems contract. The key drivers are the Communications and Signals installations. Elements of the Civil Contracts also appear critical due to new logic linking the completion of those contracts to the new Rail Activation Schedule. Other factors bringing the civil work onto the longest path, include continued slippage in the Northgate Station electrical work, ongoing punchlist work at Roosevelt Station, and completion of the additional stairs at U District Station.



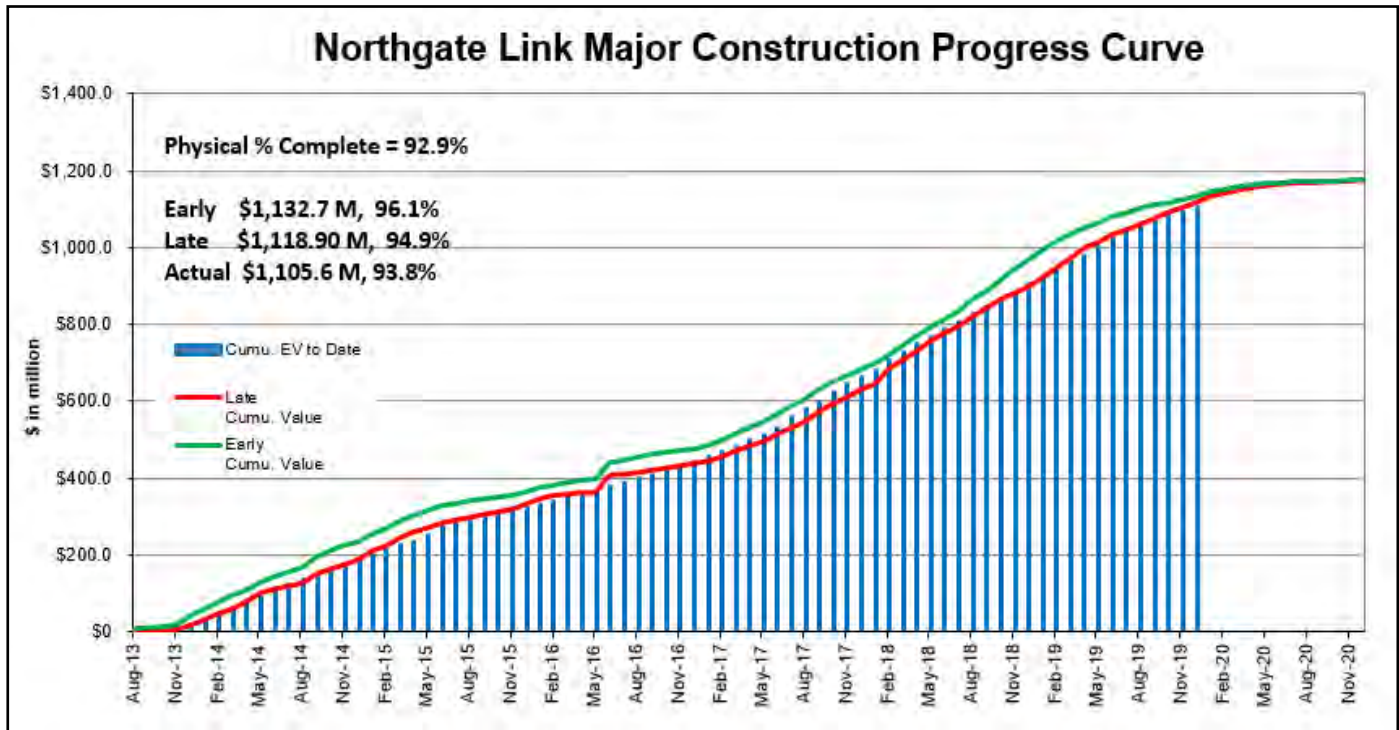
Schedule Performance Index

The early Schedule Performance Index (SPI) for the project is at 0.98 for this period, and the late SPI is at 0.99, showing that in general, performance continues to be satisfactory. Both the early and late numbers have been trending within a range of 0.06 above or below the current period numbers throughout the year.



Cost Progress Analysis

Overall Northgate Link major construction percent complete analysis is based on a weighted measurement among the six major construction contracts' schedules, durations and costs. The graph below shows the aggregate cost progression for these construction contracts is trending toward the late projection as drawn from the master schedule.



Community Outreach

- **Northgate Link general:** Hosted an information table at the U District Food Bank
- **U District Station (N140):**
 - Coordinated with companies to clean filters in two U District businesses.
 - Met with City of Seattle and Recology to coordinate trash pick-up.
 - Attended UW monthly floor coordinator meeting.
- **Roosevelt Station (N150):** Assisted with the Roosevelt Station Media Event
- **Northgate Station (N160):** Meet and Greet w/ residents in Northgate, Dec. 11, 2020.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	December 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	1	9	113
Days Away From Work Cases	0	0	6
Total Days Away From Work	0	0	397
First Aid Cases	3	33	185
Reported Near Mishaps	0	26	147
Average Number of Employees on Worksite	346	-	-
Total # of Hours (GC & Subs)	58,170	1,038,096	5,078,124
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	3.44	1.73	4.45
Lost Time Injury (LTI) Rate	0.00	0.00	0.24
Recordable National Average	3.00		
LTI National Average	1.20		
Recordable WA State Average	6.00		
LTI WA State Average	1.90		

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

Major Construction Contract Packages

Below are the major construction contract packages for the project with a brief scope description of each.

N105 Advance Demolition and Site Prep - Demolition of Key Bank Building, removal of underground storage tanks and remediation of contaminated soil at UDS. Demolition site and site prep at strip mall near the NG Station. (Complete)

N111 Advanced Utility Relocation at Northgate Area - Relocation of 26kV and communication lines at the Northgate Station vicinity. (Complete)

N113 115kV Relocation at Northgate Station Area - Relocation of overhead electrical facilities at the Northgate Station area. (Complete)

N125 TBM Tunnels UW Station to Maple Leaf Portal - Tunneling work and support of excavation of station boxes for the U District and Roosevelt stations. (Complete)

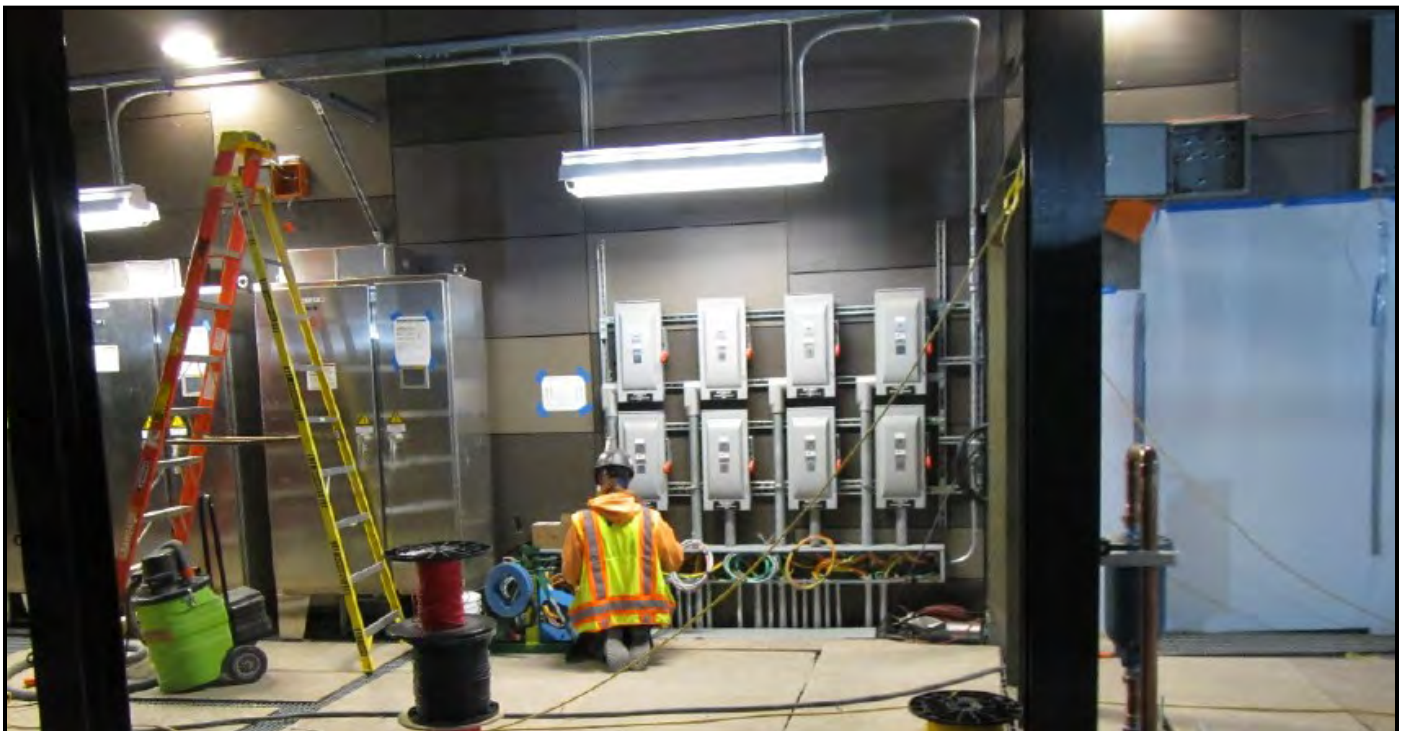
N140 U District Station Finishes - Civil and architectural finishes work for the U District Station.

N150 Roosevelt Station Finishes - Civil and architectural finishes work for the Roosevelt Station (Substantially Complete)

N160 Northgate Station & Elevated Guideway & Parking Garage - Civil and architectural finishes work for the Maple Leaf Portal, the aerial guideway, and the Northgate Station and Tail Track. Construction of a 450 stall parking garage to be located at the south corner of the existing Northgate Mall surface parking lot at NE 103rd St. near 1st Avenue NE.

N180 Trackwork - Installation of all trackwork through two tunnels and three stations between UW Station and Northgate Station, including tail track. (Substantially Complete)

N830 Track Electrification, Signals, Communication System - Installation of the major system elements – Traction Electrification, 26kV Distribution, Signals, and Communications.



N140 – Wiring Escalator Control Panels and Disconnects.

Contract N140—U District Station Finishes

Current Progress

The N140 Contractor, Hoffman Construction, is continuing work on site as follows:

- Commenced installation of Elevator 1 at south end.
- Continued installation of metal wall panels at the north end of the platform.
- Commenced placement of concrete panels at 43rd and Brooklyn Avenue intersection.
- Continued installation of lighting at north stairways and floors.
- Continued installation of control wires between fan control cabinets on north Basement Level (BL) 2.

Schedule Summary

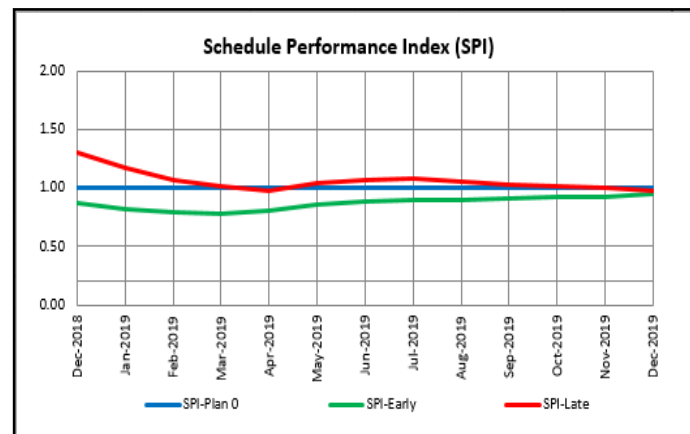
The December schedule continues to forecast a six day delay to substantial completion with the schedule progressing from 88% complete to 90%. Vertical Conveyance and Commissioning remain critical for achievement of Milestone 4, Substantial Completion. Milestone 4A, Stair 8, is still on schedule for March completion. Milestone 4B, Deferred Work is still thirteen days behind schedule, driven by restoration work on NE 43rd St. and on Brooklyn Ave. Delays to these contract milestones do not impact the Revenue Service Date.

Activity Name	OD	RD	Start	Finish	2017				2018				2019				2020	
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
N140 - U-District Station Finishes	814	91	10-Feb-17 A	07-May-20														
MILESTONES	0	0	17-Mar-20	17-Mar-20														
Milestone 4 - Substantial Completion	0	0		17-Mar-20*														
PRECONSTRUCTION	0	0	17-Jul-17 A	17-Jul-17 A														
Precon - Site Access Granted (Construction NTP)	0	0	17-Jul-17 A															
CONSTRUCTION	814	91	10-Feb-17 A	07-May-20														
C. BL2 - Remove Composite Temp Work Deck at Mezz	20	0	16-Aug-19 A	13-Sep-19 A														
Structure	754	21	10-Feb-17 A	13-Feb-20														
EXTERIOR SHELL / SKIN	296	41	28-Dec-18 A	27-Feb-20														
INTERIORS	449	83	23-Jul-18 A	27-Apr-20														
ELEVATORS	188	51	17-Jun-19 A	12-Mar-20														
ESCALATORS	437	47	18-Jun-18 A	06-Mar-20														
STAIRS	447	4	10-May-18 A	13-Feb-20														
SITWORK	470	80	18-Jun-18 A	22-Apr-20														
START-UP & COMMISSIONING	218	91	01-Jul-19 A	07-May-20														

Schedule Performance Index

This period, the SPI early is at 0.94 (slightly up from last month) and the SPI late is 0.97 (slightly down from last month).

The early index is reflective of the of the forecast late achievement of MS-4A and MS-4B. The late index indicates that the remaining work is being performed close to or on the forecast late dates. As the project nears completion, the range of float separating early and late will continue to lessen, such that the difference between performing close to the early SPI and performing close to the late SPI will be small.



Link Light Rail Northgate Link Extension

Next Period's Activities

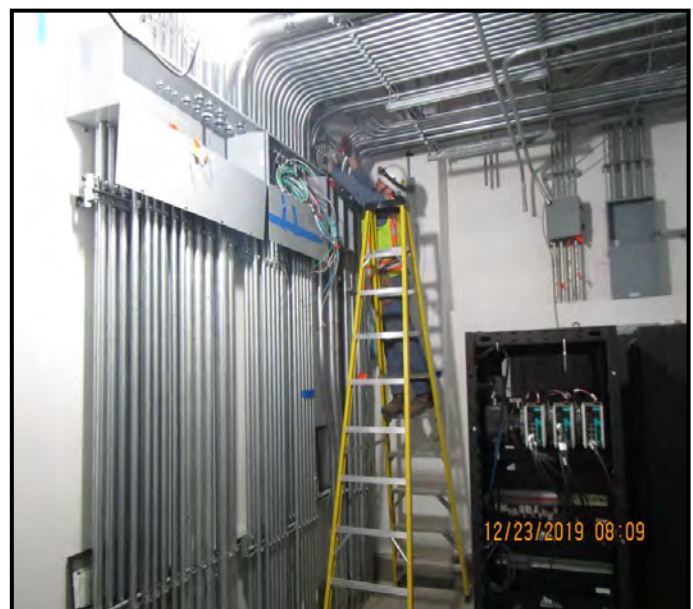
- Commence installation of precast stair treads on Stair 8.
- Continue installation of cement wall panels at north headhouse.
- Continue installation of guard rail on Stair 8.
- Continue installation of tile on platform level.
- Commence installation of ceiling grid at south headhouse.
- Commence demolition of sound wall.
- Continue soil cell installation.
- Continue installing conduit, junction boxes and pulling wiring to various locations.

Closely Monitored Issues

- Additional Stair: The contractor working with their sub-contractor to finalize costs for RFP 142 Revisions 3 and 4.
- CNWD 044A – Lid Level Stem Walls & 0053 N Plenum Insulation & Doors – Revised offer is under review by the Contractor and this issue is pending CCB approval in February 2020.
- Third party agency approvals: As previously reported, the delays caused by Seattle City Light and Seattle Public Utilities during their review and approval process has impacted the site work construction schedule early January 2020.

Cost Summary

Present Financial Status	Amount
N140 Contractor—Hoffman Construction	
Original Contract Value	\$ 159,836,688
Change Order Value	\$ 5,711,373
Current Contract Value	\$ 165,548,061
Total Actual Cost (Incurred to Date)	\$ 148,023,218
Percent Complete	91.1%
Authorized Contingency	\$ 15,491,834
Contingency Drawdown	\$ 5,711,373
Contingency Index	2.5



Conduit installation at south surface mechanical room.

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Contract N150 – Roosevelt Station Finishes

Current Progress

Hoffman Construction focused on punchlist activities and change order work this period. Additional activities were as follows:

- Continued Level 1 & 2 commissioning testing of electrical and mechanical equipment.
- Continued installation of irrigation system for the south entrance.
- Completed installation of ladders on north and south entrance vent shafts.
- Continued installation of wall tile at north head entry lobby.

Next Period's Activities

- Continue completion of punchlist items.
- Commence installation of trees and plants at south entrance.
- Continue installation of plants at south entrance, 12th Avenue and north entrance planters.
- Continue installation of handrail at exterior stairs.

Closely Monitored Issues

- Lighting at Escalators 1-4: L&I provided acceptance of Escalators 1-8 with a requirement to address low lighting issues within 90 days. Design provided options for review and Hoffman is pricing both options to assist Sound Transit on how to proceed.
- Lighting at Escalators 5-8: Contractor confirmed lighting levels at escalators do not meet code. Contractor documented the issue via RFI 1331 which is under review by Design. The CMC is working to get Designer on site to review the lighting issue.
- Switchgear Issue: CNWD 137 Revision 1 is pending CCB approval in February 2020.

Cost Summary

Present Financial Status	Amount
N150 Contractor - Hoffman Construction	
Original Contract Value	\$ 152,291,184
Change Order Value	\$ 11,616,832
Current Contract Value	\$ 163,908,016
Total Actual Cost (Incurred to Date)	\$ 160,432,269
Percent Complete	99.2%
Authorized Contingency	\$ 14,614,559
Contingency Drawdown	\$ 11,616,832
Contingency Index	1.2



Installation of bike lockers at north entry

Contract N160 – Northgate Station, Elevated Guideway, and Parking Garage

Current Progress

The N160 prime contractor, Absher Construction, and its various subcontractors are continuing work in all areas of the project. Accomplishments through the end of December include:

- Continued installation of equipment for elevators as well as escalator finishes at the station.
- Continued planting and irrigation near parking garage.
- Continued electrical work in all areas of the project.
- Continued tiling, painting, and glass installation at the station.

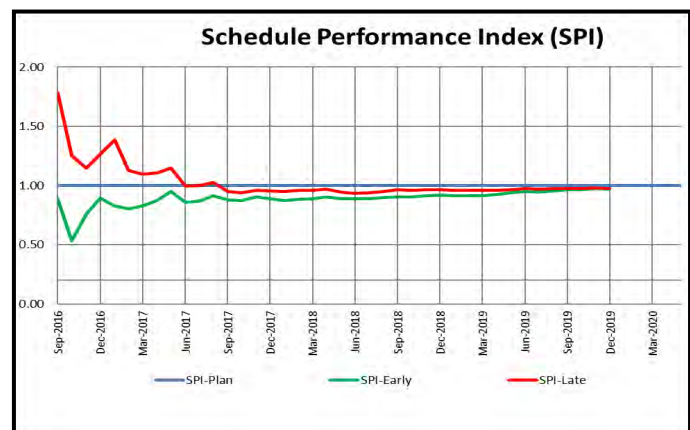
Schedule Summary

The project schedule for December slips the Substantial Completion date to April 22, 2020, with 28 days of negative float. The critical path continues to be driven by electrical work within the station. Sound Transit and Absher are continuing working closely with the Elcon, the electrical subcontractor, on strategies to improve the performance and avoid impacts to the Systems contractor.

Activity Name	OD	RD	Start	Finish	2017				2018				2019				2020	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
N160 - Northgate Station Finishes	959	99	01-Sep-16 A	20-May-20														
1.00 - General Requirements	920	0	01-Sep-16 A	22-Apr-20														
1.10 - Project Start-up	0	0	01-Sep-16 A	01-Sep-16 A														
Contract Award/NTP (See Site Access Dates)	0	0	01-Sep-16 A															
1.20 - Contractual Milestones	0	0	22-Apr-20	22-Apr-20														
Absher Contract Milestones	0	0	22-Apr-20	22-Apr-20														
MS08 - Substantial Completion [Site Access+1201d; 10/17/16, then by 1/30/20] revised to 3/13/20	0	0		22-Apr-20*														
2.00 - Procurement	791	17	02-Sep-16 A	27-Jan-20														
3.00 - Preparatory Work	861	79	16-Sep-16 A	22-Apr-20														
4.00 - Earthwork & Utilities	874	5	04-Jan-17 A	08-Jan-20														
5.00 - Guideway (inc. Station Unit)	780	14	03-Jan-17 A	22-Jan-20														
6.00 - Station Finishes	596	41	27-Mar-18 A	28-Feb-20														
7.00 - Garage	637	2	27-Jun-17 A	03-Jan-20														
8.00 - At-Grade Restoration	633	59	22-Sep-17 A	25-Mar-20														
9.00 - Transition to Operations	5	0	14-Jan-19 A	22-Jan-19 A														
10.00 - Project Close-out	78	78	03-Feb-20	20-May-20														

Schedule Performance Index

This period, the SPI early is 0.97(down from 0.98 last period) and the SPI late is at 0.98 (no change from 0.98 last period), indicating no major change in performance since last month. However, the indices indicate that the contractor continues performing slightly behind plan when compared to the baseline schedule. Overall work progress has remained within 0.07 of its current trend over the last year.



Link Light Rail Northgate Link Extension

Next Period's Activities

- Continue painting, tiling, electrical, fire sprinkler system installation, and ceiling grid panels at main station.
- Continue placing concrete pavement and sidewalks at South Plaza.
- Continue electrical tie-ins at Maple Leaf Portal in preparation for energizing system.

Closely Monitored Issues

- Sound Transit continues to believe the main electrical subcontractor has insufficient manpower, which is causing delays, and that the prime contractor's efforts to date to manage their subcontractor's performance have been ineffective.

Cost Summary

Present Financial Status	Amount
N160 Contractor - Absher Construction	
Original Contract Value	\$ 174,000,000
Change Order Value	\$ 10,667,559
Current Contract Value	\$ 184,667,559
Total Actual Cost (Incurred to Date)	\$ 171,923,831
Percent Complete	93.1%
Authorized Contingency	\$ 17,400,000
Contingency Drawdown	\$ 10,667,559
Contingency Index	1.5



Placing rebar for MLP Southeast screen wall.

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Link Light Rail Northgate Link Extension

Contract N180 – Trackwork UWS to Northgate Station

Current Progress

The N180 Contractor, Stacy and Witbeck, Inc. (SWI) achieved Substantial Completion of all Milestones on Oct. 31, 2019.\

Remaining work are the punch list items for all work areas and documentation prior to closeout, which is being carried out and ongoing.

Next Period's Activities

- Punchlist activities and final walk related to all work areas ongoing.

Closely Monitored Issues

- Communication and coordination between contracts is ongoing, monitoring related activities to bring the contract to a successful close out.

Cost Summary

Present Financial Status	Amount
N180 Contractor - Stacy and Witbeck, Inc.	
Original Contract Value	\$ 71,455,950
Change Order Value	\$ 4,311,104
Current Contract Value	\$ 75,767,054
Total Actual Cost (Incurred to Date)	\$ 74,481,491
Percent Complete	100%
Authorized Contingency	\$ 10,718,393
Contingency Drawdown	\$ 4,311,104
Contingency Index	\$ 2.4



Punchlist work on elevated guideway.

Contract N830 – Northgate Link Systems, Heavy Civil GC/CM

Current Progress

The N830 Contractor, Mass Electric Construction Co. (MEC), continued to prosecute the work as follows:

- Installed UPS, battery cabinets, isolation transformer, and network rack at Roosevelt Station (RVS).
- Installed conductor cable, inverter, and battery cabinets at U District Station (UDS). Tested 26kV cable UDS to RVS.
- Continued installing reverse running signals and testing at International District Station (IDS) / Downtown Seattle Transit Tunnel (DSTT).

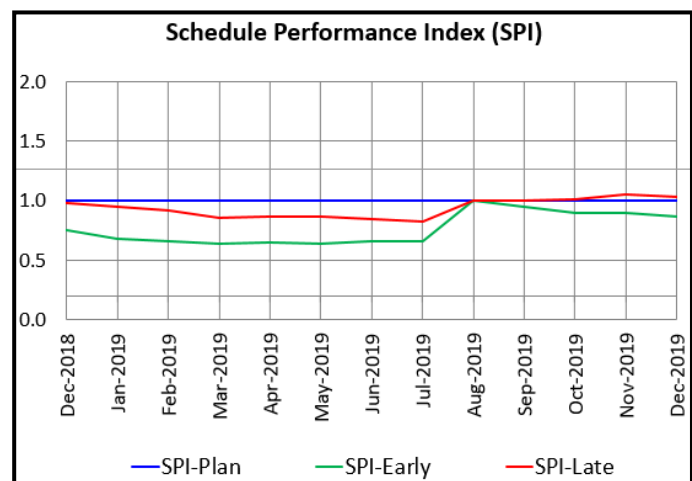
Schedule Summary

The December update from MEC forecasts a late completion of January 6, 2020, a slip of 6 days. The critical path is driven by Signals and Communications installations. This is followed by testing of the equipment in the field and finally, systems integrated testing. Overhead Catenary System (OCS) installation is ongoing in the tunnels. MEC is completing testing of the Northgate Station Traction Power Substations (TPSS) units and will be ready to install them onsite starting in early February 2020.

Activity Name	OD	RD	Start	Finish	2017	2018				2019				2020				2021						
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
N830/E750 - Systems	884	257	12-Jun-17 A	13-Jan-21																				
General	0	0	12-Jun-17 A	12-Jun-17 A																				
Key Dates	0	0	12-Jun-17 A	12-Jun-17 A																				
NTP - Notice to Proceed (NTP) Northgate and East Link	0	0	12-Jun-17 A		NTP - Notice to Proceed (NTP) Northgate and East Link																			
N830 Project	752	257	20-Dec-17 A	13-Jan-21																				
N830 Construction	752	257	20-Dec-17 A	13-Jan-21																				
N830 Milestones	0	0	06-Jan-21	06-Jan-21																				
MS#05 Northgate: Substantial completion of Northgate Link systems (12/31/20)	0	0		06-Jan-21	MS#05 Northgate																			
N830 OCS	475	153	10-Sep-18 A	09-Aug-20																				
N830 Traction Power / Substations Procurement	606	111	20-Dec-17 A	09-Jun-20																				
N830 Signals	465	143	15-Aug-18 A	27-Jul-20																				
N830 Communications	617	153	10-Feb-18 A	09-Aug-20																				
N830 Radio	479	134	09-Jul-18 A	14-Jul-20																				
N830 Trunk Fiber	427	105	28-Sep-18 A	01-Jun-20																				
N830 Testing and Commissioning	575	257	07-Sep-18 A	13-Jan-21																				

Schedule Performance Index

This period, the SPI early is 0.87 (same from 0.86 last period) and the SPI late is 1.03 (slightly up from 1.01 last period). The indices indicate a slight improvement from the previous month. Sound Transit and Construction Management Consultant (CMC) continue to work closely with the Contractor/Subcontractors to help strengthen the schedule and improve performance.



Link Light Rail Northgate Link Extension

Next Period's Activities

- Continue development and reviews of engineering submittals covering all disciplines: Traction Power Substations (TPSS), Overhead Catenary Systems (OCS), Train Control Signal Systems, and Communications.
- Ongoing coordination meetings between systems and civil contractors for interface and access points for respective contracts.
- Ongoing installation of TPSS switchgear, flooring and signal racks in train control equipment room and communication conduits/cables at University District Station.
- Ongoing installation of TPSS equipment in train control room, communications rack in equipment room, and pulling cable to field end devices at Roosevelt Station.
- Ongoing installation of communication devices and wiring at Northgate Station.
- Ongoing installation of OCS bracket, flooring in train control equipment and cables for trackside devices and communications fiber and radio radix cable and support brackets in the Northgate tunnels.

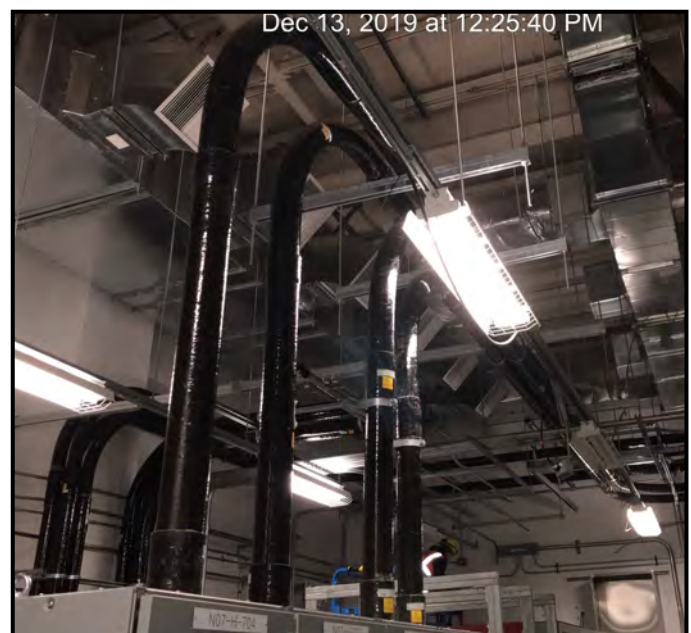
Closely Monitored Issues

- Sound Transit and Construction Management Consultant (CMC) coordination ongoing for the IDS cutover change from full shutdown to single tracking.
- Sound Transit and CMC are receiving a large number of submittals for review and anticipate even more over the coming weeks. To mitigate delays in approval of reviews, Sound Transit, CMC, and contractor held joint workshops to expedite the review process without impacting the quality of the review.
- Sound Transit and CMC concerned Contractor's ramp-up of labor is not sufficient to meet the planned construction activities. Sound Transit and CMC closely tracking the planned ramp-up of labor in comparison to actual progress.

Cost Summary

Present Financial Status	Amount
N830 Contractor - Mass Electric Construction Co.	
Original Contract Value	\$104,660,444
Change Order Value	\$798,567
Current Contract Value	\$105,459,011
Total Actual Cost (Incurred to Date)	\$54,434,198
Percent Complete	59%
Authorized Contingency	\$5,233,022
Contingency Drawdown	\$798,567
Contingency Index	3.9

**The N830 and E750 Systems is a joint procurement. The Cost Summary table above represents N830 Systems only.*



U District Station: TPSS Conduit Installation

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Link Light Rail Lynnwood Link Extension

Project Summary

Scope

Limits	North Seattle to Shoreline, Mountlake Terrace, and Lynnwood Transit Center
Alignment	Lynnwood Link extends light rail 8.5 miles to Snohomish County along I-5 from Northgate Mall in Seattle to the Lynnwood Transit Center, with four new light rail stations. The configuration includes at-grade, elevated, and retained cut/fill alignment.
Stations	Shoreline South/145th, Shoreline North/185th, Mountlake Terrace, Lynnwood City Center
Systems	Signals, traction power, and communications (SCADA)
Phase	Construction
Budget	\$2.772 Billion (Baseline May 2018)
Schedule	Revenue Service: July 2024



Map of Lynnwood Link Extension Alignment.

Key Project Activities

- Continued integration of contract modification scopes into the schedules for each active heavy civil GC/CM contract.
- Began site preparation for ground improvement work, expected to commence in January 2020 (L200).
- Continued construction of Phase 2 area mitigation work at the Ronald Bog site in Shoreline (L200).
- Continued support of excavation (SOE) installations at the SR-104 / I-5 interchange (L300).
- Continued early utility work and supplemental parking lot construction in the Lynnwood Transit Center to support the imminent transition to guideway work through the area starting in 1st QTR 2020.
- Commenced drilled shaft installation on the L200 contract, with L300 installations anticipated to commence in 1st QTR 2020.
- Continued quantity reconciliation of the 100% systems design package with the L800 systems GC/CM in anticipation of negotiations starting in late January 2020.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

In December 2019, \$39.7M was incurred. The major project expenditures were for civil construction, construction management, and work toward completion of civil & systems final design.

The remaining expenditures were for right of way, third party coordination, permits, staff, legal, and other direct charges.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$98.2	\$98.1	\$36.4	\$36.6	\$98.1	\$0.0
Preliminary Engineering	\$39.1	\$39.1	\$39.1	\$39.1	\$39.1	\$0.0
Final Design	\$164.2	\$164.2	\$140.5	\$112.6	\$164.2	\$0.0
Construction Services	\$128.4	\$128.4	\$92.3	\$30.1	\$128.4	\$0.0
3rd Party Agreements	\$14.6	\$14.6	\$10.5	\$8.3	\$14.6	\$0.0
Construction	\$1,921.4	\$2,091.6	\$1,710.3	\$197.8	\$2,091.6	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$235.7	\$235.7	\$173.0	\$155.3	\$235.7	\$0.0
Project Contingency	\$170.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$2,771.6	\$2,771.6	\$2,202.1	\$579.8	\$2,771.6	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$791.8	\$1,002.2	\$676.3	\$19.0	\$711.4	\$290.7
20 Stations	\$333.8	\$333.8	\$408.8	\$2.6	\$430.2	-\$96.4
30 Support Facilities	\$2.0	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
40 Sitework & Special Conditions	\$421.1	\$426.2	\$569.1	\$173.8	\$645.5	-\$219.3
50 Systems	\$244.4	\$244.4	\$46.1	\$0.4	\$219.4	\$25.0
Construction Subtotal (10 - 50)	\$1,793.0	\$2,008.5	\$1,700.3	\$195.8	\$2,008.5	\$0.0
60 Row, Land	\$235.7	\$235.7	\$173.0	\$155.3	\$235.7	\$0.0
70 Vehicles (Non-Revenue)	\$1.4	\$1.4	\$0.0	\$0.0	\$1.4	\$0.0
80 Professional Services	\$449.3	\$450.6	\$329.4	\$228.7	\$450.6	\$0.0
90 Unallocated Contingency	\$292.2	\$75.4	\$0.0	\$0.0	\$75.4	\$0.0
Total (10 - 90)	\$2,771.6	\$2,771.6	\$2,202.7	\$579.8	\$2,771.6	\$0.0

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The following are the top project risks:

- Tight budget and limited contingency; changes during construction that impact cost and schedule.
- Coordination of civil/systems interface and potential for civil construction delays to systems construction.
- Obtaining permits: Cities, WSDOT and resource agencies.
- Delays in long lead procurement of girders and other key material/equipment/resources.
- Timely completion of utility relocations and property acquisition.
- Relationship with GC/CM contractors and culture of each contract.
- Quality of schedule submittals from the civil contractors impairs master schedule clarity and reliability.

Project Schedule

The December 2019 update maintains the July 2024 revenue service date, assuming using three months of project float. The driving issue is completion of the 60% Seattle Street Improvement Permit (SIP). Sound Transit has been working closely with the L200 contractor to resolve critical issues with calendars utilized in their schedule. These issues resulted in Sound Transit rejecting both the November and December 2019 schedule updates. As of early January, resolution of these issues appears to have been reached. ST continues to work with all contractors on schedule quality, including level of detail, cost-loading, and best practices, to improve the accuracy and usability of the schedules.

Activity Name	Start	Finish	Total Float	2019				2020				2021				2022				2023				2024				Disc				
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1				
LLE Master Schedule	20-May-10A	14-Feb-24	171																													
Project Administration	20-May-10A	14-Feb-24	171																													
Final Design/Preconstruction	01-Sep-16A	23-Nov-22	475																													
Permitting & Agreements	07-Jan-16A	21-Aug-20	1041																													
Utilities	02-May-16A	16-Mar-22	651																													
L200 ROW Acquisitions	04-Jan-16A	29-May-20	2187																													
L300 ROW Acquisitions	14-Jan-16A	08-Dec-20	1116																													
L200 Construction	04-Jan-19A	05-Aug-23	101																													
L300 Construction	25-Sep-18A	01-Dec-23	220																													
L800 Construction 90Pct	02-Jul-20	05-Dec-23	10																													
LLE Rail Activation	05-Jun-23	17-Jul-24	91																													
Contracts	05-Jun-23	05-Dec-23	14																													
RA Tasks	26-Jul-23	14-Feb-24	245																													
Pre-Revenue Service	17-Nov-23	14-Feb-24	175																													
Revenue Service - FFGA	14-Feb-24	17-Jul-24	91																													
Program Wide Float (CD)	14-Feb-24	17-Jul-24	91																													
Revenue Service - 7/17/2024		17-Jul-24	91																													

Contingency Management

The Lynnwood Link project budget was baselined in May 2018 with a total contingency of \$737.7M.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is expected to be fully drawn when all construction contract packages are executed.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties.

Following a significant drawdown in project contingency in Q2/Q3 2019, Sound Transit revised the contingency forecast to align with the cash flow forecast of the major civil contracts.

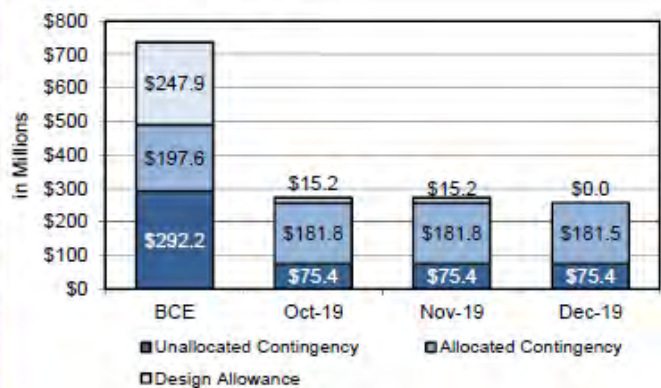
During the current period, DA decreased by \$15.2M as the L800 systems contract reached 100% design (as scheduled), and AC decreased by \$305k for final design and construction change orders. UAC is unchanged.

Contingency Status

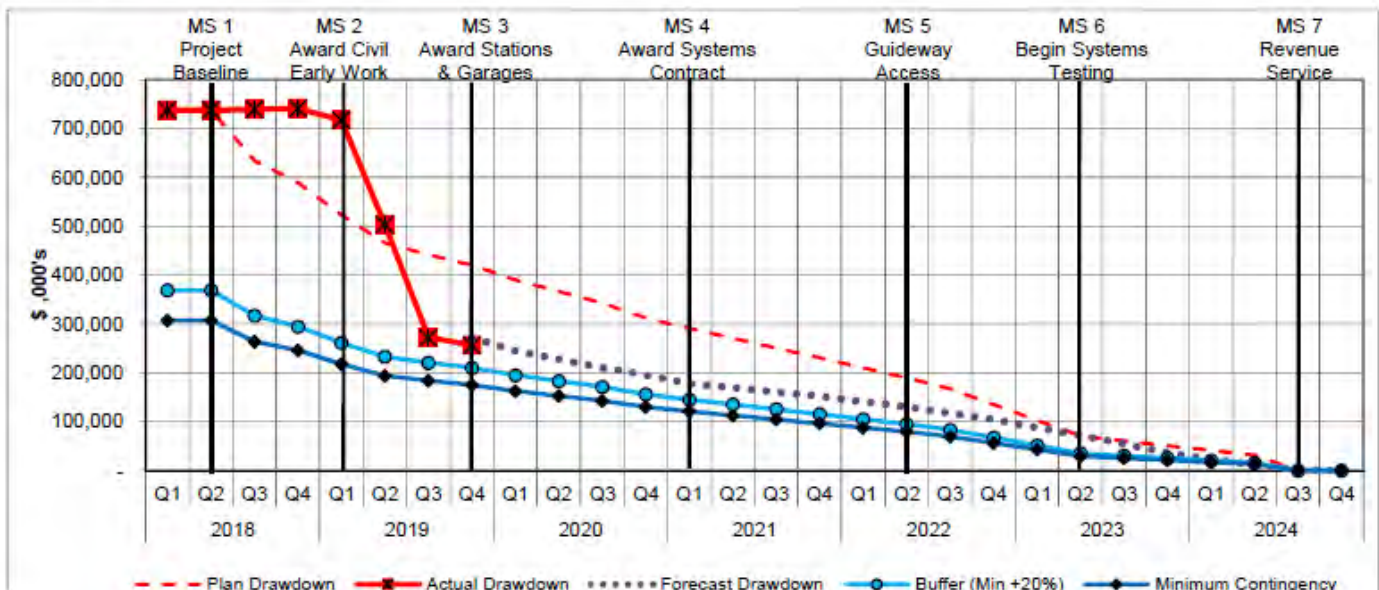
Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$247.9	8.9%	\$0.0	0.0%
Allocated Contingency	\$197.6	7.1%	\$181.5	8.3%
Unallocated Contingency	\$292.2	10.5%	\$75.4	3.4%
Total:	\$737.7	26.6%	\$256.9	11.7%

Table figures are shown in millions.

Contingency by Type



Contingency Drawdown



Right-of-Way

The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The Right-of-Way program status for this period is summarized in the following table.

Lynnwood Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date *	Relocations Required	Relocations Completed to date
365	362	343	274	375	351
All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods. *Total number of parcels available for construction = 321.					

Community Outreach

In December, the Lynnwood Link Community Outreach team:

- Worked with Community Transit (CT) on outreach plan for Lynnwood Transit Center parking lot changes; published a construction alert and installed signage about the changes.
- Attended meetings with ST and CT operations about upcoming shutdown of Mountlake Terrace Transit Center flyer stop.
- Worked with Construction Management Consultant and ST Risk Management on hazard tree located on resident's lot. Coordinated with two additional properties on tree removal and received signed permission for tree removal.
- Attended Shoreline Chamber of Commerce event and hosted informational table.
- Responded to Shoreline resident about signage at night on SR 104 interchange. Worked with contractor to improve signage.
- Responded to call about home flooding in Shoreline. Went to the scene and made sure water was diverted away from the house. Contacted Resident Engineer, who immediately had the Contractor go assess and fix the issue.
- Worked with neighbors on 12th Avenue NE to address safety traffic issues and created lawn signage for 20 mph speed reduction to increase awareness.
- Responded to public concerns regarding visual barrier at the Corliss Ave to I-5 South On-Ramp.
- Informed properties on NE 200th Street about underground utility work and construction impacts.
- Distributed alerts to properties near NE 155th Street about utility work and coordinated with City of Shoreline, Fire Department, and Shoreline Public Schools on closure.
- Performed property owner outreach to five properties and assisted in activating five temporary construction easements.
- Coordinated response to questions from Lynnwood Times reporter about business impacts.
- Met with Shoreline Public Schools to discuss Aldercrest Annex staging plans.
- Delivered construction notifications to approximately 175 residents regarding night work near NE 195th, NE 145th NE 130th and Northgate Way.

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Sound Transit Board Actions

Board Action	Description	Date
	No board actions this period.	

Construction Safety

Data/ Measure	December 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	0	0
Days Away From Work Cases	0	0	0
Total Days Away From Work	0	0	0
First Aid Cases	1	6	6
Reported Near Mishaps	1	8	8
Average Number of Employees on Worksite	309	-	-
Total # of Hours (GC & Subs)	22,684	167,440	167,440
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	0.00	0.00
LTI Rate	0.00	0.00	0.00
Recordable National Average	3.00		
LTI National Average	1.20		
Recordable WA State Average	6.00		
LTI WA State Average	1.90		

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

Data includes the L200 and L300 contracts.

Civil Final Design Overview

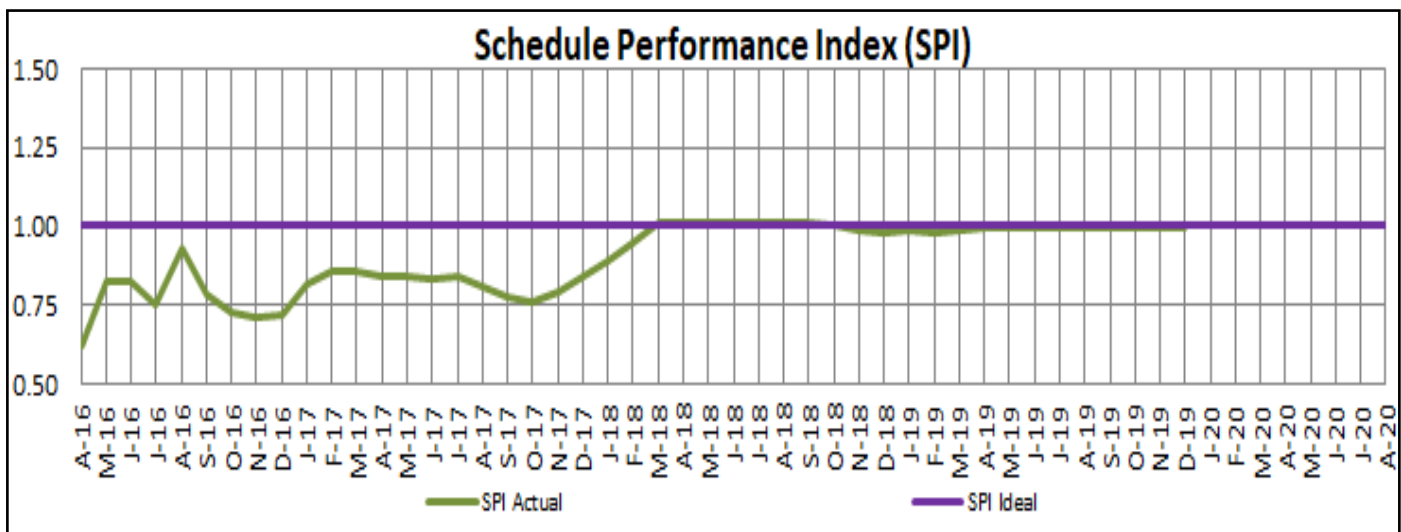
Sound Transit executed a professional services contract with HNTB Jacobs in April 2016 to perform civil final design along the entire Lynnwood Link alignment. Design services include preparation of comprehensive civil contract documents for construction, design coordination and cooperation with the GC/CM contractors, permit support, survey, geotechnical investigations, right-of-way planning and acquisition support, third party coordination support, risk assessment support, value engineering and constructability support, building and station systems design, cost estimating, and sustainability reports.

