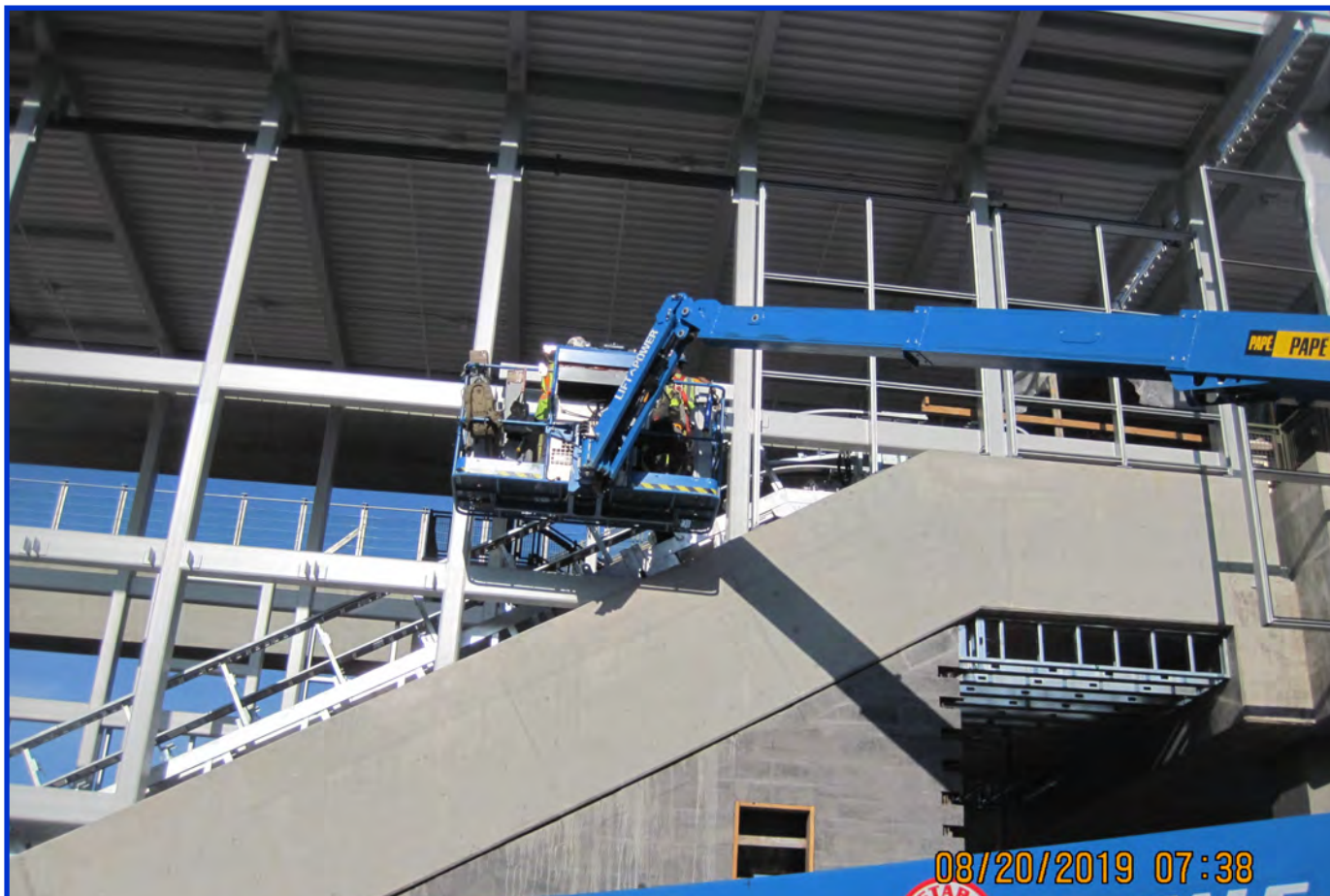


Progress Report

Link Light Rail Program



Escalator Installation at the Northgate Station

August | 2019





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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.