Current Progress

- Design Construction During Construction (DSDC) work continued, with increased activity for L200 and L300, as guideway structural work is underway in addition to the previously ongoing early work.
- Continued work to support Sound Transit in obtaining permits.
- Advanced work on the 200th Street widening, including incorporating VE items for the project.
- *Civil Final Design is substantially complete. This will be the last update on this Contract in the Agency Progress Report.*

Schedule Performance Index

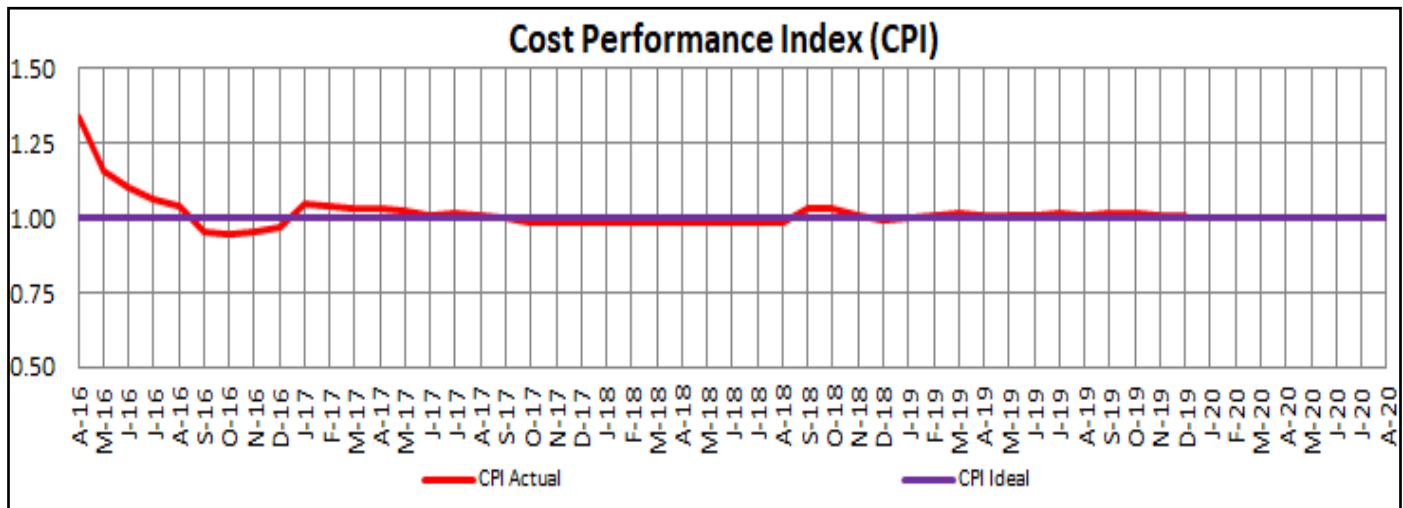
The cumulative Schedule Performance Index (SPI) trends at 1.00 through December 2019, which means that the cumulative amount of work accomplished is equal to the value of work planned. As the work nears completion, the SPI will continue to be near 1.0.



Link Light Rail Lynnwood Link Extension

Cost Performance Index

\$100.2 M of the total contract amount, 99%, has been spent through December 2019. The civil final design percent complete is 99%, with an earned value of \$100.8 M. The cumulative Cost Performance Index (CPI) through November is 1.01 indicating that actual costs are close to the earned value of work performed.



Cost Summary

Present Financial Status	Amount
HNTB Jacobs	
Original Contract Value	\$70,256,263
Change Order Value	\$31,137,587
Current Contract Value	\$101,393,850
Total Actual Cost (Incurred to Date)	\$100,173,031
Financial Percent Complete	98.8%
Physical Percent Complete	99.5%
Authorized Contingency	\$31,137,587
Contingency Drawdown	\$28,784,088
Contingency Index	1.07



Crew Filling Drill Pad A10 Multi Plate Caisson S

Systems Final Design Overview

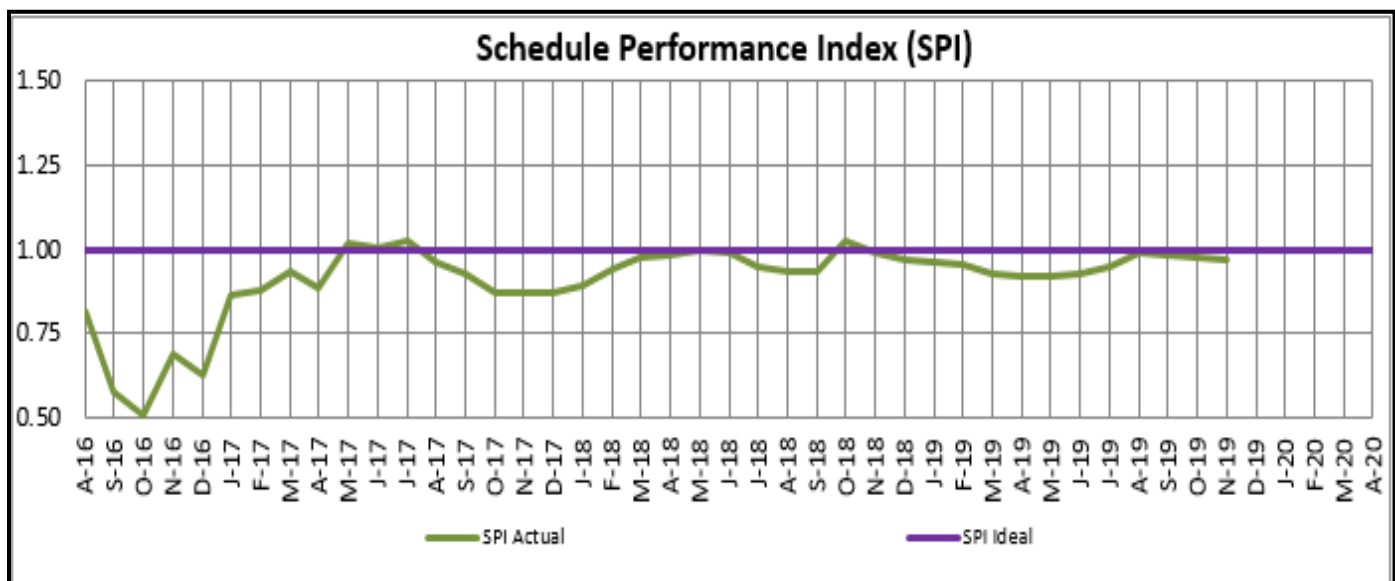
Sound Transit executed a professional services contract with LTK Engineering in July 2016 to perform systems final design along the entire Lynnwood Link alignment. Design services include preparation of comprehensive contract documents for construction, design coordination and cooperation with the civil final designer and GC/CM contractors, permit support, third party coordination support, risk assessment support, value engineering and constructability support, schedules and cost estimating.

Current Progress

- Letter issued by Sound Transit to LTK to selectively delay completion of portions of design work effective October 31st. This delay allows better alignment of the Issue for Construction (IFC) documents and construction contract negotiations and notice to proceed. Exceptions may be directed for certain activities like signal systems, communication systems and cost estimating work, if the need arises.
- Minimal design revisions occurred in December. November reported actual cost were over-accrued, so the December reported actual costs are lower.

Schedule Performance Index

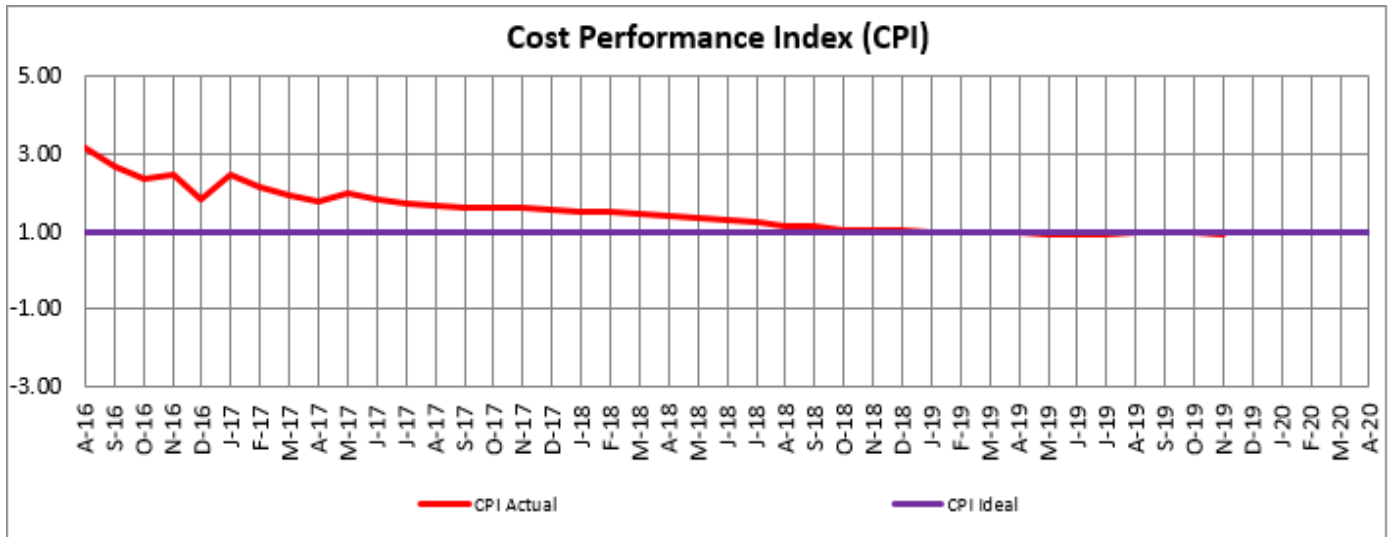
The cumulative Schedule Performance Index (SPI) trends at 0.96 through December 2019, which means that the cumulative amount of work accomplished is slightly lower than the overall work planned.



Link Light Rail Lynnwood Link Extension

Cost Performance Index

\$9.8M (98%) of the total contract amount has been spent through December 2019. The systems final design percent complete is 94%, with an earned value of \$9.4M. The cumulative Cost Performance Index (CPI) is 0.94 indicating the earned value of the work performed is lower than the actual cost incurred.



Cost Summary

Present Financial Status	Amount
LTK Engineering	
Original Contract Value	\$9,293,684
Change Order Value	\$650,494
Current Contract Value	\$9,944,178
Total Actual Cost (Incurred to Date)	\$9,831,353
Financial Percent Complete	98.9%
Physical Percent Complete	94.1%
Authorized Contingency	\$650,558
Contingency Drawdown	\$650,494
Contingency Index	0.99



Light Rail Train run by the Overhead Catenary System (OCS) powered from the Traction Power Substation (TPSS).

Contract L200 GC/CM—Northgate to NE 200th Street

Current Progress

The Sound Transit Board approved the L200 construction contract with Stacy & Witbeck– Kiewit– Hoffman JV (SKH) in December 2018. In this period SKH performed the following work in work zones (WZ):

- WZ-1: Fabricate drilled shaft cages for A10-A15. Staging yard at Clover Leaf setup.
- WZ-2: Complete ductbank install at 115th, 117th and 125th. 115th staging yard setup.
- WZ-3: Fabricate drilled shaft cages for C2-C8. Structures access C1-C13 complete.
- WZ-5: Continue install Ronald sewer A and B. Started guided auger boring at Ronald A sewer.
- WZ-7: Continue Ronald sewer D install. Gas line cut/cap. Staging yard setup. Started at-grade guideway access.



Schedule Summary

The December 2019 update from SKH continues to indicate late completion of work. Like the November update, the schedule was submitted with calendar exceptions the contractor asserts are meant to represent time anticipated to be lost to weather. This resulted in the December update being rejected by Sound Transit. After correcting the calendars, the longest path through the schedule is driven by completion of the 60% Seattle Street Improvement Permit (SIP). Sound Transit is working with the city to shift much of the successor work currently dependent on the SIP to the early work Utility Master Permit, which should improve the critical path.

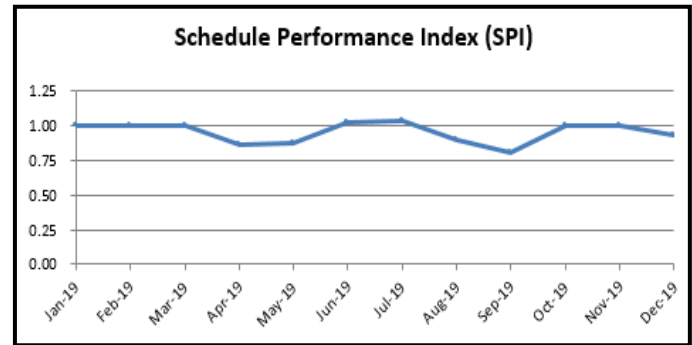
Activity Name	Start	Finish	Total Fiscal	2020				2021				2022				2023				2024			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
L200 Construction	04-Jan-19A	05-Aug-23	101																				
Project Wide	04-Jan-19A	05-Aug-23	101																				
WZ-1 Elevated (1437+00 to 1458+63)	08-Apr-19A	26-Apr-23	171																				
WZ-2 At Grade - Fill (1458+63 to 1492+45)	21-Mar-19A	07-Dec-22	266																				
WZ-3 Elevated (1492+45 to 1559+17)	23-Mar-19A	08-Feb-23	228																				
WZ-4 145th Station & Garage	08-Apr-19A	21-Feb-23	190																				
WZ-5 At Grade - Fill (1559+17 to 1571+30)	26-Mar-19A	14-Feb-23	222																				
WZ-6 155th Bridge (1571+30 to 1572+40)	22-May-19A	09-Dec-22	267																				
WZ-7 At Grade - Retained (1572+40 to 1624+00)	27-Mar-19A	17-Jan-23	242																				
WZ-8 175th Bridge (1624+00 to 1631+25)	25-Apr-19A	07-Jul-22	375																				
WZ-9 At Grade - Cut (1631+25 to 1661+78)	15-Apr-19A	13-Dec-22	266																				
WZ-10 185th Station & Garage	08-Apr-19A	03-Nov-22	264																				
WZ-11 At Grade (1661+78 to 1694+01)	09-Apr-19A	03-May-23	147																				
Provisional Sums	22-Mar-19A	03-Jan-20	963																				

Link Light Rail Lynnwood Link Extension

Schedule Performance Index

The cumulative SPI is at 0.93 meaning the cumulative amount of work accomplished is below the planned.

Through December, the earned value represents only the early work portion of the contract. The major contract modification is not yet integrated into the earned value plan.



Next Period Activities:

- WZ-1: Drill shafts for A9-A13. Fabricate shaft cages. Install temp fencing and lighting.
- WZ-2: Grade/pave temp parking lot at Latvian community center. Noise wall demo at 119th.
- WZ-3: Drill shafts for C2-C7. Fabricate shaft cages.
- WZ-5: Complete install Ronald sewer A and continue sewer B. Start ductbank install at 155th.
- WZ-7: Complete Ronald sewer D install. Start soldier pile wall.
- WZ-9: Finish tree removal. Install temp fencing at 185th.
- Ronald Bog: Finish trail construction, landscaping and bollards.

Closely Monitored Issues:

- Monitoring timing of receipt of all permits necessary for construction.
- Evaluating cost impact of plan set revision between the early work pricing and Issue for Construction (IFC) sets.
- Coordination of construction impacts to bicycle/pedestrian path between 1st Ave NE and NE 116th St.
- Erosion and sediment control during the wet season; impacts of heavy rain and snow occurrences.

Cost Summary

Financial Status	Amount
L200 Contractor - SKH	
Original Contract Value	\$ 88,147,258
Change Order Value	\$ 752,351,006
Current Contract Value	\$ 840,498,264
Total Actual Cost (Incurred to Date)	\$ 136,395,683
Percent Complete	16.1%
Authorized Contingency	\$ 43,762,892
Contingency Drawdown	\$ 533,399
Contingency Index	8.4



Ronald B sewer excavation

Contract L300 GC/CM—NE 200th Street to Lynnwood Transit Center

Current Progress

The Sound Transit Board approved the L300 construction contract with Skanska Constructors in February 2019. In this period, Skanska performed the following work:

- Continued installation and maintenance of temporary stormwater collection system and erosion control throughout the alignment. Completed large stormwater pond in Work Area (WA) 15.
- Performed sewer, vault, ductbank and conduit work in WA 7. Testing the water line at 52nd Ave W in WA 13 and 14.
- Working on access roads and walls in WA 1-6. Staging equipment and materials, and preparing the WA 10 site as an interim storage yard. Completed drainage and paving for temporary parking lot at WA 16.



Schedule Summary

The December 2019 schedule update indicates improvement in the forecast milestone dates with substantial completion now forecast for June 2023. The critical path as submitted is driven by shifting parking at the Lynnwood Transit Center, allowing construction of the new parking garage to begin. Near-critical work are the G and H bridges. Continued improvement in the level of detail should improve the forecast for the critical milestones. Skanska is also working to complete the schedule cost loading.

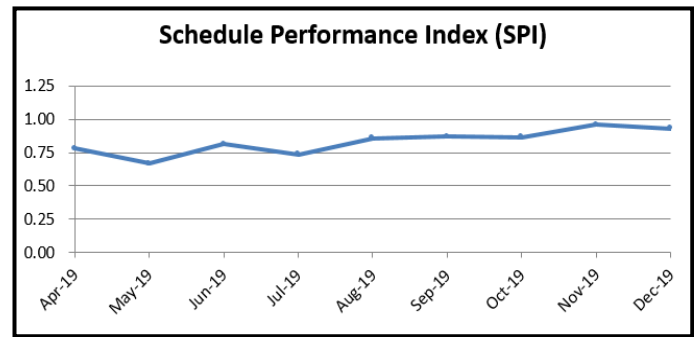
Activity Name	Start	Finish	Total Float	2020				2021				2022				2023				2024			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
L300 Construction	25-Sep-18A	01-Dec-23	220																				
L300 Construction			0																				
MILESTONES	25-Sep-18A	01-Dec-23	220																				
ROW ACQUISITIONS (PARCELS & TCE'S)	04-Jun-19A	09-Dec-20	726																				
PERMITTING	01-Feb-19A	22-Aug-20	1031																				
SUB-CONTRACTS	07-Aug-19A	02-Jan-20	789																				
SUBMITTALS	12-Apr-19A	08-Jun-20	565																				
MATERIAL PROCUREMENT	18-Aug-19A	04-Apr-21	405																				
EARLY WORK	12-Apr-19A	08-Oct-20	1008																				
3RD PARTY UTILITIES	03-Oct-19A	08-Apr-20	1119																				
CONSTRUCTION	11-Dec-19A	02-Oct-23	261																				
CHANGE ORDERS	22-Nov-19A	08-Jan-20	1199																				
Deleted Activities	01-Jan-20	28-Oct-20	996																				

Link Light Rail Lynnwood Link Extension

Schedule Performance Index

This period the cumulative SPI is at 0.93, which means that cumulative amount of work accomplished is lower than the value of work planned.

Through December, the earned value represents only the early work portion of the contract. The major contract modification is not yet integrated into the earned value plan.



Next Period's Activities

- Continuing installation and maintenance of temporary stormwater collection system and Best Management Practices (BMPs).
- WA 1-6: Continue work on the access road and walls.
- WA 7: Continue conduit and sewer work in the Mountlake Terrace Transit Center area.
- WA 8: Continue to clear and grub; install access bench and BMPs for slope stabilization.
- WA 9: Complete the placement of fill material; continue pre-activity work for the new manhole installation in the south end of this work area.
- WA 10: Continue to stage equipment and materials, and prepare the storage yard.
- WA 16: Pave and prepare the upper temporary parking lot for opening.

Closely Monitored Issues

- Monitoring timing of receipt of all permits necessary for construction.
- Evaluating cost impact of plan set revision between the early work pricing and Issue for Construction (IFC) sets.
- Coordination of temporary parking at Lynnwood Transit Center.
- Erosion and sediment control during the wet season; impacts of heavy rain and snow occurrences.

Cost Summary

Present Financial Status	Amount
L300 Contractor—Skanska	
Original Contract Value	\$ 56,886,631
Change Order Value	\$ 778,908,606
Current Contract Value	\$ 835,795,237
Total Actual Cost (Incurred to Date)	\$ 43,889,321
Percent Complete	10.1%
Authorized Contingency	\$42,888,048
Contingency Drawdown	\$ 795,237
Contingency Index	5.4



Clearing and grubbing along the temporary access road.

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Link Light Rail I-90 Two-Way Transit & HOV Operations (Stage 3)

Project Summary

Scope

The I-90 Two-Way Transit and HOV Operations (Stage 3) project provides approximately four miles of HOV lanes in each direction of the outer roadway between 80th Avenue South on Mercer Island and Rainier Avenue in Seattle. The project includes upgrades and retrofits to the fire, life, safety, and other systems in the Mount Baker and Mercer Island/First Hill tunnels. The project also includes remaining dowel bar retrofit work on the west side of Lake Washington, and the installation of screening on the shared-use pathway on the I-90 floating bridge.



Since June 2017, the project has provided 24/7 HOV access on I-90 between Seattle, Mercer Island and Bellevue.

Phase

Construction

Budget

\$225.6 Million

Schedule

Construction Complete: 1st QTR 2019

Major Contracts

	Scope	Agreement/Contract Amount
WSDOT	Final Design	\$ 20,942,000
WSDOT	CM Services	\$ 39,188,449
IMCO	Construction	\$131,515,559
City of Mercer Isl.	Transportation Mitigation	\$10,050,000

Key Project Activities

- Work outside the tunnels – No work remaining
- Mercer Island Tunnel – Complete punch list items
- Mount Baker Ridge Tunnel – Complete punch list items
- SCADA – Final testing & commissioning
- Simplex – Complete punch list items

Closely Monitored Issues

While the center roadway turnover to Sound Transit was completed on schedule, granting of Substantial Completion is contingent on WSDOT's execution of a clear-all settlement change order with their contractor; granting of Substantial Completion (retroactive to June 2017) is anticipated for 1st Quarter 2020, and the following issues are being resolved:

- Incomplete submittal of warranty lists
- Commissioning Agent Certification of remaining tests not completed as anticipated and is ongoing

Project Cost Summary

The following tables summarize the cost information for the I-90 Two- way Transit and HOV Operations (Stage 3) project. Project expenditures for December were \$259.0K. Tables below are in millions.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$3.6	\$3.6	\$2.3	\$2.3	\$3.6	\$0.0
Preliminary Engineering	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$0.0
Final Design	\$22.1	\$22.1	\$18.7	\$18.2	\$22.1	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$198.3	\$198.3	\$182.7	\$174.4	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$205.3	\$196.5	\$225.6	\$0.0

Totals may not equal column sums due to rounding of line entries.

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
40 Sitework & Special Conditions	\$180.6	\$190.7	\$182.7	\$174.4	\$190.7	\$0.0
80 Professional Services	\$26.3	\$26.3	\$22.6	\$22.1	\$26.3	\$0.0
90 Unallocated Contingency	\$18.7	\$8.7	\$0.0	\$0.0	\$8.7	\$0.0
Total	\$225.6	\$225.6	\$205.3	\$196.5	\$225.6	\$0.0

Totals may not equal column sums due to rounding of line entries.

Link Light Rail I-90 Two-Way Transit & HOV Operations (Stage 3)



Cost Contingency Management

In the table below, the Allocated Contingency includes both WSDOT-controlled construction contingency and total ST-controlled allocated contingencies. Due to finalization of a claim settlement with the WSDOT contractor, additional budget commitment to the construction contract resulted in a decrease of the Committed Allocated Contingency from \$2.2M to \$1.4M, and a net 2.4% decrease to the overall Current Contingency % when compared to the remaining work budgeted.

Contingency Status	Baseline Amount	Baseline % of Total	Current Amount	CTG as % of Remaining Work Budgeted
Design Allowance	\$0.0	0.0%	\$0.0	0.0%
Committed Allocated Contingency	\$17.0	7.5%	\$1.4	4.8%
Unallocated Contingency	\$18.7	8.3%	\$8.7	29.7%
Total	\$35.7	15.8%	\$10.9	34.5%

Totals may not equal column sums due to rounding of line entries.

Project Schedule

Project Milestones for construction are indicated below; the revised Substantial Completion date, retroactive to June 14, 2017, was negotiated by WSDOT with their contractor and authorized by Sound Transit as part of a commercial issues resolution clear-all change order, and as an amendment to the agreement between ST and WSDOT. Formal execution of the settlement change order is anticipated for January 2020.

Contract	Fire/Life Safety Systems Commissioning		Substantial Completion		Center Roadway Turnover		Physical Completion	
	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual
I-90 Two-Way Transit & HOV Operations Stage 3	2/16/2017	Q4/2019	2/20/2017	6/14/2017	5/31/2017	6/14/2017 A	5/31/2017	Q1/2020

Changes from previous update are indicated in **RED**; A indicates Actual.

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Link Light Rail East Link Extension

Project Summary

Scope

Limits Fourteen-mile extension from Downtown Seattle to Mercer Island, Bellevue and the Overlake area of Redmond.

Alignment East Link Extension expands light rail to East King County via I-90 from Downtown Seattle to the Overlake Transit Center area of Redmond.

Stations Judkins Park, Mercer Island, South Bellevue, East Main, Bellevue Downtown, Wilburton, Spring District/120th, Bel-Red/130th, Overlake Village (OVS) and Redmond Technology (RTS).

Systems Signals, traction electrification, and communications (SCADA).

Phase Construction

Budget \$3.677 Billion (Baseline April 2015)

Schedule Revenue Service: June 2023



Map of East Link Extension Alignment.

Key Project Activities

- **Floating Bridge Retrofit (E130):** Interior pontoon cathodic protection continues; ongoing application of polyuria at West Bound modular track bridges.
- **Mercer Island (E130):** Continue interior finishes, plaza construction, electrical/mechanical commissioning at Mercer Island Station; begin installation of pedestals for pedestrian crossing, ongoing track installation in Mercer Island Tunnel.
- **IDS to Mt. Baker Tunnel (E130):** Ongoing International District Station (IDS) turn-back track and plinth installation; complete final materials demobilization at Pioneer Square Station temporary platform; continue utility, structural work at Judkins Park Station East Head House and platform.
- **South Bellevue (E320):** Completed I-90 track slab; ongoing garage and station work; continued progress on overhead catenary system (OCS) foundation work as well as along Bellevue Way SE.
- **Downtown Bellevue Tunnel (E330):** Continued installing reinforcement and shotcrete of the crown in the mid-tunnel enlarged section; Continued construction of the center wall throughout the tunnel south of the enlarged section.
- **Downtown Bellevue to Spring District (E335):** Continued formwork, rebar, and concrete placement at Bellevue Downtown Station and Wilburton Station; ongoing track work; Continued footing excavation and placement at East Main Station.
- **Bel-Red (E340):** Continued forming and pouring curb on the aerial guideway. Continued station buildout, track slab grading and rail placement. Sidewalk placement, curb and gutter along NE Spring Blvd.
- **SR520 to Redmond Technology Station (E360):** Temporary occupancy issued for the RTS to open the bus loop on December 23th. Ongoing fabrication of pedestrian bridge truss and installation of the precast concrete vault at sweeper site.
- **Systems (E750):** Continued with submittals, component design/manufacturing/fabrication, pre-work ahead of IDS tie-in.

Closely Monitored Issues

- Bellevue Downtown Station (E335) and the Bel-Red Segment (E340) challenges and schedule slippage.
- Design change during construction phase particularly at our most technically challenging stations.
- Quality, construction safety and environment compliances.
- Coordination of pre-requisite work in 2019 that leads up to IDS single tracking in Q1 2020.
- Contractor performance and level of confidence in turning over access to follow on Systems contract.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

The Estimated Final Cost (EFC) remains the same at approximately \$3.68B. This period's expenditure is a little under \$52.1M, pushes the total expenditure to date from \$2.23B to \$2.28B. Project commitments is over \$3B with all major construction contracts in place and construction is on-going. This period's continues to somewhat under perform due to a combination of resequencing of work plan and construction challenges. It is anticipated to be made up throughout the current year.

Cost Summary by Phase

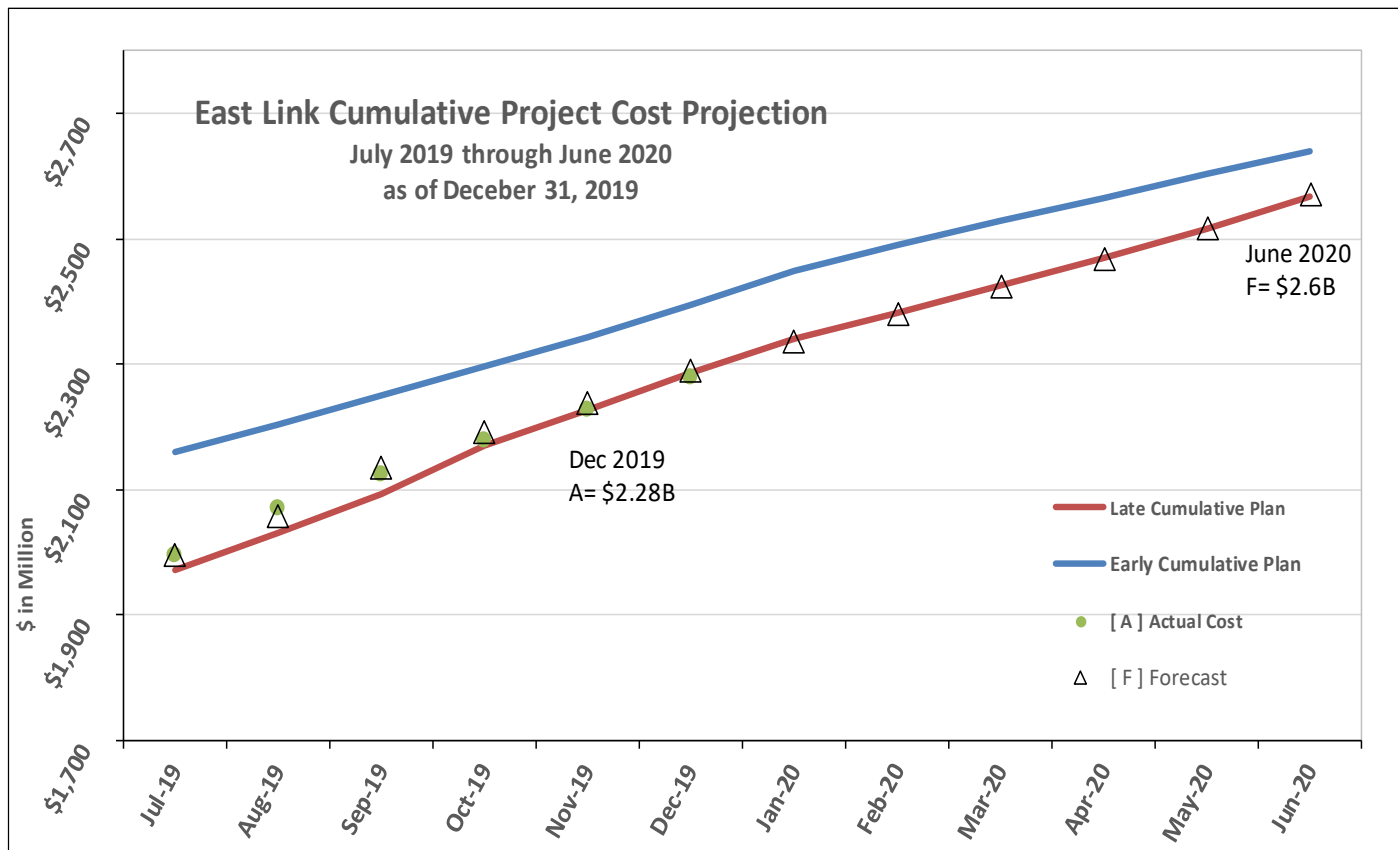
Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$186.2	\$186.2	\$88.7	\$88.9	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.8	\$54.8	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$246.6	\$222.9	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$196.7	\$118.1	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$38.3	\$27.4	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$2,185.0	\$1,497.9	\$2,544.3	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$298.2	\$298.2	\$270.9	\$269.9	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$3,081.0	\$2,279.9	\$3,677.1	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$744.6	\$949.7	\$894.5	\$705.5	\$954.7	(\$210.1)
20 Stations	\$397.7	\$474.2	\$440.1	\$274.7	\$468.6	(\$70.9)
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$808.5	\$568.3	\$478.8	\$364.8	\$567.3	\$241.2
50 Systems	\$353.8	\$367.9	\$347.3	\$133.1	\$369.0	(\$15.2)
Construction Subtotal (10 - 50)	\$2,304.6	\$2,360.1	\$2,160.6	\$1,478.2	\$2,359.6	(\$55.0)
60 Row, Land	\$288.5	\$288.5	\$270.9	\$269.9	\$288.5	(\$0.0)
70 Vehicles (non-revenue)	\$2.8	\$2.8	\$0.0	\$0.0	\$2.8	\$0.0
80 Professional Services	\$898.4	\$889.1	\$649.5	\$531.9	\$889.5	\$8.9
90 Unallocated Contingency	\$182.9	\$136.6	\$0.0	\$0.0	\$136.6	\$46.2
Total (10 - 90)	\$3,677.2	\$3,677.2	\$3,081.0	\$2,279.9	\$3,677.1	\$0.0

Project Cash Flow Projection

The East Link cost projection continues to progress within the planned expenditure as construction activities continue to pickup. This period's project to date expenditure topped out at approximately \$52.1M where Construction Phase is responsible for about 90.5% or approximately \$47.1M of December's expenditure. Total project cost incurred to date topped \$2.28B, to which a little under \$1.5B was recorded in the Construction Phase. The project expenditures continue to pick up and is predicted to rise to approximately \$2.6B by June 2020.



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks.

The 3rd QTR 2019 risks updates have been completed. The Risk Mitigation Milestone #4 (Completion of SEM Tunneling) report is completed and given the current risk profile in the project, there are sufficient schedule and budget in the project to complete in accordance to baseline. The 4th QTR 2019 risk registers are being prepared for update. The following are the current top project wide risks areas:

- Compliance with quality, safety and environmental requirements.
- Design changes during construction, particularly at technically complex stations such as Mercer Island, Bellevue Downtown and Redmond Technology.
- Interfaces between contracts, agency supplied equipment and third party jurisdictions.
- International District Station coordination of pre-requisite work that leads up to East Link tie in to mainline operations work in 1st QTR 2020.

Contingency Management

East Link project budget was baselined on April 2015 with a total contingency of \$795.9M. At the end of this period, all major construction contracts have been procured, the total contingency balance stands at \$359.4M (previously \$359.8M). The current contingency balance is consistent with the project's planned contingency drawdown.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is unchanged this period with a balance at \$3.6M and is expected to be fully drawn when all construction scope are executed.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. This period, AC was drawn down for an aggregate of approximately \$0.4M due to predominantly construction changes, leaving a balance of \$219.1M. The contingency draw in this period is primarily driven by aggregation of construction change orders in the project, primarily the construction contracts.

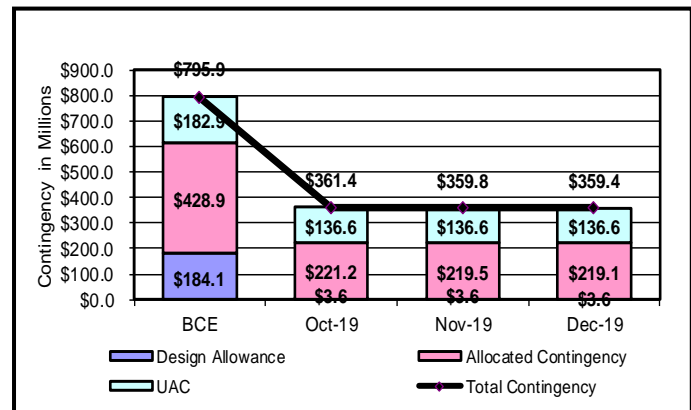
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance remains unchanged at \$136.6M.

Contingency Status

Contingency Type	Baseline		Current Status	
	Amount	% of Total Budget	Amount Remaining	% of Work Remaining
Design Allowance	\$184.1	5.0%	\$3.6	0.3%
Allocated Contingency	\$428.9	11.7%	\$219.1	15.7%
Unallocated Contingency	\$182.9	5.0%	\$136.6	9.8%
Total	\$795.9	21.6%	\$359.4	25.7%

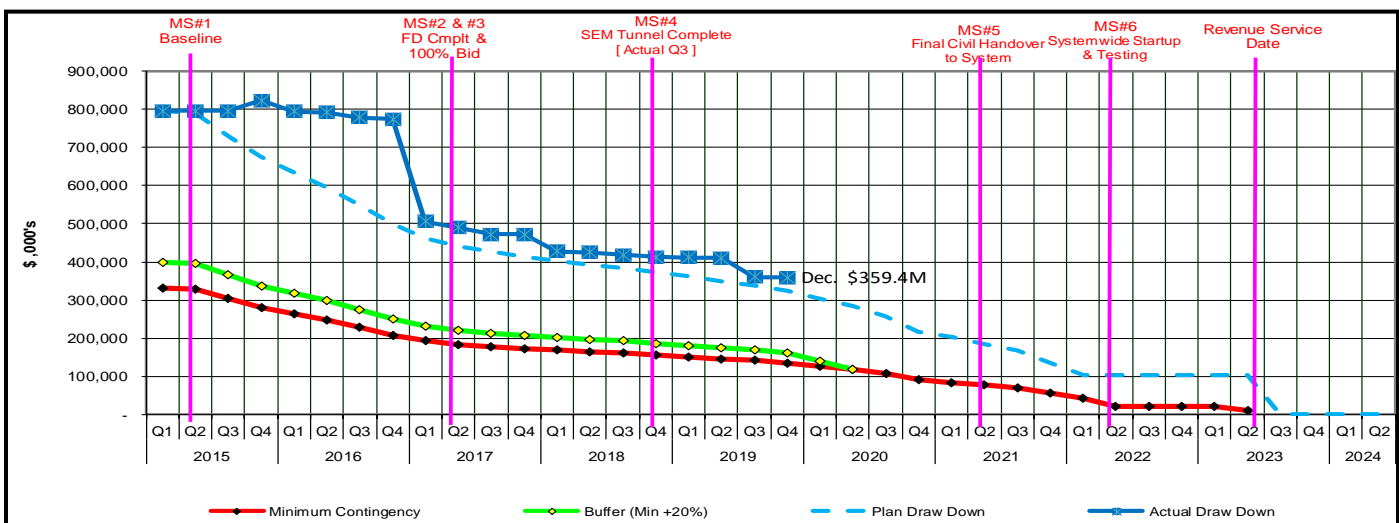
Table figures are shown in millions.

Contingency by Type



Contingency Drawdown

East Link Project's total contingency drawdown continues to trend within plan with an overall contingency balance at approximately \$359.4M (previously \$359.8M) and with all major construction contracts procured, remains above the baseline draw down projection and well above both the minimum contingency and the buffered (minimum plus 20%) contingency levels. The contingencies at the end of December represented the monthly draw of about \$1.7M due to various construction change orders.



Contingency Drawdown as of December 31, 2019

Link Light Rail East Link Extension



Project Schedule

The Integrated Master Schedule is presented below.

E130 continued installing cathodic protection in the HMH floating bridge pontoons; work continued at both stations; continued work at International District Station and Pioneer Square Station in anticipation of Connect 2020.

E320 continued preparation of TPSS foundation, and OCS foundations; began plinth pours; continued conveyance and electrical work at S. Bellevue Station; continued pouring sidewalks, curbs, and gutters along 112th.

E330 continued placement of the center wall; continued reinforcement and shotcrete of mid-tunnel crown.

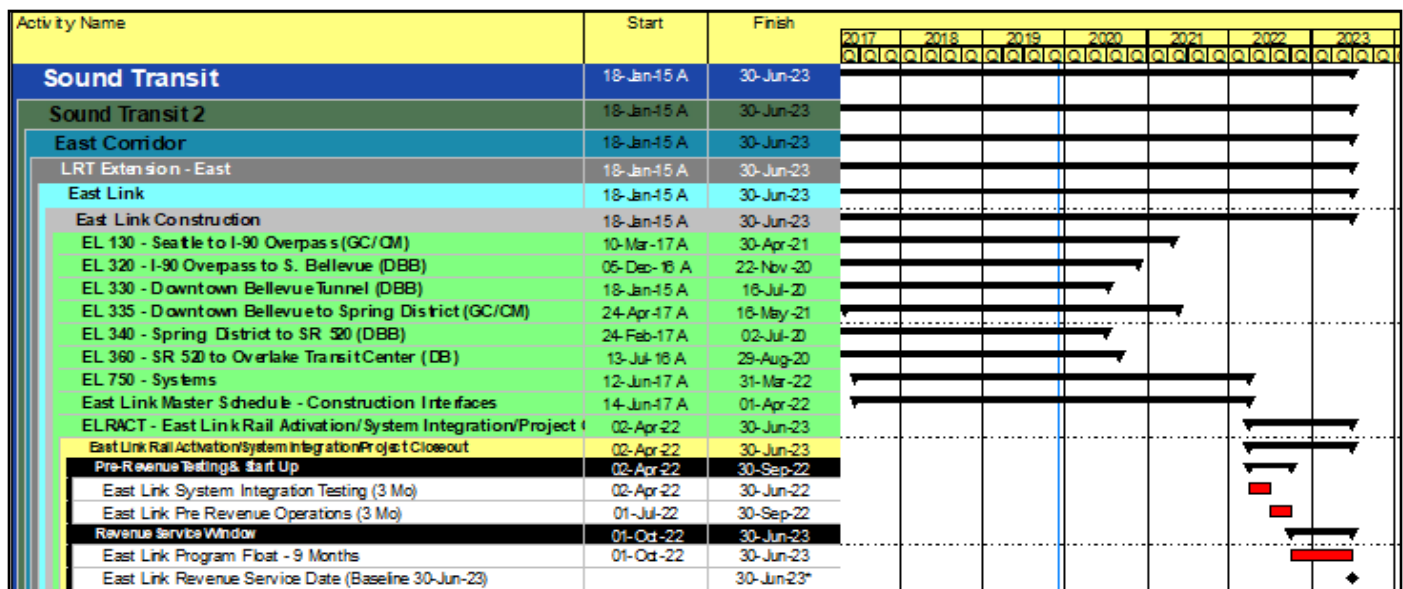
E335 continued restoration at 110th Ave NE; continued trackwork and ductbank installation on aerial guideway; continued work at all stations.

E340 continued placing plinths and curbs on aerial guideway; continued excavation for trackwall placement on 136th Pl; continued work at 130th Station.

E360 continued placing track slab and skeleton track at the west end of the alignment; continued installing guardrail on aerial guideway; continued placing track on at-grade guideway; continued work at both stations.

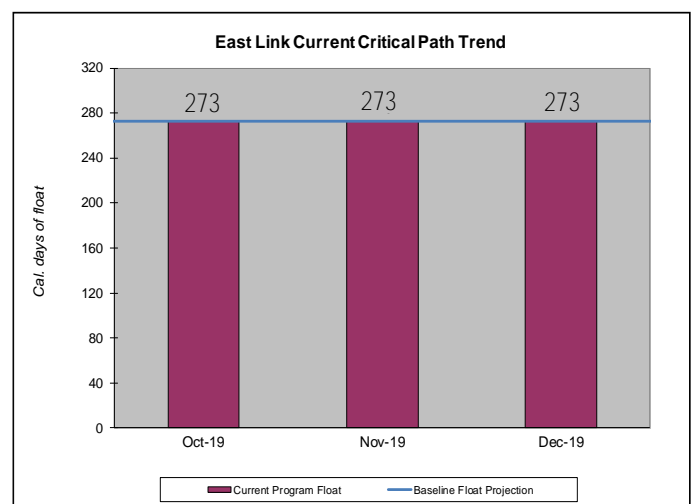
E750 Systems contractor continued procuring equipment and continued mobilizing for construction; preliminary work continued at International District Station (IDS); prepared to start work on East Channel Bridge.

All contracts are forecast to complete on or before target. Revenue Service is forecasted in June 2023.



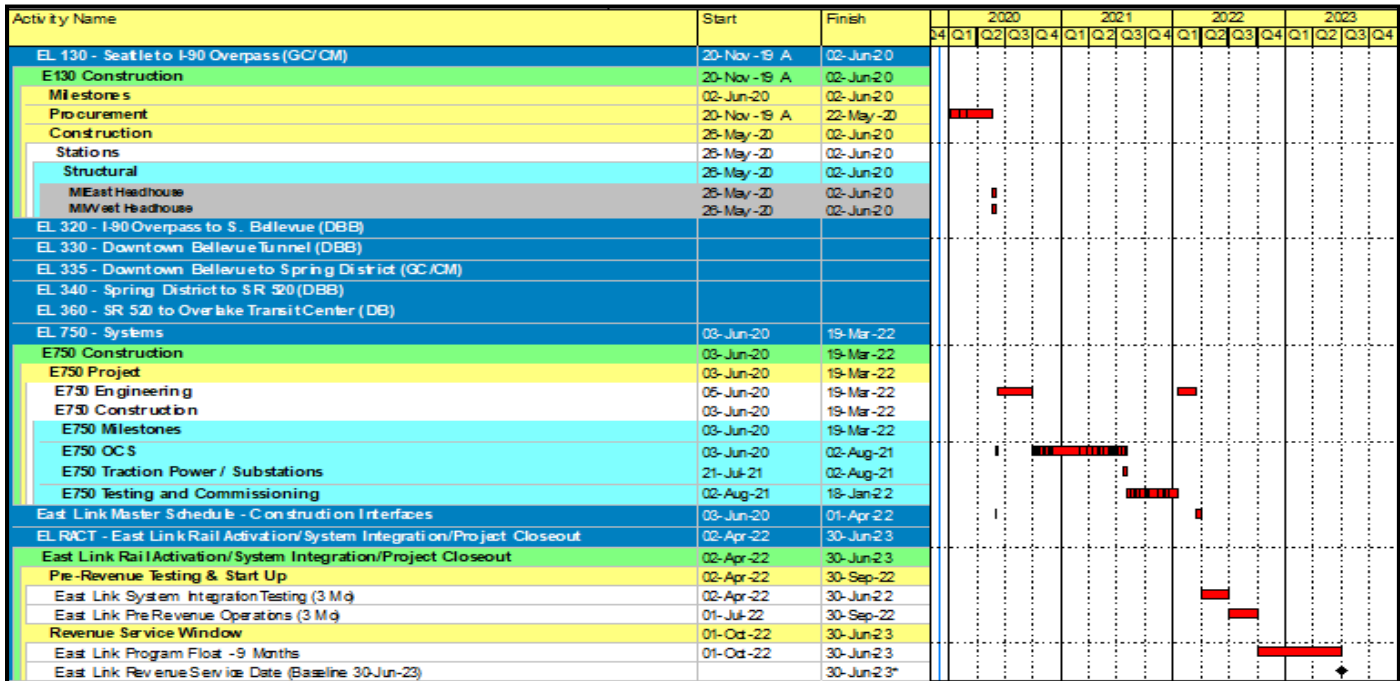
Project Float

East Link was baselined with 273 days of program float. To date, no float has been used.



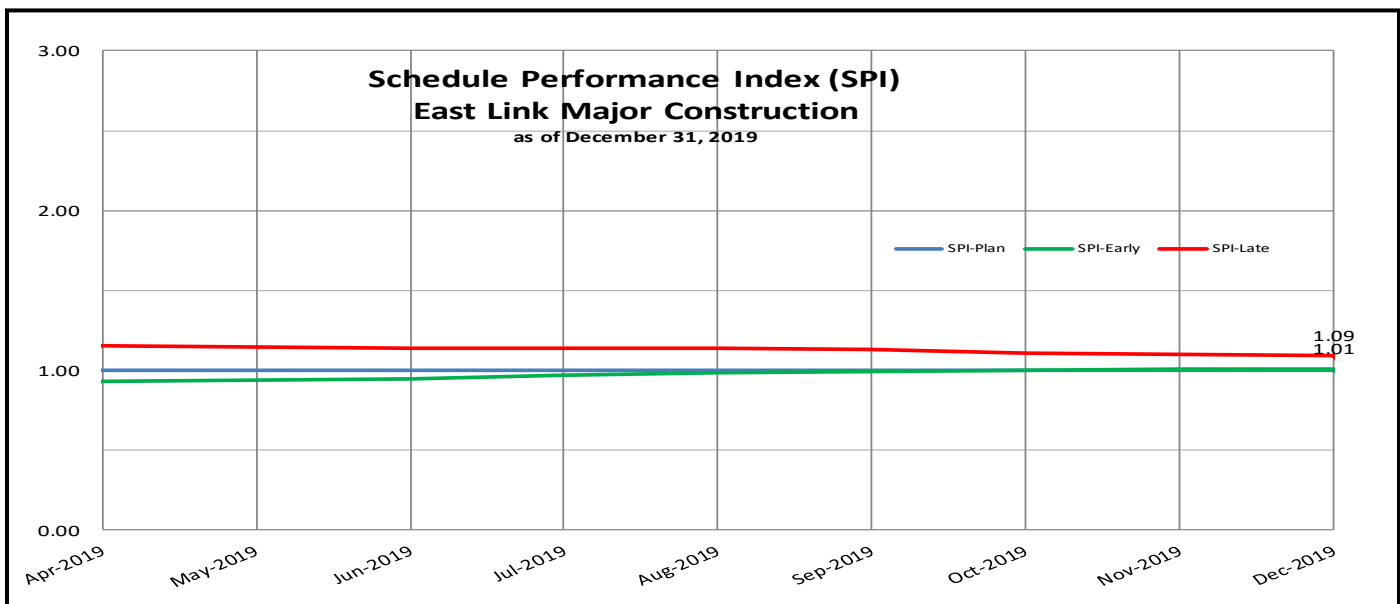
Critical Path Analysis

The East Link critical path this month continues to run through Mercer Island Station on the E130 contract to the handover to the E750 systems contractor. It then follows OCS installation. Other civil contracts continue to be closely monitored for potential impacts to the E750 schedule.



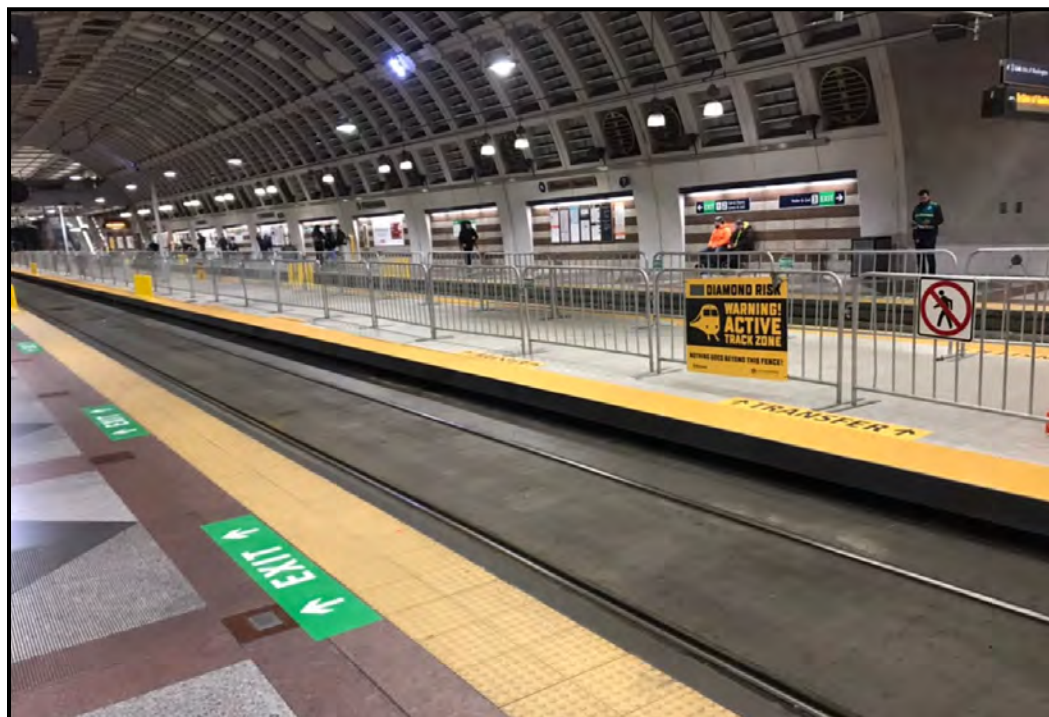
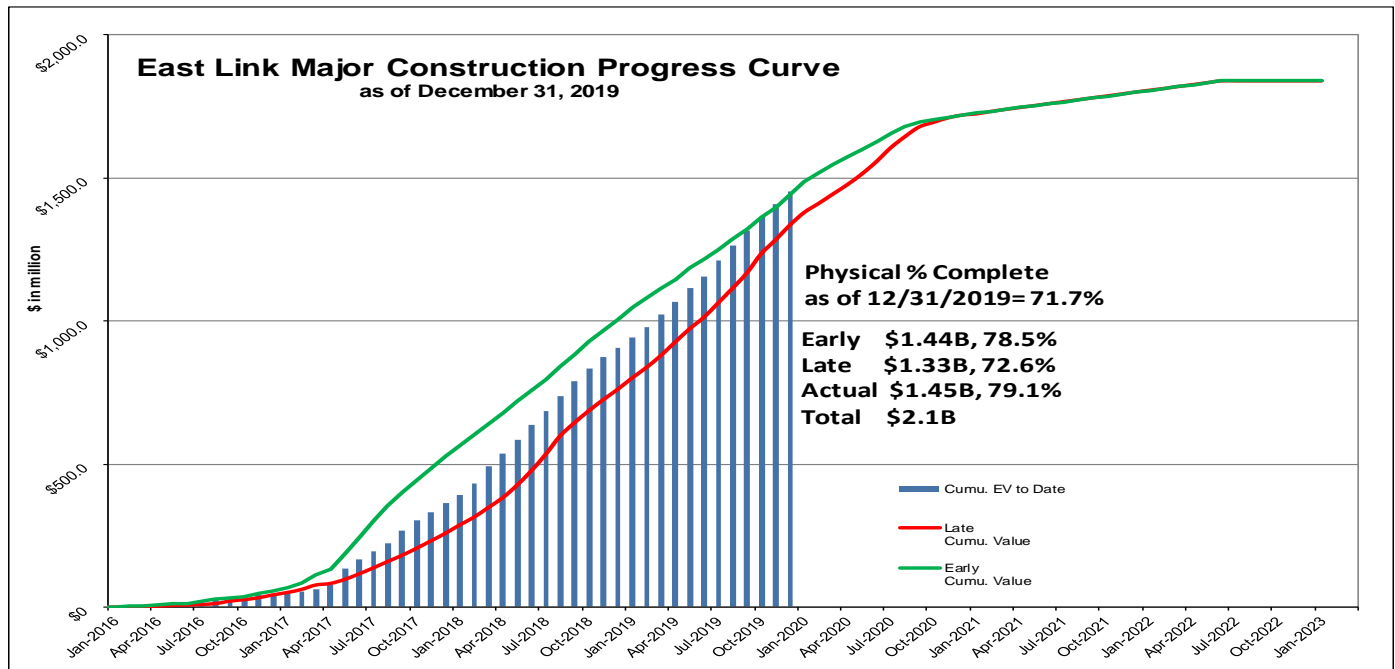
Schedule Performance Index

The early Schedule Performance Index (SPI) for East Link's Major Construction Packages remains at 1.01 for this period, which indicates continued steady performance. The late SPI of 1.09 shows that in general, performance is satisfactory.



Project Cash Flow Projection

The overall East Link Major Construction percent complete analysis is based on a weighted measurement among the seven major construction contracts' schedule, duration and cost. The graph below shows the aggregate cost progression for these construction contracts. As of the end of December, performance continues to trend positively toward the early projection as drawn from the master schedule. The overall physical percent complete for East Link construction is 71.7%.



E130 Seattle to South Bellevue: Pioneer Square Station's temporary center platform with "exit" and "transfer" decals applied.

Right-of-Way

The East Link Extension involves the acquisition of a range of property interests including fee acquisitions for stations, guideway, staging areas, support facilities, and tunnel and guideway easements as well as permanent and temporary easements for construction. These acquisitions resulted in owner and tenant residential and commercial relocations. Property acquisition and relocations are mostly complete, with limited processing of relocation claims and coordination of property transfers with the City of Bellevue remaining. The right-of-way program status for this period is summarized in the following table:

East Link Extension Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
239	246	234	228	229	226
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

Community Outreach

- Ongoing distribution of weekly construction alerts for maintenance of traffic activities for Mercer Island, Bellevue and Redmond. Coordinated many briefings and meetings with impacted neighbors about upcoming major traffic changes including but not limited to full closures. December focus: door to door outreach on flooding and standing water on roadways during heavy rains on 19th & 20th; on-site street teaming on the bus loop traffic switch at Redmond Technology Station Dec. 23th; traffic switch on NE 20th and 136th Pl. NE.
- Ongoing engagement with individual property owners, members of the public, and impacted neighbors on a variety of concerns including demolition, noise wall construction, dust control, signage, night time noise, traffic, access, maintenance of traffic.
- Participated in a Rail & Ice event on December 20 at the Bellevue downtown ice skating rink, inviting project participants and neighbors to ice skate and learn more about East Link.



E335 Downtown Bellevue to Spring District: Bridge spanning over Highway I-405 along NE 6th Street on December 31, 2019

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	December 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	1	33	72
Days Away From Work Cases	0	7	14
Total Days Away From Work	63	705	1,089
First Aid Cases	5	95	216
Reported Near Mishaps	6	55	245
Average Number of Employees on Worksite	1,014	15,001	32,065
Total # of Hours (GC & Subs)	139,930	2,276,685	4,746,867
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	1.43	2.90	3.03
LTI Rate	0.00	0.61	0.59
Recordable National Average	3.00		
LTI National Average	1.20		
Recordable WA State Average	6.00		
LTI WA State Average	1.90		

Note1: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

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Major Construction Contract Packages

Below are the major construction contract packages for the project with a brief scope description of each.

R8A Stage 3A – Modification of HOV Ramp between I-90 and Bellevue Way SE. [Design-bid-build]

Status: Completed and Operational.

E130 Seattle to South Bellevue – International District Station (IDS) modification, Retrofit of existing WSDOT structures, I-90 Center Roadway and two light rail stations. [Heavy Civil GC/CM]

Status: See following pages under Contract E130.

E320 South Bellevue – One light rail station and a parking garage at South Bellevue P&R; aerial, at-grade and retained-cut guideway along Bellevue Way SE and 112th Avenue SE. [Design-bid-build]

Status: See following pages under Contract E320.

E330 Downtown Bellevue Tunnel – SEM Tunneling along 110th Ave. NE in Downtown Bellevue. [Design-bid-build]

Status: See following pages under Contract E330.

E335 Downtown Bellevue to Spring District – Four light rail stations; aerial, at-grade and retained-cut guideway from Downtown Bellevue, over I-405 to 124th Ave. NE. [Heavy Civil GC/CM]

Status: See following pages under Contract E335.

E340 Bel-Red – One light rail station, aerial and at-grade guideway from 124th Ave. NE to NE 20th. [Design-bid-build]

Status: See following pages under Contract E340.

E360 SR520 to Redmond Technology Station – Two light rail stations; aerial and retained-cut guideway along SR-520 in the Overlake area of Bellevue and Redmond. [Design-Build]

Status: See following pages under Contract E360.

E750 Systems – Light rail systems elements, including Traction Power Electrification, Overhead Catenary System, Train Signals and Communication System. Combined with Northgate Link N830. [Heavy Civil GC/CM]

Status: Contractor continues with critical submittal, reviews of plans, component and product designs as well as meetings with civil contractors with regards to the Coordinated Installation Plan (CIP), off site TPSS worksite interface inspections and surveys of E130. Executed perquisite work that leads up to Q1 2020's East Link Tie-In (Connect 2020)



E360 SR520 to Redmond Technology Station: North face of the parking garage at Redmond Technology Station.

Contract E130 – Seattle to South Bellevue Heavy Civil GC/CM

Current Progress

West Segment: Ongoing IDS turn-back track and plinth installation; complete final materials demobilization at Pioneer Square Station temporary platform; continue utility, structural work at Judkins Park Station East Head House and platform.

Center Segment: Interior pontoon cathodic protection continues; ongoing application of polyuria at West Bound modular track bridges.

East Segment: Continue interior finishes, plaza construction, electrical/mechanical commissioning at Mercer Island Station; begin installation of pedestals for pedestrian crossing, ongoing track installation in Mercer Island Tunnel.

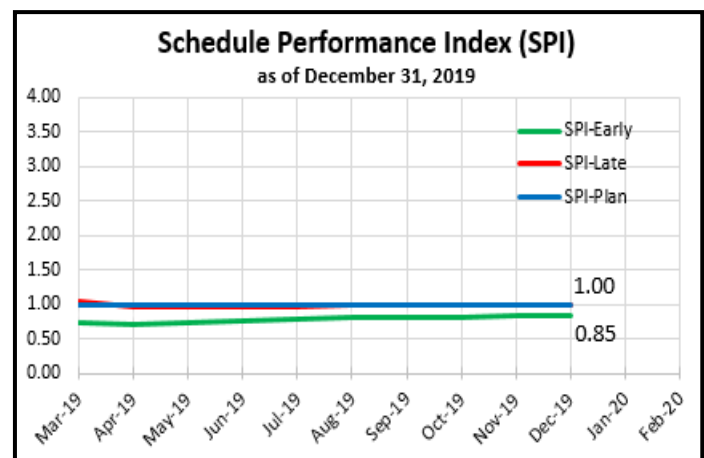
Schedule Summary

The critical path for this project currently runs through cathodic protection on the floating bridge. The contractor is currently behind on milestones 1 and 4; however, they have been coordinating with the E750 systems contractor to ensure that access is preserved. None of the work which impacts the milestones is expected to delay the start of systems work.

Activity Name	Start	Finish	2020						2021
			Q1	Q2	Q3	Q4	Q1	Q2	
E130 Construction	10-Mar-17 A	30-Apr-21							
Milestones	10-Mar-17 A	30-Apr-21							
Access Milestones	10-Mar-17 A	12-May-17 A							
16. Notice to Proceed - Package 1	10-Mar-17 A								
16. Notice To Proceed - Remaining Scope	12-May-17 A								
Major Project Complete Milestones	21-Aug-19 A	30-Apr-21							
16. MS#02 - Substantial Completion of IDS Conversion - Reinstat NB Operations (10-Feb-20)		08-Feb-20*							
16. MS#03 - Substantial Completion of IDS Conversion - Reinstat SB Operations (18-Mar-20)		12-Mar-20*							
16. MS#01 - Acceptance		02-Jul-20							
16. MS#01 - Substantial Completion West Mercer Island Lid to East End of Project (29-Jan-20)		09-Sep-20*							
16. MS#04 - Substantial Completion All Work (12-Dec-20)		31-Mar-21*							
16. Acceptance		30-Apr-21							
Milestone 1 Interim Dates	21-Aug-19 A	09-Sep-20							
Construction	20-Mar-17 A	01-Mar-21							
Preliminary Activities	03-Apr-17 A	28-Apr-20							
Sitework	23-Aug-17 A	08-Jan-20							
Demolition	20-Jul-17 A	29-Jan-20							
Tunnel Modifications	18-Sep-17 A	23-Oct-20							
Stations	31-May-17 A	10-Nov-20							
OCS Bases/Frames	02-Apr-18 A	27-Aug-20							
Civil Utilities	05-Jul-17 A	21-Jan-21							
Electrical	20-Mar-17 A	27-Aug-20							
Structures Retrofit	20-Mar-17 A	01-Mar-21							
Trackwork	29-Jan-18 A	08-Jan-21							
Systems	26-Jun-17 A	06-Nov-20							
IDS Modification	18-Jan-19 A	23-Jun-20							

Schedule Performance Index

This period, the SPI early is 0.85, while SPI late is 1.00; these indices show the Contractor is behind their early plan, but remains on-target with their late finish plan and should reach Substantial Completion by the required finish date. Pressures to the schedule have been identified which may affect the Contractor's ability to achieve Milestone 2; associated activities are under review to develop a plan to complete remaining work, while ensuring a successful interface with the E750 Contractor's schedule. The critical path continues to run primarily through cathodic protection and final commissioning.



Link Light Rail East Link Extension

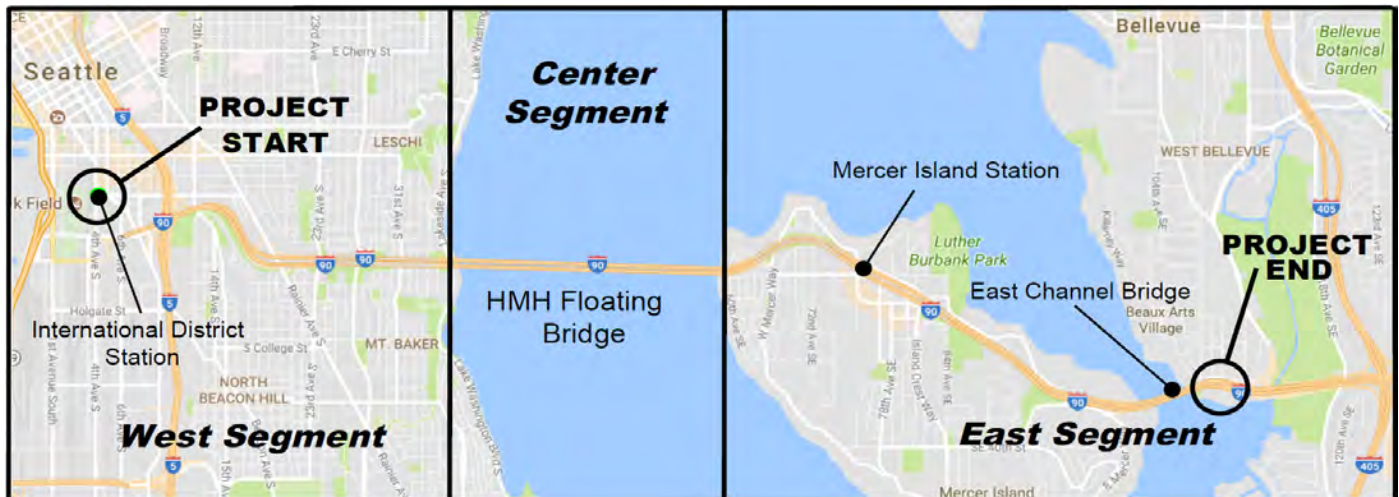
Next Period's Activities

- **West Segment:** Progress Judkins Park Station structures, platform construction; continue IDS retrofit work, track installation
- **Center Segment:** Progress cathodic protection in pontoon interiors
- **East Segment:** Advance MI Station commissioning; final track installation in MI Tunnel; final ballasting and stray current testing at East Ballasted 1 segment

Closely Monitored Issues

- Current East Segment activity progress to reach Milestone 2 and potential impacts to E750
- Coordination of rail tie-in activities at the International District Station
- Requirement for shielding non-conductive wires for the cathodic protection on floating bridge

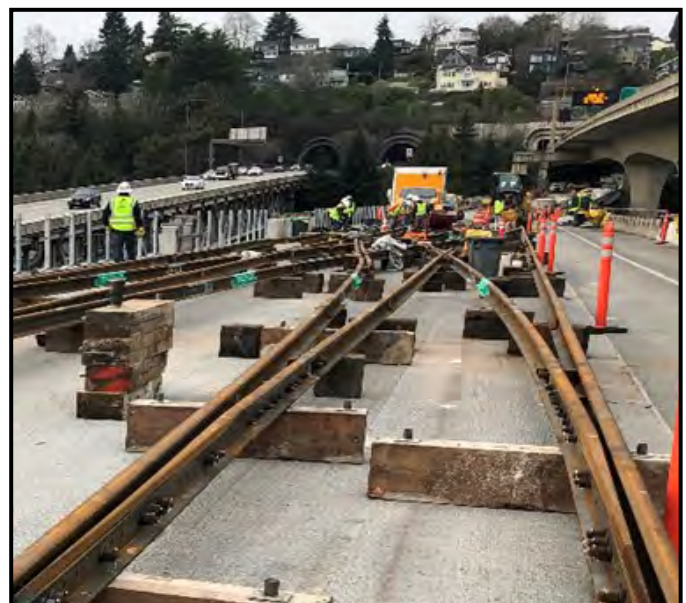
E130 Construction Segments



Cost Summary

Present Financial Status	Amount
E130 Contractor - Kiewit-Hoffman	
Original Contract Value (incl. Phase 2 MACC)	\$665,000,000
Change Order Value	\$26,275,579
Current Contract Value	\$690,320,579
Total Actual Cost (Incurred to Date)	\$506,625,841
Percent Complete	71.99%
Authorized Contingency	\$46,660,541
Contingency Drawdown	\$26,275,579
Contingency Index	1.3

Contract Value excludes Betterment



Double-crossover rail placement at west approach to floating bridge

Contract E320 – South Bellevue

Current Progress

I-90 Flyover: Continued overhead catenary system (OCS) and traction power substation (TPSS) foundation work. Begin form/rebar/pour (FRP) plinths eastbound and westbound; continued emergency guardrail work.

Bellevue Way SE: Continued rock faced retaining wall work; continued trench and shotcrete work as well as OCS pole work underground conduit pull work is ongoing as is curb and gutter work.

S. Bellevue Sta./P&R: Continued mechanical work on all levels of the garage and stair construction on north end; Station electrical work and conveyance installation continued. Installation of metal panels and curtain wall work is ongoing.

Wye-to-East Main and Track Work: Civil work prep ongoing for walls and sub ballast. Continued work installing electrical poles and ductbank; FRP plinths eastbound and westbound on elevated guideway.

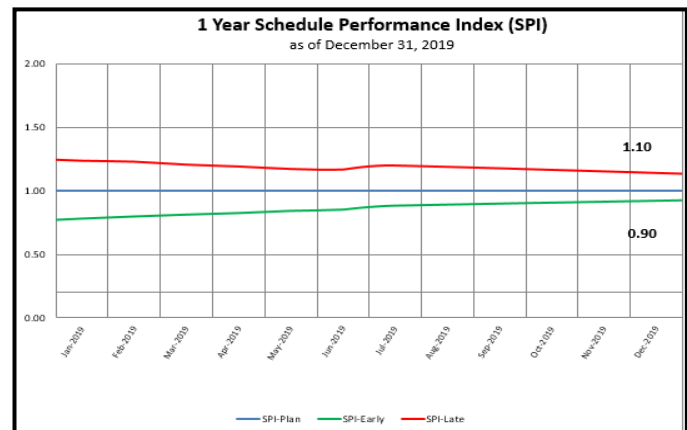
Schedule Summary

The critical path for this project continues to run through the 112th undercrossing and trench along Bellevue Way SE. The contractor is currently forecast to achieve substantial completion in time to hand over the station and guideway to the E750 systems contractor.

Activity Name	Start	Finish	2020			
			Q1	Q2	Q3	Q4
E320 Construction	05-Dec-16 A	21-Nov-20				
Milestones and Summary	05-Dec-16 A	21-Nov-20				
Contract Milestones	05-Dec-16 A	21-Nov-20				
Limited Notice to Proceed	05-Dec-16 A					
Notice to Proceed	13-Feb-17 A					
Milestone 3A - Clear & Grub Swaylocken (Start of "Wetland Fill" Work-365D)		21-Dec-18 A				
Milestone 1 - (Alternate) Phase B21 Not Used		31-May-19 A				
Milestone 3B - Clear & Grub Coal Creek		22-Nov-19 A				
Milestone 2 - Final Restoration of Bellevue Way (Start-897D)		08-Aug-20*				
Milestone 4 - SIFT & SCADA Complete (NTP+1160D)		08-Sep-20*				
Milestone 5 - Acceptance of South Bellevue Station (NTP+1125D)		18-Oct-20*				
Milestone 6 - Required Substantial Completion (NTP+1364D)		21-Nov-20*				
Construction-1	21-Apr-17 A	02-Nov-20				
Mobilization	21-Apr-17 A	18-Jul-18 A				
Area A - I-90 Mainline to Bellevue Interchange - Sta EB405+54 to EB438+20	18-Jun-17 A	19-Oct-20				
Area B - Bellevue Way SE, SE 30th St to 112th Ave SE Wye - Sta EB438+20 to EB476+75	30-May-17 A	02-Nov-20				
Area C - 112th Ave SE, 112th Ave SE Wye to SE 8th - Sta EB476+75 to EB508+00	13-Jun-17 A	28-Sep-20				
Area D - 112th Ave SE to SE 8th St to Main St - Sta 508+00 to EB528+25	22-May-17 A	21-Sep-20				
Area E - Coal Creek Stream Enhancement	09-Jul-18 A	22-Nov-19 A				
Area F - Swaylocken Mitigation	23-Apr-18 A	21-Dec-18 A				

Schedule Performance Index

The SPI early remains at 0.9 this month and the SPI late is 1.1. The contractor continues to remain ahead of their late finish plan and are slightly behind their early plan. Affecting the schedule are the station and garage which are running behind plan. Critical path remains the work on 112th with ballasted track install, weld and de-stress and eastbound track wall work.



Link Light Rail East Link Extension

Next Period's Activities

- **I-90 Flyover:** Continue plinth work, TPSS, OCS foundations work and installation of emergency guardrail on guideway.
- **Bellevue Way SE:** Continue trench and shotcrete work; begin pigment sealing in trench.
- **S. Bellevue Sta./P&R:** Continue conveyance work in station and garage; continue site drainage and electrical work at station.
- **Wye-to-East Main and Track Work:** Continue underground raceway work and ballasted rail work.

Closely Monitored Issues

- Working adjacent to wetland areas, environmental compliance concerns.
- Refinement to the three-lane reversible Maintenance of Traffic (MOT) on Bellevue Way SE.



Cost Summary

Present Financial Status	Amount*
E320 Contractor - Shimmick/Parsons JV.	
Original Contract Value	\$319,859,000
Change Order Value	\$3,993,803
Current Contract Value	\$323,852,804
Total Actual Cost (Incurred to Date)	\$252,773,696
Percent Complete	77.2%
Authorized Contingency	\$38,532,000
Contingency Drawdown	\$3,993,803
Contingency Index	7.4

* \$ Amount excludes betterments and STArt.



Plinth and track work on elevated guideway at station and garage.

Contract E330 – Downtown Bellevue Tunnel

Current Progress

Tunnel: Continued installing reinforcement and place concrete of the center wall, installing reinforcement and shotcrete of the crown in the mid-tunnel enlarged section and placing curbs and walkways. Received Notice of Substantial Completion for mid-tunnel shaft and adit as well as north of mid-tunnel expanded zone.

South Portal: Continued to maintain the temporary erosion/sediment control and the traffic control. Forming and tying rebar for exterior walls and bulkhead of cut and cover area, ahead of permanent E335's resumption of permanent wall installation in January 2020.

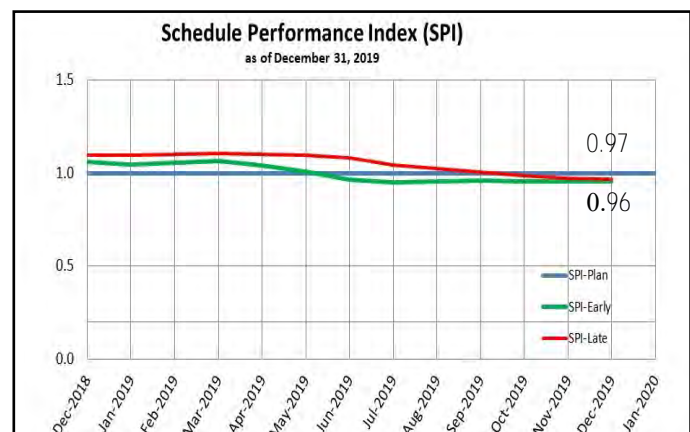
Schedule Summary

The critical path for this contract follows the final tunnel lining and the completion of the South Portal structure. The contractor is forecast to achieve Substantial Completion in time to meet their contractual requirements.

Activity Name	Start	Finish	2020
			Q1Q2
E330 Construction	15-Dec-15 A	17-Jun-20	
CONSTRUCTION	15-Dec-15 A	17-Jun-20	
MILESTONES/CONSTRUCTION EASEMENTS	15-Dec-15 A	17-Jun-20	
MILESTONES	15-Dec-15 A	17-Jun-20	
CALCULATED MILESTONES	15-Dec-15 A	17-Jun-20	
L-NTP	15-Dec-15 A		
NTP	08-Feb-16 A		
MLST1 - Acceptance of the 110th Ave Controlled Low Strength Material Work		14-Oct-16 A	
MLST2 - Acceptance of CO #006 Work		14-Oct-16 A	
MLST3 - Substantial Completion of all Work from Station EB 542+64.52 to Station EB 562+47.91		01-Feb-20	
MLST4 - Substantial Completion Total Contract		17-Jun-20	
MOBILIZATION	08-Feb-16 A	21-Jan-20	
SITWORK	29-Feb-16 A	17-Jun-20	
PRECONSTRUCTION	21-Mar-16 A	01-Jun-20	
TRAFFIC CONTROL	25-Mar-16 A	17-Feb-20	
SURVEY & MONITORING	29-Feb-16 A	03-May-18 A	
NORTH PORTAL AREA	13-Jun-16 A	14-Oct-16 A	
CAST IRON PIPE REPLACEMENT	08-Feb-17 A	08-Apr-17 A	
SOUTH PORTAL AREA	29-Feb-16 A	17-Jun-20	
SKYLINE BUILDING RETROFIT	17-Jan-17 A	18-Oct-17 A	
TUNNELING	01-Feb-17 A	30-Jan-20	
EXCAVATION	01-Feb-17 A	20-Jul-18 A	
FINAL TUNNEL LINING	20-Jul-18 A	02-Jan-20	
FINAL TUNNEL FINISHES	09-Sep-19 A	30-Jan-20	
MID TUNNEL	08-Mar-18 A	08-Nov-19 A	
DEMOBE	13-Mar-17 A	04-Jun-20	

Schedule Performance Index

In December, the SPI early is at 0.96 and the SPI late is at 0.97. The SPI curves are lagging behind as the expanded zone crown shotcrete installation and duct bank placement took longer than planned.



Link Light Rail East Link Extension

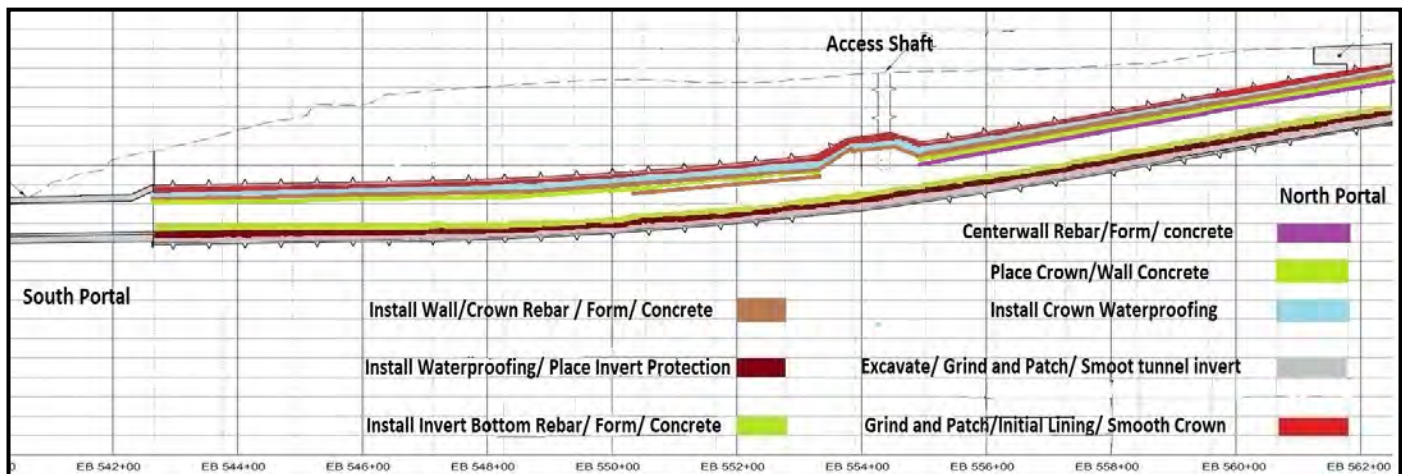
Next Period's Activities

- **South Portal:** Continue rebar, form and placing exterior permanent walls of cut and cover.
- **Tunnel:** Continue installing conduits, tying rebar and forming ductbank and walkways south of the mid-tunnel enlarged section. Continue center wall construction throughout the tunnel south of the enlarged section. Commence mid-tunnel fan slab shoring towers installations.
- Continue coordinating with E335 on turnover items, specifically tunnel access at Milestone 3.

Closely Monitored Issues

- Center wall reinforcing is high in some locations. Working through clearance requirements between Top of Wall and tunnel crown for installation of fire rated material.
- Shotcrete in the crown through the enlarged section of the tunnel continues progressing slower than anticipated. Sound Transit and contractor are monitoring the progress closely.

E330 Downtown Bellevue Tunnel overall progress (As of 12/31/2019)



Cost Summary

Preset Financial Status	Amount
E330 Contractor– Guy F Atkinson Construction, LLC.	
Original Contract Value	\$121,446,551
Change Order Value	\$1,418,628
Current Contract Value	\$120,027,923
Total Actual Cost (Incurred to Date)	\$111,684,062
Percent Complete	93.05%
Authorized Contingency	\$13,604,087
Contingency Drawdown	\$1,418,628
Contingency Index	N/A



Final Line Pour at the Expanded Zone.

Contract E335 – Bellevue to Spring District Heavy Civil GC/CM

Current Progress

Area 1: East Main Station: Install ductbank in West platform, excavate for power and communication crossings, and install track underdrain.

Area 3: North Portal (NP)/ Bellevue Downtown Station (BDS): Continued restoration 110th Ave by laying asphalt and pavement. Installation of formwork and rebar for surface level deck placement at BDS.

Area 4: Aerial Guideway/ Wilburton Station: Continued track works trestle and installation of ductbank at Aerial Guideway. At Wilburton Station: Completion of elevated slabs and shoring tower removal underway.

Area 6: 120th-124th Trench/Station: Continued finishes, BOH and vertical transportation installation at 120th Station. Continued installing curtainwall framing, wiring, entrance for elevators and installing handrail decking wiring, and test escalators.

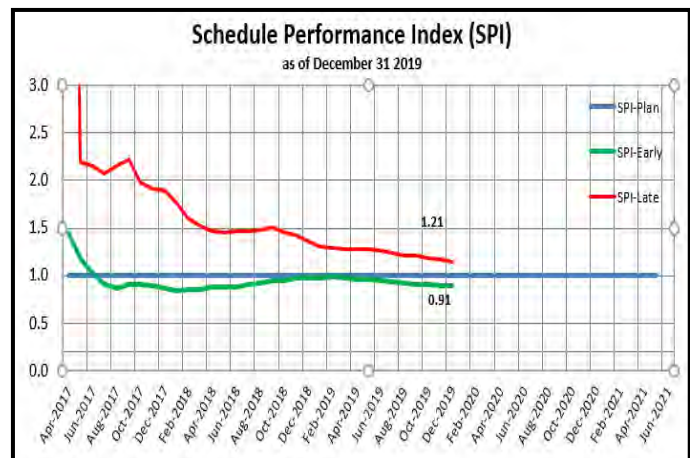
Schedule Summary

There are two primary critical paths on this contract, corresponding to the two handovers to the E750 Systems Contractor — one runs through BDS, and the other follows access to E330 tunnel in Area 2 and goes through the South Portal and its electrical building. Tunnel work will begin in early 2020. The contractor is currently expected to achieve all milestones on time.

Activity Name	Start	Finish	2020	2021
E335 Construction	24-Apr-17 A	16-May-21		
Milestones	04-May-18 A	16-May-21		
Contract Milestones	30-Sep-18 A	16-May-21		
Milestone#1 - Complete North Portal Headwall Temporary Shoring		30-Sep-18 A		
Milestone#2 - Complete SIDs for Interface to SCADA		14-Jan-20*		
Milestone#3 - Complete Trackway and Stations for Primary Systems Access - BTC to EOP		21-May-20*		
Milestone#4 - Complete SEM Tunnel Trackwork for Primary Systems Access		16-Jan-21*		
Milestone#5 - Complete All Trackway and Stations for Primary Systems Access		16-Mar-21*		
Milestone#6 - Substantial Completion of all Work		16-May-21*		
Calculated Milestones	04-May-18 A	23-Apr-21		
E335 Achieves Milestone #1		04-May-18 A		
E335 Achieves Milestone #2		12-Jan-20		
E335 Achieves Milestone #3		03-Jun-20		
E335 Achieves Milestone #4		10-Jan-21		
E335 Achieves Milestone #5		18-Feb-21		
E335 Achieves Milestone #6		23-Apr-21		
Mobilization	24-Apr-17 A	24-Apr-17 A		
Construction	24-Apr-17 A	24-Mar-21		
Area 1: E Main Station to South Portal (531+55 - 538+00)	11-Oct-17 A	24-Mar-21		
Area 2: South Portal to SEM Tunnel (538+00 - 562+47.91)	24-Aug-18 A	24-Mar-21		
Area 3: North Portal to Aerial Guideway (562+50 - 568+45)	24-Apr-17 A	24-Mar-21		
Area 4: Aerial Guideway (568+45 - 606+59)	24-Apr-17 A	24-Mar-21		
Area 5: Pine Forest to 120th (606+59 - 619+00)	07-Jul-17 A	24-Mar-21		
Area 6: 120th - End of Project (619+00 - 634+99)	01-Aug-17 A	24-Jul-20		
Testing and Commissioning	18-Feb-20	15-Dec-20		

Schedule Performance Index

This period, the SPI early is at 0.91 and the SPI late is at 1.21. The numbers indicate that the contractor continues to lag the early plan yet ahead of late planned curve. These factors contributed to SPI's early falls behind: Construction progress for Stations—Eastmain, BDS, Wilburton and 120th—are behind schedule and slower than planned. Several activities, such as roadwork at intersections and the excavation of the channel for Sturtevant Creek, are happening later than shown in the baseline. Track construction on Aerial Guideway is behind and cause delay to installation of signal ductbank.



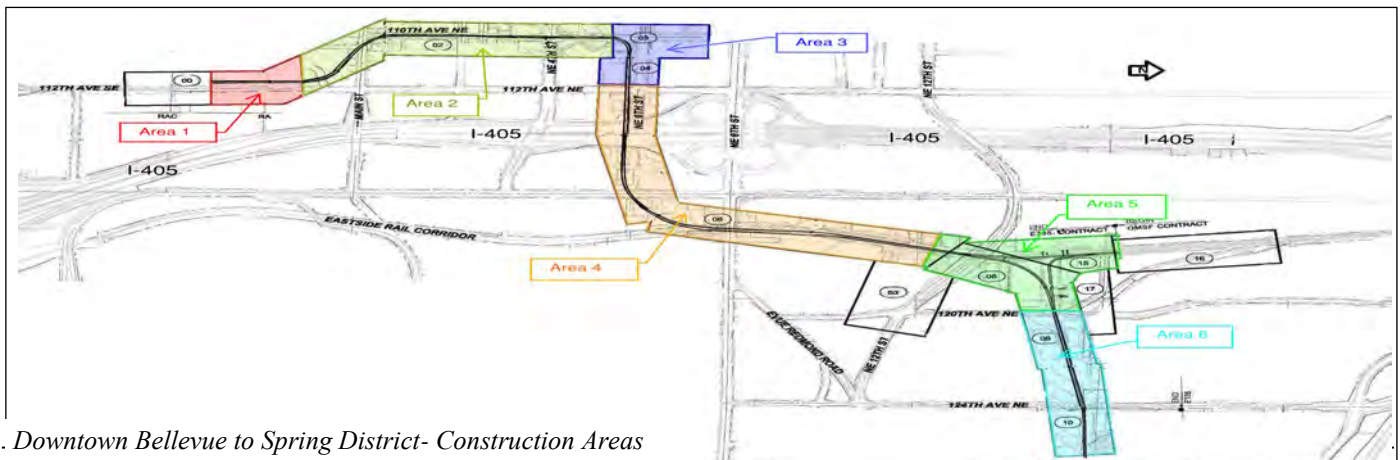
Link Light Rail East Link Extension

Next Period's Activities

- **Area 1:** East Main Station: Continue excavate for sound walls. Continue rebar, form, pour wall footings and install ductbank and drainage in the area.
- **Area 3:** North Portal (NP)/ Bellevue Downtown Station (BDS): Continue backfill and utility tie-ins at the North Portal and Plaza Demo. Continue 110th full closure for removal of temporary roadway and restoration. Continue footing/columns/wall formwork, reinforcing, and concrete placement at BDS.
- **Area 6:** 120th-124th Trench/Station: Continue finishes, Back Of House, and vertical transportation installation at 120th Station. Continue track work and ballast flooding at BNSF Wye and trestle/aerial areas.

Closely Monitored Issues

- Design revisions for Mechanical, Electrical and Plumbing (MEP) stations, impacted City of Bellevue and permits issuance taking longer than anticipated. Currently all changes are finalized and issued to contractor. ST closely monitor the progress of work on site and installation of infrastructure to support these systems at Wilburton and BDS Stations.



Downtown Bellevue to Spring District- Construction Areas

Cost Summary

Present Financial Status	Amount
E335 Contractor– Stacy & Witbeck/Atkinson Joint Venture (SWA-JV).	
Original Contract Value (includes station scope)	\$393,798,210
Change Order Value	\$8,970,692
Current Contract Value	\$402,768,902
Total Actual Cost (Incurred to Date)	\$260,212,460
Percent Complete	72.66%
Authorized Contingency	\$19,689,911
Contingency Drawdown	\$8,970,692
Contingency Index	1.4



Wall Forms on Bellevue Downtown Station.

Contract E340 – Bel-Red

Current Progress

Aerial Guideway Decks: Continued placing typical plinth, rebar, forming and pouring curbs.

130th Ave Station: Placed stem wall for north-side canopy. Placed station slabs, stripped light pole bases. Repaired pre-cast concrete panels at entry canopies. Placed track slab near the east-side entry.

136th Pl NE: Began excavation for track wall placement. Pavement removal for center lane of NE 20th. St Curb, gutter, and sidewalk placement. Water service work at NE Spring Spur. Roadway grading at driveways and additional paving.

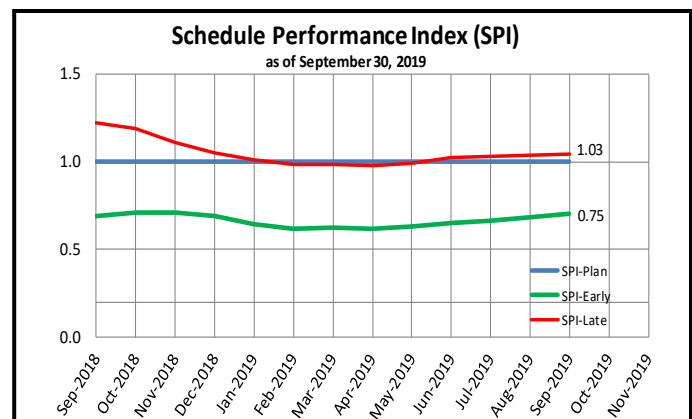
Schedule Summary

Critical path of this project segment now runs concurrently through the 130th Avenue Station and work on 136th Place. The contractor's November update is presented below. Schedule updates have lagged while ST and the contractor negotiated a change to use some contract float to preserve the interface with the E750 systems contractor. This change will be reflected in the forthcoming update.

Activity Name	Start	Finish	2020
E340 Construction	24-Feb-17 A	02-Jul-20	Q4 Q1 Q2 Q3
CONSTRUCTION	24-Feb-17 A	02-Jul-20	
~MILESTONE S/EASEMENTS~	24-Feb-17 A	02-Jul-20	
~Milestones	24-Feb-17 A	02-Jul-20	
Contract Milestones	24-Feb-17 A	02-Jul-20	
Limited Notice to Proceed (LNTP - Feb 24 2017)	24-Feb-17 A		
Notice to Proceed (NTP - March 27, 2017)	27-Mar-17 A		
MS #1 West Tributary Mitigation Site - NTP + 537 DAYS (September 15, 2018)		14-Sep-18 A	
MS #2 Substantial West Tributary Mitigation Site - NTP + 826 DAYS (July 1, 2019) Ref. C		10-Jun-19 A	
MS #3 Acceptance of SDIT - NTP + 976 DAYS - (Nov 27, 2019)		26-Nov-19 A	
MS #4 Substantial Completion - NTP + 1156 DAYS - (May 26, 2020)		02-Jul-20*	
~SUBMITALS/PRELIMINARY ACTIVITIES~	24-Feb-17 A	11-Apr-20	
~MOBILIZATION~	24-Feb-17 A	29-Jul-19 A	
~SITEWORK~	04-Apr-17 A	01-Jun-20	
~RETAINING WALLS~	12-Feb-18 A	18-Mar-20	
~AERIAL STRUCTURES~	15-May-17 A	01-Apr-20	
~STATIONS~	01-Aug-18 A	29-May-20	
~ELECTRICAL ITS~	02-Jan-18 A	23-Mar-20	
~FINISHES~	02-Dec-19	22-Apr-20	
~TRACKWORK~	13-Jul-18 A	29-May-20	
~LANDSCAPING/FLATWORK~	22-May-18 A	29-Apr-20	
~TESTING AND COMMISSIONING~	27-Aug-19 A	06-May-20	
~DEMOBILIZATION~	01-Aug-18 A	09-Apr-20	

Schedule Performance Index

There has not been updated information received from the contractor to update the SPI or financial information this month. The Schedule Performance Index chart and Cost Summary section remain as of September 2019 pending the contractor submittal of their recovery schedule.



Link Light Rail East Link Extension

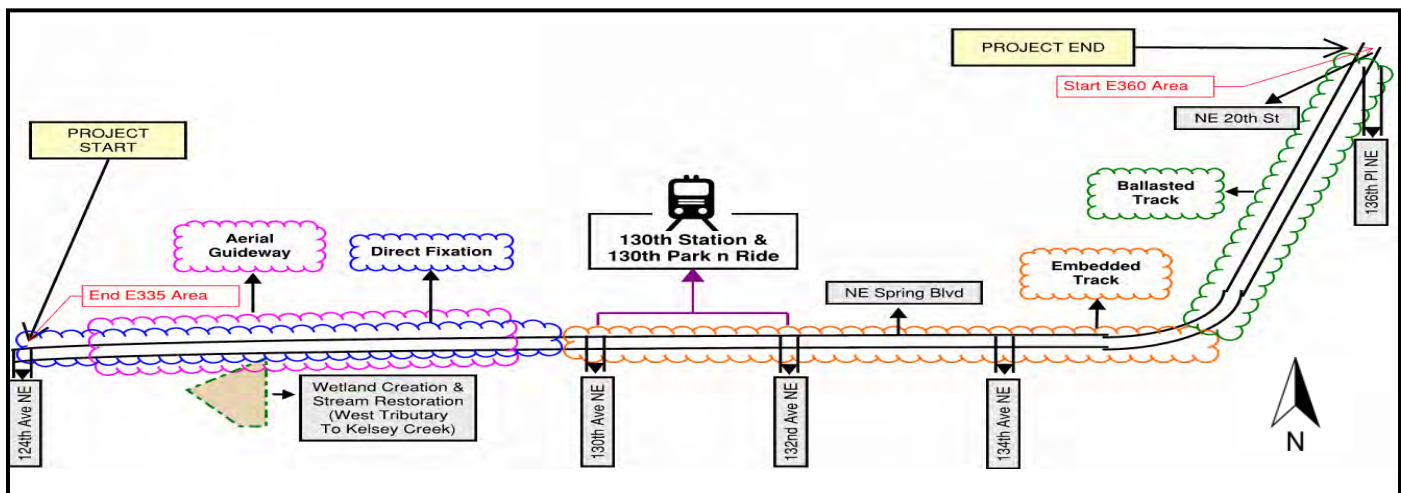
Next Period's Activities

- **Aerial Guideway:** Continue curb placement, rebar and form placement, place of typical plinths.
- **130th Ave Station:** Repair precast panel. Finish placing track slab in east area. Grade area at west entry and center slab.
- **NE Spring Blvd:** Curb and gutter placement. Sidewalk grading along 134th NE and NE Spring Blvd.
- **136th PI NE:** Finish excavation for track wall placement. Place systems duct bank, signal conduit. Grade for concrete paving for NE 20th St.