Link Light Rail Program Overview

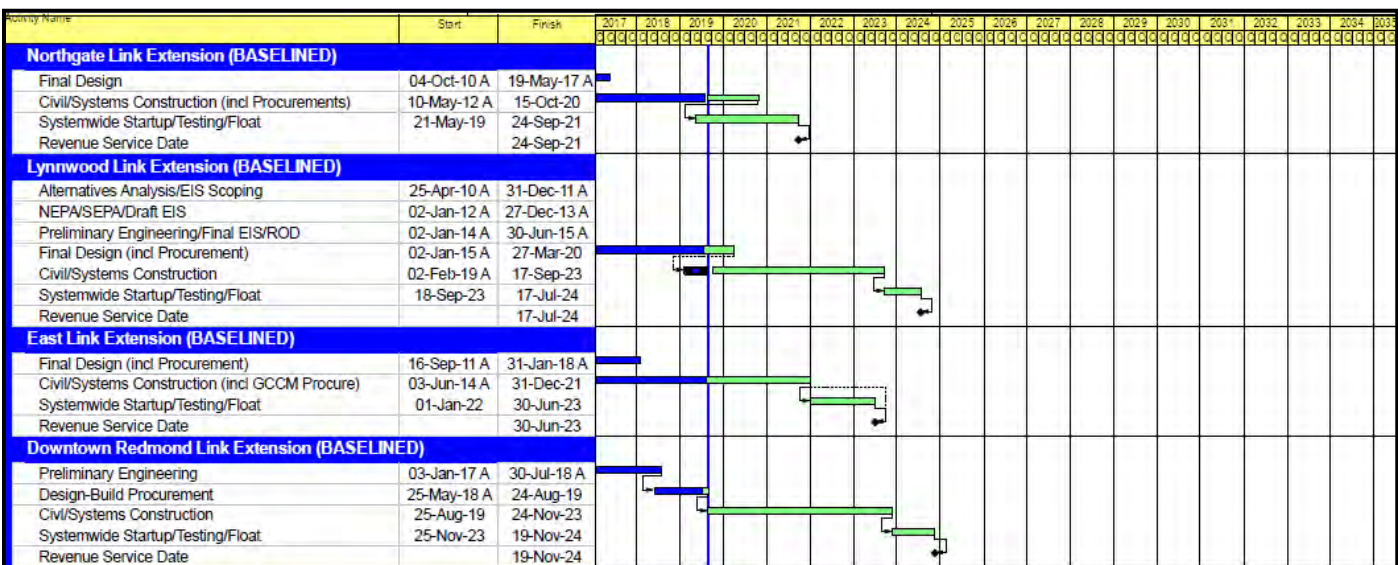
Program Budget

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	\$1,522.3	\$1,514.5	\$31.8	\$1,554.2	\$201.8
Northgate Link Extension	\$1,899.8	\$1,668.6	\$1,503.6	\$177.1	\$1,845.7	\$54.0
Lynnwood Link Extension	\$2,771.6	\$654.6	\$422.4	\$2,117.0	\$2,771.6	\$0.0
East Link Extension	\$3,677.2	\$3,055.9	\$2,068.0	\$621.2	\$3,677.2	\$0.0
Downtown Redmond Link Ext.	\$1,530.0	\$789.1	\$56.4	\$740.9	\$1,530.0	\$0.0
West Seattle and Ballard Link Ext.	\$285.9	\$92.4	\$39.6	\$193.5	\$285.9	\$0.0
Federal Way Link Extension	\$2,451.5	\$1,440.0	\$206.3	\$1,011.5	\$2,451.5	\$0.0
Hilltop Tacoma Link Extension	\$217.3	\$189.1	\$85.8	\$28.2	\$217.3	\$0.0
Tacoma Dome Link Extension	\$125.7	\$52.6	\$14.6	\$73.1	\$125.7	\$0.0
Link O & M Facility: East	\$449.2	\$359.4	\$250.6	\$89.9	\$449.2	\$0.0
LRV Fleet Expansion	\$740.7	\$667.1	\$136.1	\$73.6	\$740.7	\$0.0
Total Link	\$15,904.9	\$10,491.1	\$6,297.8	\$5,157.9	\$15,649.0	\$255.9

Program Schedule

Schedules for active projects are summarized below.

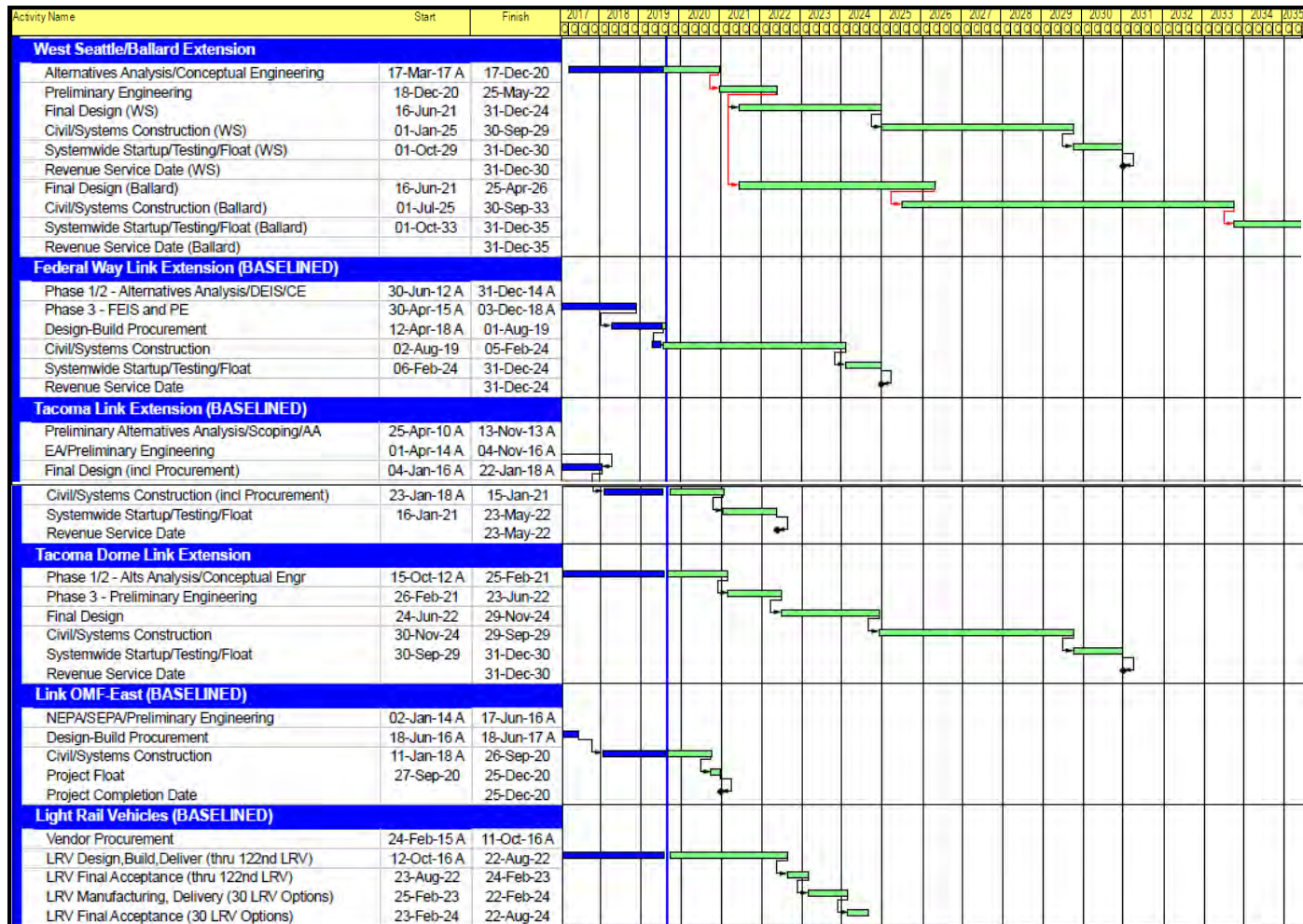


Link Light Rail Program Overview



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, now, awaits 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 continues to progress. FTA's recommended "on to off" data collection to expand the survey data to more accurately reflect total ridership were incorporated. Study to complete by end summer 2019 and report by 4th Quarter 2019.

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 \$996M 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	\$83.8	\$88.2	\$25.4
Preliminary Engineering	\$24.4	\$24.3	\$24.3	\$24.3	\$24.3	\$0.0
Final Design	\$77.9	\$90.3	\$88.0	\$86.8	\$89.2	\$1.1
Construction Services	\$68.5	\$94.8	\$86.9	\$86.6	\$88.7	\$6.1
3rd Party Agreements	\$18.6	\$18.6	\$11.7	\$11.3	\$13.2	\$5.4
Construction	\$1,180.0	\$1,158.2	\$1,002.0	\$996.2	\$1,021.9	\$136.3
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	\$1,522.3	\$1,514.5	\$1,554.2	\$201.9
Finance Cost	\$191.7	\$191.7	\$191.7	\$174.9	\$191.7	\$0.0
Project Total	\$1,947.7	\$1,947.7	\$1,714.0	\$1,689.4	\$1,745.9	\$201.9