Closely Monitored Issues

- The City of Bellevue Mid-Lakes Pump Station and a late start on the 124th Ave NE Bridge have potential to impact overall project schedule as a result of coordination of traffic control.
- NE Spring Blvd was opened on November 22, 2019. There are outstanding elements of permanent work that may require road closures on the new alignment to complete.
- Precast artistic panels arrived on site were not acceptable. Panels may need to be recast. This would result in an impact to the overall schedule.

E340 Construction Work Areas



Cost Summary

Present Financial Status	Amount
E340 Contractor– Max J Kuney	
Original Contract Value	\$93,170,012
Change Order Value	\$4,258,489
Current Contract Value	\$97,428,501
Total Actual Cost (Incurred to Date)	\$71,674,536
Percent Complete	73.1%
Authorized Contingency	\$9,317,000
Contingency Drawdown	\$4,258,489
Contingency Index	1.60



Forming the north-side station platform slab, looking northwest.

Contract E360 – SR 520 to Redmond Technology Station (RTS)

Current Progress

Design: All design packages are issued for construction. Notice of Design Change work is still ongoing to include ST and KH initiated changes. Sound Transit initiated design changes: Rectangular Rapid Flashing Beacon, PSE Meter Relocation, Track Access at Signal House, Sweeper Site Alternate Design, and RTS Garage Insulation Cover.

Construction:

- Work Area (WA) #1: Continue skeletonize and form/pour/strip rack slab plinths.
- WA #2: Continue aerial guideway guardrail, fire standpipe and drainage. Continue track skeletonize, plinths and final line.
- WA #3/4: Ballast track-work ongoing. Start station canopy glazing and start demolition of existing site offices.
- WA #5: Continue cross over and surface ballast.
- WA #6: Completed RTS permanent power and energization of parking garage. Completed City of Redmond inspections/test for receipt of Temporary Certificate of Occupancy. Switched bus loop to under garage and started site work for leased office building. Station platform finished and trip ongoing. Ancillary rooms ongoing finish activities.
- WA #7: Start OVS Pedestrian Bridge paperclip ramp curb and stair concrete placement.

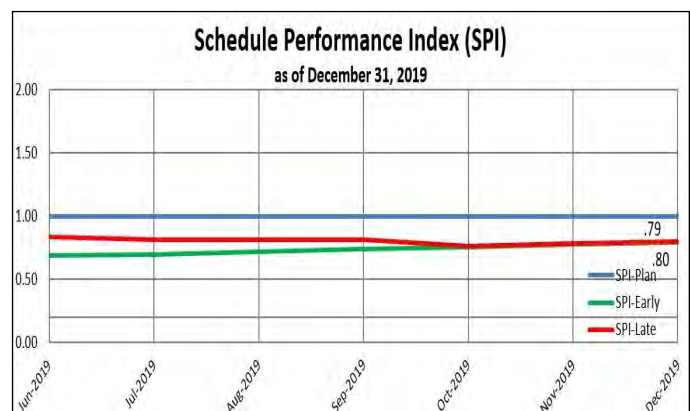
Schedule Summary

The critical path currently goes through the structural work at RTS and into the leased office building near the station. The contractor's December update shows 28 days of negative float, for which the contractor has requested schedule relief. This change is currently under review and is unlikely to impact the E750 systems contractor.

Activity Name	Start	Finish	Q1	Q2	Q3
E360 Construction	13-Jul-16 A	30-Jul-20			
Base Contract	13-Jul-16 A	30-Jul-20			
Design	13-Jul-16 A	19-Feb-20			
Design Milestones	03-Oct-16 A	01-Jan-20			
Design Overhead	13-Jul-16 A	18-Jul-17 A			
Design and Engineering	13-Jul-16 A	19-Feb-20			
Construction	13-Jul-16 A	30-Jul-20			
General	13-Jul-16 A	30-Jul-20			
Project Milestones	13-Jul-16 A	30-Jul-20			
Notice to Proceed	13-Jul-16 A				
Civil/Systems 100% Design Submittal (NTP +300d) (09-May-2017)		10-Apr-17 A			
Milestone 3A for E750 Work		02-Mar-20*			
Milestone 3B Substantial Completion		30-Jul-20*			
WA #1- Track Slab Guideway	22-May-17 A	21-Feb-20			
WA #2- Aerial Guideway	01-Jun-17 A	03-Apr-20			
WA #3- Ballasted Guideway Block #1	01-May-17 A	20-Mar-20			
WA #4- Overlake Village Station	14-Jul-16 A	25-Jun-20			
WA #5- Ballasted Guideway Block #2	15-Aug-17 A	30-Mar-20			
WA #6- Overlake Transit Center	01-May-17 A	29-Jun-20			
WA #7- OVS Pedestrian Bridge	01-Oct-18 A	30-Jun-20			

Schedule Performance Index

This period, early SPI is 0.79 and late SPI is 0.8. 164 days was added to the schedule due to City of Redmond delay in their permitting process (150 days) and weather impacts (14 days). Milestone 3 has been split in two; 3A for the systems handoff and 3B for completion of all other work (Substantial Completion). The removal of the RTS Pedestrian Bridge is still being negotiated and is still reflected in the EV (Earned Value).



Link Light Rail East Link Extension

Next Period's Activities

- **Work Area #1:** Finish plinths and final line track.
- **Work Area #2:** Complete guard rail, drainage and rail final line. Start commissioning work.
- **Work Area #3/4:** Start site utilities under plaza street, and continue canopy finishes and trim out.
- **Work Area #5:** Continue ballasted track work to include the crossover welding and distress.
- **Work Area #6:** Continue finishes at Vertical Circulation Tower and ancillary rooms. Station platform finishes & MEP. Demo, clear and grade east bus loop. Start underground utilities for Leased Office Building.
- **Work Area #7:** Continue Ped Bridge stair placement.

Closely Monitored Issues

- PSE construction schedule for establishing permanent power. Completed this month for RTS.
- OVS Pedestrian Bridge - Fabrication delays due to welding and fabrication criteria.
- Permanent bus loop transition under the RTS Garage that will require garage Temporary Cert. Occupancy from the City of Redmond. Completed this month.
- Commercial issues for revised RTS Pedestrian Bridge, As-Built Specification, Safety/Security, City of Redmond CDF, Bike Storage and Exothermic welding.
- Shared access road for the WSDOT Aggregate Disposal Site and Valley Creek vault.

E360 Construction Work Areas



Cost Summary

Present Financial Status	Amount
E360 Contractor— Kiewit-Hoffman	
Original Contract Value	\$225,336,088
Change Order Value	\$5,149,785
Current Contract Value	\$230,485,873
Total Actual Cost (Incurred to Date)	\$181,423,209
Percent Complete	85.24%
Authorized Contingency	\$22,533,609
Contingency Drawdown	\$5,149,785
Contingency Index	3.6

Excludes Betterment



Work Area 4 OVS — Site Office Demolition

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Link Light Rail Downtown Redmond Link Extension

Project Summary

Scope

Limits	The Downtown Redmond Link Extension (DRLE) builds new light rail from the Redmond Technology Station to downtown Redmond.
Alignment	The extension starts at Redmond Technology Station and travels generally along SR-520 and SR-202 to downtown Redmond.
Stations	Two Stations—SE Redmond (at Marymoor Park) and Downtown Redmond
Systems	Signals, traction electrification, and communications (SCADA)
Phase	Planning
Budget	\$1.530 Billion (Baselined October 2018)
Schedule	Revenue Service: December 31, 2024



Map of Downtown Redmond Link Extension

Key Project Activities

- Ongoing field work to support final design (survey, geotechnical borings, potholing).
- Contractor refining City of Redmond permitting plan.
- Continued to work with the Tribes, WSDOT and WDFW on design options for the unnamed tributary to accommodate fish passage per the WSDOT injunction with the Tribes.
- Army Corps certified the Keller Farm Mitigation Bank after months of delay.
- Working to identify possible spots to relocate cell towers, including examination of feasibility to relocate on the SE Redmond parking garage.
- Sound Transit appealed the City of Redmond Shoreline permit – parties actively working towards resolution.
- Contractor submitted 30% design package.
- City of Redmond Design Review Board presentation on December 5, 2019.
- Preparing for a Codes, Covenant and Restriction acquisitions hearing scheduled for January 23, 2020.
- Coordinating with Dept. of Ecology regarding gore area and National Pollutant Discharge Elimination System (NPDES).

Project Cost Summary

Voters approved funding for preliminary engineering for the Downtown Redmond Link Extension (DRLE) in the 2008 in the Sound Transit 2 ballot measure. In response to the 2007-2009 Great Recession, the ST Board suspended the project. In February 2016, the ST Board restored funding to support preliminary engineering of the project prior to funding approval for final design and construction as part of the Sound Transit 3 Plan. Table (below) figures in millions. This project has now been baselined, The baseline budget has been incorporated into the tables below. The first table below summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS), while the second table in FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

In this period, DRLE incurred approximately \$19.6M of expenditure. This period expenditure incurred primarily in the ROW phase for approximately \$17M. The rest of the expenditures for about \$2.6 in December are made up of the other work phases. Total cumulative expenditure to date is at \$110M.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$77.0	\$77.0	\$8.1	\$8.0	\$77.0	\$0.0
Preliminary Engineering	\$23.0	\$23.0	\$19.3	\$18.3	\$23.0	\$0.0
Final Design	\$4.5	\$4.5	\$0.7	\$0.3	\$4.5	\$0.0
Construction Services	\$58.0	\$58.0	\$49.7	\$3.5	\$58.0	\$0.0
Third Party Agreements	\$17.0	\$17.0	\$6.7	\$2.5	\$17.0	\$0.0
Construction	\$1,151.5	\$1,151.5	\$726.8	\$29.5	\$1,151.5	\$0.0
ROW	\$199.0	\$199.0	\$51.2	\$47.9	\$199.0	\$0.0
Total	\$1,530.0	\$1,530.0	\$862.6	\$110.0	\$1,530.0	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$332.4	\$332.4	\$229.5	\$10.2	\$332.4	\$0.0
20 Stations	\$261.9	\$261.9	\$182.5	\$7.0	\$261.9	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$287.1	\$287.1	\$181.2	\$7.0	\$287.1	\$0.0
50 Systems	\$108.6	\$108.6	\$65.2	\$2.5	\$108.6	\$0.0
Construction Subtotal (10 - 50)	\$990.0	\$990.0	\$658.4	\$26.7	\$990.0	\$0.0
60 Row, Land	\$168.5	\$168.5	\$51.2	\$47.9	\$168.5	\$0.0
70 Vehicles (Non-Revenue)	\$4.1	\$4.1	\$0.0	\$0.0	\$4.1	\$0.0
80 Professional Services	\$289.3	\$289.3	\$153.0	\$35.4	\$289.3	\$0.0
90 Unallocated Contingency	\$78.2	\$78.2	\$0.0	\$0.0	\$78.2	\$0.0
Total (10 - 90)	\$1,530.0	\$1,530.0	\$862.6	\$110.0	\$1,530.0	\$0.0

Link Light Rail Downtown Redmond Link Extension



Risk Management

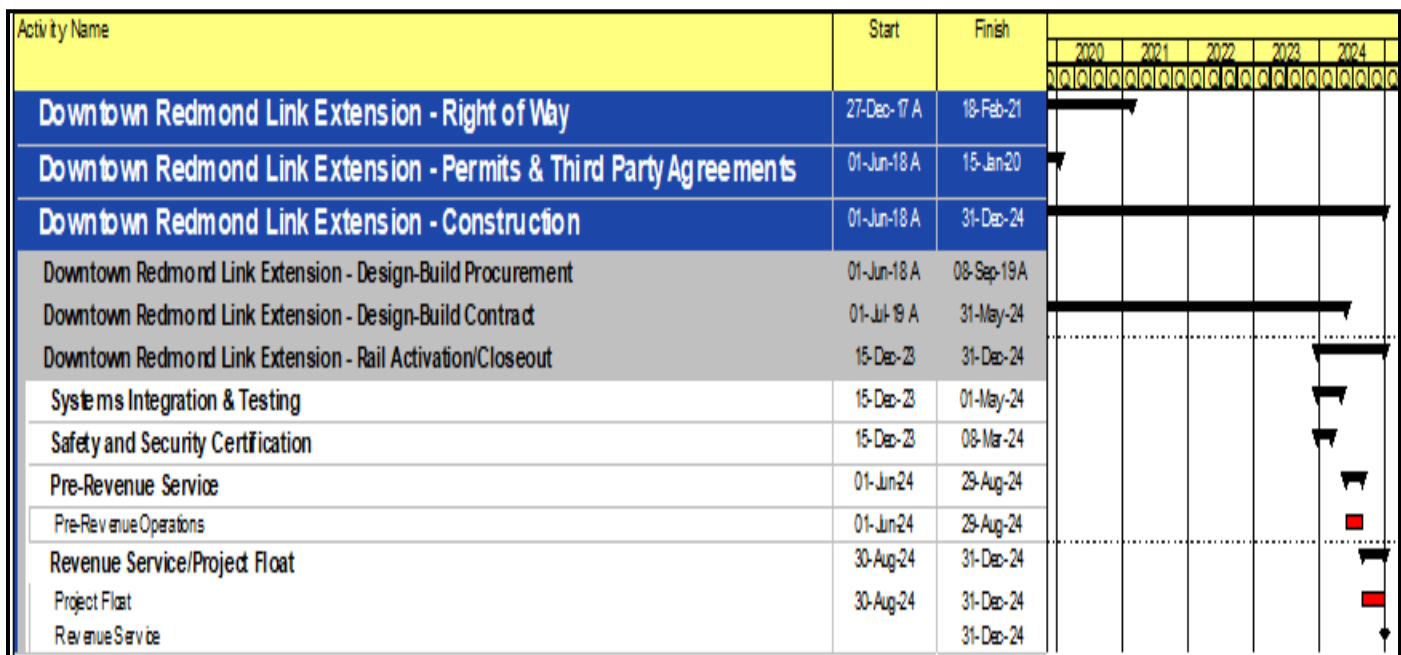
The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The project completed its quantitative risk assessment risk workshop as part of the process project baseline in Q4 2018. The quantitative risk assessment report is completed and finalized with good probability that supported the DRLE baseline cost and schedule assumptions. The externality conditions remains the same this period and may have reduced in some instances, therefore, the project's risk profile remains unchanged. The qualitative risk assessment risk meeting for Q3 was performed in August 2019. Q4 risk register is planned for January 2020. The following continues to be the current top project risk areas:

- Property acquisition - market conditions; protracted durations of attaining control of properties; evolving design impacts property needs; however, the current cost risk seems to be subsiding due to appraisals and offers aligning to the baseline budget assumptions.
- Permitting and third party requirements - construction adjacent to SR520; flood prone areas by Sammamish River and Bear Creek; archaeological discovery; betterment requests increases complexity of projects; construction impacts to traffic; storm water discharge requirements by King County Parks; protracted negotiation with third parties.
- Construction market conditions - inflationary pressure due to competitiveness for resources and labor; higher materials pricing due to demand as well as regulations (tariffs and taxes); However, since the DB contract bid and awarded for less than baseline estimate, a very significant cost pressure to this project has been averted.
- Agency staffing capacity - developing and mobilizing resources and coordinating start up activities across multiple extensions within a short time frame.

Project Schedule

The project schedule is presented below. NTP was issued to the DB contractor on September 9, 2019. Property acquisition and environmental permitting are ongoing. The contractor's baseline schedule has been revised and resubmitted and is still under review. The 30% design submittal was delivered in December and is also under review. The project is currently forecast for completion near the end of 2024.



Right-of-Way

The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The right-of-way program status for this period is summarized in the following table.

Downtown Redmond Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
93	93	67	26	1552	1367
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

Community Outreach

- Continued meetings with potentially impacted property owners in southeast and downtown Redmond to provide updated project information and real estate process information and timing.
- Activation of temporary construction easements along the RCC in downtown Redmond.
- Planning the open house and public hearing for the removal of Code & Covenant Restrictions for certain Home Owner Associations in Redmond. Public hearing is scheduled for January 23, 2020.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Link Light Rail West Seattle and Ballard Link Extensions

Project Summary

Scope

Limits The West Seattle extension includes 4.7 miles of light rail from downtown Seattle to West Seattle's Junction neighborhood. The Ballard extension includes 7.1 miles of light rail from downtown Seattle to Ballard's Market Street area.

Alignment The West Seattle extension route is assumed to run primarily on elevated guideway with a new rail-only bridge over the Duwamish River. The Ballard extension route is assumed to run through a new downtown Seattle rail-only tunnel, elevated guideway, and a rail-only bridge over Salmon Bay.

Stations Five stations planned for West Seattle Segment. Nine stations planned for the Ballard Segment.

Phase Planning

Budget \$286M through completion of Preliminary Engineering

Schedule Revenue Service: 2030 (West Seattle), 2035 (Ballard)



Map of Project Alignment

Key Project Activities

- Held neighborhood forums for communities along the corridor to learn more about light rail route and station location options being studied in the Draft EIS.
- Per direction from the Board, began advancing the study of two additional alternatives to be included in the Draft EIS.
- Continued defining alignment and station footprints for evaluation in the Draft EIS.
- Continued collecting data, conducting fieldwork and geotechnical borings for environmental and engineering evaluation in support of design.
- Continued engagement with partner and regulatory agencies, tribes, waterway users, stakeholder groups and property owners regarding environmental process and next steps.
- Continued coordinating with partner agencies including City of Seattle, King County, Port of Seattle and other local, state and federal agencies.

Project Cost Summary

The West Seattle and Ballard Link Extensions are voter-approved projects under the ST3 Plan. The current Authorized Project Allocation (budget) for the project that has been approved by the Sound Transit Board allows staff to conduct alternatives development, followed by an Environmental Impact Statement, leading to ST Board selection of the project to be built and FTA issuance of a Record of Decision no later than 2022.

Out of the total Authorized Project Allocation, the project is authorized and planned to incur approximately \$31M in 2019 for completing alternatives development and evaluation; EIS Scoping; Draft EIS; conceptual engineering work; project administration and stakeholder engagement.

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$63.1	\$9.8	\$9.3	\$63.1	\$0.0
Preliminary Engineering	\$205.4	\$82.4	\$38.9	\$205.4	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$11.4	\$1.4	\$0.3	\$11.4	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$6.0	\$2.0	\$0.5	\$6.0	\$0.0
Total	\$285.9	\$95.6	\$49.0	\$285.9	\$0.0

Cost Summary by SCC

SCC Element	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
50 Systems	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Subtotal (10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 Row, Land	\$5.0	\$2.0	\$0.5	\$5.0	\$0.0
80 Professional Services	\$263.4	\$93.6	\$48.5	\$263.4	\$0.0
90 Unallocated Contingency	\$17.5	\$0.0	\$0.0	\$17.5	\$0.0
Total (10 - 90)	\$285.9	\$95.6	\$49.0	\$285.9	\$0.0

Link Light Rail West Seattle and Ballard Link Extensions



Risk Management

Sound Transit has a vigorous risk management program and is committed to identifying, assessing, and monitoring risks and implementing risk reduction/mitigation actions. Risk Assessment for the West Seattle and Ballard Link Extensions Project was conducted as part of the ST3 Planning process.

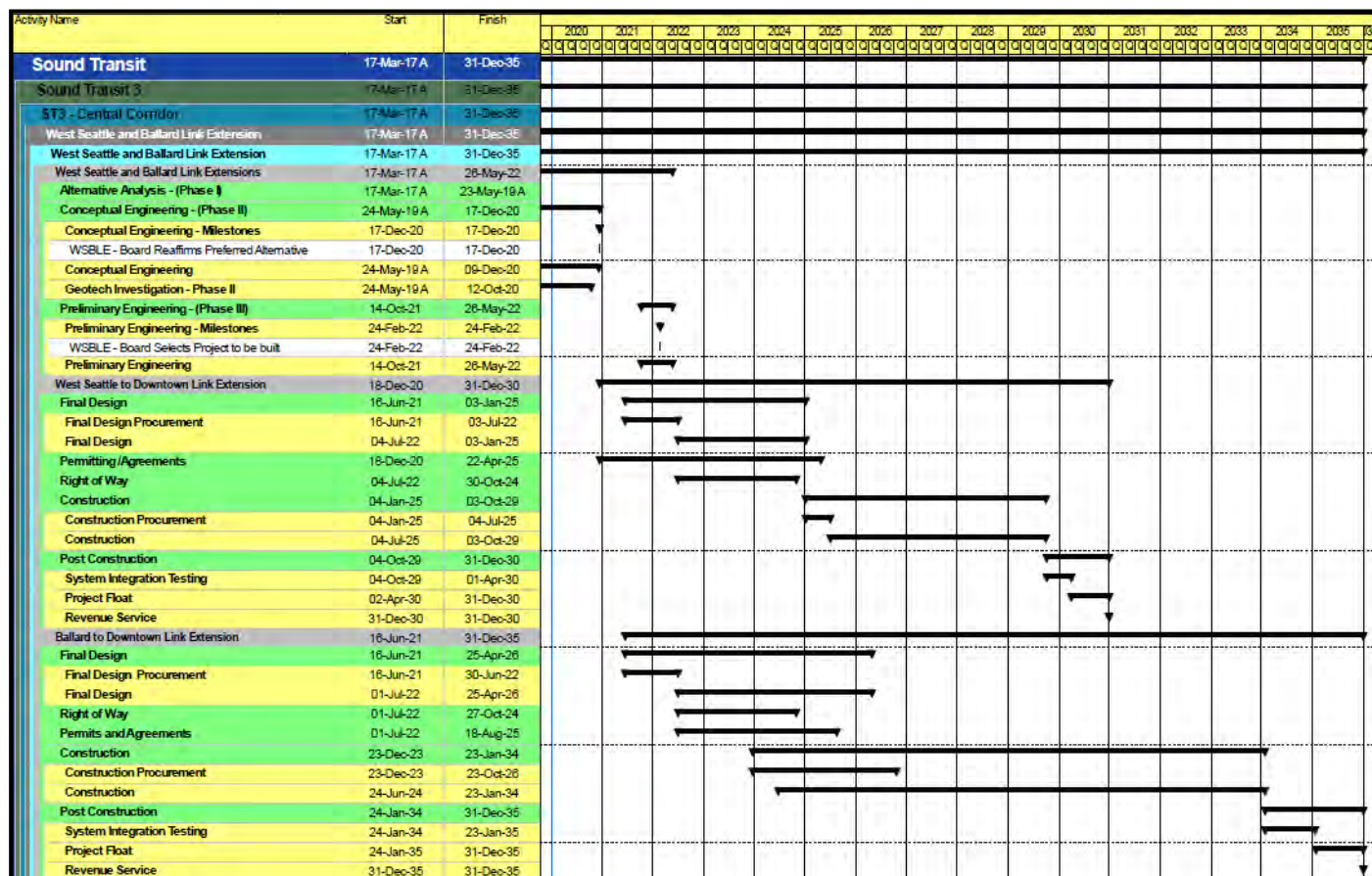
Project issues and risks identified at this stage include:

- Reaching stakeholder consensus on a preferred alternative, including Third Party Funding;
- Complexity of alignments in constrained environment with challenging topography and waterway crossings;
- Complexity associated with tunneling through a mature urban environment;
- Potential construction effects in a constrained environment;
- Potential effect on Central Link operations during construction;
- ROW and property impacts.

Project Schedule

The preliminary project schedule can be found below. Sound Transit Board identified preliminary preferred alternatives (DEIS) on May 23, 2019. FTA issuance of ROD and Final Design are expected to begin in 2022.

Revenue Service between West Seattle and Downtown Seattle is targeted for 2030, and revenue service between Ballard and Downtown Seattle is targeted for 2035.



Community Outreach

- Held and prepared for multiple neighborhood forums in December 2019 for the communities to learn more about light rail route and station location options being studied in the Draft EIS. The specific dates of those forums were:
 - Chinatown / International District - December 3, 2019
 - Interbay / Ballard - December 5, 2019
 - Delridge - December 7, 2019
- Drafted fieldwork flyers and conduct door-to-door outreach for fieldwork activities.
- Began preparation of neighborhood forum summary report out.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Link Light Rail Federal Way Link Extension

Project Summary

Scope

Limits	The Federal Way Link Extension adds approximately 7.8 miles of light rail from the Angle Lake Station in the City of SeaTac to the Federal Way City Center.
Alignment	The extension generally parallels SR 99 and I-5 freeway.
Stations	Stations at Kent/Des Moines, South 272nd Star Lake Park –and-Ride and the Federal Way Transit Center
Systems	Signals, traction power, and communications (SCADA)
Phase	Proceed to Final Design/Construction
Budget	\$2.45 Billion (Baseline Sep 2018)
Schedule	Revenue Service: December 2024



Map of Federal Way Link Extension.

Key Project Activities

- Full Funding Grant Agreement (FFGA) sent to US Congress this month and FTA anticipates execution next month.
- Design Build (DB) contractor (F200) held monthly meeting with Authorities-having-Jurisdiction (AHJs) to facilitate coordination issues and design development. See F200 construction page for status of activities.
- DBPM staff continue developing Construction Quality Plan and Continuous Process Improvement occurred for the Quality Management Plan.
- Continue preparing task order scope of work for advanced utility relocation with Century Link and PSE.
- Execution of Developer Extension Agreements with Lakehaven and Midway is in progress.
- Interagency coordination for Midway Landfill agreement is progressing forward with Seattle Public Utility (SPU), WSDOT, Ecology, EPA and FTA; goal to reach agreement resolution by end of 1st QTR 2020.
- Discussions continue with King County Metro for temporary lease parking during construction at Star Lake Park & Ride.
- King County (KC) Fee In-Lieu Environmental Mitigation agreement for purchasing mitigation credits is pending execution.
- Progress continues with settling Right-of-Way acquisition and relocations this period.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

This period approximately \$16.8M was incurred for December 2019, of which \$10.1M incurred was for Right-Of-Way; \$1M incurred for Construction Services; \$4.6M for Construction phase comprised mainly of \$4.2 for Design Build construction contract and \$0.2M for Construction Permits. Remaining major expenditures of \$1.1M were for Preliminary Engineering, Third Party and Administration. Overall the project Estimate at Completion continues to reflect \$2.45B.

NOTE: Pending future board approval, a Project Reserve of \$459.3M shall be added representing additional contingency FTA recommended the project carry following their independent risk assessment, is anticipated. FFGA application reflects this amount.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$96.5	\$20.8	\$21.0	\$96.5	\$0.0
Preliminary Engineering	\$46.5	\$45.5	\$44.5	\$46.5	\$0.0
Final Design	\$3.1	\$1.0	\$0.9	\$3.1	\$0.0
Construction Services	\$107.0	\$15.6	\$9.3	\$107.0	\$0.0
3rd Party Agreements	\$27.7	\$21.0	\$4.6	\$27.7	\$0.0
Construction	\$1,831.9	\$1,278.9	\$135.4	\$1,831.9	\$0.0
ROW	\$338.8	\$128.4	\$121.0	\$338.8	\$0.0
Total	\$2,451.5	\$1,511.1	\$336.7	\$2,451.5	\$0.0

Cost Summary by SCC

SCC Element	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$517.7	\$392.7	\$31.8	\$517.7	\$0.0
20 Stations	\$316.1	\$244.5	\$19.7	\$316.1	(\$0.0)
30 Support Facilities	\$5.3	\$11.5	\$0.9	\$5.3	(\$0.0)
40 Sitework & Special Conditions	\$557.7	\$407.2	\$32.0	\$550.8	\$6.9
50 Systems	\$153.0	\$116.5	\$9.4	\$153.0	(\$0.0)
Construction Subtotal (10 - 50)	\$1,549.9	\$1,172.4	\$93.7	\$1,543.0	\$6.9
60 Row, Land	\$338.8	\$128.4	\$121.0	\$338.8	\$0.0
70 Vehicles	\$1.8	\$0.0	\$0.0	\$1.8	\$0.0
80 Professional Services	\$383.0	\$210.3	\$121.9	\$391.9	(\$8.9)
90 Unallocated Contingency	\$178.1	\$0.0	\$0.0	\$176.1	\$2.0
Total (10 - 90)	\$2,451.5	\$1,511.1	\$336.7	\$2,451.5	\$0.0

Link Light Rail Federal Way Link Extension



Risk Management

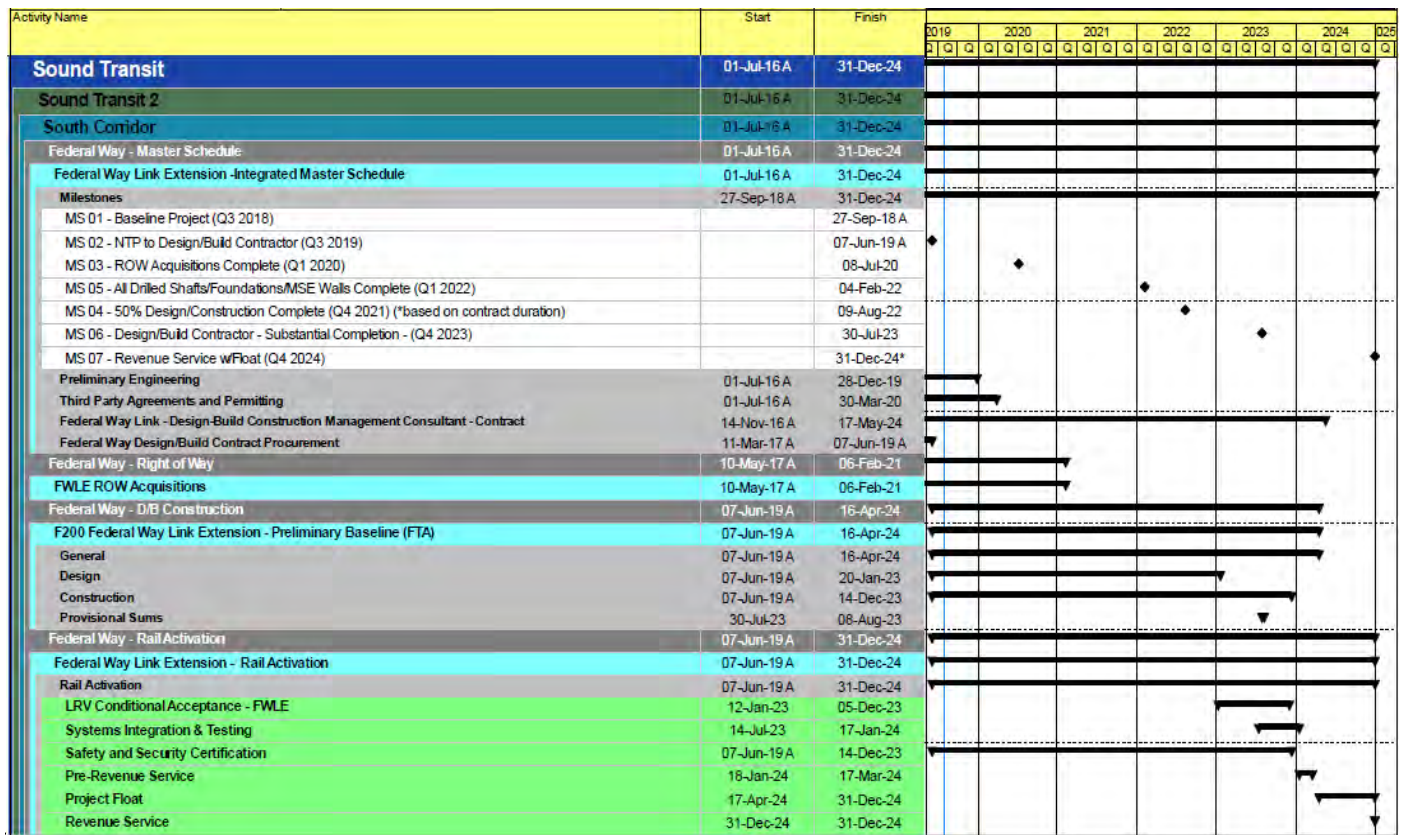
The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks.

Below are the top project risks:

- Obtaining easements for PSE advanced utility relocation could impact DB Contractor schedule.
- Design review/approvals may not be completed in timely manner by jurisdictional partners, thus delaying project progress.
- Midway Landfill crossing agreement may not reach timely execution with WSDOT & SPU prior to DB contract submittal permit package.
- Known third party utility relocations may not occur as scheduled, delaying DB construction activities.
- FFGA review and approvals could cause construction contract schedule delays.
- Federal Way Transit Center design changes could impact construction contract.

Project Schedule

The project schedule is presented below. Right-of-Way acquisitions and relocations continue and additional detail has been added to the master schedule to monitor any impacts to the project. FFGA application is under review by FTA and received notice that Sound Transit has met readiness requirements in September. LNTP was issued June 2019. The baseline schedule submittal was returned "revise and resubmit." A revised baseline is expected in January 2020. Construction NTP is expected 1st QTR 2020. Revenue Service is on schedule for 4th QTR 2024. No updates to the master schedule have been made this month as the baseline schedule has to be resubmitted.



Contingency Management

The Federal Way Link Extension project budget was baselined in September 2018 with a total contingency of \$549.9M. The current contingency balance is \$412.7M.

Design Allowance (DA) has been used and no longer reported.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. During this period the AC remained unchanged.

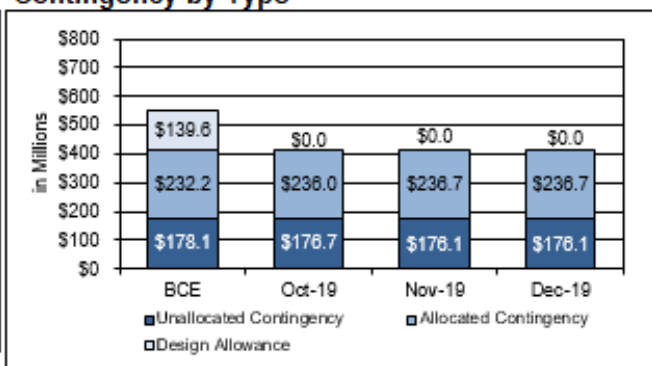
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. During this period the UAC remained unchanged.

Contingency Status (Monthly)

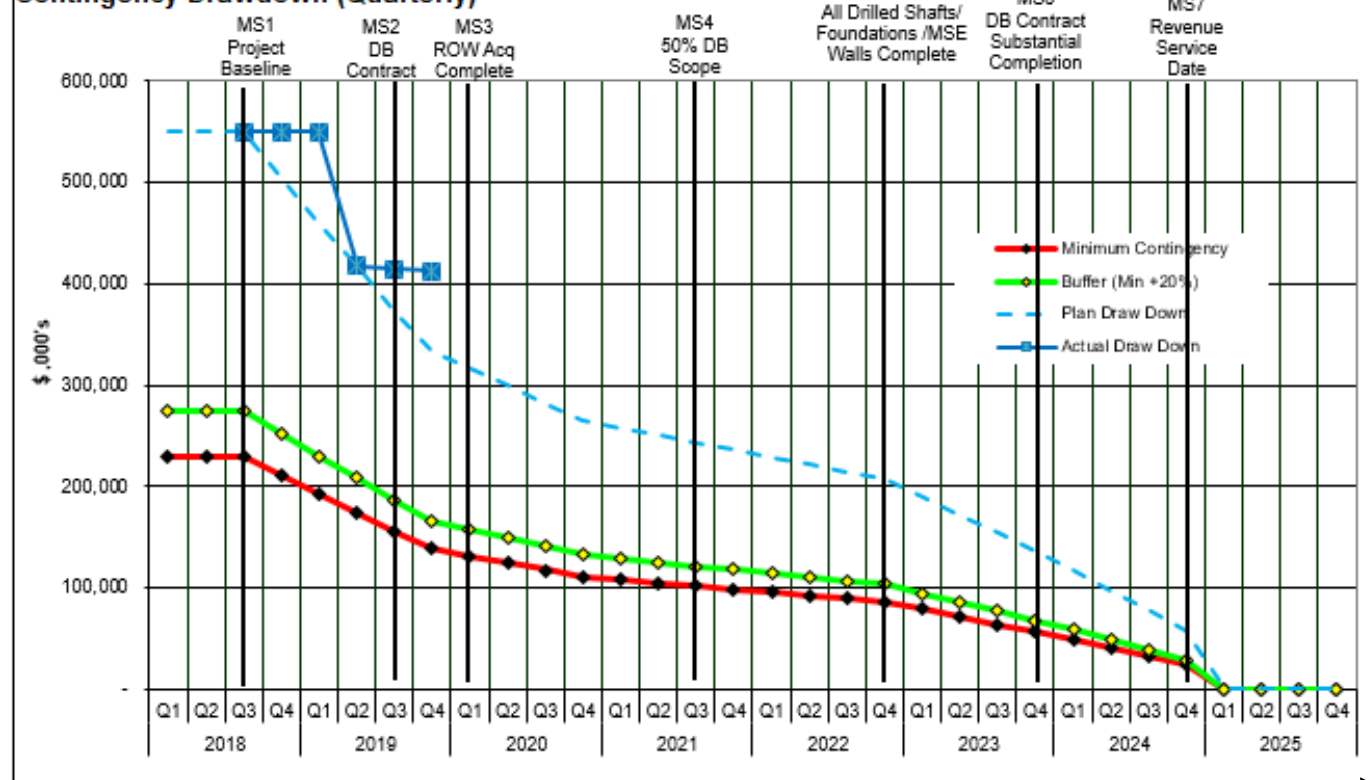
Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$139.6	5.7%	\$0.0	0.0%
Allocated Contingency	\$232.2	9.5%	\$236.7	10.7%
Unallocated Contingency	\$178.1	7.3%	\$176.1	8.0%
Total:	\$549.9	22.4%	\$412.7	18.7%

Table figures are shown in millions.

Contingency by Type



Contingency Drawdown (Quarterly)



Right-of-Way

The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The Right-of-Way Program status for this period is summarized in the following table.

Federal Way Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION ³	
Total Acquisitions ¹	Board Approved ²	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
256	353	250	113	430	329
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

1. Total Acquisitions is defined as only parcels (recognizing only land not owners).
2. Board Approved based on parcels and properties (multi-unit acquisitions).
3. Relocation numbers are the number of affected individuals.

Community Outreach

- Communication with property owners regarding FWLE route, profile, station areas, acquisition and relocation is ongoing.
- Conducted extensive outreach to business in the project area
- Presented to Highline College Students and Faculty on Dec. 4, 2019.
- Tabled for event at Centro Rendu in Kent on Dec. 13, 2019.



Community Outreach at Centro Rendu in Kent distributing information on FWLE on Dec. 13.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Phase 3 Preliminary Engineering (PE)

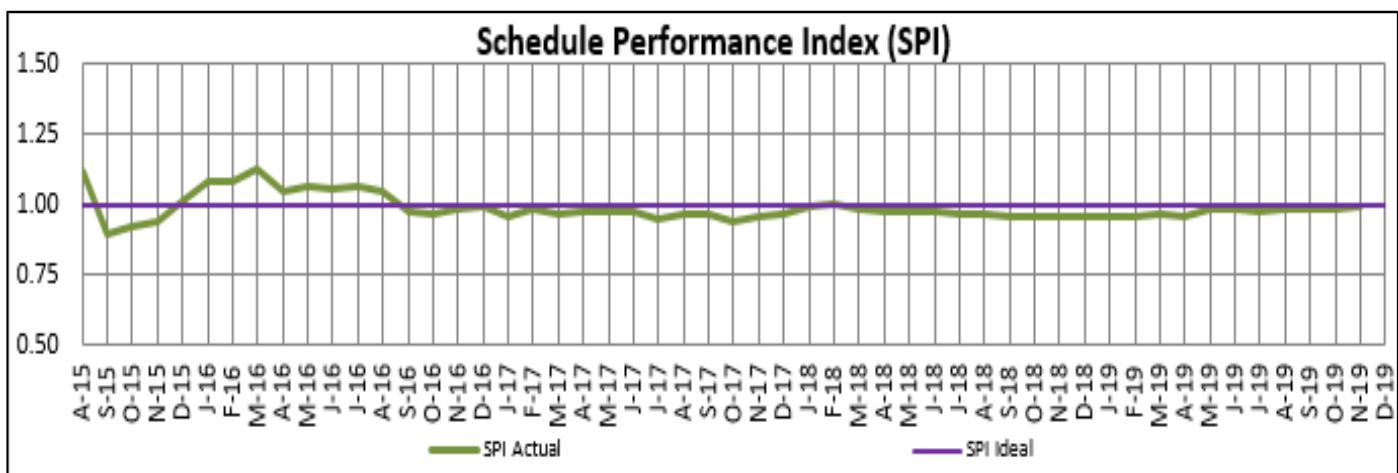
In July 2015, Sound Transit executed an amendment to the professional services agreement with HDR Engineering, Inc. for Phase 3 professional services, including completion of a Final Environmental Impact Statement (FEIS) using the preferred alternative and the other alternatives in the Draft EIS, preliminary engineering of the preferred alternative to Kent/Des Moines and additional engineering as needed to support receipt of environmental approvals. In February 2016, Sound Transit executed an amendment to extend the preliminary engineering effort from Kent/Des Moines to the Federal Way Transit Center.

Current Progress

- Continued effort to submit Draft 3 of NEPA/SEPA “Additional Information for Project refinements” and revision to critical areas reports.
- Continued follow-up ESA and HBM work and support for property acquisition including ROW drawings, parcel maps, ALTA maps, and TCALs.
- Various coordination works between Sound Transit, the DBPM and the design-builder.

Schedule Performance Index

The cumulative Schedule Performance Index (SPI) is 0.99 through December 2019, indicating the overall amount of work accomplished is as planned. The consultant (HDR) is fully engaged on coordination efforts with the DBPM consultant, and the design-builder, Environmental works including NEPA/SEPA, property acquisition support with parcel maps, ALTA maps and TCALs.

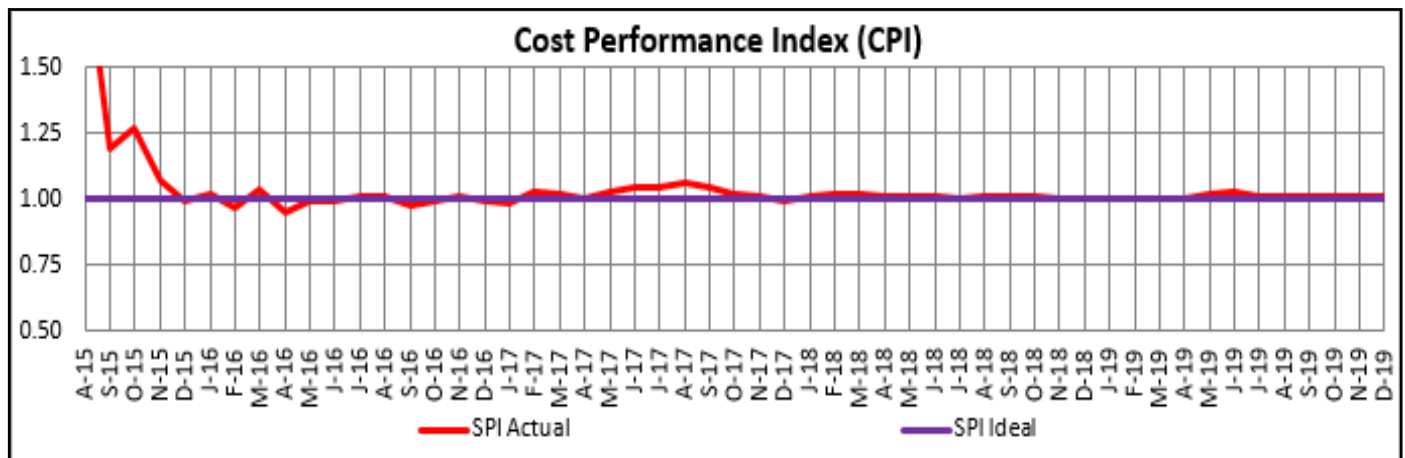


Link Light Rail Federal Way Link Extension



Cost Performance Index

Phase 3 expenditures through December 2019 totaled \$36.3M, approximately 97.7% of the amended total contract. The Phase 3 percent complete is reported at 99.0%, with an earned value of \$36.8M. The cumulative Cost Performance Index (CPI) is 1.01 showing costs are on track with work accomplished. The Consultant is engaged in coordinating efforts with the DBPM and the design-builder, environmental works, ROW acquisition support, parcel maps, ALTA maps, and TCALs.



Cost Summary

Contract (Phase 3 portion)	Cumulative To-date
Amount Invoiced	\$36.3M
% Spent	97.7%
Earned Value	\$36.8M
% Complete	99%
SPI	0.99
CPI	1.01

F200 Design Build Contract

Current Progress

- Continue Design Task Force meetings; Seg1(KDM) 60% MOT and SR 99 Bridge, 90/100% early utilities; Seg2(Star Lake) 30% bridge Structure Z, 90/100% MOT and Demo C&G.
- Identify requirements and seek needed property rights for PSE relocation, and finalize PSE Task Order utility relocation.
- Geotechnical site investigation work continues.
- Continue early property demolition and began 30" Highline waterline work.

Schedule Summary

LNTP was issued June 7, 2019. A preliminary baseline schedule was submitted by the Design-Build Contractor. The initial baseline schedule submittal was rejected and a revised baseline is expected in January; Construction NTP is expected Q1 2020. Below is a summary schedule from the contractor's preliminary baseline schedule.