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 \$1.68B. The financing cost Incurred to Date is about \$175M. University Link EFC continues to be projected to close out with at least \$201M 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	\$57.5	\$55.2	\$56.8	\$10.6
50 Systems	\$69.6	\$116.4	\$102.2	\$102.0	\$102.4	\$14.0
Construction Subtotal (10 - 50)	\$1,128.8	\$1,009.9	\$988.9	\$984.4	\$998.7	\$11.1
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	\$307.2	\$303.8	\$318.0	\$28.6
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	\$1,522.3	\$1,514.5	\$1,554.2	\$201.9
100 Finance Cost	\$191.7	\$191.7	\$191.7	\$174.9	\$191.7	\$0.0
Project Total	\$1,947.7	\$1,947.7	\$1,714.0	\$1,689.4	\$1,745.9	\$201.9

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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):** Crews continued installation of roofing membrane and installation of Mechanical, Electrical, and Plumbing (MEP) conduit and pipe for power, water and fire in the north station area. In the central area crews installed Formed Metal Enclosure (FME) structural steel on the platform level. In the south station area the contractor commenced demolition of roadway to the east of the south head house on 43rd and placed concrete in stair pans for Stairs 1 and 2 from basement level 1 to the surface.
- **Roosevelt Station (N150):** Crews continued metal panel installation for Escalator 1, 2 and 5-8 and completed sprinkler and electrical work for Escalators 3 and 4. Continued Level 1 commissioning testing of electrical and mechanical equipment.
- **Northgate Station (N160): Guideway Substructure/Superstructure:** Elcon continued installing conduit under the Guideway spans 3 and 4. **Station:** Absher completed final inspections and placed the south ancillary slab. Mid-American is working on wiring and controls for Escalators 1 and 2 and installing balustrades for Escalator 3.
- **Trackwork (N180):** In work areas from U District Station to Roosevelt Station crews continue to perform final housekeeping and pre-punchlist walks south to north. In work areas from Roosevelt Station to Maple Leaf Portal, crews continue to perform final line and grade and torquing/clipping of bolts in the tunnels.
- **Environmental:** Environmental and safety site walks conducted on all Northgate contracts.

Closely Monitored Issues

- **N160 – Maple Leaf Portal South:** Seattle City Light (SCL) guy wires are still being discussed. Locations of proposed permanent helical anchors are being verified for SCL approval.

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 \$1,847.3 M, which is \$52.5 M below the current project budget, unchanged since last period. This period approximately \$19.3 M 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	\$75.3	\$75.3	\$136.5	\$8.4
Preliminary Engineering	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$0.0
Final Design	\$132.2	\$132.2	\$122.5	\$119.2	\$133.6	\$(1.5)
Construction Services	\$118.3	\$118.3	\$103.0	\$85.7	\$110.3	\$8.0
3rd Party Agreements	\$11.8	\$11.8	\$8.4	\$7.1	\$11.4	\$0.4
Construction	\$1,343.0	\$1,343.0	\$1,243.3	\$1,100.4	\$1,334.4	\$8.7
ROW	\$112.3	\$112.3	\$100.9	\$100.9	\$106.0	\$6.3
Project Contingency	\$22.2	\$22.2	\$0.0	\$0.0	\$0.0	\$22.2
Total	\$1,899.8	\$1,899.8	\$1,668.6	\$1,503.6	\$1,847.3	\$52.5