Activity Name	Start	Finish	2019	2020	2021	2022	2023	2024				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Sound Transit	07-Jun-19 A	16-Apr-24										
Sound Transit 2	07-Jun-19 A	16-Apr-24										
South Corridor	07-Jun-19 A	16-Apr-24										
Federal Way - D/B Construction	07-Jun-19 A	16-Apr-24										
F200 Federal Way Link Extension - Preliminary Baseline (FTA)	07-Jun-19 A	16-Apr-24										
Contract Milestones	07-Jun-19 A	16-Apr-24										
Contract Duration 1,778 (Maximum Duration)	07-Jun-19 A	16-Apr-24										
Limited Notice to Proceed	07-Jun-19 A	16-Apr-24										
Notice to Proceed	28-Feb-20*	18-Feb-22										
Anticipated Weather Days - MS 1	31-Dec-21	18-Feb-22										
MS 1 - Civil Work in WSDOT ROW From S 208th Street to I-5 (Sta. L 2260+00) (VA-2) (01-Mar-22)		18-Feb-22*										
Anticipated Weather Days - MS 2	12-Aug-22	05-Oct-22										
MS 2 - Civil Work in WSDOT ROW from Start of FWLE to S 208th Street (VA-1) (01-Nov-22)		05-Oct-22*										
Anticipated Weather Days - MS 3	27-Apr-23	04-May-23										
MS 3 - LRV Early Storage (2,000 feet of Track) (01-Jun-23)		04-May-23*										
Anticipated Weather Days - MS 4	09-May-23	16-May-23										
MS 4 - Work in WSDOT ROW from I-5 (Sta. L 2260+00) to S 272nd Street (VA-3) (01-Nov-23)		16-May-23*										
Substantial Completion		29-Jul-23										
Anticipated Weather Days - MS 5	15-Dec-23	17-Jan-24										
Testing and Commissioning NLT 12-Feb-24		17-Jan-24*										
60-Day Pre-Revenue Operations	18-Jan-24	17-Mar-24										
30-Day Sound Transit-Controlled Float	18-Mar-24	16-Apr-24										
MS 5 - Acceptance of All Work (19-Apr-24)		16-Apr-24*										
General	07-Jun-19 A	31-Mar-24										
Design	07-Jun-19 A	20-Jan-23										
Design Milestones	07-Jun-19 A	20-Jan-23										
Corridor Wide	07-Jun-19 A	19-Apr-21										
Design Packages - Kent Des Moines Segment 1	07-Jun-19 A	27-Oct-20										
Design Packages - Star Lake Segment 2	07-Jun-19 A	17-Feb-21										
Design Packages - Federal Way Transit Segment 3	07-Jun-19 A	20-Apr-21										
Construction	07-Jun-19 A	14-Dec-23										
Segment 1 Construction [STA 990+10 to 1112+99]	07-Jun-19 A	14-Dec-23										
Segment 2 Construction [STA 1112+99 to 1227+29]	07-Jun-19 A	14-Dec-23										
Segment 3 Construction [STA 1227+29 to 1401+87]	07-Jun-19 A	14-Dec-23										

Link Light Rail Federal Way Link Extension



Next Period's Activities

- Continue design task force meetings: Seg1(KDM) 60% civil & SR99 Bridge, 90/100% Guideway grading and walls, IFC early Utilities and Demo C&G; 90%; Seg2(Star Lake) 60% bridge Structure B; Seg 3(Fed Way): 60% Structures D & E—bridges and MOT, 90/100% Demo
- Continue other early critical submittal activities
- Continue geotechnical borings along alignment
- Continue early building demolition
- Continue 30-inch Highline WD water line relocation

Closely Monitored Issues

- Midway Landfill crossing
- Federal Way Transit Center design changes

Cost Summary

Present Financial Status	Amount
F200 Contractor - Kiewit Infrastructure West Co	
Original Contract Value	\$1,285,200,000
Change Order Value	\$500,000
Current Contract Value	\$1,285,700,000
Total Actual Cost (Incurred to Date)	\$131,066,779
Percent Complete	11%
Authorized Contingency	\$128,520,000
Contingency Drawdown	(\$500,000)
Contingency Index	25

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Link Light Rail Hilltop Tacoma Link Extension

Project Summary

Scope

Limits City of Tacoma

Alignment The Hilltop Tacoma Link Extension project is a 2.4-mile extension of the existing Tacoma Link system from the Theater District in downtown Tacoma to the Hilltop neighborhood. The extension will travel at-grade along Stadium Way, North 1st Street, Division Avenue, and Martin Luther King Jr. Way.

Stations Old City Hall, S. 4th, Stadium District, Tacoma General, 6th Avenue, Hilltop District, and St. Joseph.

Systems Expansion of the Operations and Maintenance Facility; The at-grade alignment will include additional signals, OCS, traction power, and communications infrastructure.

Phase Construction

Budget \$217.3 Million (Baselined September 2017)

Schedule Revenue Service: May 2022



Map of Hilltop Tacoma Link Extension.

Key Project Activities

Final Design: Design consultant continued design services during construction scope including review of construction contractor submittals and responded to requests for information.

Construction

- Heading 1: Continued installation of OCS foundations along Stadium Way; continued outbound track slab installation and performed curb/gutter and sidewalk restoration near Division.
- Heading 2: Holiday Moratorium in effect from 11/28/19-1/2/20 in Stadium District. Began underground conduit installation for signals/street lighting at Tacoma Ave. 1st St intersection.
- Heading 3: Holiday Moratorium in effect from 11/28/19-1/2/20 in Hilltop Business District. Substantially completed jack and bore for storm and sewer at Tacoma General. Installed water service crossings on MLK between 6th and 11th and completed rail welding at 18th and MLK.
- OMF: Continued installation of systems ductbank at yard. Continued mechanical, electrical and plumbing rough-in at interior. Continued insulation at exterior walls and installation of metal roof panels at interior.
- General: Staff received ST Board approval to amend construction contract by utilizing remaining project contingency.

Right-of-Way: Acquisition of all required parcels and temporary construction easements is complete.

Project Cost Summary

In September 2017, Sound Transit Board adopted the Hilltop Tacoma Link Extension (HTLE) baseline schedule and budget by increasing the authorized project allocation from \$34.6M to \$217.3M. The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions. To date, most of the expenditures have been from Administration, Design, 3rd Party, and ROW.

The T100 construction contract was executed in August 2018. The team went to the Sound Transit Board in December 2019 to add contingency to this contract.

In the December 201, approximately \$4.9M was incurred. Most expenditures are occurring in the Construction Phase related to the T100 construction contract. Sound Transit continues to anticipate majority of expenditures in the construction phase.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$16.9	\$16.9	\$10.7	\$10.7	\$16.9	\$0.0
Preliminary Engineering	\$5.6	\$5.6	\$5.6	\$5.6	\$5.6	\$0.0
Final Design	\$10.8	\$12.8	\$12.5	\$11.1	\$12.8	\$0.0
Construction Services	\$9.9	\$10.3	\$8.9	\$4.4	\$10.3	\$0.0
3rd Party Agreements	\$1.5	\$1.5	\$1.3	\$1.0	\$1.5	\$0.0
Construction	\$127.2	\$130.1	\$121.1	\$65.3	\$130.1	\$0.0
Vehicles	\$35.4	\$32.8	\$30.3	\$2.9	\$32.8	\$0.0
ROW	\$3.6	\$2.3	\$2.2	\$1.9	\$2.3	\$0.0
Contingency	\$6.6	\$5.1	\$0.0	\$0.0	\$5.1	\$0.0
Total	\$217.3	\$217.3	\$192.6	\$102.8	\$217.3	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$21.9	\$24.9	\$23.2	\$12.5	\$24.9	\$0.0
20 Stations	\$1.8	\$2.8	\$2.6	\$1.4	\$2.8	\$0.0
30 Support Facilities	\$26.6	\$33.1	\$30.8	\$16.6	\$33.1	\$0.0
40 Sitework & Special Conditions	\$40.0	\$41.6	\$38.7	\$20.9	\$41.6	\$0.0
50 Systems	\$25.0	\$27.8	\$25.8	\$13.9	\$27.8	\$0.0
Construction Subtotal (10 - 50)	\$115.4	\$130.12	\$121.1	\$65.3	\$130.1	\$0.0
60 Row, Land	\$3.4	\$2.3	\$2.2	\$1.9	\$2.3	\$0.0
70 Vehicles (non-revenue)	\$34.1	\$32.8	\$30.3	\$2.9	\$32.8	(\$0.0)
80 Professional Services	\$48.4	\$47.1	\$39.0	\$32.7	\$47.1	(\$0.0)
90 Unallocated Contingency	\$16.1	\$5.1	\$0.0	\$0.0	\$5.1	\$0.0
Total (10 - 90)	\$217.3	\$217.3	\$192.6	\$102.8	\$217.3	\$0.0

Risk Management

The Hilltop Tacoma Link Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It will provide a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks, taking mitigation actions for known risks identified on the risk register, and effectively responding in a timely manner to those risks that pose a significant impact to the project cost or schedule forecast.

The Baseline Risk Assessment was conducted in May 2017 and we conducted a Quantitative Risk Assessment in May 2019. A Recovery Action Workshop was conducted on October 24-25, 2019. An update to the risk model following review of secondary risk mitigations was done and an updated estimate at completion is in progress. The team is implementing the mitigations for the top risks and are being tracked a bi-weekly status updates. Per the December 2019 Register Update the current top project risks include:

- Lack of contractor's approved schedule is creating a series of cascading impacts to the project.
- Roadway improvements and modifications along MLK are greater than anticipated.
- Unidentified utilities under the proposed alignment lead to increased cost and schedule delays for mitigation during construction.
- Redesign of Division St./J/K intersection work leads to schedule delay and higher costs.
- Contractor assumed CoT discretion to relax code requirements regarding material staging in public ROW.
- Work zone constraints due to traffic control considerations and impacts to stakeholder require additional contractor resources due to resequencing activities and materials and equipment handling.



OMF– Green girth Z strips installation

Contingency Management

Hilltop Tacoma Link Extension was baselined on September 2017 with a total contingency of \$33.8M. Since baselining, there were draw downs on AC and UAC to address the Procurement of the Tacoma LRV and T100 Construction contracts, Design Services During Construction contract, and various Change Orders.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is at \$0, as a result of completion of Final Design.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. This period the Total AC was unchanged this period as a result of no T100 Change Orders. We do anticipate more change orders for T100 and other contracts. The balance is \$4.5M. Additional T100 contract AC will be reflected in next months report as the board approves the action.

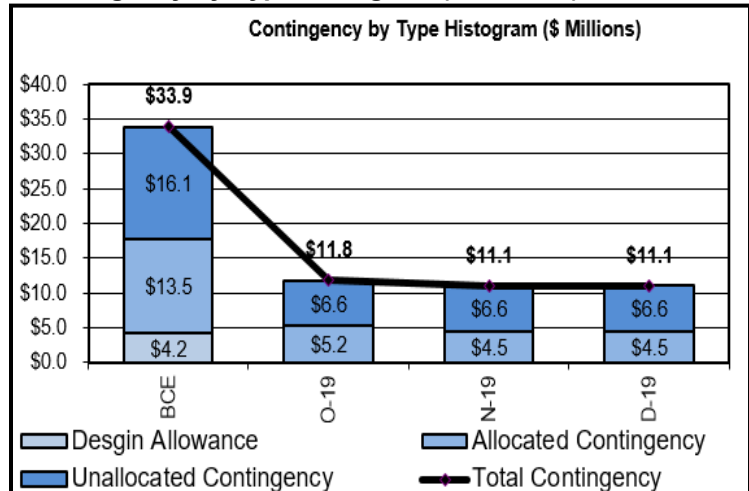
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance did not change this period. The a net balance amount is \$6.6M.

Contingency Status (Monthly)

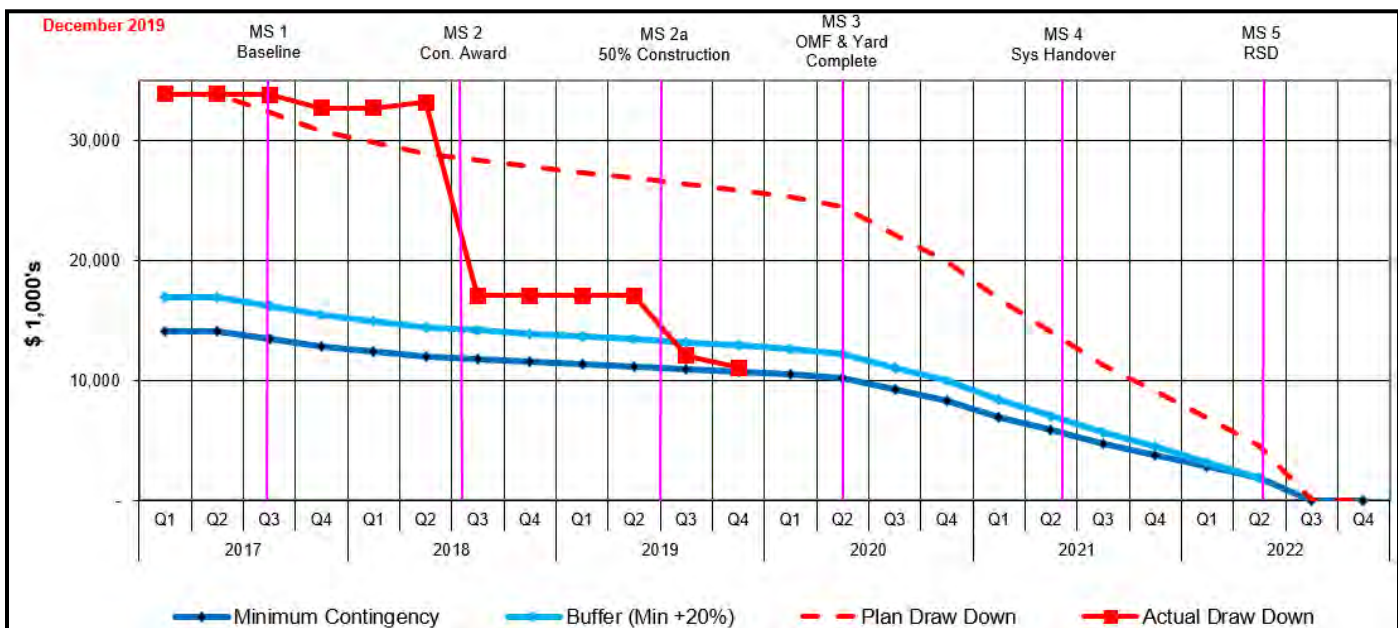
Type	Baseline		Current	
	Amount	% of Total	Amount	% of Work
Design Allowance	\$4.2	2.2%	\$0.0	0.0%
Allocated Contingency	\$13.5	6.8%	\$4.5	3.9%
Unallocated Contingency	\$16.1	8.2%	\$6.6	5.8%
Total	\$33.9	17.2%	\$11.1	9.7%

Table figures are shown in millions.

Contingency by Type Histogram (\$ Millions)



Contingency Drawdown (Quarterly)



Link Light Rail Hilltop Tacoma Link Extension



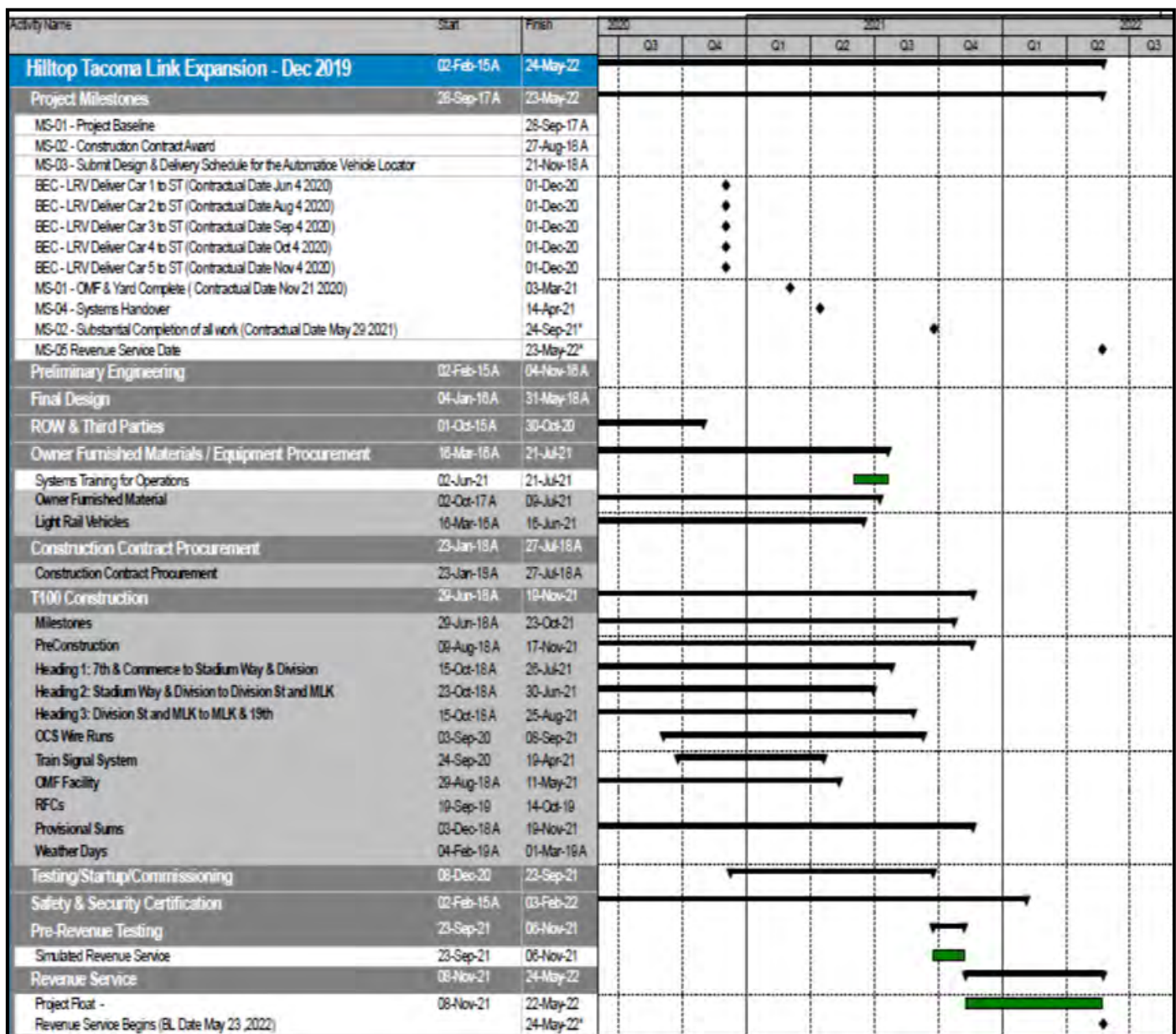
Project Schedule

The Master Schedule has been updated through the end of December 2019.

LRV: The LRV procurement contractor is still forecasting that Final Design Review (FDR) completion to be held in 2nd QTR 2020. Forecast delivery of the first car arriving in late 4th QTR 2020 and last car in 2nd QTR 2021. The contractor schedule is still projecting that all cars will be delivered in time to support T100 mainline system integration testing and pre-revenue service startup in 3rd QTR 2021.

T100: Construction Schedule MS#2 Substantial Completion of all work has slipped from May 2021 to September 2021. Contractor is working on a revised project completion schedule due to design issues and differing site conditions causing time delays in the installation of track and possibly pushing the pre-revenue service. This will be submitted in Jan 2020 for ST review.

Over all Physical Percent Complete is 51%



Critical Path Analysis

The analysis for December 2019 shows dual critical paths. The first critical path runs through the T100 contract with the completion of wet utilities in Heading 1, 2B and 3. Followed by installation of inbound/outbound track for each of the headings. The second critical path is the delivery of the LRVs to the OMF, followed by completing the burn in testing required for pre-revenue service.

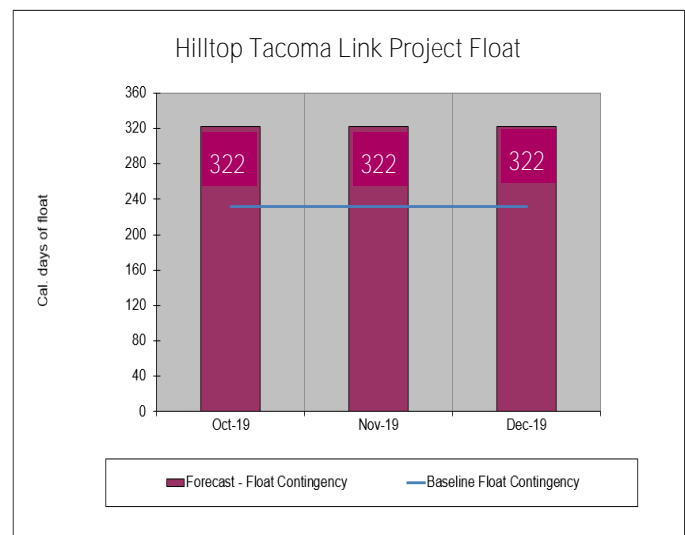
The contractor is still working on a project completion schedule to show the resequencing of the remaining work in order to achieve the MS #2 Substantial Completion in 2nd QTR 2021.

Activity Name	Start	Finish	2020				2021			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Hilltop Tacoma Link Expansion - Dec 2019	26-May-17 A	08-Nov-21								
Project Milestones	24-Sep-21	24-Sep-21								
MS-02 - Substantial Completion of all work (Contractual Date May 29 2021)		24-Sep-21*								
ROW & Third Parties	26-May-17 A	28-Oct-20								
T100 Construction	06-May-19 A	23-Oct-21								
Milestones	23-Sep-21	23-Oct-21								
Heading 1: 7th & Commerce to Stadium Way & Division	01-Jan-20	05-May-21								
Utilities	04-Jan-20	05-Jan-20								
St & Commerce Intersection Work	01-Jan-20	22-Dec-20								
Outbound	25-Mar-21	05-May-21								
Inbound	10-Nov-20	11-Dec-20								
Pave	23-Dec-20	06-Jan-21								
Heading 3: Division St and MLK to MLK & 19th	06-May-19 A	25-Aug-21								
Utilities	06-May-19 A	09-Nov-20								
Intersections - Traffic Signal	12-Aug-21	25-Aug-21								
Jack & Bore	02-Jan-20	14-Apr-20								
Outbound	10-Nov-20	25-Mar-21								
OCS Wire Runs	07-Jan-21	30-Jul-21								
Testing/Startup/Commissioning	02-Aug-21	23-Sep-21								
Systems Integration Testing	02-Aug-21	23-Sep-21								
Job Wide ITS Installation - Mainline	02-Aug-21	18-Aug-21								
Job Wide ITS - Mainline Systemwide Testing	26-Aug-21	23-Sep-21								
Pre-Revenue Testing	23-Sep-21	08-Nov-21								
Simulated Revenue Service	23-Sep-21	08-Nov-21								

Project Float

Hilltop Tacoma Link Extension was baselined with 232 days of project float. Current forecast for HTLE are now reporting 322 days of project float before Revenue Service on May 23, 2022.

RFC #148/ CO #37 is pending approval for a 45 day time extension due to differing site conditions and design issues and is not yet reflected in the current project float drawdown.



Right-of-Way

The Hilltop Tacoma Link Operations and Maintenance Facility will expand to the east and five new vehicles will be purchased. The Right-of-Way effort for this project involved the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions resulted in owner and tenant residential and commercial relocations. The following table summarizes the Right-of-Way program status for this period. All project property acquisitions are complete.

Tacoma Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
20	20	20	20	1	1
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

Community Outreach

- Provided two-week notification and coordinated with MultiCare on utility work on MLK Jr. Way between Division Ave and 3rd St., including informing them of a Puget Sound Energy gas line that would be moved as well as the blocked access to the Jackson Hall parking garage. Met with MultiCare four times in December.
- Responded to the flooding issue in Tacoma General's Baker Center pedestrian tunnel, which affected the IR room. Visited the pedestrian tunnel with MultiCare on this "rain event day."
- Met with Stadium businesses one-on-one to discuss and obtain input on track installation in the Tacoma Ave. and N. 1st St. intersection. Also met with the president of the Stadium Business District and with the City of Tacoma's Community and Economic Development manager to discuss track installation.
- Notified businesses and residents in the Stadium District about traffic signal work starting in the Tacoma Ave and N. 1st St. intersection in early January.
- Provided notification about the Division Ave. and K St. intersection closure, paving on MLK Jr. Way between S. 18th and S. 17th St., concrete pours and access on Stadium Way, and equipment stored on Division Avenue.
- Collaborated with the Tacoma Dome Link team on a presentation for high school students interested in architecture, construction and engineering careers (the group is called ACE Mentor). Approximately 20 high school students attended and learned more about siting a transit hub.
- Walsh sponsored the Dickens Festival at Stadium on Dec. 14.
- Produced and distributed weekly construction alerts about traffic impacts.
- Attended the HTLE stakeholder outreach meeting with the City of Tacoma and community organizations.
- Collaborated with Tacoma Public Utilities on an article that will feature the HTLE project and businesses in their January newsletter.
- Continued working with Communications to feature Hilltop and Stadium businesses in the Loyal to the Local campaign.
- Continued coordinating with SpaceWorks on murals that will be installed at businesses along the HTLE route.
- Responded to questions about when Stadium Way would be open to two-way traffic.

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Link Light Rail Hilltop Tacoma Link Extension



Sound Transit Board Actions

Board Action	Description	Date
M2019-122	Increase Contingency for Hilltop Tacoma Link Extension Construction Contract	12/12/19

Construction Safety

Data/ Measure	December 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	2	3
Days Away From Work Cases	0	0	0
Total Days Away From Work	0	0	0
First Aid Cases	0	7	8
Reported Near Mishaps	3	8	15
Average Number of Employees on Worksite	188	-	-
Total # of Hours (GC & Subs)	10,139	126,861	138,674
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	3.15	4.33
Lost Time Injury (LTI) Rate	0.00	0.00	0.00
Recordable National Average	3.00		
LTI National Average	1.20		
Recordable WA State Average	6.00		
LTI WA State Average	1.90		

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

Contract T100 — Hilltop Tacoma Link Extension

Current Progress

The T100 Contractor, Walsh Construction Company II, LLC, is continuing with work outside the OMF and Mainline work at grade.

- Heading 1 - Saw cut outbound track slab and started installing rail , Installed water line for 4th St. Station .
- Heading 2B - Potholing for OCS foundations , installation of traffic conduit and catch basin at Tacoma & 1st Ave.
- Heading 3 - Completed carrier pipe installation under Baker tunnel , started storm crossing work at MLK and 14th St.
- OMF - Installed metal roof panels, completed storm work on site near J St., Plumbing and electrical rough-in on the mezzanine and 2nd floor .

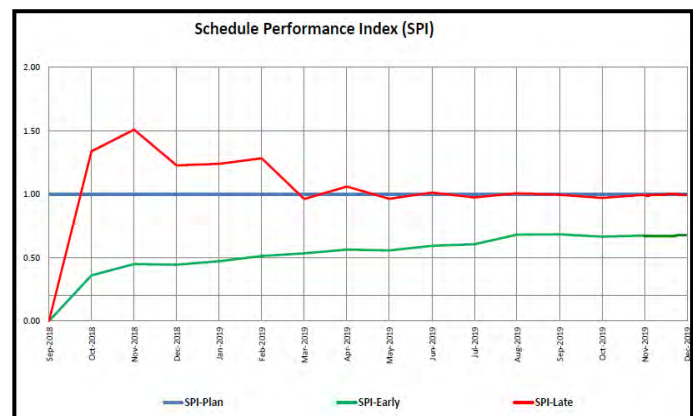
Schedule Summary

The schedule update for December 2019 is still not available. Progress is based on contractors three- week look ahead schedules from Nov 27—Dec 31, 2019 as the project forecast completion schedule is still in process, schedule workshops were held in order to identify possible schedule mitigations that will improve the MS#2 Substantial Completion of all Work completion date. Contractor will submit project completion schedule in 1st week of January 2020 for approval by Sound Transit.

Activity Name	Start	Finish	19	2020				2021				
			Q1	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
T100 Hilltop Tacoma Link Extension Schedule Update Oct 2019	29-Jun-18 A	23-Oct-21										
Tacoma Links Baseline Schedule	29-Jun-18 A	23-Oct-21										
Milestones	29-Jun-18 A	23-Oct-21										
PreConstruction	09-Aug-18 A	27-Jun-21										
Heading 1: 7th & Commerce to Stadium Way & Division	15-Oct-18 A	26-Feb-21										
Heading 2: Stadium Way & Division to Division St and MLK	23-Oct-18 A	07-May-21										
Heading 3: Division St and MLK to MLK & 19th	15-Oct-18 A	23-Jul-21										
OCS Wire Runs	19-Nov-19	21-Jun-21										
Train Signal System	29-Sep-20	10-Dec-20										
Job Wide ITS	03-Sep-20	26-Feb-21										
OMF Facility	29-Aug-18 A	02-Nov-20										
Change Orders	24-Dec-18 A	27-Jan-21										
Deleted Activities	01-Apr-19 A	01-Apr-19 A										
Provisional Sums	03-Dec-18 A	26-Apr-21										

Schedule Performance Index

This period, the SPI-early stayed the same at 0.67 and the SPI-late slightly decreased to 0.98. The early index indicates that the contractor continues to perform behind the plan when compared to the baseline schedule. Based on the current trends there is a high likelihood of schedule impacts to the current T100 contract milestones.



Link Light Rail Hilltop Tacoma Link Extension

Next Period's Activities

- Heading 1— Start OCS cantilever pole installation. Continue Outbound track slab and rail installation. Complete systems duct bank installation and backfill.
- Heading 2B - Limited work due to Holiday moratorium. Continuing with storm drain work and underground electrical work at crossings.
- Heading 3- Limited work due to Holiday moratorium. Continuing with water main work on MLK between 6th and 11th Street. Continue rail welding between 16th and 19th Street.
- OMF: Installation of underground electrical at NE corner of the yard, continue wall framing /sheeting and complete pre-cast panel installation.

Closely Monitored Issues

- Working with the contractor to develop a realistic schedule to forecast project completion. Review meetings have been held between contractor, Sound Transit and City of Tacoma to establish assumptions and improve schedule efficiencies.
- The third party utility relocations (Tacoma Public Utility, CenturyLink and PSE) appear to have little impact on the T100 contract schedule and the HTLE Contractor has shown flexibility in accommodating the remaining third party work through coordinated sequencing. ST construction management continue to monitor for potential cost and schedule impacts.
- Notifications to the community are critical in providing advance notice of upcoming construction activities. Business mitigation efforts are underway to support businesses impacted by construction activities. Community Outreach staff are managing this effort with the support of the contractor, City of Tacoma and Sound Transit field staff.
- Work at 9th and Commerce requires a planning workshop which will be held in January 2020. Participants will include Sound Transit (including Operations), City of Tacoma and the contractor.

Cost Summary

Present Financial Status	Amount
T100 Contractor— Walsh Construction Company	
Original Contract Value	\$ 108,295,000
Change Order Value	\$ 4,460,287
Current Contract Value	\$ 112,775,287
Total Actual Cost (Incurred to Date)	\$ 60,271,803
Percent Complete	51%
Authorized Contingency	\$ 943,583
Contingency Drawdown	\$ 4,460,287
Contingency Index	0.6



Floor Slab Preparation—OMF

Contract RTA/RP 0014-16 — Tacoma Link Light Rail Vehicle (LRV) Procurement

Current Progress

The Brookville Monthly Schedule Submittal is updated as of December 31, 2019.

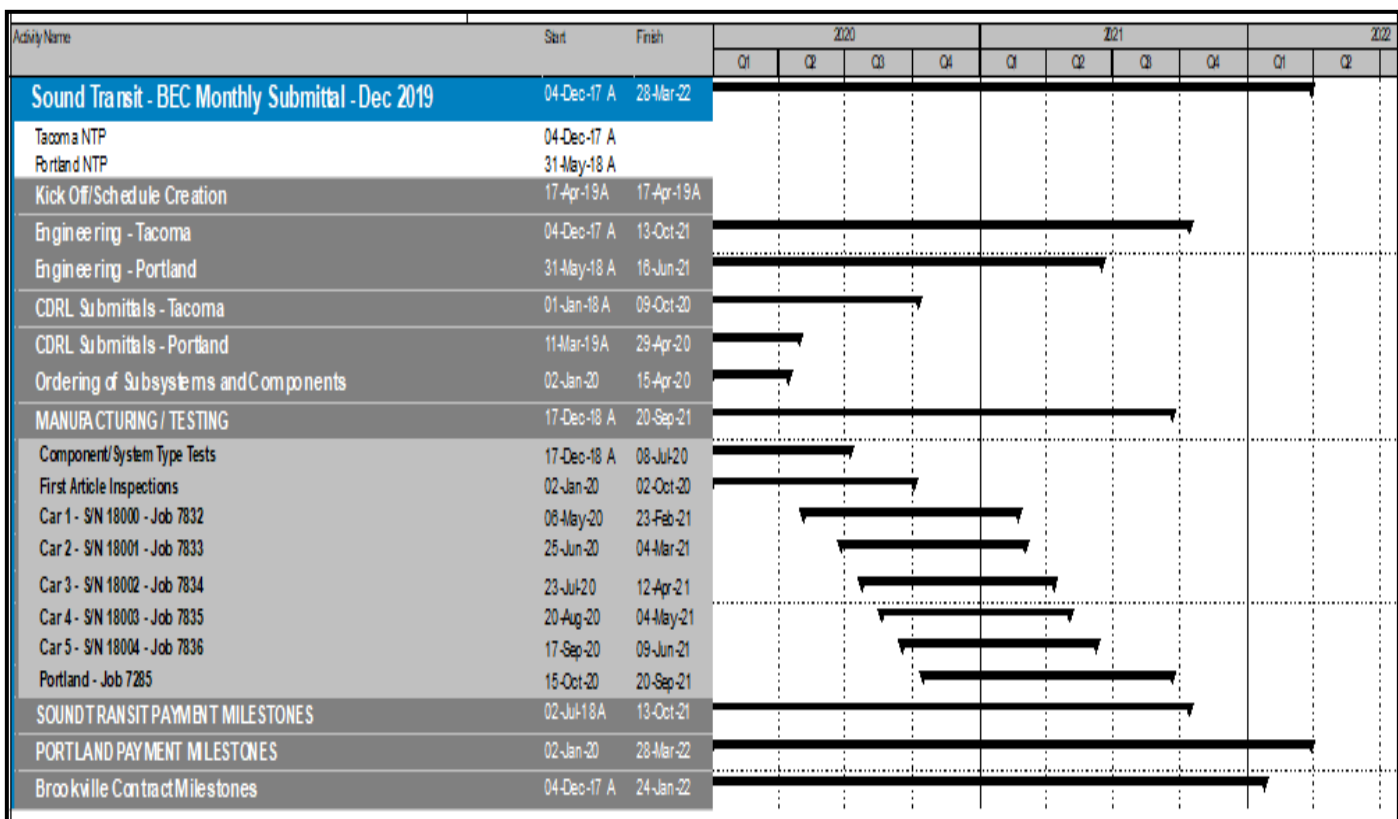
- Continuing on phase 2 system integration design and phase 3 system design and models.
- Reworking and resubmittal of CDRLS listed under : Sections 2– 16 and Section 19.

Schedule Summary

The December 2019 schedule update indicates Brookville on target to complete Final Design Review (FDR) in 2nd QTR 2020. FDR forecasted completion falls ahead of building the end base of the car in the Fab Shop and Cut Shop. All First Article Inspections to be complete by October 2020.

Current Forecast indicate ship and delivery of the 1st car arriving to OMF in Tacoma will begin in December 2020. Approximately six weeks later the 2nd car will arrive in late January 2021. Car 3 arriving in February 2021, car 4 arriving in March 2021 and the final car 5 in April 2021.

Onsite Testing for the 1st car will begin in late January 2021 and complete in June 2021. Contractor schedule is projecting all cars will still be delivered in time to support mainline system integration testing and pre-revenue service startup in 3rd QTR 2021.



Link Light Rail Tacoma Dome Link Extension

Project Summary

Scope

Limits	Federal Way Transit Center to South Federal Way, Fife, East Tacoma, and Tacoma Dome
Alignment	The Tacoma Dome Link Extension expands light rail 9.7 miles from the Federal Way Transit Center to Tacoma. The representative alignment travels adjacent to I-5 with four stations.
Stations	South Federal Way, Fife, and East Tacoma (elevated stations) and Tacoma Dome (at-grade station)
Systems	Signals, traction power, communications (SCADA), Operations and Maintenance Facility South (OMF South)
Phase	Planning: Alternative Development
Budget	\$125.7 Million for Preliminary Engineering Phase 1—Alternative Development
Schedule	Revenue Service: December 2030



Map of Tacoma Dome Link Extension.

Key Project Activities

- Advanced the footprints for the OMF South and presented to City of Kent, City of Federal Way and City of Seattle.
- Continued developing non-motorized integration workshops with the AHJs.
- Thirty-five borings have been identified for environmental clearance, for which workplans will be developed for the purpose of securing permits.
- Held meetings with the cities of Fife, Milton, Federal Way, and Tacoma as well as WSDOT.
- Executed Task Order #2 and Task Order #3 with the City of Federal Way.
- Completed letter of concurrence with WSDOT and Sound Transit on the Portland Avenue / I-5 Underpass Agreement.

Project Cost Summary

The Tacoma Dome Link Extension and OMF South project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

Project cost and monthly expenditures are trending lower than planned monthly budget but the current forecast is on track for completing this phase within the authorized budgeted amount.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$26.8	\$6.3	\$6.0	\$26.8	\$0.0
Preliminary Engineering	\$87.1	\$47.3	\$14.2	\$87.1	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$5.8	\$1.4	\$0.3	\$5.8	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$6.0	\$0.4	\$0.0	\$6.0	\$0.0
Total	\$125.7	\$55.4	\$20.5	\$125.7	\$0.0

Cost Summary by SCC

SCC Element	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
50 Systems	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Subtotal (10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 Row, Land	\$5.0	\$0.4	\$0.0	\$5.0	\$0.0
80 Professional Services	\$110.9	\$55.0	\$20.5	\$110.9	\$0.0
90 Unallocated Contingency	\$9.8	\$0.0	\$0.0	\$9.8	\$0.0
Total (10 - 90)	\$125.7	\$55.4	\$20.5	\$125.7	\$0.0

Link Light Rail Tacoma Dome Link Extension



Risk Management

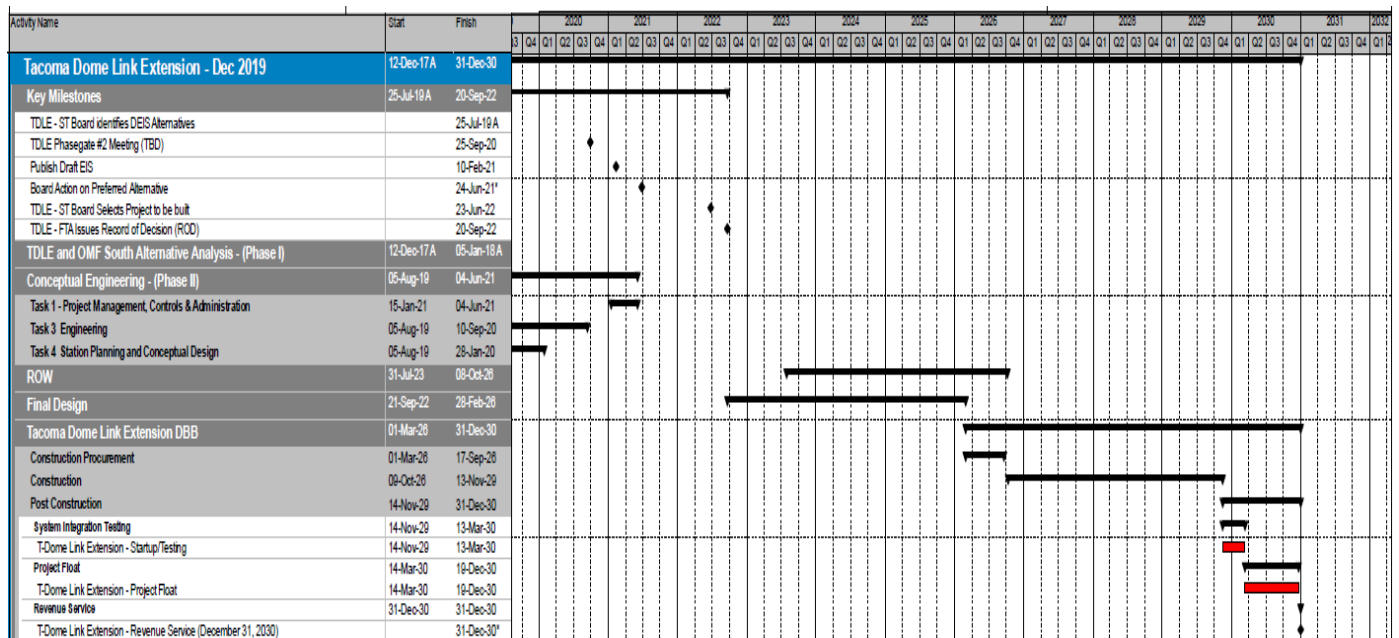
The Tacoma Dome Link Extension and OMF South Risk and Contingency Management Plan (RCMP) will establish a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It will provide a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks, taking mitigation actions for known risks identified on the risk register, and effectively responding in a timely manner to those risks that pose a significant impact to the project cost or schedule forecast.

The 4th QTR 2019 risk review workshop was held in December-2019. The following are the top project wide risks:

- Preferred alignment cost is greater than the ST3 budgeted project cost may cause the project to delay.
- OMF South cost is greater than the ST3 budgeted project cost may cause the project to delay.
- Puyallup Tribe may take longer than planned to provide cultural resources and/or fisheries, stormwater mitigation approvals.
- OMF South can not be built in time for ST3 vehicle schedule.
- Other earlier-programmed ST projects are experiencing baseline cost escalation, resulting in insufficient funding available for TDLE and OMF South.
- Lack of federal funding for public transit projects could delay the project.
- Sound Transit funding authorization reduced by voters or legislation may result in insufficient local funds.
- Contaminated soil and/or groundwater are discovered during TDLE and OMFS construction, resulting in increased costs.

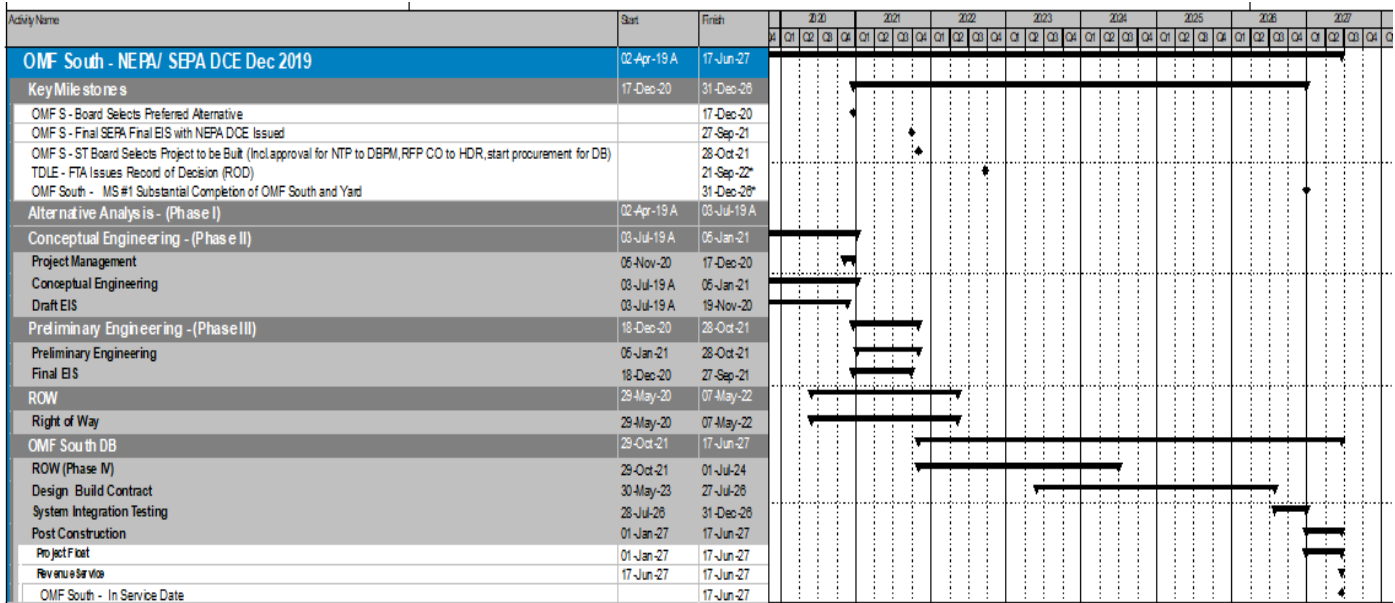
TDLE Project Schedule

Below is the HDR consultant detailed schedule as of December 31, 2019. The schedule indicates the Draft EIS publication completion in 1st QTR 2021 with Sound Transit Board Confirms/Revises Preferred Alternative in 2nd QTR 2021. Final EIS publication shows completion in 2nd QTR 2022. FTA issuance of the Record of Decision expected in 3rd QTR 2022. Revenue Service is targeted for December 31, 2030.



OMF South Project Schedule

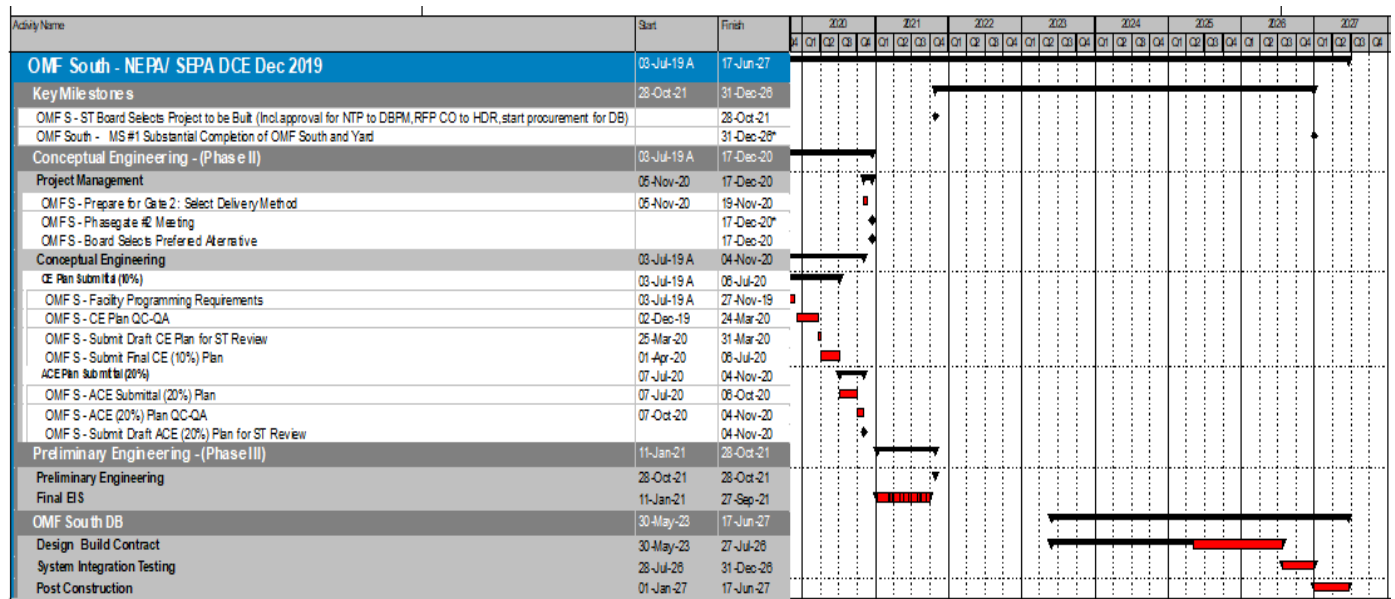
Below is the summary schedule as of December 31, 2019. The schedule indicates OMF South is in the Conceptual Engineering phase now and Final SEPA EIS with NEPA DCE will be published in 3rd QTR 2021. ST Board Selects Project to be Built late 4th QTR 2021. The milestone, Substantial Completion of the OMF South and Yard, is targeted for December 2026 to receive the ST3 Light Rail Vehicle cars and perform burn-in testing to support TDLE Revenue Service in December 31, 2030.



Critical Path Analysis

The critical path for the overall TDLE program continues to run through OMF South portion of the project. OMF South must complete conceptual engineering and environmental to produce the Draft EIS. The critical path then continues through the project life cycle of conceptual, preliminary design, final design, permitting, Right-of-Way acquisition, and construction to meet a target substantial completion of December 2026.

Findings from the final OMFS Strategy workshops for the best project procurement method to be used in order to meet the substantial completion target 2026 will be incorporated into the master schedule in 1st QTR 2020.



Community Outreach

- TDLE – Conducted stakeholder interview with the Salishan Association (11/4)
- TDLE – Hosted drop-in session at UW Tacoma (12/3)
- TDLE – Hosted drop-in session at Fife Pierce County Library (12/3)
- TDLE – Provided briefing to Harsch Real Estate Investment (12/4)
- TDLE/OMF – Hosted drop-in session at Federal Way Community Center (12/4)
- TDLE – Hosted drop-in session at Tacoma Sounder Station (12/4)
- TDLE – Hosted drop-in session at Salishan Family Investment Center Holiday Bazaar (12/6)
- TDLE – Provided briefing at Dome District Meeting (12/13)
- TDLE – Conducted field visits to Fife businesses (12/20)
- TDLE – Provided briefing at Freighthouse Square Meeting (12/23)

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

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Link Light Rail

Link Operations & Maintenance Facility: East

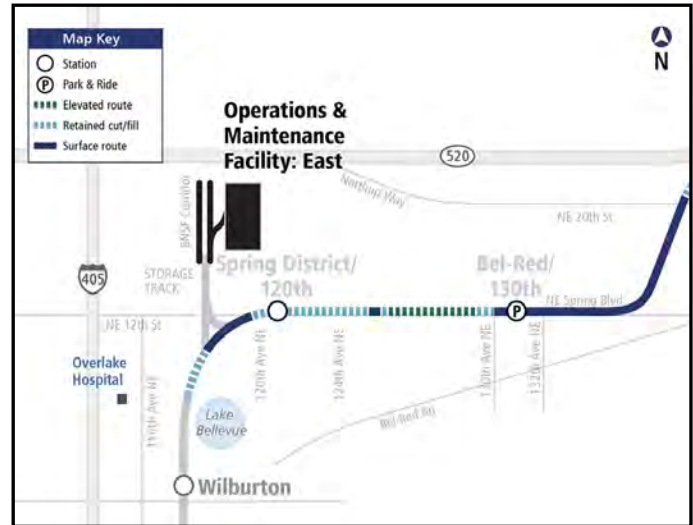
Project Summary

Scope The Link Operations and Maintenance Facility: East (OMF East) project, located in the City of Bellevue, includes a 160,000 sq. ft. operations and maintenance facility that will maintain, store and deploy and expanded light rail fleet, including seven LRV service bays, a LRV wash facility and storage for up to 96 LRVs.

Phase Proceed to Construction

Budget \$449.2 Million (Baselined July 2016)

Schedule Project Completion: December 2020



Map of OMF East Site

Key Project Activities

- OMF East building insulated metal panels, roofing and curtain wall were completed around the admin area.
- OMF East building, framing and mechanical/electrical/plumbing/fire sprinkler (MEPF) overhead and in wall rough-ins continue at Levels 1 and 2, including on the high bay area of the shop.
- Perimeter apron slabs on the south side of the site were completed and are in progress at the north.
- Maintenance of Way (MOW) building masonry was completed, rooftop air handling units (AHUs) were set and the transition walls framing, and parapet framing/sheathing were completed.
- Skeletonizing of track at the south and north storage fan, and completed embedded track work at the buildings.
- Signals and communications, switch machines and crib and rail heaters were installed for the north storage fan, south fan, storage tracks, and north runaround.

Closely Monitored Issues

- Monitoring commissioning and testing in support of project transition to Operations.
- Late design changes to the Type 2 LRVs (Siemens) that may impact the OMF East LRV interfaces.

Project Cost Summary

The Baseline Budget (July 2016) for the OMF East is \$449.2M. The OMF East cost is summarized into two cost tables. The first table is in accordance with Sound Transit's Work Breakdown Structure (WBS) displaying the cost summary by phase. The second table summarizes project cost by SCC, in accordance to the FTA Standard Cost Categories (SCC) format. Both tables show figures in millions.

The Estimated Final Costs (EFC) continues to be projected at approximately \$449.2M. This period's expenditure of about \$4.1M. The total project cost incurred increased from \$278M to \$282.1M. The primary cost drivers during this period on the OMF East project comes from the design build (construction) phase at \$3.7M or roughly 91% of the total monthly expenditures. The next cost driver this period pertains to Construction Services expenditures at about \$402K.

Cost Summary by Phase

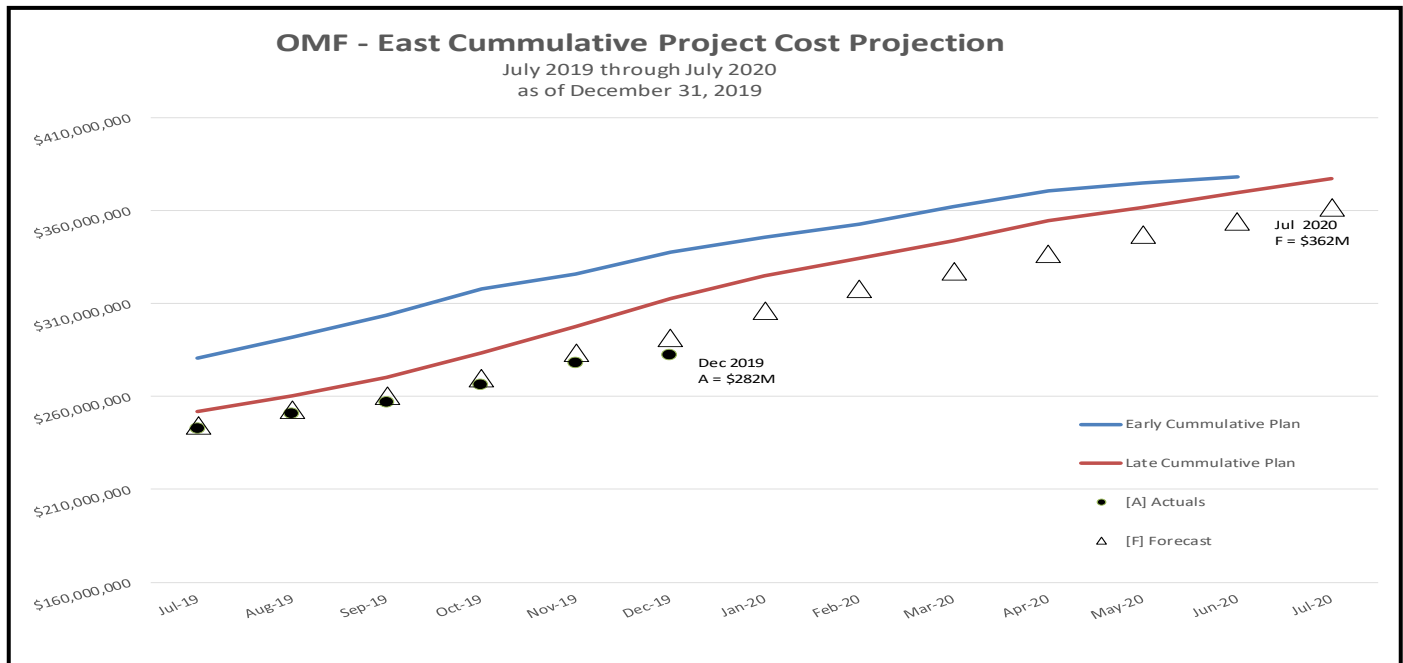
Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$17.6	\$17.6	\$6.6	\$6.4	\$17.6	\$0.0
Preliminary Engineering	\$9.5	\$9.5	\$9.0	\$8.7	\$9.5	\$0.0
Final Design	\$0.4	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
Construction Services	\$19.3	\$19.3	\$17.5	\$9.7	\$19.3	\$0.0
3rd Party Agreements	\$3.1	\$3.1	\$0.3	\$0.1	\$3.1	\$0.0
Construction	\$264.8	\$264.8	\$225.5	\$154.7	\$264.8	\$0.0
ROW	\$134.5	\$134.5	\$102.7	\$102.5	\$134.5	\$0.0
Total	\$449.2	\$449.2	\$361.7	\$282.1	\$449.2	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$2.6	\$4.4	\$4.1	\$2.5	\$4.1	\$0.3
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities: Yard, Shop	\$140.1	\$136.1	\$125.8	\$89.6	\$146.2	-\$10.1
40 Sitework & Special Conditions	\$43.6	\$48.5	\$40.1	\$24.0	\$43.1	\$5.4
50 Systems	\$43.0	\$41.6	\$39.0	\$23.3	\$39.0	\$2.6
Construction Subtotal (10 - 50)	\$229.3	\$230.6	\$209.0	\$139.3	\$232.4	-\$1.8
60 ROW, Land, Improvements	\$134.5	\$134.5	\$102.7	\$102.5	\$134.5	\$0.0
70 Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
80 Professional Services	\$71.6	\$70.3	\$49.9	\$40.3	\$68.5	\$1.8
90 Unallocated Contingency	\$13.8	\$13.8	\$0.0	\$0.0	\$13.8	\$0.0
Total (10 - 90)	\$449.2	\$449.2	\$361.7	\$282.1	\$449.2	\$0.0

Project Cash Flow Projection

The OMF East cost projection is trending late this period but anticipates to pick up through the following summer. Total project expenditure incurred to date at approximated \$282M with Construction Phase at 54.3% and Right-of-Way (ROW) phase at 38%. Construction activities is now the main cost driver. The forecasted cash flow was revised this period for the next nine months to reflect some current trends. While the Design Builder's (DB) design completion slipped and impacted specifically on Systems where some anticipated procurements did not occur as planned, construction has certainly picked up on yard tracks and structural steel installations. The project expenditure continues to trend a projection of \$362M by July of 2020 which is at the lower bounds of the late planned expenditures as shown in the graph below.



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks.

The project has completed Risk Mitigation Milestone (RMS) 2, the completion of ROW Acquisition and Mass Grading. The Quantitative Risk Assessment (QRA) assessed that with the current risk profile, the project would complete within the baseline schedule and budget. QRA for RMS 3, the completion of building enclosure, is taking place in December 2019 with report anticipated in January 2020. The current top actively managed risk areas remains similar to the previous quarter and are listed below:

- **Design:** With the project design effectively completed, changes made to scope or design will have greater cost impact than during the earlier design stages.
- **Scope:** Scope interfaces with East Link (E335/E750) tracks, OCS, Signals, LRV vehicle envelop, Operations' requirement changes creates additional work impacts the project's schedule and budget.
- **Construction:** As the construction progress past the midpoint, normal and routine construction risks will be encountered and post-IFC change to design may also drive cost growth to the project. Safety and environmental compliance is another area to monitor especially as the wet season begins.
- **Start Up:** As the project progress, it is inevitable that the startup phase needs to be address early. This facility will need coordination for testing and acceptance of ST Operations.

Contingency Management

The Link Operations and Maintenance Facility: East was baselined and approved by Sound Transit Board in July 2016 with a total contingency of \$93.2M. The Project's starting contingency balance as of the Notice to Proceed for Construction was \$71.6M reflecting the inclusion of the Design Allowance in the Design Builder contract amount. In this period, change orders were related to various construction scope. The current contingency balance remains materially unchanged at approximately \$66.9M (previous period at \$67.1M).

Design Allowance (DA): N/A

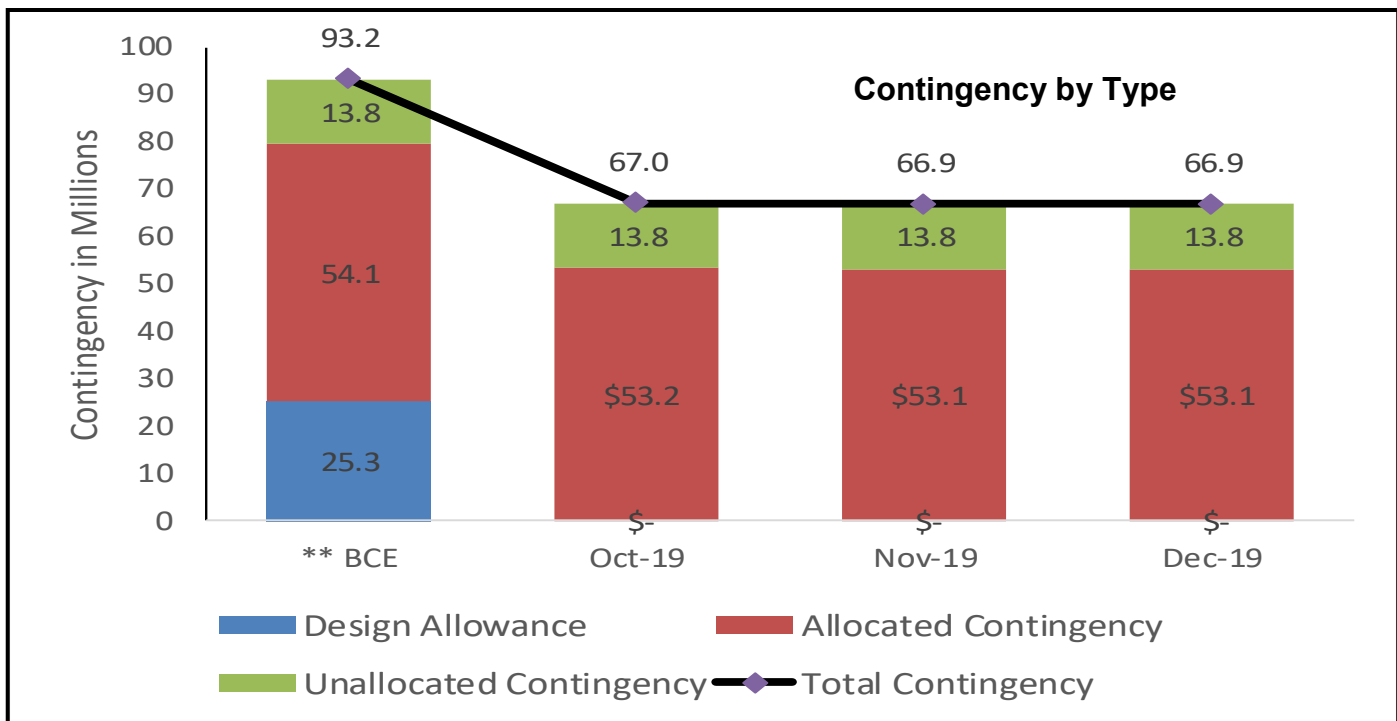
Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. Allocated contingency balance at the end of this period remains at \$53.1M (the previous period at \$53.3M).

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The baseline UAC amount of \$13.8M reflects no changes this period.

Contingency Status

Contingency Type	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ 25.3	5.6%	\$ -	0.0%
Allocated Contingency	\$ 54.1	12.0%	\$ 53.1	31.8%
Unallocated Contingency	\$ 13.8	3.1%	\$ 13.8	8.3%
Total	\$ 93.2	20.7%	\$ 66.9	40.0%

Table figures are shown in millions.

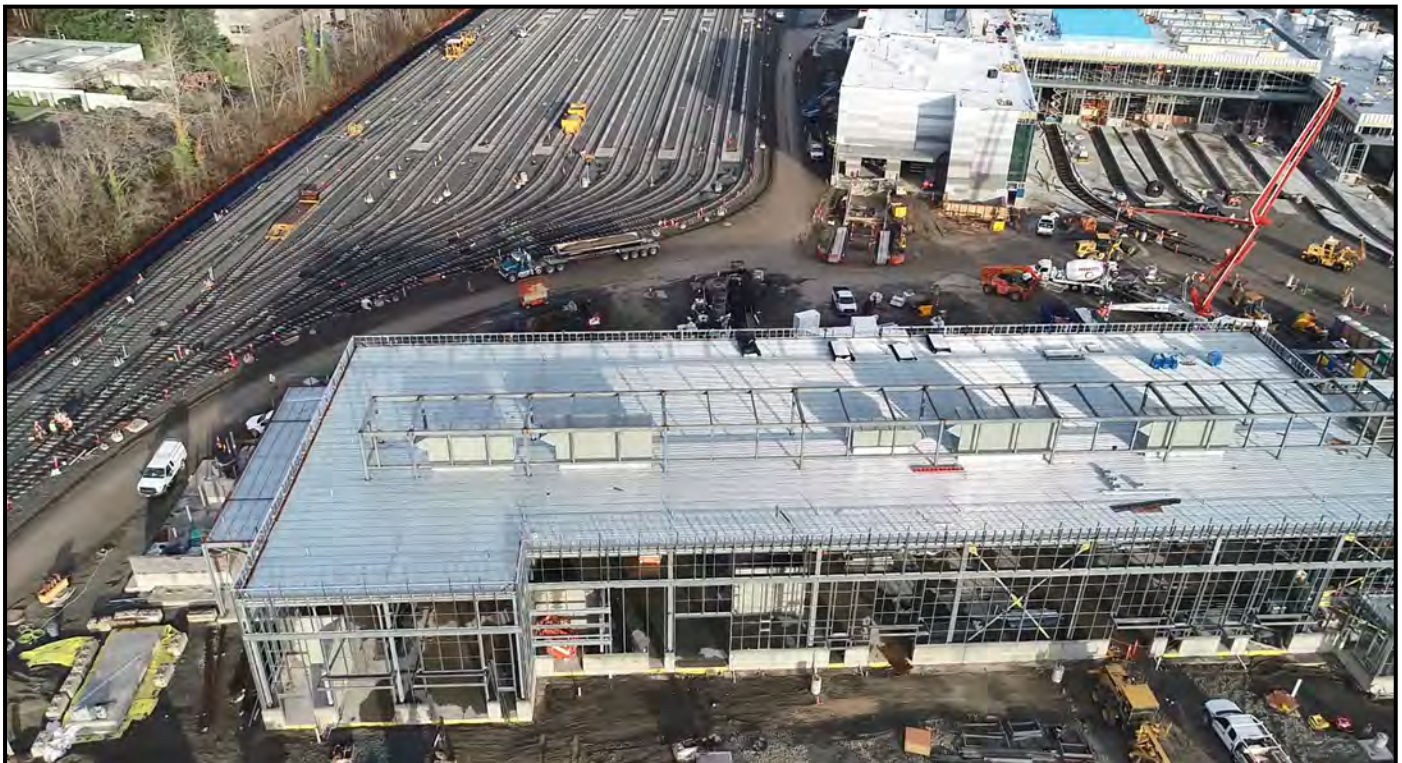
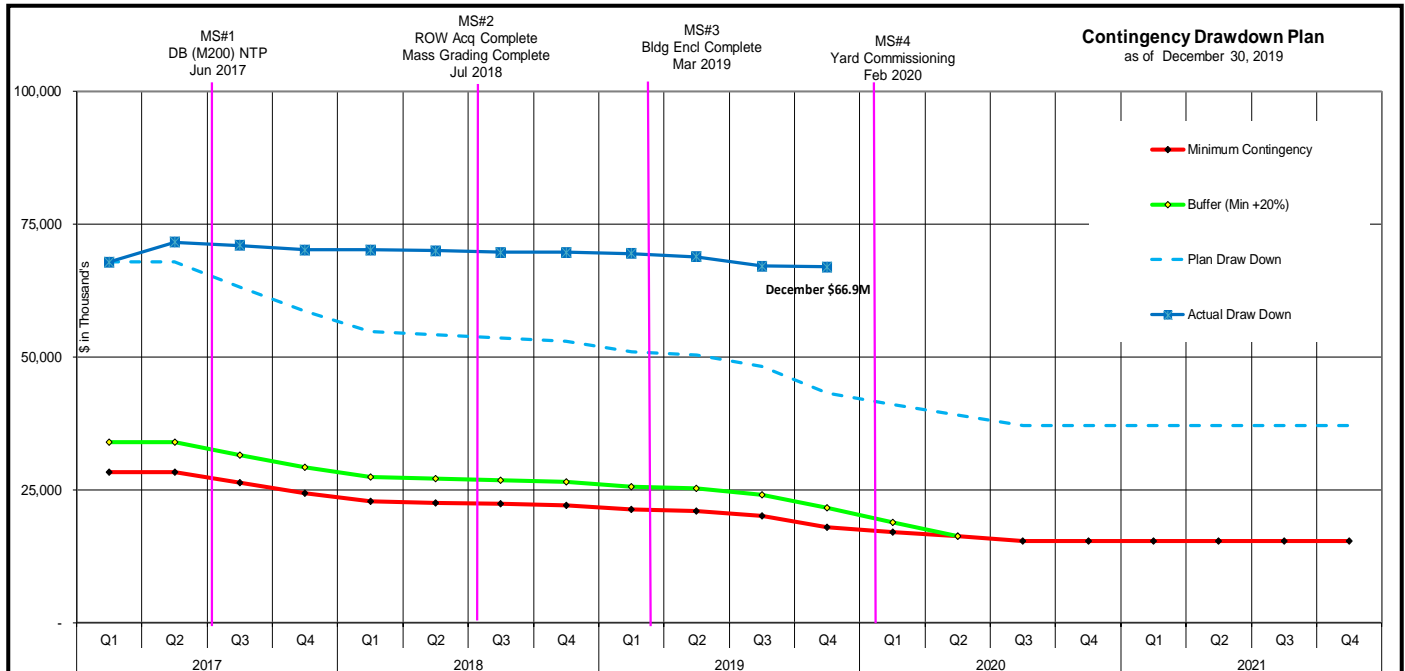


Link Light Rail

Link Operations & Maintenance Facility: East

Contingency Drawdown

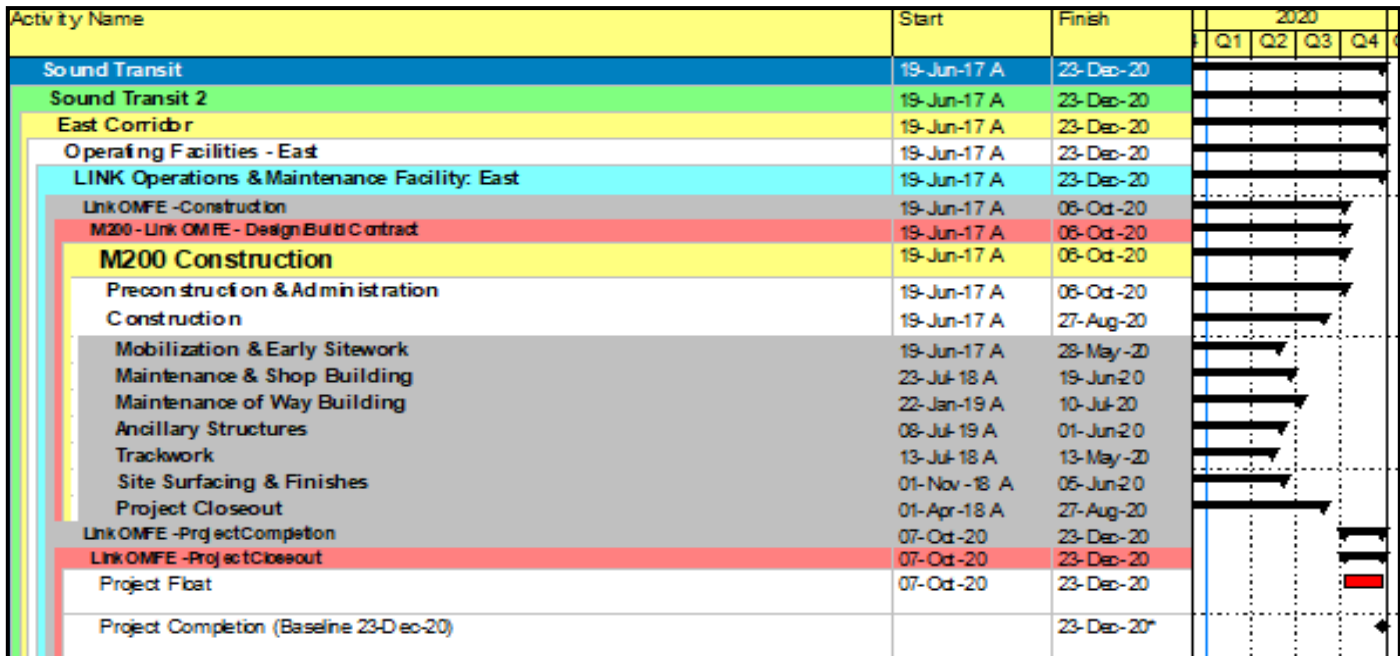
At the end of the 4th QTR 2019, OMF East Project's total contingency drawdown plan is trending positively. Total contingencies balance is at approximate \$66.9M (previously quarter at \$67.1M) and remains above all the baseline draw down projection and well above both the minimum contingency and the buffered (minimum plus 20%) contingency levels. The next update will be at end of the 4th QTR 2019. Risk Mitigation Milestone #3 has been revised to be met in 4th QTR 2019.



OMF East birds eye view looking north taking shape with yard scope and steel structure framing - December, 2019

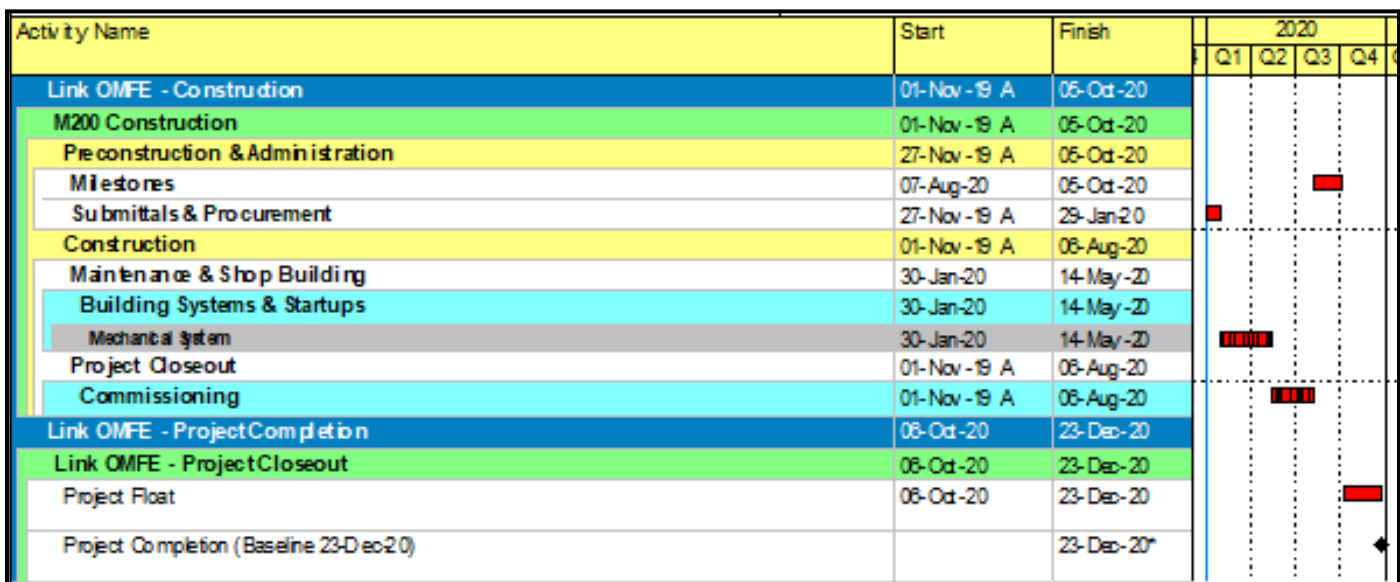
Project Schedule

The schedule for OMF East is now entirely within the M200 contract, which is presented below. The Contractor continues to progress as planned and is forecast to complete on target. The OMF East is expected to be available to begin receiving LRVs as needed in the Summer 2020.



Critical Path Analysis

The critical path continues to run through the mechanical room in the Maintenance & Shop Building, and then through building commissioning and project closeout.



Link Light Rail

Link Operations & Maintenance Facility: East



Community Outreach

- Ongoing engagement with the public on potential construction impacts to the neighborhood.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	December 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	2	5	6
Days Away From Work Cases	0	2	2
Total Days Away From Work	0	31	31
First Aid Cases	0	5	8
Reported Near Mishaps	2	13	16
Average Number of Employees on Worksite	110	-	-
Total # of Hours (GC & Subs)	20,000	229,631	322,635
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	20.00	4.35	3.72
LTI Rate	0.00	1.74	1.24
Recordable National Average	3.00		
LTI National Average	1.20		
Recordable WA State Average	6.00		
LTI WA State Average	1.90		

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

Contract M200 - OMF East Design Build

Current Progress

Design: Hensel Phelps (HP) advanced design package (DP) for DP05 currently being evaluated.

Construction: Track work skeletonizing continued at the north and south maintenance fans and embedded track work was completed at the building and is in progress at the south apron. For signals and communications, switch machines and crib and rail heaters were installed for the north storage fan, south fan, storage tracks, and north runaround. At the OMF Building, insulated metal panels, roofing and curtain wall were completed around the admin area of the building. Framing and MEPF overhead and in wall rough-ins continue at Levels 1 and 2. MOW building, masonry was completed, rooftop AHUs were set and the transition walls framing, and parapet framing/sheathing were completed.

Next Period's Activities

- Continue work at OMF East Building.
- Continue work at MOW Building.
- Continue track work skeletonizing.
- Continue installation of overhead (OH) rough-in and HVAC system.
- Continue interior framing at MOW building.
- Systems work to begin.

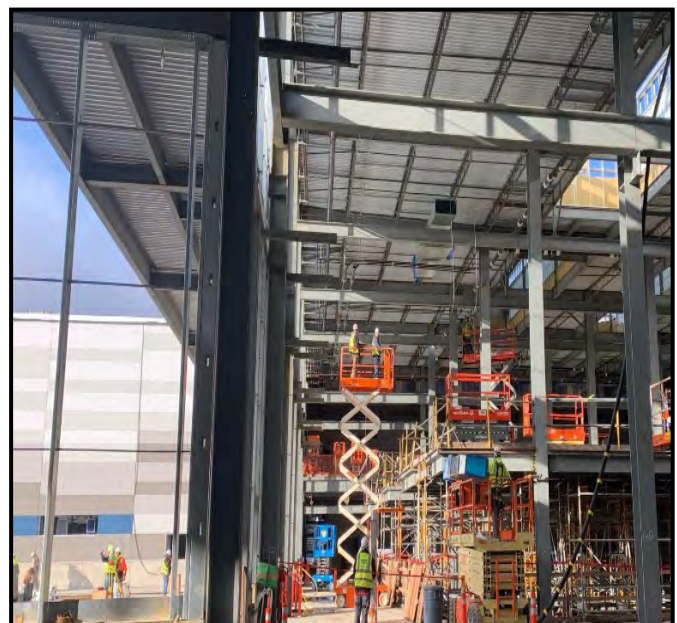
Closely Monitored Issues

- PSE Delays at North Trail: PSE easement language has been received and is under review by Sound Transit.

Cost Summary

Present Financial Status	Amount
M200 Contractor – Hensel Phelps	
Original Contract Value	\$218,912,000
Change Order Value	\$4,470,452
Current Contract Value	\$223,382,452
Total Actual Cost (Incurred to Date)	\$152,597,282
Percent Complete	70.66%
Authorized Contingency	\$21,891,200
Contingency Drawdown	\$4,470,452
*Contingency Index	3.53

**Excludes Betterments*



OMFE—Installation of OH drain pipe RI.

Link Light Rail Light Rail Vehicle Fleet Expansion

Project Summary

Scope	Design, manufacturing, assembly, inspection, testing and delivery of 152 low floor light rail vehicles for service requirements of Northgate, East Link and Lynnwood Link Extensions.
Phase	Manufacturing
Budget	\$740.7 Million (Baseline September 2015, Amended April 2017)
Schedule	Project Completion: 3rd QTR 2024



Siemens' LRV on test track.

Key Project Activities

- Of the 21 design reports, 12 approved, 8 conditionally approved, 1 disapproved.
- Two LRVs received in Seattle during December 2019.
- 25 cars in final assembly and 11 carshells in process at Siemens' facilities in Sacramento, CA.
- Siemens is proceeding with the agreed S70 LRV lifting beam design.
- Siemens is currently on par with their recovery schedule in terms of number of LRVs, delivered.

Closely Monitored Issues

- High schedule risk for commissioning and burn-in of Siemens' LRVs until lift jacks issue is resolved..
- OMF Central yard storage capacity in 2020 may limit Siemens LRV delivery schedule; production progress is being monitored closely. Risk lower, shifting to 2021. LRVs delivery and transportation study between OMFC & OMFE based on updated schedule is in progress.
- High number of documents on CIL (Certifiable Items List) pending approval: Design (30%), Qualification (97%).



Delivery of LRV 225 at Seattle, WA



LRV 214 radiated emissions testing at Seattle, WA

Project Cost Summary

The LRV Fleet Expansion Project has an approved baseline budget of \$740.7M. The project cost is summarized into two cost tables. The first table is in accordance with Sound Transit's Work Breakdown Structure (WBS) displaying the cost summary by phase. The second table summarizes project cost by SCC, in accordance to the FTA Standard Cost Categories (SCC) format. Both tables show figures in millions.

The project expenditure incurred to date is approximately \$169.1M to which a majority of the cost is attributed to the vehicles phase. The current period expenditure is approximately \$5.5M, where the majority cost is associated to LRVs of \$5.2M. The other incurred cost was attributed from engineering and inspection of \$162.1k, safety of \$77.2k and staff costs of \$77.1k.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$6.4	\$6.4	\$2.6	\$2.6	\$6.4	\$0.0
Construction Services	\$18.0	\$18.0	\$15.1	\$5.6	\$18.0	\$0.0
Vehicles	\$716.3	\$716.3	\$650.6	\$161.0	\$716.3	\$0.0
Total	\$740.7	\$740.7	\$668.4	\$169.1	\$740.7	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Construction Subtotal (SCC 10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 ROW, Land, Existing Improvements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
70 Vehicles	\$702.8	\$704.8	\$665.7	\$166.6	\$704.8	\$0.0
80 Professional Services	\$6.1	\$6.1	\$2.6	\$2.6	\$6.1	\$0.0
90 Contingency	\$31.7	\$29.7	\$0.0	\$0.0	\$29.7	\$0.0
Capital Total (SCC 10 - 90)	\$740.7	\$740.7	\$668.4	\$169.1	\$740.7	\$0.0

**Totals may not equal column sums due to rounding of line entries.*

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitoring project status and associated risks.

The project's qualitative risk register reflects 2nd Quarter of 2019, the meeting was held on July 22, 2019. The current top risk are listed below:

- Hoist Beam Lifting Issues could cause delays in testing of the new fleet
- Automatic Train Protection interface between ST1 vehicle ATP system and new ST2 vehicle ATP causing potential interface or functional problems.
- Subcomponents required for LRV production being delayed due to shipping issues or an increase in cost due to tariffs.
- Limited storage capacity delays or increases costs on delivery of LRV spare parts.
- Quality issues in documentation/workmanship by the manufacturer delays safety certification and impacts recovery schedule.

Link Light Rail Light Rail Vehicle Fleet Expansion



Contingency Management

The project's budget was Baseline in September 2015 and was amended in April 2016 to exercise the option LRV contained a total of \$78.0M of Total Contingency. The project's Total Contingency is currently at \$68.9M or about 13.3 % of remaining work in the project.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. This project contains \$0 design allowance.

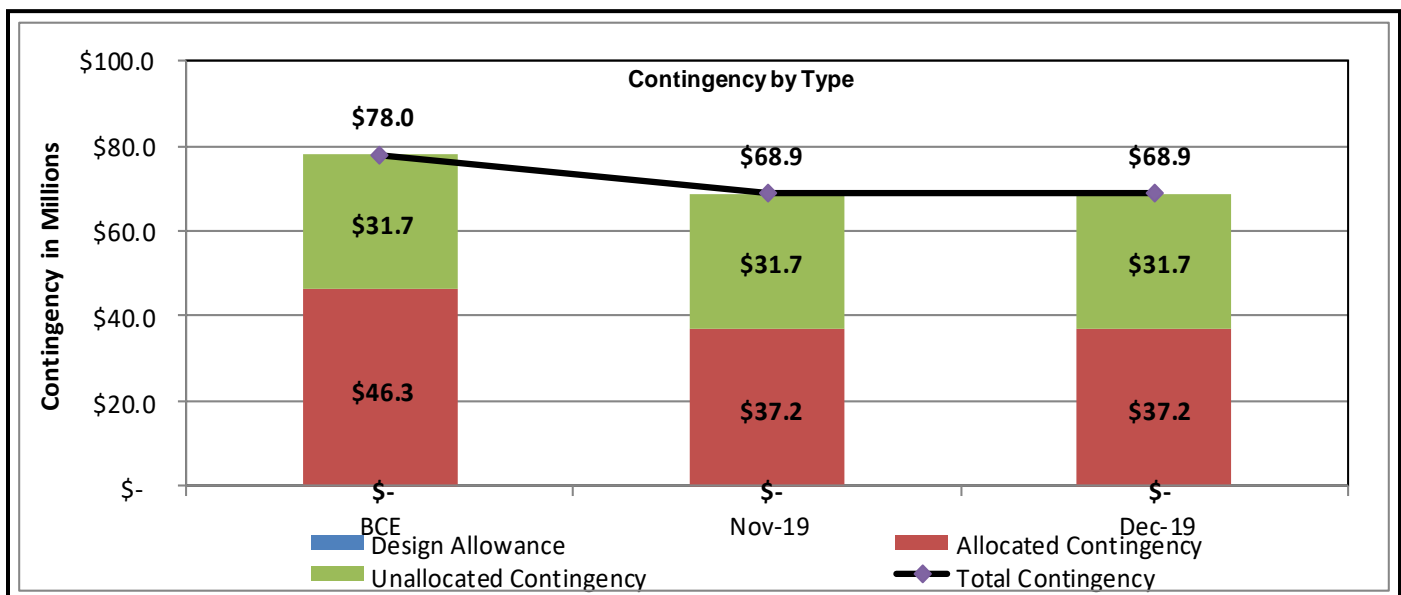
Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. The project baseline's allocated contingency was \$46.3M. The AC for November remains unchanged at \$37.2M.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC for November remains unchanged at \$31.7M.

Contingency Status (Monthly)

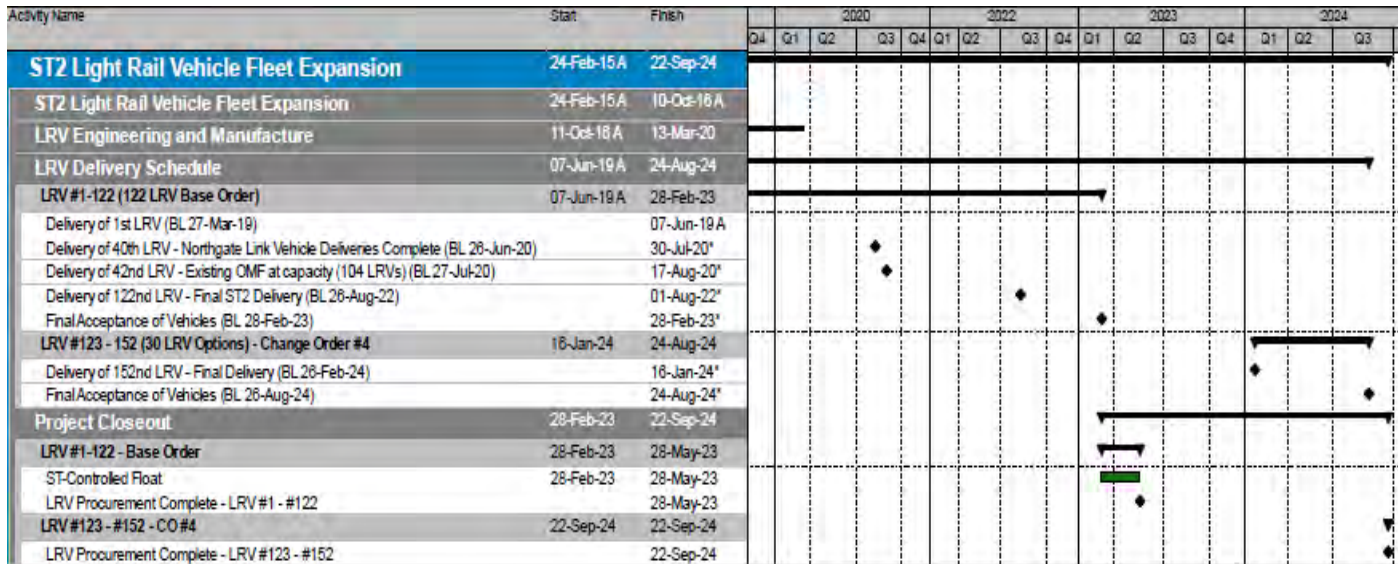
Contingency Status	Baseline		Current	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$ -	0.0%	\$ -	0.0%
Allocated Contingency	\$ 46.3	6.4%	\$ 37.2	7.2%
Unallocated Contingency	\$ 31.7	4.3%	\$ 31.7	6.1%
Total	\$78.0	10.7%	\$ 68.9	13.3%

Contingency by Type



Project Schedule

The progress schedule was established using the last monthly production schedule submittal and forecast milestones updates for engineering final design during the weekly progress and coordination meeting. As of December 2019, Sound Transit has received a total of eighteen cars. Siemens is anticipating to shipping three more Type 2 LRVs and returning three of the rejected LRV with mask issues between January and February 2020. Siemens' LRV shipment to Seattle is officially on hold at 18 until Conditional Acceptance of the first LRV is approved.



LRV Delivery and Testing Progress as of December 31, 2019

LRV status	Received in Seattle	Testing in progress (Seattle)	Conditionally Accepted	Entered Revenue Service
Planned	18	16	-	-
Actual	18	13	-	-

Link Light Rail Light Rail Vehicle Fleet Expansion

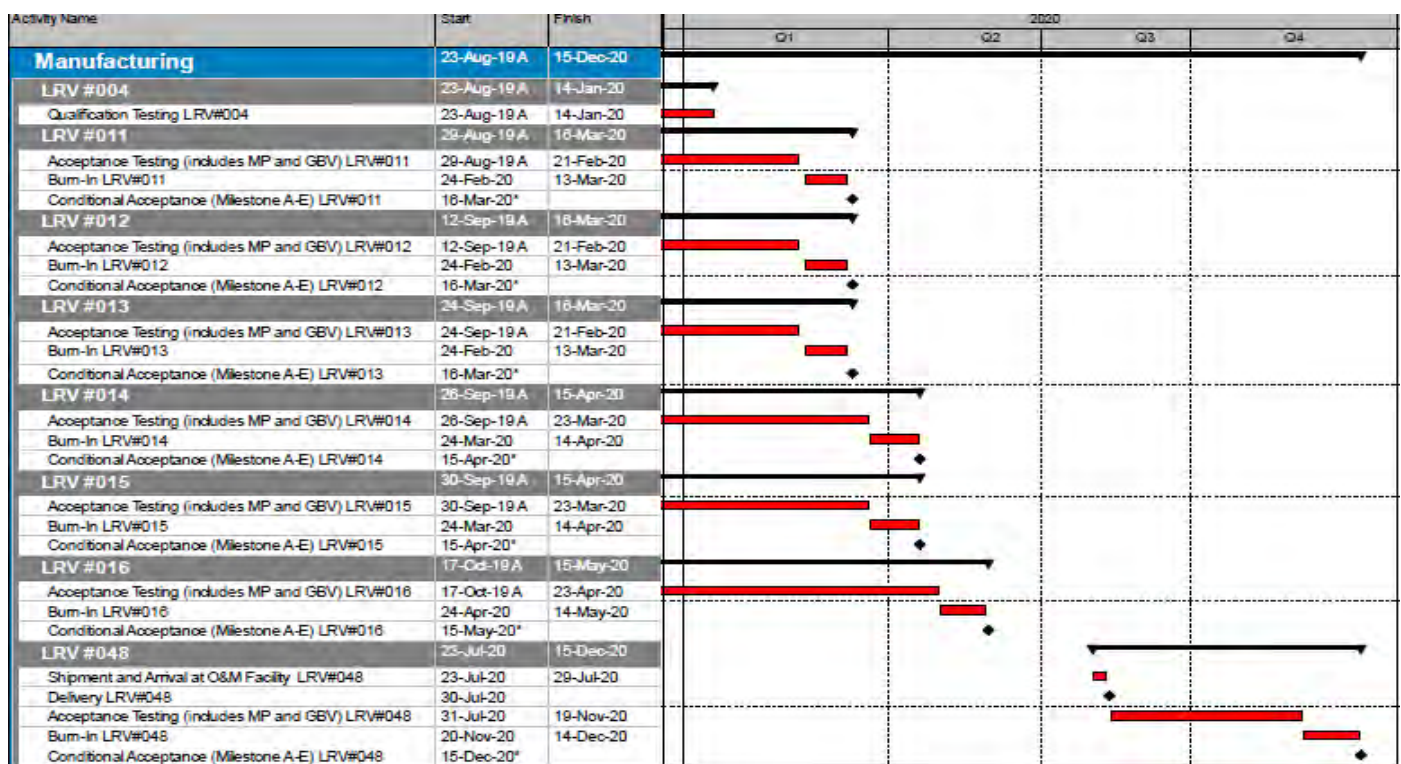


Critical Path Analysis

The critical path is completing the on-site Vehicle Performance Qualification Test of Car 204 and Acceptance Testing and Burn-In of all LRVs that have been delivered to Sound Transit site as of December 2019.

Delivery and Conditional Acceptance Testing of all 40 light rail vehicles required for Northgate Link is closely monitored to support the Pre-Revenue simulation period. The planned deliveries, commissioning and testing of light rail vehicles are anticipated to be complete by September 2024. As well as on time for the start of Pre-Revenue Service for each of the new extension lines: East Link, Lynnwood Link, Downtown Redmond Link and Federal Way Link and Federal Way Link.