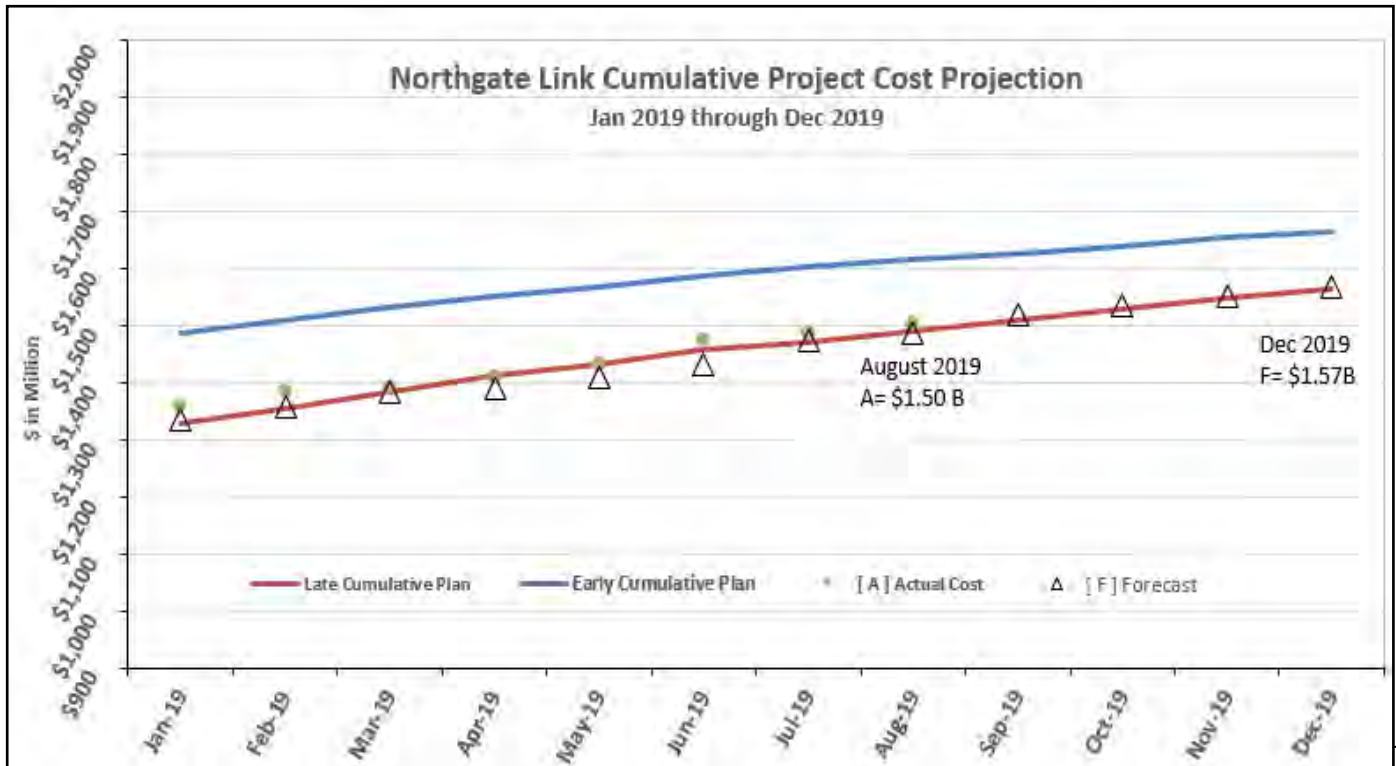
Cost Summary by SCC

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	\$516.9	\$503.0	\$534.0	\$14.2
20 Stations	\$376.1	\$425.1	\$431.4	\$381.6	\$449.8	\$(24.8)
30 Support Facilities: Yard, Shop	\$5.3	\$6.1	\$6.5	\$6.4	\$6.5	\$(0.3)
40 Sitework & Special Conditions	\$140.8	\$230.7	\$170.4	\$158.0	\$199.2	\$31.5
50 Systems	\$110.9	\$98.5	\$107.7	\$42.4	\$119.5	\$(21.0)
Construction Subtotal (10 - 50)	\$1,228.7	\$1,308.6	\$1,232.9	\$1,091.4	\$1,309.0	\$(0.5)
60 Row, Land, Existing Improvements	\$119.9	\$110.9	\$100.9	\$100.9	\$105.5	\$5.4
80 Professional Services	\$420.7	\$435.2	\$334.8	\$311.3	\$427.3	\$7.9
90 Contingency	\$130.4	\$45.1	\$0.0	\$0.0	\$5.4	\$39.7
Total (10 - 90)	\$1,899.8	\$1,899.8	\$1,668.6	\$1,503.6	\$1,847.3	\$52.5

Project Cash Flow Projection

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

Total project cost to date reached \$1.50 B of which about \$1.10 B (73%) is attributed to construction. The project cost is currently predicted to increase to approximately \$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:

- New stairwell at N140 – cost and schedule risk.
- Coordination with third parties (City of Seattle, WSDOT, UW etc.). This risk includes mitigation/restoration requests and extended submittal/permit reviews.
- Coordination of system installation, integration, and testing.
- Potential shortage of operations & maintenance support during startup and integration testing.
- Multiple contract interfaces and loss of interface float.