LRV Manufacturing and Qualification Testing Critical Path Schedule



Link Capital Program Staffing—4th QTR 2020

Project	Resources	Avg. FTE/mo. Planned	Avg. FTE/mo. Actual	Avg. FTE/mo YTD Planned	Avg. FTE/mo YTD Actual
Federal Way Link Extension	Internal Staff	52	40	52	35
	Consultants	24	38	24	23
Northgate Link Extension	Internal Staff	43	35	43	50
	Consultants	90	52	90	53
Lynnwood Link Extension	Internal Staff	59	43	59	47
	Consultants	145	84	145	130
East Link Extension	Internal Staff	76	59	76	62
	Consultants	187	190	187	224
Link OMF East	Internal Staff	14	9	14	8
	Consultants	16	18	16	16
Tacoma Link Extension	Internal Staff	22	24	22	19
	Consultants	30	19	30	17

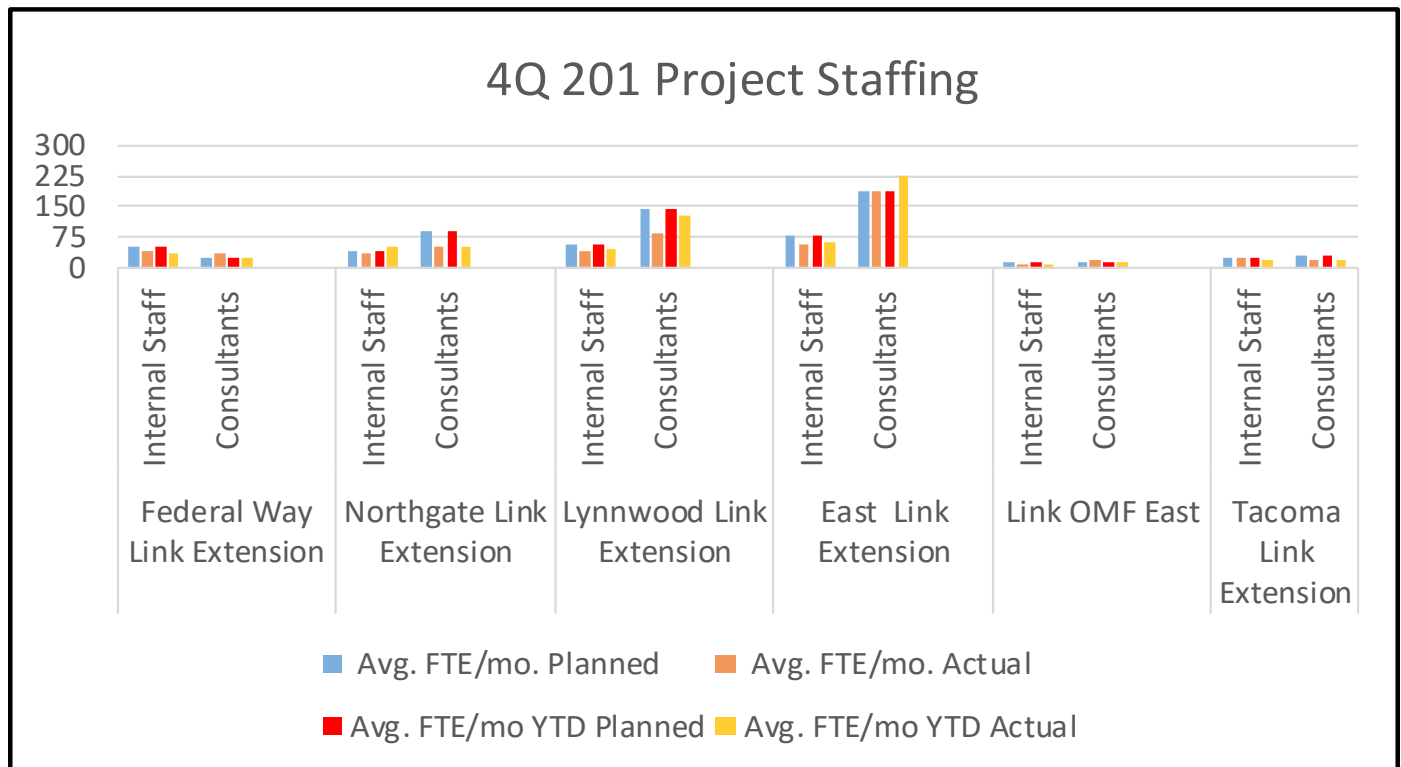
Link Light Rail Staffing Report



Staffing Variance

There were 211 internal and 342 consultants full time equivalents (FTE) supporting design and construction of Link light rail extensions. See table below.

Project	Sound Transit Staff				Consultants				Total (AVG. YTD)			
	FTE		Variance		FTE		Variance		FTE		Variance	
	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan
Federal Way Link Extension	52	40	-12	-22%	24	38	14	57%	76	78	2	3%
Northgate Link Extension	43	35	-8	-18%	90	52	-38	-42%	133	87	-46	-35%
Lynnwood Link Extension	59	43	-16	-27%	145	84	-61	-42%	204	127	-77	-38%
East Link Extension	76	59	-18	-23%	187	190	3	1%	263	248	-15	-6%
OMF East	14	9	-5	-37%	16	18	2	12%	30	27	-3	-11%
Tacoma Link Extension	22	24	2	10%	30	19	-11	-37%	52	43	-9	-17%
Total	267	211	-56	-21%	492	400	-92	-19%	759	611	-148	-19%



AA	Alternative Analysis	GC/CM	General Contractor /Construction Management
AHU	Air Handling Units	HVAC	Heating, Ventilation and Air Conditioning
BCE	Baseline Cost Estimate	ICD	Integration Control Document
BCWS	Budgeted Cost of Work	IFB	Issue for Bids
BIM	Building Information Modeling	IFC	Industry Foundation Classes
BNSF	Burlington Northern Santa Fe Railway	IRT	Independent Review Team
CCB	Change Control Board	IWP	Industrial Waste Permit
CDF	Controlled Density Fill	JA	Jacobs Associates
CHS	Capitol Hill Station	JARPA	Joint Aquatic Resource Permit Application
CM	Construction Management	KCM	King County Metro
CMU	Concrete Masonry Unit	LNTF	Limited Notice to Proceed
CO	Change Order	LRRP	Light Rail Review Panel
CPI	Cost Performance Index	LRT	Light Rail Transit
CPM	Critical Path Method	LRV	Light Rail Vehicle
DAHP	Department of Archaeology & History Preservation	LTK	LTK Engineering Services
DART	Days Away, Restricted or Modified	MACC	Maximum Allowable Construction Cost
DB	Design -Build	MEPF	Mechanical/Electrical/Plumbing/Fire Sprinkler
DBPM	Design-Build Project Management	MLK	Martin Luther King, Jr. Way
DECM	Design, Engineering and Construction Management	MOA	Memorandum of Agreement
DEIS	Draft Environmental Impact Statement	MOU	Memorandum of Understanding
DP	Design Package	MOW	Maintenance of Way
DPD	Seattle Department of Planning and Development	MPPCV	Major Public Project Construction Variance
DSC	Differing Site Conditions	MRB	Material Review Board
DSDC	Design Support During Construction	MTP	Montlake Triangle Project
DSTT	Downtown Seattle Transit Tunnel	MUP	Master Use Permit
EFC	Estimated Final Cost	NB	Northbound
EMI	Electro Magnetic Interference	NCR	Notification of Change Report
ERC	East Rail Corridor	NCTP	North Corridor Transit Partners
FD	Final Design	NEPA	National Environmental Policy Act
FHWA	Federal Highway Administration	NOAA	National Oceanic and Atmospheric Administration
FSEIS	Final Supplemental Environmental Impact Statement	NTP	Notice to Proceed
FFGA	Full Funding Grant Agreement	OCS	Overhead Catenary System
FTA	Federal Transit Administration	OMF	Operations and Maintenance Facility
FTE	Full Time Employee	OMSF	Operations and Maintenance Satellite Facility

PE	Preliminary Engineering	UAC	Unallocated Contingency
PEP	Project Execution Plan	U-Link	University Link project
PEPD	Planning, Environment and Project Development	UDS	University District Station
PMOC	Project Management Oversight Consultant	USFWS	U.S. Fish and Wildlife Service
PSST	Pine Street Stub Tunnel	UW	University Of Washington
QA	Quality Assurance	UST	Underground Storage Tank
QC	Quality Control	UWS	University of Washington Station
QTR	Quarter	VE	Value Engineering
RE	Resident Engineer	VECP	Value Engineering Cost Proposal
RFC	Request for Change	WBS	Work Breakdown Structure
RFD	Request for Deviation	WDFW	Washington Department of Fish and Wildlife
RFI	Request for Information	WSDOT	Washington Department of Transportation
RFP	Request for Proposal		
RFQ	Request for Qualifications		
RIR	Recordable Injury Rates		
RMP	Risk Management Plan		
ROD	Record of Decision		
ROW	Right -of -Way		
SB	Southbound		
SCADA	Supervisory Central and Data Acquisition		
SCC	Standard Cost Categories		
SCL	Seattle City Light		
SDEIS	Supplemental Draft Environmental Impact Statement		
SEPA	State Environmental Policy Act		
SIP	Street Improvement Permitting		
SPI	Schedule Performance Index		
SR	State Route		
ST	Sound Transit		
START	Seattle Tunnel and Rail Team		
SWI	Stacy and Witbeck, Inc.		
TBM	Tunnel Boring Machine		
TCE	Temporary Construction Easement		
TE	Traction Electrification		
TFK	Traylor Frontier Kemper Joint Venture		
TOD	Transit Oriented Development		
TVM	Ticket Vending Machine		

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Progress Report

Sounder Program



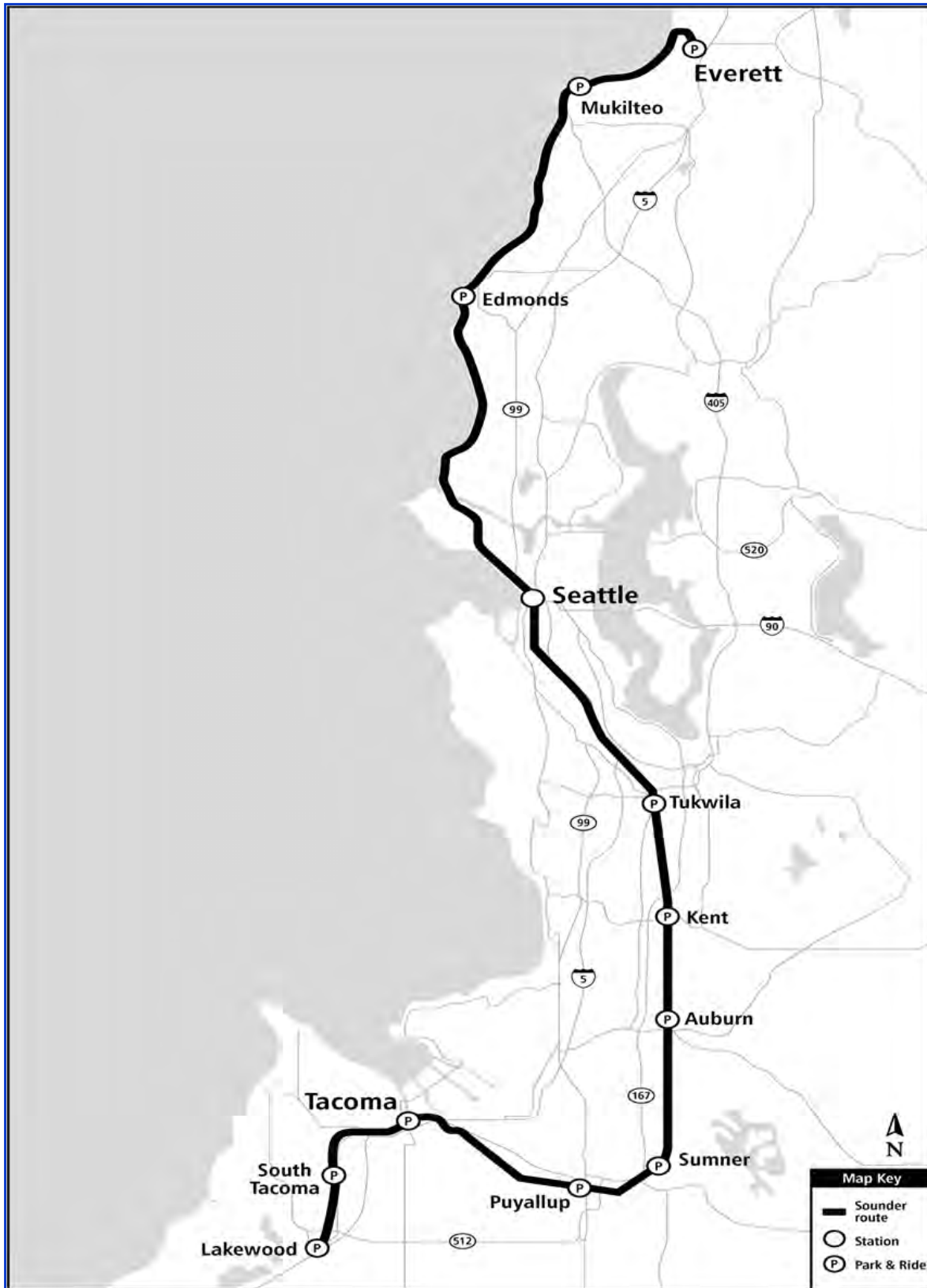
Sounder trains travel between Lakewood and Seattle with regular runs weekday morning and afternoons. Sounder also serves select major weekend events such as Mariners, Sounders, and Seahawk games.

December | 2019



Prepared by Project Control & VE | Design, Engineering & Construction Management

Sounder Commuter Rail Program Overview



Sounder Commuter Rail Routes

Auburn Station Access Improvements: Project includes alternatives identification, screening, environmental documentation, design and construction of station access improvements at or around Auburn Station. The purpose of the project is to improve access to the existing Auburn Sounder station for Sounder riders, bicyclists, bus riders, and drivers.

Edmonds and Mukilteo Stations Parking & Access Improvements: The Edmonds and Mukilteo Stations Parking and Access Improvements Project will provide parking and access improvements to the Edmonds and Mukilteo Sounder Stations. A variety of access improvements will be considered for each station including bicycle and pedestrian access, pick up/drop off areas, transit integration, and parking.

Kent Station Access Improvements: Project includes alternatives identification, screening, environmental documentation, design and construction of station access improvements at or around Kent Station. The purpose of the project is to improve access to the existing Kent Sounder station for Sounder riders, bicyclists, bus riders, and drivers.

Mukilteo Station, South Platform: Full build-out of this station included construction of a second platform, overhead pedestrian bridge, elevators, stair tower, and passenger shelters. Sounder service at the south platform began on April 11, 2016. The project page for this project has been removed. Only follow-on work remains.

Point Defiance Bypass: Sound Transit administered the construction of the Point Defiance Bypass Track & Signal contract, which constructed a new second track adjacent to Sound Transit's existing main line between South Tacoma (66th Street Bridge) and Lakewood (Bridgeport Way) and installed new rails, ties, and ballast on Sound Transit's existing track between Lakewood and Nisqually with associated signal and PTC safety systems. The work was funded by a FRA-administered federal grant to WSDOT for improvements along the Pacific Northwest High Speed Intercity Passenger Rail corridor. Construction was completed 3Q 2017, and the track is in service. The project page for this project has been removed.

Positive Train Control: Federal regulations required all passenger train routes be equipped with PTC systems before January 2019. This necessitated upgrades to Sounder wayside signals, communications, and information management systems along with additional on-board equipment. BNSF has installed wayside elements within the Everett-to-Tacoma corridor. This project includes wayside elements along the Tacoma-to-Lakewood corridor and modifications of locomotives and cab cars for installation of on-board equipment. BNSF dispatches all Sounder trains and operates the back office server (BOS) portion of Sound Transit's PTC system. Sound Transit has implemented PTC operations as of Q4 2018.

Puyallup Station Access Improvements: Project includes environmental documentation, design and construction of station access improvements at or around Puyallup Station. The purpose of this project is to accommodate and encourage future demand for Sounder ridership in an economically efficient and environmentally sustainable manner.

Sounder South Capacity Expansion: This project establishes a program of capital elements that will improve South Sounder access, capacity, and services in response to increase in demand. Program elements could include platform extensions, track and signal upgrades and other related infrastructure to facilitate additional capacity, and access improvements for pedestrians, bicyclists, buses, and private vehicles, prioritized per Sound Transit's System Access Policy. The elements included in this representative project will be refined during future phases of project development and are subject to change.

Sounder Maintenance Base: Sound Transit will construct a new railroad maintenance facility to service Sounder commuter trains at its expanded Century Yard facility in the City of Lakewood. The building will contain maintenance bays, materials storage areas, offices, and facilities for employees.

Sounder South Expanded Service: Sound Transit purchased four additional round trip easements from BNSF to expand service between Seattle and Tacoma/Lakewood, all of which have been implemented. Sound Transit is responsible for completing environmental documentation, permitting, and mitigation associated with BNSF construction activities necessary to support those additional round trips.

Sumner Station Access Improvements: Project includes environmental documentation, design, and construction of station access improvements at or around Sumner Sounder Station. The purpose of this project is to accommodate and encourage future demand for Sounder ridership in an economically efficient and environmentally sustainable manner.

Tacoma Trestle Track & Signal: Replacement of existing wooden trestle that reached the end of its functional service life has been completed with construction of a double track concrete structure. This project is complete and has improved overall safety, capacity, and speed in this section of the Sounder Tacoma-to-Lakewood corridor. There are no more updates for this project.

Tukwila Station: Construction of a permanent station and platforms to replace the temporary wooden structure has been completed. This project included the construction of an expanded parking lot, bus loop with passenger shelters, bicycle storage area, and new concrete platforms with improved passenger shelters, all sited to accommodate BNSF's new third mainline, now under construction. The project page for this project has been removed. Only follow-on work remains.

Sounder Commuter Rail Program Overview



Program Budget

The Authorized Project Allocation reflects the budget for each project through the approved project phase, meaning that for projects approved for Final Design activities only, the project budget will be amended at some point to add budget for construction activities.

SOUNDER	Authorized Project Allocation	Commitment to Date	Incurred to Date	Forecast to Complete	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
AUBURN STATION ACCESS IMPRVMT	\$8.9	\$4.2	\$3.4	\$4.7	\$9.0	\$0.0
EDMONDS & MUKILTEO STN P&A IMP	\$2.5	\$0.8	\$0.8	\$1.7	\$2.5	\$0.0
KENT STATION ACCESS IMPRVMTS	\$13.1	\$4.6	\$3.6	\$8.6	\$13.1	\$0.0
PUYALLUP STATION IMPROVEMENTS	\$79.1	\$13.2	\$9.3	\$66.5	\$79.7	\$0.0
SOUNDER MAINTENANCE BASE	\$12.9	\$9.1	\$7.1	\$4.3	\$12.9	\$0.0
SOUNDER SOUTH CAPACITY EXPN	\$2.6	\$2.3	\$1.8	\$0.4	\$2.6	\$0.0
SUMNER STATION IMPROVEMENTS	\$17.8	\$16.3	\$9.8	\$2.0	\$17.8	\$0.0
SOUNDER SOUTH EXPANDED SERVICE	\$205.6	\$200.7	\$200.4	\$0.2	\$200.9	\$4.7
SOUNDER YARD EXPANSION	\$20.6	\$16.3	\$16.3	\$1.8	\$18.1	\$2.4
Total SOUNDER	\$363.1	\$267.3	\$252.4	\$90.3	\$356.7	\$7.1

Figures are shown in millions

Program Schedule

Schedule for active projects are summarized below.

Schedule Snapshot

Project Name	Start	Finish	2020	2021	2022	2023	2024	2025
◆ Sound Transit	01-Apr-13 A	31-Mar-25						
◆ Sound Transit 2	01-Apr-13 A	31-Mar-25						
◆ South Corridor	01-Apr-13 A	31-Mar-25						
◆ Sounder Commuter Rail - South	01-Apr-13 A	31-Mar-25						
◆ Operations/Facilities - South	01-Apr-13 A	31-Dec-24						
◆ S300004 - Sounder Maintenance Base - DB	01-Apr-13 A	31-Dec-24						
◆ Station Access - South	01-May-15	31-Mar-25						
◆ S300017 - Puyallup Station Access Improvements - DB	01-May-15	10-Feb-22						
◆ S300018 - Sumner Station Access Improvements - DB	01-May-15	29-Jul-23						
◆ S300036 - Kent Station Access Improvements - DB	24-Feb-16 A	14-Nov-24						
◆ S300041 - Auburn Station Access Improvement - DB	24-Feb-16 A	31-Mar-25						

Construction Safety

Construction and System Safety provide systematic and comprehensive oversight, resources, and guidance to eliminate recognized hazards, promote a safety culture and achieve an integrated system of compliance and continuous improvement of safety on both construction projects and transit system elements.

Agency-led active construction contracts under the Sounder program are as follows:

- None to report.

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Sounder Commuter Rail Auburn Station Improvements

Project Summary

Scope Project includes alternatives identification, screening, environmental documentation, design, and construction of station access improvements at or around Auburn Station.

The purpose of the project is to improve access to the existing Auburn Sounder Station for Sounder riders, bicyclist, bus riders, and drivers.

Phase Conceptual Engineering and Environmental Review

Budget \$8.9 Million

Schedule Revenue Service: 2024



Improving access to Sounder Auburn Station

Key Project Activities

- Finalizing SEPA environmental documentation, including Draft NEPA Documented Categorical Exclusion for review by FTA. Sound Transit to issue SEPA/DNS in January 2020 for two week public comment review.

Project Cost Summary

The Auburn Station Access Improvement project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures increased by \$242K. The incurred cost increased from \$3.2M to \$3.4M. The majority of this period's costs is attributed to staff costs, preparing environmental documentation, and conceptual engineering work.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.6	\$1.0	\$1.0	\$1.6	\$0.0
Preliminary Engineering	\$3.4	\$2.8	\$2.4	\$3.4	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$3.8	\$0.4	\$0.0	\$3.8	\$0.0
Total	\$8.9	\$4.2	\$3.4	\$8.9	\$0.0

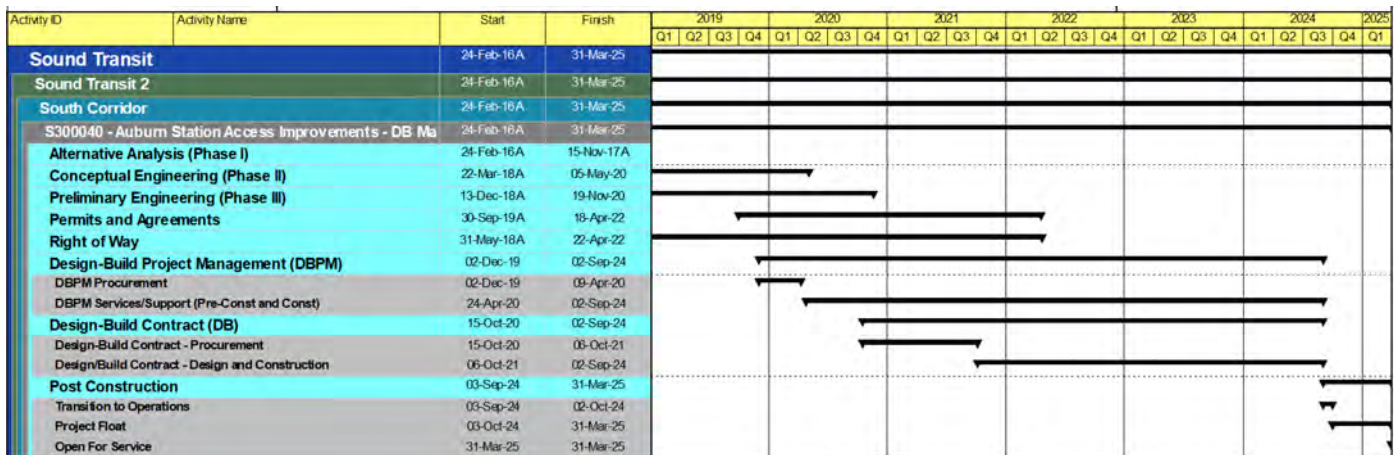
Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It fulfills Sound Transit's responsibility to continuously monitor project status and associated risks.

- The Auburn Station Access Improvements Project Team reviewed and updated the risk register in Q3 2019, and will continue to do so on a quarterly basis.
- The Auburn Station Access Improvements Project Team will develop the Risk and Contingency Management Plan (RCMP) during Phase III—Preliminary Engineering phase of the project. The project team will conduct a risk management workshop to identify all the potential risks during design and construction by Q1 2020.

Project Schedule

The project has initiated the Phase II—Conceptual Engineering and Environmental activities. The project forecasts completion of the environmental assessment in Q1/early Q2 2020. Sound Transit and City of Auburn continue to work to reach concurrence on traffic mitigation. Delay of concurrence to date has delayed completion of requisite environmental documentation leading to Sound Transit Board action to "Select the Project to be Built". Project team is working towards issuing NEPA/DCE and SEPA Checklist for public comment in early Q1 2020. Construction NTP is forecast for Q4 2021. Open for Service is forecast for Q1 2025 at this time.



Community Outreach

ST is planning an open house in Q1 2020 to provide a project update to the community.

Sound Transit Board Actions

Board Action	Description	Date
	None This Period	

Sounder Commuter Rail Edmonds and Mukilteo Station Parking & Access Improvements



Project Summary

Scope

The Edmonds and Mukilteo Station Parking and Access Improvements Project will provide parking and access improvements to the Edmonds and Mukilteo Sounder Stations, to increase Sounder ridership and support other project goals.

A variety of access improvements will be considered for each station including bicycle and pedestrian access, pick up/drop off areas, transit integration, and parking.

Stations

Edmonds and Mukilteo Sounder stations

Phase

Phase 1: Project Definition and Screening

Budget

Phase 1: \$2.5 Million

Schedule

Revenue Service: 2024



Improving access to Edmonds Sounder Station



Improving access to Mukilteo Sounder Station

Key Project Activities

- Held the fifth Interagency Group Meeting.
- Held two Open Houses (one in each city) to share evaluation and improvements recommended for Phase 2.
- Identified seven new projects for consideration in Mukilteo to address parity between cities.
- Presented results of evaluation with Edmonds City Council, prepared for January 2020 meeting with Mukilteo Council.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.0	\$0.3	\$0.3	\$1.0	\$0.0
Preliminary Engineering	\$1.3	\$0.5	\$0.5	\$1.3	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Total	\$2.5	\$0.8	\$0.8	\$2.5	\$0.0

Risk Management

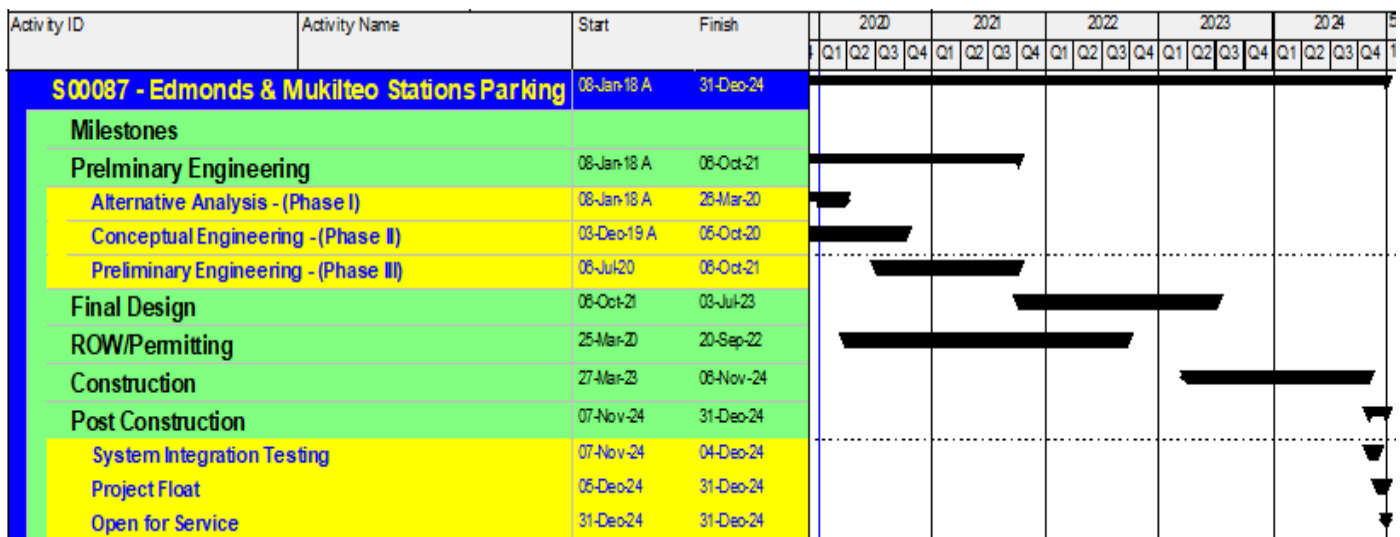
The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitoring project status and associated risks.

The following are the top project wide risks:

- Challenge in allocating the \$40 million project budget between the two station areas. This is a decision the ST Board of Directors will make, likely during Phase 2 of the project.
- Cities/partners' desires for more parking, or more expensive parking, than appears affordable within the \$40 million project budget.

Project Schedule

Sound Transit has almost completed Alternative Analysis Phase 1. Currently working on identifying improvements for further analysis. This should be done by end of Q1 2020. Some work has been initiated to prepare SEPA Check Lists - Draft. Anticipated Gate II start is end of Q2 2020. NTP should be by end of Q1 2023 and Services to be Open to Public by end Q4 2024.



Community Outreach

- Hosted two Open Houses in October, including online open house .
- Summarized results in "Fall 2019 Outreach Summary."
- Met with ArtWorks to discuss controversial improvement. Presented to Edmonds City Council

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Sounder Commuter Rail Kent Station Improvements



Project Summary

Scope Project includes alternatives identification, screening environmental documentation, design, and construction of station access improvements at or around Kent Station.

The purpose of the project is to improve access to the existing Kent Sounder station for Sounder riders, bicyclists, bus riders, and drivers.

Phase Conceptual Engineering and Environmental Review

Budget \$13.1 Million

Schedule Open For Service: 2024



Improving Access to Sounder Kent Station

Key Project Activities

- Sound Transit's Board of Directors expected to "Select the Project to be Built" in FEB 2020.
- Sound Transit held coordination meetings with King County Metro (KCM) to confirm programmatic requirements and conceptual engineering estimates for the 1st Avenue for future bus layover. ST and KCM to execute a letter of concurrence.
- Sound Transit and City of Kent are collaborating to develop first draft of a Developers Agreement.

Project Cost Summary

The Kent Station Improvement project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditure increased by \$313K. The incurred cost increased from \$3.3M to \$3.6M. The majority of this period's costs is attributed to staff costs, preparing environmental documentation, and conceptual engineering work.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.7	\$1.1	\$1.1	\$1.7	\$0.0
Preliminary Engineering	\$3.4	\$3.1	\$2.5	\$3.4	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$7.9	\$0.3	\$0.0	\$7.9	\$0.0
Total	\$13.1	\$4.5	\$3.6	\$13.1	\$0.0

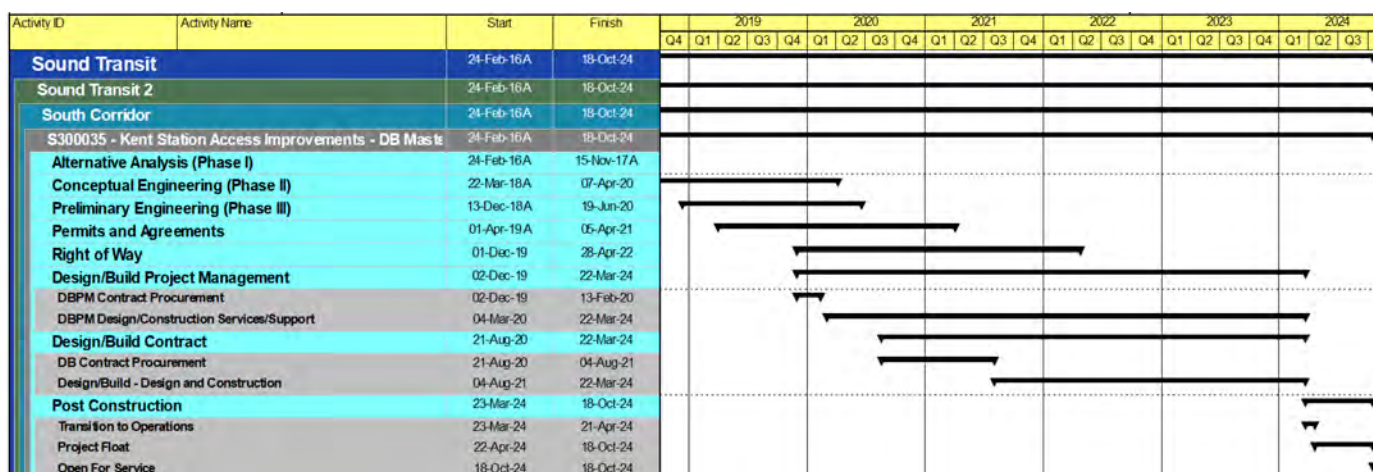
Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

- The Kent Station Access Improvements Project Team reviewed and updated the risk register; the team will review and revise the register again on a quarterly basis.
- The Kent Station Access Improvements Project Team will develop the Risk and Contingency Management Plan (RCMP) during Phase III—Preliminary Engineering phase of the project. The project team will conduct a risk assessment workshop to identify all the potential risks during design and construction by Q1 2020.

Project Schedule

The project continued working towards completing the Phase II—Conceptual Engineering and Environmental activities throughout Q4 2019 and completed the environmental assessment in Q4 2019. In Q1 2020 the project team will go to the ST Board to Select the Project to Be Built followed by Phase Gate 3: Enter Design and Construction. Design-Build Contractor NTP is forecast for Q4 2021. Open For Service is forecast for Q4 2024.



Community Outreach

Sound Transit held project update meetings with affected property owners and businesses and to inform them that Sound Transit Real Estate will seek Board of Directors authority to acquire property interests for the project. Sound Transit also held public open house to update the community on the project and share results of environmental analysis.

Sound Transit Board Actions

Board Action	Description	Date
	None This Period	

Sounder Commuter Rail

Puyallup Station Access Improvements

Scope	Improving access to Puyallup Station to pedestrians, bicyclists and drivers, including construction of a new garage (503 spaces), new surface parking (166 spaces), and pedestrian and bicycle improvements.
Phase	Preliminary Engineering
Budget	\$79.1 Million
Schedule	Revenue Services: Q1 2022



Improving access to Sounder Puyallup Station

Key Project Activities

- Design Build contract awarded to Hensel Phelps in December 2019

Project Cost Summary

The Puyallup Station Access Improvement project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$4.6	\$1.8	\$1.9	\$4.6	\$0.0
Preliminary Engineering	\$2.9	\$2.7	\$2.5	\$2.9	\$0.0
Final Design	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Construction Services	\$5.2	\$4.9	\$0.3	\$5.2	\$0.0
3rd Party Agreements	\$2.2	\$0.0	\$0.0	\$2.2	\$0.0
Construction	\$58.4	\$0.1	\$0.0	\$58.4	\$0.0
ROW	\$5.6	\$4.2	\$4.6	\$5.6	\$0.0
Total	\$79.1	\$13.7	\$9.3	\$79.1	\$0.0

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The following are the top project-wide risks:

- **Environmental** – Contamination (Soil &/or Water). *Mitigation:* A work plan has been included in the procurement documents to mitigate and address remediation of contaminated materials. This will be the first line of work the contractor will perform upon Notice to Proceed.
- **Real Estate / Right-of-Way** - having parcels in-hand before DB contract award. *Mitigation:* Real Property representative and Project Manager will regularly monitor progress and discuss status of all ROW acquisitions.
- **Third-party agreements** - The development agreement is not complete and executed; the project's permit could be delayed. *Mitigation:* The DA document will be finalized before issuance of project NTP.

Project Schedule

Design Build contract awarded to Hensel Phelps in December 2019, Notice To Proceed (NTP) to Hensel Phelps is planned for Q1 2020. Right of way acquisitions are in progress and are forecast to be completed in advance of the planned construction start need by dates.

Activity ID	Activity Name	Start	Finish	2019				2020				2021				
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Sound Transit	01-May-15 A	10-Feb-22													
	Sound Transit 2	01-May-15 A	10-Feb-22													
	South Corridor	01-May-15 A	10-Feb-22													
	S300017 - Puyallup Station Access and Expansion - DB Master Schedule	01-May-15 A	10-Feb-22													
	Alternative Analysis (Phase I)	28-Apr-16 A	28-Apr-16 A													
	Preliminary Engineering (Phase III)	01-May-15 A	20-Mar-19 A													
	Right of Way	26-May-16 A	30-Oct-21													
	Permits and Agreements	15-Jul-16 A	30-Dec-20													
	Design/Build Project Management	17-Sep-18 A	31-Jan-22													
	DBPM CCB RFQ	17-Sep-18 A	23-Oct-18 A													
	DBPM Contract Procurement	24-Oct-18 A	17-Jul-19 A													
	DBPM Construction Services/Support	17-Jul-19 A	31-Jan-22													
	Design/Build Contract	01-Oct-18 A	31-Jan-22													
	DB CCB RFQ	01-Oct-18 A	26-Dec-18 A													
	DB Contract Procurement	17-Dec-18 A	14-Feb-20													
	Design/Build - Design and Construction	02-Dec-19	31-Jan-22													
	Post Construction	16-Dec-21	10-Feb-22													
	Transition to Operations	16-Dec-21	31-Jan-22													
	Project Float	01-Feb-22	10-Feb-22													
	Open For Service	10-Feb-22	10-Feb-22													

Community Outreach

Community input regarding the appearance of the new garage and pedestrian bridge was received from a series of stakeholder workshops and public meetings. The information received has been included in project requirements that will guide the design and constructing the garage.

Sound Transit Board Actions

Board Action	Description	Date
M2019-110	Authorizes the chief executive officer to execute a contract with Hensel Phelps Construction Co. to provide design-build services for the Puyallup Station Parking and Access Improvement project in the amount of \$45,994,000, with a 10 percent contingency of \$4,606,000, for a total authorized contract amount not to exceed \$50,600,000.	11/21/2019

Sounder Commuter Rail Sounder Maintenance Base

Project Summary

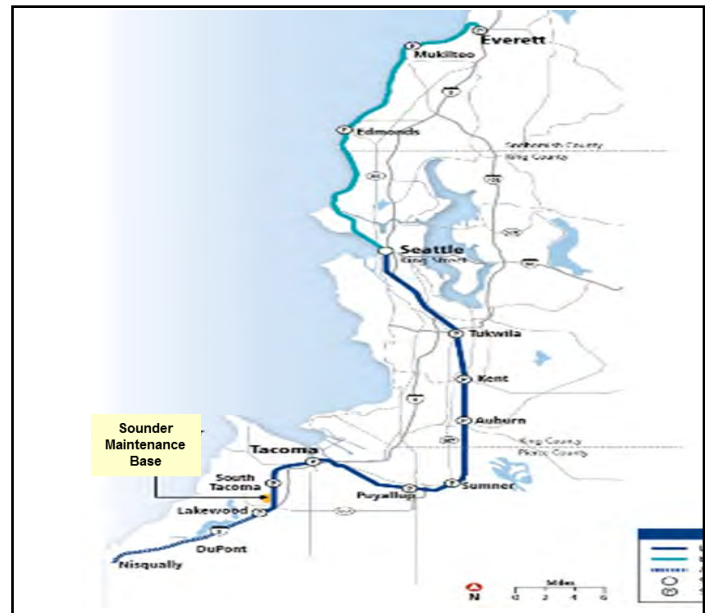
Scope Sound Transit will design and construct an approximately 60,000 square foot Sounder Commuter Rail operations and maintenance facility and train yard elements that will include: maintenance shops, repair positions, storage areas, offices, and employee welfare facilities.

Located in Lakewood, WA on Sound Transit's railroad right of way between Steilacoom Boulevard and 100th Street SW, east of Lakeview Boulevard.

Phase Design and Construction

Budget \$12.9 Million

Schedule Revenue Service: Q4 2023



Sounder Maintenance Base Project Map Alignment

Key Project Activities

- The Design-Build Project Management (DBPM) consultant is developing the design build project requirements, building program, and other procurement documents.
- The project team and the preliminary engineering consultant are performing environmental analysis to determine the impact of the new project changes. These project changes include the a new “run-through” facility layout, co-location of the Maintenance of Way building on the site, accommodation of ST3 storage needs, and the purchase of a adjacent parcel.
- Continued development of cost agreements with Tacoma Power to relocate their utilities off ST’s railroad right of way.
- Continued negotiation of temporary construction easements.

Project Cost Summary

The Sounder Maintenance Base project cost is summarized on the following page in accordance with Sound Transit’s budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures increased approximately \$557K. The majority of this period’s costs are attributed to staff costs in the Admin phase; for conceptual engineering tasks, including geotechnical investigations in the PE phase; phase 1 design-build project management services; and ROW activities, including TCE appraisals.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$2.3	\$1.9	\$1.9	\$2.3	\$0.0
Preliminary Engineering	\$3.6	\$2.9	\$2.5	\$3.6	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$2.0	\$1.9	\$0.4	\$2.0	\$0.0
3rd Party Agreements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$3.0	\$2.4	\$2.2	\$3.0	\$0.0
Total	\$12.9	\$9.1	\$7.1	\$12.9	\$0.0

Risk Management

The project team conducts quarterly risk management workshops to identify, update, and monitor potential risks during design and construction. The project team completed a quantitative risk analysis to evaluate confidence in the current budget and schedule. The analysis will establish contingency levels and schedule float for the project baseline, which is to occur in Q1 2020. The analysis has identified the following as the top project risks and proposed mitigations:

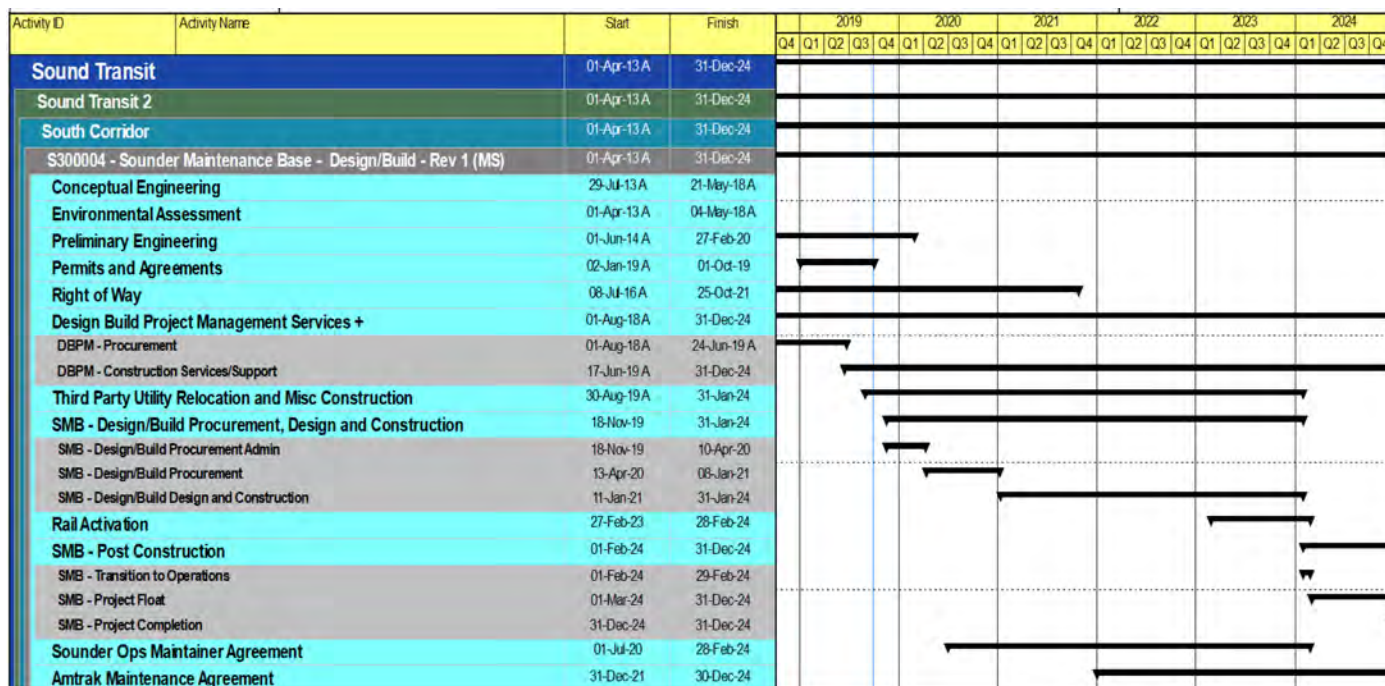
- Advanced utility relocation delays - *Risk Mitigation:* Execute agreements with the utility companies in advance of the design-build team mobilizing. Monitor progress on a regular basis.
- Potential differing site conditions - *Risk Mitigation:* Complete additional geotechnical investigations.
- Implementing new form of contracting: Design Build Guaranteed Maximum Price Contract. - *Risk Mitigation:* Work closely with Design Build Project Management and Sound Transit team to modify contract documents. Seek ST sponsorship to accomplish timely review and approval of changes.
- ROW acquisition delay - *Risk Mitigation:* Monitor Sound Transit Real Estate negotiations and obtain possession and use of property being acquired.

Sounder Commuter Rail Sounder Maintenance Base



Project Schedule

Sounder Maintenance Base is anticipated to be open for service in Q4 2024. The revised conceptual engineering (10%) design submittal and cost estimate were completed previously. In late Q1 2019 a value engineering effort on the current 10% design was initiated, in late Q3 2019 a value engineering option was approved to proceed forward, which is for a “run-through” design. Draft Design-Build Project Requirements for Design-Build Procurement are being developed and will be incorporated into the planned Q2 2020 Issue Design-Build Request For Qualifications (RFQ) and finalized for the Request For Proposal (RFP). The project team anticipates issuing Design/Build Notice to Proceed in Q1 2021.



Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

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Sounder Commuter Rail Sounder South Capacity Expansion



Project Summary

Scope This project will establish a program of capital improvements which enhance Sounder South access capacity, and services in response to increased demand. Program elements may include platform extensions, track and signal upgrades and other related infrastructure to facilitate additional capacity, and access elements such as improvements for pedestrians, bicyclists, buses, and private vehicles, prioritized per Sound Transit's System Access Policy.

Once the project completes the Sounder South strategic development and implementation plan, capital projects included in the program will be refined during future phases of project development.

Phase Planning

Budget \$2.6 Million

Schedule Revenue Service: 2036



Sounder South Capacity map alignment

Key Project Activities

- Developed the programmatic approach and criteria for future access projects; started work to update Sounder South ridership projections through 2042; and commenced the Railroad Train Control modeling to determine opportunities to increase track capacity to accommodate additional Sounder roundtrip trains.
- Project Team held inter-agency staff and railroad organizations stakeholders coordination meetings.

Project Cost Summary

The Sounder South Capacity Expansion project cost is summarized below in accordance with Sound Transit's budget Work Breakdown (WBS). The figures are shown in millions.

Since December 2018, the project costs incurred to date is \$336K. The majority of those costs is for creation of the strategic development and implementation plan and staff costs.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$0.7	\$0.7	\$0.7	\$0.7	\$0.0
Preliminary Engineering	\$1.8	\$1.6	\$1.0	\$1.8	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$2.6	\$2.3	\$1.7	\$2.6	\$0.0

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

There are no risks identified at this time.

Project Schedule

Baseline Schedule was approved in September 2019. Sound Transit is expected to complete Alternative Analysis - Phase I by end of Q1 2020. Phase II – Conceptual engineering to commence immediately afterword. Final Design is expected to start by end of Q2 2022 and Construction by end of Q1, 2024. Revenue Service Date is 2036.

Activity ID	Activity Name	Start	Finish	2020	2021	2022	2023	2024	2025	2026	2027	2028
				Q	Q	Q	Q	Q	Q	Q	Q	Q
	Sounder South - Platform Extensions	13-Jun-18 A	30-Dec-36									
	Sounder South Platform Extensions	13-Jun-18 A	30-Dec-36									
	Alternative Analysis - (Phase I)	13-Jun-18 A	26-Mar-20									
	Conceptual Engineering/Environmental - (Ph.	27-Mar-20	21-Nov-21									
	Preliminary Engineering - (Phase III)	22-Nov-21	22-Sep-22									
	Final Design	30-Jun-22	24-Mar-24									
	ROW	22-Mar-22	19-Feb-24									
	Construction	25-Mar-24	24-Nov-27									
	Post Construction	25-Nov-27	30-Dec-36									
	Project Float	25-Nov-27	30-Dec-36									
	Revenue Service	30-Dec-36	30-Dec-36									

Sounder Commuter Rail Sounder South Expanded Service



Project Summary

Scope

Purchase of four additional commuter rail easements from BNSF for expanding Sounder service between Seattle and Lakewood. Additional Sounder South Service was implemented in 2016 and two more round trips were added in 2017, bringing the total to 13.

As part of environmental mitigation requirements, Sound Transit has partnered with King County to replace an existing culvert in the Auburn area with a larger structure that will permit fish to pass through it.

Phase

Construction

Budget

\$205.6 Million

Schedule

Project Completion: Fall 2019



Additional morning and evening service between Seattle and Lakewood

Key Project Activities

- Physical Completion of the 55th Ave S Culvert Replacement environmental mitigation project was issued on 11/4/2019. There were no discrepancies and no punch list was created. Final acceptance will be issued upon completion of the one year plant establishment period.
- Designer working to complete record drawings.
- This will be the last update for this project in the Agency Progress Report.*

Project Cost Summary

The Sounder South Expanded Services project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures increased by \$0.3Million due to progress in the Fish Culvert construction and support by the consultant in Final Design .

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.7	\$1.5	\$1.5	1.6	\$0.1
Preliminary Engineering	\$0.5	\$0.5	\$0.5	\$0.5	\$0.0
Final Design	\$0.9	\$0.8	\$0.7	\$0.8	\$0.1
Construction Services	\$0.2	\$0.0	\$0.0	\$0.0	\$0.1
3rd Party Agreements	\$3.0	\$0.1	\$0.1	\$0.1	\$2.9
Construction	\$12.8	\$12.6	\$12.4	\$12.6	\$0.2
ROW	\$186.5	\$185.2	\$185.2	\$185.2	\$1.3
Total	\$205.6	\$200.7	\$200.4	\$200.8	\$4.7

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitoring project status and associated risks.

At this time all risks have been closed.

Project Schedule

- Contractor received Substantial completion for construction in Q3 2019.

Community Outreach

- King County was responsible for Community Outreach during construction and responded to inquiries from private property owners adjacent to the project.
- Designer, Environmental Sciences and Associates, submitted Draft Downstream Effects memo which analyzes the potential changes in flow timing and sediment transport in Bingamon Creek due to the project, and the possible effect of these changes on downstream properties. The memo concludes that loss of the upstream water detention that was provided by the undersized previous culvert could change the timing of flood flows arriving on downstream properties

Sound Transit Board Actions

Board Action	Description	Date
M2018-145	Motion authorizing the CEO to execute the agreement with King County to administer construction and construction management services for the 55th Avenue South Fish Passage Culvert Replacement project.	11/08/2018

Sounder Commuter Rail Sumner Station Access Improvements

Project Summary

Scope

Project includes alternative identification, screening, environmental documentation, design and construction of station access improvement at or around Sumner Station.

The purpose of the project is to provide increased parking by 400-600 stalls and improve access to the existing Sumner Sounder Station for Sounder riders, bicyclists, bus riders, and drivers. The project is being delivered via design-build contracting.

Phase

Preliminary Engineering

Budget

\$17.8 Million

Schedule

Revenue Service: 2023



Improving access to Sounder Sumner Station

Key Project Activities

- Prepare for Project Baseline in Q1 2020.
- Continued drafting Design-Build procurement documents.
- Completed negotiations with parcel owners for relocation and acquisition.
- Updating of Project schedule is currently underway due to ongoing lease negotiations with the City.

Project Cost Summary

The Sumner Station Access Improvement project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures increased by \$1.1M. The incurred cost increased from \$8.7M to \$9.8M. This period's costs are attributed to staff costs, third party agreements, property acquisition, engineering design work, project requirements and drafting the design-build procurement's RFP.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$2.2	\$1.5	\$1.5	\$2.2	\$0.0
Preliminary Engineering	\$3.0	\$2.6	\$2.5	\$3.0	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
3rd Party Agreements	\$7.7	\$7.6	\$1.7	\$7.7	\$0.0
Construction	\$0.1	\$0.1	\$0.1	\$0.1	\$0.0
ROW	\$4.4	\$4.5	\$4.0	\$4.4	\$0.0
Total	\$17.8	\$16.3	\$9.8	\$17.8	\$0.0

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The Project performed a quantitative risk assessment in Q4 2019.

The following are the top project wide risks:

- Third Party Agreements to be finalized before contract award. Risk mitigation - ST staff has finalized a draft of the Conditional Use Permit (CUP); readying for a meeting with the City once key open issues have been addressed.
- Environmental-Contamination (Soil &/or Water). Risk mitigation- Inclusion of a work plan has been included in the procurement documents to mitigate and address remediation of contaminated materials. This will be the first line of work the Contractor will perform when they are approved to proceed with construction.

Project Schedule

Project planned to be Baseline in Q1 2020. The project team is continuing work on Preliminary Engineering, to be completed in Q1 2020. Right of way acquisitions are in progress and are forecast to be completed in advance of the area of construction needed for the Design-Build contractor's construction activities. Procurement of the Design-Build contractor is forecast to start in Q4 2019, with Issue Design-Build Request For Qualifications (RFQ) planned for 1st half of 2020 and design-build contractor Notice To Proceed (NTP) forecast for Q4 2020 or early Q1 2021. The projected Open For Service date is 2023.

Activity ID	Activity Name	Start	Finish	2019					2020					2021					2022					2023	
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Sound Transit		01-May-15A	30-Jun-23																						
Sound Transit 2		01-May-15A	30-Jun-23																						
South Corridor		01-May-15A	30-Jun-23																						
S300018 - Sumner Station Parking and Access Improvements - DB Master		01-May-15A	30-Jun-23																						
Alternative Analysis (Phase I)		01-May-15A	26-May-16A																						
Conceptual Engineering (Phase II)		01-May-15A	14-Mar-16A																						
Preliminary Engineering (Phase III)		14-Jul-16A	09-Apr-20																						
Right of Way		22-Sep-16A	17-Apr-21																						
Permits and Agreements		01-Mar-16A	29-Jun-20																						
Design-Build Project Management		24-Jan-20	13-Dec-22																						
DBPM Construction Services/Support		24-Jan-20	13-Dec-22																						
Design/Build Contract		27-Sep-19A	13-Dec-22																						
DB Contract Procurement		27-Sep-19A	08-Dec-20																						
Design/Build - Design and Construction		09-Dec-20	13-Dec-22																						
Post Construction		13-Dec-22	30-Jun-23																						
Transition to Operations		13-Dec-22	13-Dec-22																						
Project Float		14-Dec-22	30-Jun-23																						
Open For Service		30-Jun-23	30-Jun-23																						

Community Outreach

Sound Transit participated in the City of Sumner's Open House on October 15. Outreach Team provided information about the garage and other access improvements to community members and local residents.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

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Progress Report

Regional Express & Bus Rapid Transit Program



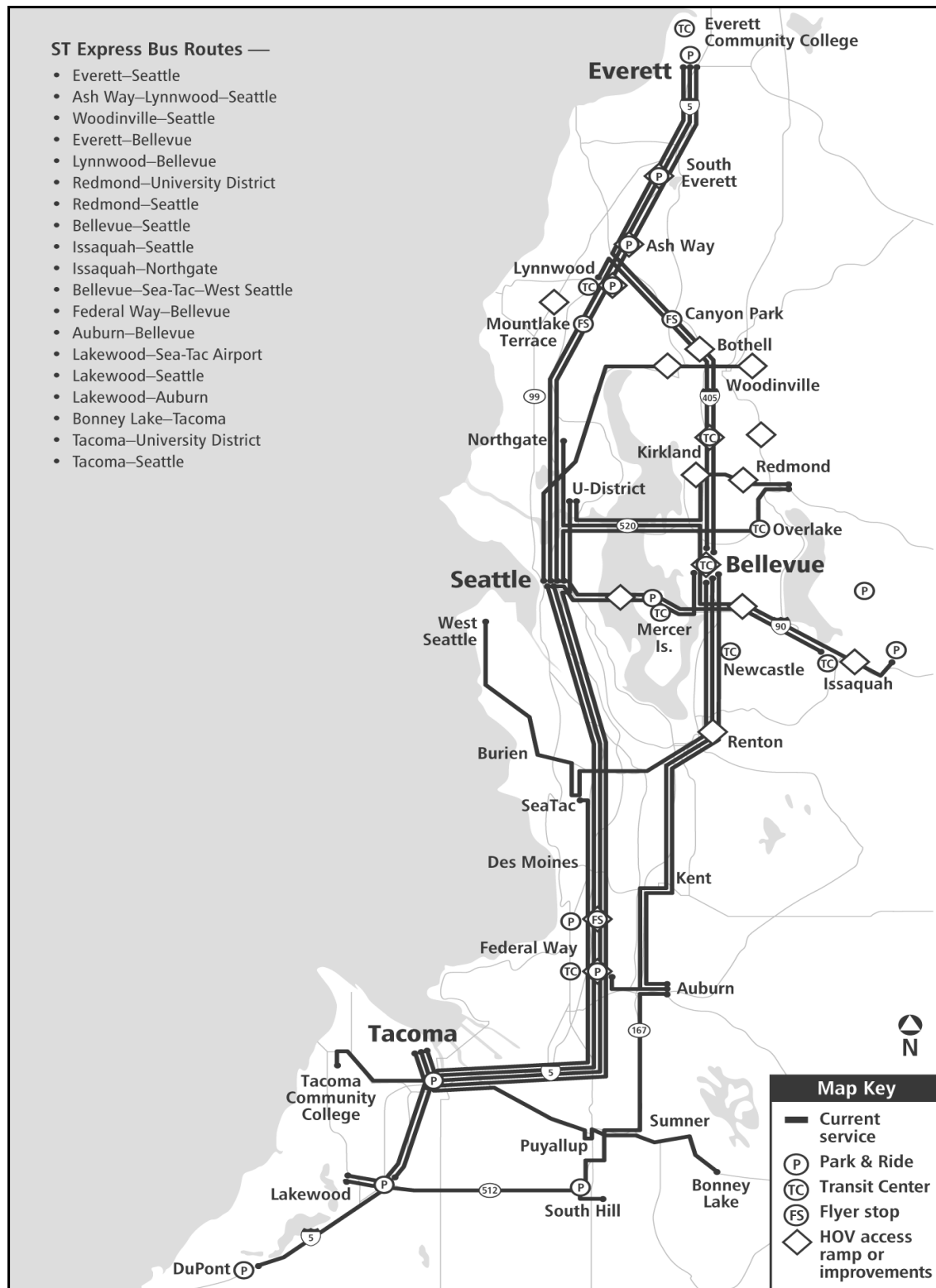
ST Express Bus routes connects major regional hubs throughout the three counties
(King, Pierce, and Snohomish)

December | 2019



Prepared by Project Control & VE | Design, Engineering & Construction Management

Regional Express & Bus Rapid Transit Program Overview



ST Regional Express Bus Routes

Regional Express & Bus Rapid Transit Program Overview



ST Express Bus Base: Sound Transit is evaluating the need for an operations and maintenance base. Project development activities include confirmation of fleet operations; facilities and site programming; and identification of site alternatives. Project is currently on hold, but being re-evaluated by senior management.

I-405 Bus Rapid Transit: This project establishes Bus Rapid Transit (BRT) from the Lynnwood Transit Center to Bellevue Transit Center and Burien Transit Center via I-405 and SR 518. The project relies on the I-405 express toll lane system where available, and Business Access Transit (BAT) lanes on SR 518 from Tukwila to Burien. Project elements include parking, station access improvements, and 11 pairs of stations, including a new transit center in South Renton and new stations at Northeast 85th Street with connection to Downtown Kirkland and at Northeast 44th Street in Renton.

Bus Base North: This project establishes the operations and maintenance facility necessary to support to support BRT operations.

SR522 Bus Rapid Transit: This project establishes BRT from the Link station at I-5 and Northeast 145th Street to UW Bothell, with service continuing at lower frequencies to Woodinville. On Northeast 145th Street, this project includes transit priority spot treatments to facilitate BRT movement through corridor bottlenecks. On SR 522 the majority of the corridor through Lake Forest Park, Kenmore and Bothell will feature BAT lanes, with transit-supportive enhancements on arterials from downtown Bothell to UW Bothell. This project includes nine pairs of stations, with additional parking at Lake Forest Park, Kenmore and Bothell and an expanded transit center at UW Bothell.

Bus on Shoulder: This program provides opportunities for buses to use shoulders on freeway and state route facilities during periods of congestion in general traffic and/or HOV lanes. This program will require coordination and further study with transit partners, WSDOT and Federal Highway Administration in order to determine locations where Bus on Shoulder may be feasible.

I-90 Two-Way Transit and HOV Operations (Stage 3): Stage 3 provides for two-way transit/HOV operations on I-90 between 80th Avenue SE and Rainier Ave. Following completion of the Stage 3 project, the center roadway was closed to traffic to allow construction of East Link Extension. Project detail page is located under the Link light rail section of this report.

Regional Express & Bus Rapid Transit Program Overview

Program Budget

The Authorized Project Allocation reflects the budget for each project through the approved project phase, meaning that for projects approved for Final Design activities only, the project budget will be amended at some point to add budget for construction activities.

REGIONAL EXPRESS & BRT	Authorized Project Allocation	Commitment to Date	Incurred to Date	Forecast to Complete	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
ST EXPRESS BUS BASE	\$5.8	\$3.2	\$1.2	\$2.7	\$5.9	\$0
BUS ON SHOULDER PROJECT	\$3.9	\$0.8	\$0.7	\$3.1	\$3.9	\$0
REX I-90 2 WAY TRANS& HOV III	\$225.6	\$205.3	\$196.5	\$20.4	\$225.6	\$0
I-405 BRT	\$258.2	\$206.7	\$90.1	\$51.8	\$258.2	\$0
SR 522-NE 145th ST BRT	\$52.6	\$36.3	\$12.7	\$16.4	\$52.7	\$0
TOTAL REGIONAL EXPRESS & BRT	\$546.1	\$452.2	\$301.2	\$94.4	\$546.3	\$0

Figures are shown in millions

Program Schedule

Schedule for BRT projects are summarized below.

Schedule Snapshot

Project Name	Start	Finish	2020	2021	2022	2023	2024	2025
◆ Sound Transit	01-Jan-18 A	02-Oct-25	Q	Q	Q	Q	Q	Q
◆ Sound Transit 3	01-Jan-18 A	02-Oct-25	Q	Q	Q	Q	Q	Q
◆ ST3 - North Corridor	26-Feb-18 A	02-Oct-25						
◆ STRIDE - Bus Rapid Transit - North Corridor	26-Feb-18 A	02-Oct-25						
◆ STRIDE Master Schedule	14-Feb-20	02-Oct-25						
◆ STRIDE - SR 522/NE 145th Bus Rapid Transit (BRT)	26-Feb-18 A	09-Feb-25						
◆ SR 522/NE 145th BRT - Preliminary Engineering	26-Feb-18 A	11-May-21						
◆ SR 522/NE 145th BRT - Final Design	31-Jul-19 A	15-Jun-22						
◆ SR 522/NE 145th BRT - Third Party Agreements and Permitting	10-Apr-20	20-Jul-22						
◆ SR 522/NE 145th BRT - Right of Way (ROW)	24-Apr-20	30-Jan-23						
◆ SR 522/NE 145th BRT - Construction	07-Jan-19 A	09-Feb-25						
◆ ST3 - East Corridor	01-Jan-18 A	02-Oct-25						
◆ STRIDE - Bus Rapid Transit - East Corridor	01-Jan-18 A	02-Oct-25						
◆ STRIDE - I-405 Bus Rapid Transit (BRT)	01-Jan-18 A	02-Oct-25						
◆ I-405 BRT - Preliminary Engineering	02-Mar-18 A	17-Mar-21						
◆ I-405 BRT - Final Design - GEC (General Engineering Contract)	31-Jul-19 A	15-Jun-22						
◆ I-405 BRT - Third Party Agreements and Permitting	11-Apr-20	26-May-22						
◆ I-405 BRT - Right of Way (ROW) / Property Acquisition	18-Mar-21	24-Jun-24						
◆ I-405 BRT - Construction	01-Jan-18 A	31-Jan-25						
◆ STRIDE - BRT - Bus Base North	08-Apr-19 A	12-Apr-24						
◆ STRIDE - BBN - Maintenance Provider	20-Jul-21	04-Jun-24						
◆ STRIDE - BRT - BRT Coaches - Procurement and Delivery	26-Jun-20	17-Apr-23						
◆ STRIDE - BRT - Intelligent Transportation System (ITS)	18-Mar-21	04-Apr-25						
◆ STRIDE - BRT - Service Line Activation	13-Apr-24	02-Oct-25						

Regional Express & Bus Rapid Transit

ST Express Bus Base

Project Summary

Scope	Sound Transit is evaluating the need for an operations and maintenance base. Project development activities include confirmation of fleet operations, facilities and site programming, and identification of site alternatives.
Phase	Planning
Budget	\$5.8 Million
Schedule	Project is on hold.



St Express bus maintenance currently performed by transit partners.

Key Project Activities

- Sound Transit Executive Leadership is evaluating the need for an operations and maintenance base.
- Sustainability is completing a \$125K study of Battery-Electric Buses in 2020.

Project Cost Summary

The ST Express Bus Bas project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$0.8	\$0.4	\$0.4	\$0.8	\$0.0
Preliminary Engineering	\$4.8	\$2.7	\$0.8	\$4.8	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Total	\$5.8	\$3.1	\$1.2	\$5.8	\$0.0

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Regional Express & Bus Rapid Transit

I-405 Bus Rapid Transit & Bus Base North

Project Summary

Scope	Develop a new bus rapid transit (BRT) system along the I-405 corridor and bus base facility.
Limits	Approximately 37 miles between Lynnwood and Burien .
Alignment	I-405 BRT will extend along the I-5, I-405 and SR 518 corridors. BRT will serve Lynnwood, Bothell, Kirkland, Bellevue, Renton, SeaTac, Tukwila, and Burien. Buses will operate in general purpose lanes, bus-only shoulders, high occupancy vehicle lanes, express toll lanes, and bus-only lanes.
Stations	Lynnwood City Center, Canyon Park, NE 195th-UW Bothell/Cascadia College, NE 160th/Brickyard, NE 128th/Totem Lake, NE 85th, Bellevue Transit Center, NE 44th, South Renton Transit Center, Tukwila International Blvd Station, Burien Transit Center.
Phase	Phase 1- Alternatives Development / ST3 Project Refinement
Budget	Overall budget: \$258.2 Million I-405 BRT: \$221.1 Million Preliminary Engineering (Phases 1-3) Bus Base North: \$37.1 Million Preliminary Engineering (Phases 1-3)
Schedule	Revenue Service: 2024



Map of project alignment

Key Activities

- Started design of Bothell Connection.
- Completed Inter-agency Value Engineering Study for NE 85th Interchange and recommendation forward to the design team.
- Held pre-application meeting with Bothell for the Bus Base North.
- Advertised for Bus Base North Design-Build Project Management team.

Project Cost Summary

The I-405 Bus Rapid Transit and Bus Base North project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures are \$4.1M, of which \$0.9M was for staff (Admin), \$2.7M for project refinement activities in the PE phase, \$100K for third party coordination, and \$400K for ROW administration and acquisitions. Project refinement activities include refining and analyzing multiple concepts for speed and reliability improvements, alternative routing options, and station locations throughout the system and various technical memorandums.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$13.7	\$4.9	\$5.0	\$13.7	\$0.0
Preliminary Engineering	\$44.2	\$35.3	\$12.9	\$44.2	\$0.0
Final Design	\$3.8	\$0.0	\$0.0	\$3.8	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$1.0	\$0.2	\$0.3	\$1.0	\$0.0
Construction	\$130.2	\$118.4	\$24.4	\$130.2	\$0.0
ROW	\$65.3	\$47.9	\$47.5	\$65.3	\$0.0
Total	\$258.2	\$206.7	\$90.1	\$258.2	\$0.0

Risk Management

The BRT Project Team will develop the Risk and Contingency Management Plan (RCMP) during Phase III - Preliminary Engineering phase of the project. The project team conducted a risk management workshop to identify all the potential risks during design and construction. The risk register will be updated and monitored quarterly.

The following are the top project risks and proposed mitigations:

- Completion of WSDOT's I-405 Renton to Bellevue Widening and Express Toll Lanes (ETL) Project. Risk Mitigation: Sound Transit participated in WSDOT's Design-Build process for the I-405 Renton to Bellevue Project as a proposal evaluation member and integrated BRT milestones into the WSDOT schedule. Sound Transit staff will participate in design and constructability reviews for BRT related facilities.
- Cost of the NE 85th BRT Station. Risk Mitigation: An ST lead Value Engineering study was held to further refine project scope.
- Concurrence with the City of Bothell on Long Term I-405 BRT and SR 522/145th BRT Integration. Risk Mitigation: Three workshops were held and a recommendation will be presented to the July 22, 2020 I-405 Elected Leadership Group meeting.

Regional Express & Bus Rapid Transit

I-405 Bus Rapid Transit & Bus Base North



Project Schedule*

The I-405 BRT Project Refinement—Phase completed in Q2 2019. The next phase, Conceptual Engineering/Environmental review commenced in Q2 2019 with an anticipated completion in Q3 2020. Construction required for BRT service is anticipated to be complete in 2024.

The current critical path for the I-405 BRT project is the Bus Base North (BBN) Facility. The Bus Base North Facility will provide for the operation, storage and maintenance of the new I-405 BRT and SR 522/NE 145th BRT corridor bus fleet and needs to be completed before the delivery of new BRT buses.

*Construction for most of the BRT projects are expected to begin by 2023 and be completed by 2024. Construction of some elements will begin before 2023 and others may occur after service starts in 2024 and complete in 2025.

**Sound Transit contributed construction funding to Washington State Department of Transportation (WSDOT) for Sound Transit's portion of the I-405—Renton to Bellevue Widening and Express Toll Lanes project's Design-Build construction wherein the I-405 NE 44th Interchange will be constructed for the BRT inline station at that interchange. In 2019 WSDOT awarded the I-405—Renton to Bellevue Widening and Express Toll Lanes project's Design-Build contract.

Project Name	Start	Finish	2020				2021				2022				2023				2024				2025		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Sound Transit	01-Jan-18 A	02-Oct-25																							
Sound Transit 3	01-Jan-18 A	02-Oct-25																							
ST3 - East Corridor	01-Jan-18 A	02-Oct-25																							
STRIDE - Bus Rapid Transit - East Corridor	01-Jan-18 A	02-Oct-25																							
STRIDE - I-405 Bus Rapid Transit (BRT)	01-Jan-18 A	02-Oct-25																							
I-405 BRT - Preliminary Engineering	02-Mar-18 A	17-Mar-21																							
I-405 BRT - Alternatives Analysis - Phase I	02-Mar-18 A	29-Apr-19																							
I-405 BRT - Conceptual Engineering/Environmental Review - Phase II	08-Apr-19 A	27-Aug-20																							
I-405 BRT - Preliminary Engineering - Phase III	17-Mar-20	17-Mar-21																							
I-405 BRT - Final Design - GEC (General Engineering Contract)	31-Jul-19 A	15-Jun-22																							
I-405 BRT - Final Design - Procurement (GEC)	31-Jul-19 A	12-May-20																							
I-405 BRT - Final Design - Design (GEC)	12-May-20	15-Jun-22																							
I-405 BRT - Third Party Agreements and Permitting	11-Apr-20	26-May-22																							
I-405 BRT - Right of Way (ROW) / Property Acquisition	18-Mar-21	24-Jun-24																							
I-405 BRT - Construction	01-Jan-18 A	31-Jan-25																							
I-405 BRT - Construction - North	01-Jan-18 A	31-Jan-25																							
I-405 BRT - Construction Roadway - North	01-Jan-18 A	31-Jan-25																							
I-405 BRT - Poplar Way Loop Ramp Widening	15-Apr-22	09-Dec-24																							
I-405 BRT - Downtown Lynnwood Transit Signal Priority (TSP)	15-Apr-22	09-Dec-24																							
I-405 BRT - Totem Lake Freeway Station Upgrade	15-Apr-22	09-Dec-24																							
I-405 BRT - WSDOT North Express Toll Lanes (ETL)	22-Aug-19 A	30-Jun-24																							
I-405 BRT - WSDOT - I-405 NE 86th Interchange	01-Jan-18 A	31-Jan-25																							
I-405 BRT - Construction Parking Garages/Facilities/Transit Center- North	02-Dec-20	02-Sep-24																							
I-405 BRT - Lynnwood Transit Center BRT Stations	10-Jun-21	04-Feb-24																							
I-405 BRT - Kingsgate Parking Garage	02-Dec-20	02-Sep-24																							
I-405 BRT - Bellevue Transit Center BRT Stations - DB	10-Jun-21	04-Feb-24																							
I-405 BRT - Construction - South	29-Oct-18 A	31-Dec-24																							
I-405 BRT - Construction Roadway - South	29-Oct-18 A	31-Dec-24																							
I-405 BRT - WSDOT I-405 Renton to Bellevue Widening & Express Toll Lanes	29-Oct-18 A	31-Dec-24																							
I-405 BRT - SR 518 Corridor Improvements	15-Apr-22	09-Dec-24																							
I-405 BRT - Construction Parking Garages/Facilities/Transit Center- South	02-Dec-20	28-Jun-24																							
I-405 BRT - S. Renton Parking Garage/Station	02-Dec-20	28-Jun-24																							
STRIDE - BRT - Bus Base North	08-Apr-19 A	12-Apr-24																							
BRT - Bus Base North - Preliminary Engineering	08-Apr-19 A	05-Aug-20																							
BRT - Bus Base North - Construction (DB)	06-Aug-20	12-Apr-24																							
BRT - Bus Base North - DB Construction Procurement	06-Aug-20	20-Jul-21																							
BRT - Bus Base North - Construction - Design / Build (DB)	20-Jul-21	12-Apr-24																							
STRIDE - BBN - Maintenance Provider	20-Jul-21	04-Jun-24																							
STRIDE - BRT - BRT Coaches- Procurement and Delivery	26-Jun-20	17-Apr-23																							
STRIDE - BRT - Intelligent Transportation System (ITS)	18-Mar-21	04-Apr-25																							
STRIDE - BRT - Intelligent Transportation System (ITS) - Procurement (DB)	18-Mar-21	12-Nov-21																							
STRIDE - BRT - Intelligent Transportation System (ITS) - Design / Build	13-Nov-21	04-Apr-25																							
STRIDE - BRT - Service Line Activation	13-Apr-24	02-Oct-25																							

Community Outreach

Sound Transit is committed to proactively seeking public input during all stages of the I-405 BRT Project. The I-405 BRT Community Engagement Guide establishes a stakeholder engagement process that helps ensure priorities of local communities are heard and considered along with the project-wide goals. The BRT team will collaborate with elected officials, partner staff, and local communities throughout the project.

- Met with Property owners who had received right-of-entry requests and other stakeholders

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period	

Regional Express & Bus Rapid Transit

SR 522/NE 145th Street Bus Rapid Transit

Project Summary

Scope

The SR 522/NE 145th BRT route will connect the Shoreline South/145th Light Rail Station to the UW Bothell/Cascadia College area, with less frequent service to the Woodinville Park-and-Ride.

The approximately 8 mile route will travel via NE 145th Street and SR 522 serving Seattle, Shoreline, Lake Forest Park, Kenmore, and Bothell. Every other bus will travel 4 additional miles from UWB/CC to serve Woodinville. The representative project assumes buses will operate primarily in Business Access and Transit (BAT) lanes, transit queue jumps and in general purpose lanes.

Limits

SR 522 and NE 145th Street in Seattle/Shoreline, Lake Forest Park, Kenmore, Bothell, and Woodinville

Stations

Includes nine (12) BRT station pairs, additional parking is included in Lake Forest Park, Kenmore, and Bothell.

Systems

BRT Operations, Transit Signal Priority

Phase

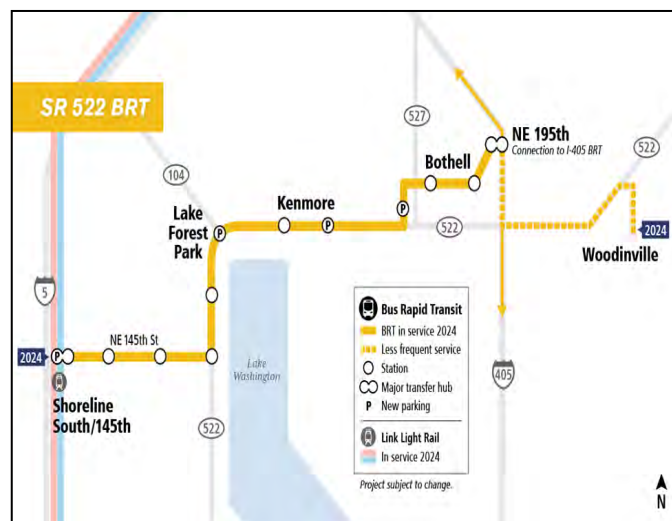
Phase 2 Conceptual Engineering and Environmental Review

Budget

Preliminary Engineering (Phases 1-3): \$52.6 Million

Schedule

Revenue Service: 2024



Map of Project Alignment

Key Project Activities

- Developed and presented 10% plans to the local agencies for their review
- Requesting Rights of Entry along the corridor.
- Collecting environmental and other data and beginning review.
- Beginning stakeholder outreach focused on property owners and businesses.
- Gave consultant Notice to Proceed to take the Lake Forest Park section of the project to a 30% design.

Regional Express & Bus Rapid Transit

SR 522/NE 145th Street Bus Rapid Transit

Project Cost Summary

The SR 522/NE 145th Street Bus Rapid Transit project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures increased by approximately \$3.8 Million, primarily due to progress made by the consultant on conceptual engineering and Environmental, City of Bothell stage 3 BAT lanes construction progress, Sound Transit staff time, and progress of ROW activities.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$6.6	\$3.0	\$3.0	\$6.6	\$0.0
Preliminary Engineering	\$10.3	\$8.0	\$5.3	\$10.3	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$1.4	\$0.2	\$0.2	\$1.4	\$0.0
Construction	\$34.0	\$25.0	\$4.1	\$34.0	\$0.0
ROW	\$0.2	\$0.2	\$0.1	\$0.2	\$0.0
Total	\$52.6	\$36.3	\$12.7	\$52.6	\$0.0

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and developing risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. Sound Transit continuously monitors project status and assesses associated risks.

The following are the top project risks and proposed mitigations:

- The SR 522/NE 145th Street BRT project is an early deliverable and involves close coordination with multiple project partners. Staff and consultants are continuing to coordinate closely with project partners.
- The timeline for property acquisition is a risk for this project. Proposed mitigation includes advancing a change order in Phase 2 to perform work that supports property civil certification and acquisition, conducting focused property owner outreach in the fall/winter of Phase 2, and advancing Phase 3 contract to first quarter 2020 to further expedite design to support property acquisition.
- Early concurrence on project components is a key effort in the first year of project development though on-going coordination with the Project Interagency Coordination Group, City Managers Group, and Elected Leadership Group.
- Coordination of ST3 refined project and WSDOT and City of Shoreline plans for NE 145th- complex jurisdictional situation and third partner expectation for ST capital investment. Partner Agency staff are actively working towards a multi-agreeable solution.
- Planning, Design, Construction and Opening the Bus Base North Facility. The Bus Base North Facility will store and maintain the BRT fleet for both the I-405 and SR 522/145th BRT corridors. The I-405 BRT team will track the progress of the Bus Base North Facility project development as it is on the critical path for the program.

Regional Express & Bus Rapid Transit

SR 522/NE 145th Street Bus Rapid Transit



Project Schedule*

- Conceptual Engineering/Environmental Review—Phase II commenced in 2Q 2019 with Phase II completion forecast in 3Q 2020. Construction required for BRT service is anticipated to be complete in 2024.
- The current critical path for the SR522/NE 145th BRT project is the Bus Base North (BBN) Facility. The Bus Base North Facility will provide for the operation, storage and maintenance of the new I-405 BRT and SR 522/NE 145th BRT corridor bus fleet and needs to be completed before the delivery of new BRT buses.

*Construction for some of the BRT projects/elements is expected to begin by 2023 and be completed by 2024. Construction of other projects/elements began in 2019 and others may occur after service starts in 2024 and complete in 2025.

**Sound Transit contributed construction funding to certain city(s)/Authorities Having Jurisdiction (AHJ) where construction by contracts managed by those city(s) (i.e. City of Bothell) commenced in Q2 2019 allowing early construction of transit speed and reliability on roadways along the BRT corridor in advance of BRT service operation.

Schedule Snapshot

Project Name	Start	Finish	2020				2021				2022				2023				2024				2025			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sound Transit	26-Feb-18 A	02-Oct-25																								
Sound Transit 3	26-Feb-18 A	02-Oct-25																								
ST3 - North Corridor	26-Feb-18 A	09-Feb-25																								
STRIDE - Bus Rapid Transit - North Corridor	26-Feb-18 A	09-Feb-25																								
STRIDE - SR 522/NE 145th Bus Rapid Transit (BRT)	26-Feb-18 A	09-Feb-25																								
SR 522/NE 145th BRT - Preliminary Engineering	26-Feb-18 A	11-May-21																								
SR 522/NE 145th BRT - Alternatives Analysis - Phase I	26-Feb-18 A	28-Mar-19																								
SR 522/NE 145th BRT - Conceptual Engineering/Environmental Review - Phase II	26-Apr-19 A	14-Jul-20																								
SR 522/NE 145th BRT - Preliminary Engineering - Phase III	09-Jun-20	11-May-21																								
SR 522/NE 145th BRT - Final Design	31-Jul-19 A	15-Jun-22																								
SR 522/NE 145th BRT - Final Design - GEC (General Engineering Contract)	31-Jul-19 A	15-Jun-22																								
SR522/NE 145th BRT - Final Design - Procurement (GEC)	31-Jul-19 A	12-May-20																								
SR522/NE 145th BRT - Final Design - Design (GEC)	12-May-20	15-Jun-22																								
SR 522/NE 145th BRT - Third Party Agreements and Permitting	10-Apr-20	20-Jul-22																								
SR 522/NE 145th BRT - Right of Way (ROW)	24-Apr-20	30-Jan-23																								
SR 522/NE 145th BRT - Construction	07-Jan-19 A	09-Feb-25																								
SR 522/NE 145th BRT - Construction - Roadway	07-Jan-19 A	09-Feb-25																								
SR 522/NE 145th BRT - Construction Roadway 145th/SR522/Shoreline/Seattle/LFP/Ke	16-Jun-22	09-Feb-25																								
SR 522/NE 145th BRT - Stage 3 Improvements [96th Ave NE to 83rd Place NE] BTH	07-Jan-19 A	30-Sep-20																								
SR 522/NE 145th BRT - Stage 2B Improvements [Wayne Curve to NE 180th St] BTH	16-Jun-22	09-Feb-25																								
SR 522/NE 145th BRT - Construction - Parking Garages	02-Dec-20	02-Sep-24																								
SR 522/NE 145th BRT - Lake Forest Park Parking Garage (LFP) - DB	02-Dec-20	02-Sep-24																								
SR 522/NE 145th BRT - Kenmore Parking Garage (KEN) - DB	02-Dec-20	02-Sep-24																								
SR 522/NE 145th BRT - Bothell Parking Garage (BTH) - DB	02-Dec-20	02-Sep-24																								
ST3 - East Corridor	08-Apr-19 A	02-Oct-25																								
STRIDE - Bus Rapid Transit - East Corridor	08-Apr-19 A	02-Oct-25																								
STRIDE - I-405 Bus Rapid Transit (BRT)	08-Apr-19 A	02-Oct-25																								
STRIDE - BRT - Bus Base North	08-Apr-19 A	12-Apr-24																								
BRT - Bus Base North - Preliminary Engineering	08-Apr-19 A	05-Aug-20																								
BRT - Bus Base North - Conceptual Engineering/Environmental	08-Apr-19 A	05-Aug-20																								
BRT - Bus Base North - Construction (D/B)	06-Aug-20	12-Apr-24																								
BRT - Bus Base North - D/B Construction Procurement	06-Aug-20	20-Jul-21																								
BRT - Bus Base North - Construction - Design / Build (DB)	20-Jul-21	12-Apr-24																								
STRIDE - BBN - Maintenance Provider	20-Jul-21	04-Jun-24																								
STRIDE - BRT - BRT Coaches- Procurement and Delivery	26-Jun-20	17-Apr-23																								
STRIDE - BRT - Intelligent Transportation System (ITS)	18-Mar-21	04-Apr-25																								
STRIDE - BRT - Intelligent Transportation System (ITS) - Procurement (DB)	18-Mar-21	12-Nov-21																								
STRIDE - BRT - Intelligent Transportation System (ITS) - Design / Build	13-Nov-21	04-Apr-25																								
STRIDE - BRT - Service Line Activation	13-Apr-24	02-Oct-25																								

Community Outreach

Sound Transit is committed to proactively seeking public input during all stages of the Project. The SR522 BRT Community Engagement and Communication Guide establishes a stakeholder engagement process that helps ensure priorities of local communities are heard and considered along with the project-wide goals. The BRT team will collaborate with elected officials, partner staff, and local communities throughout project development. The following steps have been undertaken:

- Updated Phase 2 community engagement plan, including supporting outreach/engagement with property owners along the corridor in the fall and winter.
- Met with the Kenmore/Bothell and Shoreline Chambers of Commerce.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period	

Regional Express & Bus Rapid Transit Bus on Shoulder

Project Summary

Scope	This program provides opportunities for buses to use shoulders on freeway and state route facilities during periods of congestion in general traffic and/or HOV lanes. This program will require coordination and further study with transit partners, WSDOT and Federal Highway Administration in order to determine locations that may be feasible.
Phase	Planning (Feasibility Study) and Construction (I-5 southbound Lynnwood to Mountlake Terrace bus-on-shoulder project, by WSDOT).
Budget	Planning Phase: \$3.6 Million Construction Phase: \$0.3 Million
Schedule	Revenue Service: Varies



Examples of Bus-on-Shoulder facilities

Key Project Activities

- Completed construction of the ‘early action’ I-5 Lynnwood-MLT bus-on-shoulder project.
- Completed Bus-on-Shoulder Feasibility Study, and supplemented the study with additional projects identified by transit agency partners.
- Developed engineering and environmental documentation scope of work for candidate segments which has been included in the Bus Rapid Transit GEC contract.
- Continued coordination with WSDOT and partner transit agencies.

Project Cost Summary

The Bus on Shoulder project cost is summarized below in accordance with Sound Transit’s budget Work Breakdown Structure (WBS). The figures are shown in millions.

Since June 2019, the project cost incurred to date increased but not enough to be seen in the rounded figures on the next page.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$0.9	\$0.1	\$0.1	\$0.9	\$0.0
Preliminary Engineering	\$2.2	\$0.0	\$0.0	\$2.2	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.4	\$0.4	\$0.4	\$0.4	\$0.0
Construction	\$0.3	\$0.3	\$0.3	\$0.3	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Total	\$3.9	\$0.8	\$0.7	\$3.9	\$0.0

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The following are the top project-wide risks:

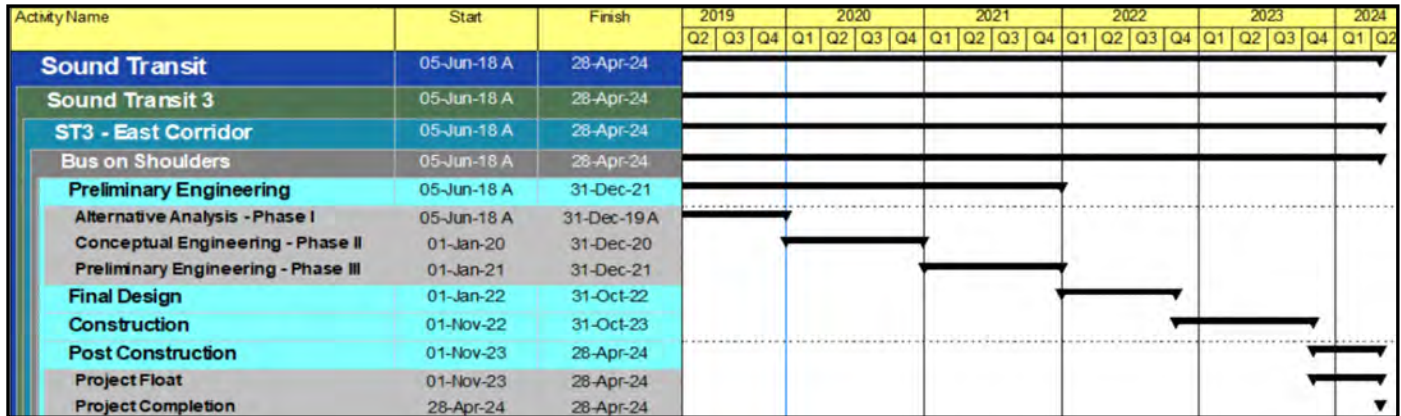
- The right combination of factors must be present to implement Bus on Shoulder operation: sufficient transit service and ridership along a roadway segment; service that is adversely affected by roadway congestion; and physical and operating conditions along a roadway segment's shoulder that can accommodate reasonable improvements to its length, width, pavement, etc.
- Candidate projects must benefit one or more of the three contributing subareas.
- Washington State Patrol and other emergency responders also use shoulders for enforcement and hazard response. Facilitating WSP and emergency responder needs may preclude bus operation on candidate roadway segments or require certain types of improvements beyond shoulder modifications.

Regional Express & Bus Rapid Transit Bus on Shoulder



Project Schedule

In early 2019, a feasibility study completed identifying and evaluating candidate Bus On Shoulder projects. A post-feasibility study-projects verification-next steps effort was completed in December 2019. The most cost-effective projects will proceed to the design process. Bus on Shoulder improvement projects may be designed, constructed and in-service over a multiple year period from 2021-2024.



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Progress Report

Capital Program Support

December | 2019



Prepared by Project Control & VE | Design, Engineering & Construction Management

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Capital Program Support Grants



Current Grant Funding *(Includes only Active Executed Grants)*

Line of Service	Grant ID	Project	Award Amount	Date Executed	Life to Date Drawdowns (thru Dec. 2019)
Federal Transit Administration (FTA)					
Link	WA-03-0237	University Link FFGA	\$ 684,370,641	9/16/15	\$ 612,915,262
Link	WA-95-X061	Tacoma Link Expansion	\$ 5,599,943	8/27/15	\$ 5,314,144
Link	WA-95-X067	East Link: Overlake Village Ped Bridge	\$ 6,606,585	8/8/14	\$ 6,606,585
Link	WA-95-X073	East Link: Bellevue Way HOV Improvements (S Bell P&R to I-90)	\$ 2,200,000	8/8/14	\$ 444,950
Link	WA-2016-012	Tacoma Link Expansion light rail vehicles	\$ 6,000,000	5/17/17	\$ 2,452,054
Sounder	WA-2018-015	Sounder Rolling Stock	\$ 7,799,730	3/8/18	\$ -
Link	WA-2018-024	Northgate Link Extension	\$ 49,708,902	5/9/18	\$ 49,708,902
Link	WA-2018-030	Federal Way Link Extension	\$ 4,509,494	6/5/18	\$ 4,509,494
Link	WA-2018-013	Tacoma Link Extension	\$ 74,999,999	5/15/18	\$ 23,999,583
Sounder	WA-2018-081	Puyallup Station Access Improvements	\$ 6,700,000	11/16/18	\$ 4,741,879
Link	WA-2018-082	Downtown Redmond Link Ext	\$ 600,000	11/16/18	\$ 58,016
Link	WA-2019-001	Linkwood Link Extension	\$ 300,000,000	12/19/18	\$ 214,326,633
REX	WA-2019-023	Bus Replacements	\$ 1,375,000	4/19/19	\$ -
REX	WA-2019-024	Bus Replacements	\$ 4,920,406	4/19/19	\$ 4,920,406
REX	WA-2019-018	HIMB Bus Preventative Maintenance	\$ 17,948,707	4/16/19	\$ 17,948,707
Link	WA-2019-025	HIFG Rail Prev Maint	\$ 41,456,995	4/20/19	\$ 41,456,995
Sounder	WA-2020-002	Sounder Expansion (ST3)	\$ 5,600,000	12/13/19	\$ -
REX	WA-2020-007	I-405 BRT North	\$ 3,500,000	12/30/19	\$ -
Other Federal					
Systemwide	EMW-2017-RA-00018	Video Monitoring System and Security Program	\$ 662,238	11/2/17	\$ 21,529
Systemwide	EMW-2019-RA-00014	Systemwide Security	\$ 1,315,813	9/1/19	\$ -
State					
Link	GCB2114	Tacoma Link Expansion	\$ 5,000,000	3/28/17	\$ 4,999,999

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Sustainability

Sustainability is at the core of Sound Transit’s mission to connect more people to more places efficiently, affordably, reliably and in an environmentally friendly manner. Investing in transit builds a better future, maintains a clean environment, and supports both healthy communities and vibrant economies. At Sound Transit, sustainability is about more than the natural environment – it is a holistic goal that protects and enhances people, planet and prosperity.

In 2019, Sound Transit continued to carry out a wide range of projects, with increased focus on integrating sustainable design into capital expansion – from planning and final design to construction. With the passage of the ST3 Plan, a fully funded Sustainability Program will integrate green building and infrastructure in projects across all phases of development.

Sound Transit continues to implement our Sustainability Initiative through our internationally certified (ISO 14001) Environmental and Sustainability Management System (ESMS). The agency also continues to be a transit industry leader through our ongoing participation in APTA’s Sustainability Commitment at the platinum recognition level.

Key Q4 2019 Accomplishments and Activities

- Continued providing alignment between PEPD, DECM and Operations on evaluating battery electric bus feasibility:
 - Finalized Battery Electric Bus Feasibility Analysis for ST Express and Bus Rapid Transit.
 - Continued meetings of internal Battery Electric Bus Working Group; presented results of both ST Express and Bus Rapid Transit analyses at these meetings.
- Completed the Environmental and Sustainability Management System external audit.
- Updated research on using greener concrete in transit expansion projects.
- Finalized guidelines on using Efficiency and Sustainability funds.
- Continued developing guidelines on using funds from the ST3 Sustainability Cost Allowance.
- Began evaluating LEED Existing Building Operations and Maintenance for Union Station.

Key Upcoming Activities for Q1 2020

- Present semiannual Sustainability Plan progress to the Sound Transit Board of Directors.
- Finalize and publish list of 2020 Environmental and Sustainability targets.
- Begin data collection for annual Sustainability Inventory and Progress Report.
- Complete procurement of a new ISO 14001 registrar.
- Finalize the guidelines for using funds from the ST3 Sustainability Cost Allowance.
- Finalize procedure for integrating utility rebates on capital projects.

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Capital Program Support Agency Staffing Report



Sound Transit Staffing Summary - 4th Quarter 2019

DEPARTMENT	NUMBER OF POSITIONS	STAFF AS OF 12/31/2019	2019 VACANT POSITIONS	HIRING IN PROCESS	VACANCY RATE
COMMUNICATIONS	72	70	2	0	3%
DESIGN, ENGINEERING & CONSTRUCTION MGMT	327	295	32	16	10%
EXECUTIVE (INC Govmt, P&C, Board & HR)	163	152	11	7	7%
FINANCE	101	89	12	3	12%
INFORMATION TECHNOLOGY	127	112	15	5	12%
LEGAL	23	22	1	0	4%
OPERATIONS	226	196	30	17	13%
PLANNING, ENVIRONMENT & PROJECT DEVELOPMENT	95	86	9	8	9%
SAFETY QUALITY MANAGEMENT	66	59	7	3	11%
AGENCY TOTAL	1200	1081	119	59	10%

<u>YEAR TO DATE STATISTICS</u>		Women	As %	Minority	As %
New Hires	224	88	39.29%	91	40.63%
Intern Hires	18	12	66.67%	10	55.56%
Internal Moves/Prorr	105	56	53.33%	42	40.00%
Terminations	88	39	44.32%	35	39.77%
Average Days to Fill Position:		73.76	Turnover	8.7%	