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, UAC decreased by \$7.5 M, which was reallocated to the N140 contract. AC increased by a net amount of \$0.2 M, including the additional \$7.5 M from UAC, and \$7.9 M in drawdown for change orders, primarily on construction contracts.

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%	\$135.6	39.5%
Unallocated Contingency	\$98.3	5.2%	\$15.6	4.6%
Total:	\$396.2	20.9%	\$151.3	44.1%

Contingency by Type

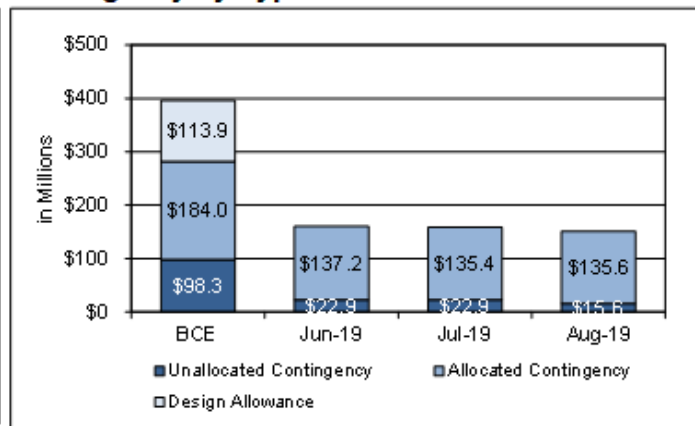
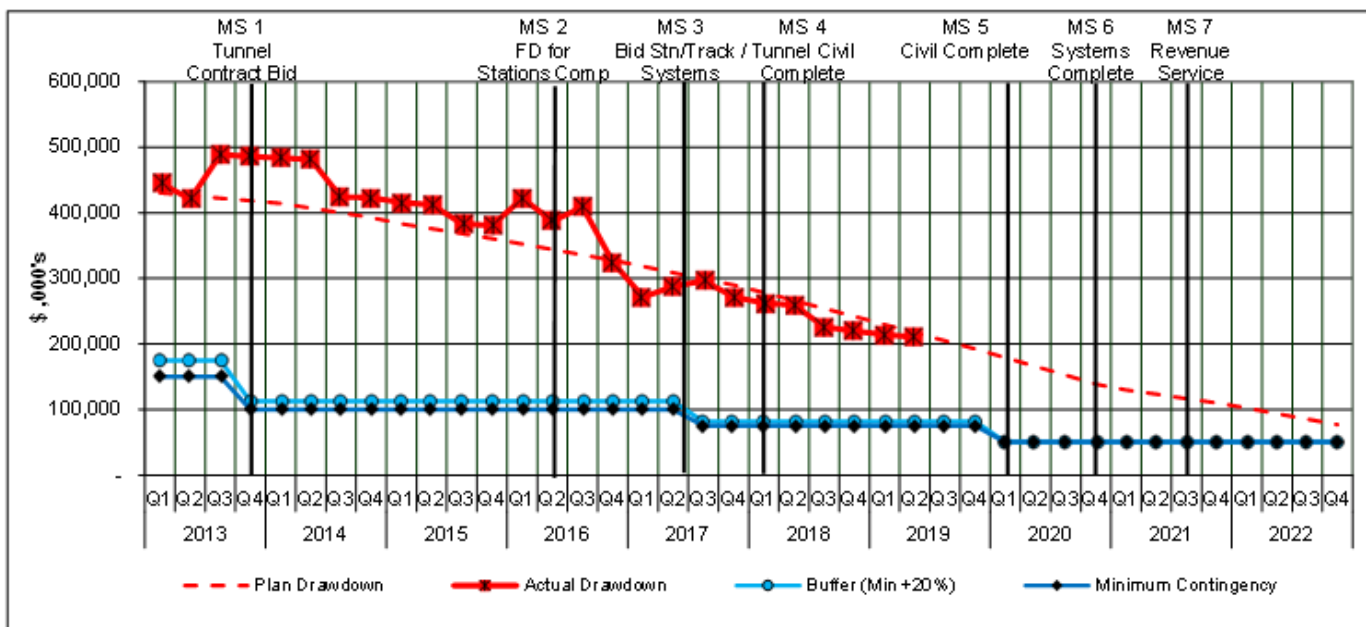


Table figures are shown in millions.

Contingency Drawdown (Quarterly)



Link Light Rail Northgate Link Extension



Project Schedule

In August 2019, the physical percent complete for all Northgate Link construction contracts increased from 85.5% to 86.5%.

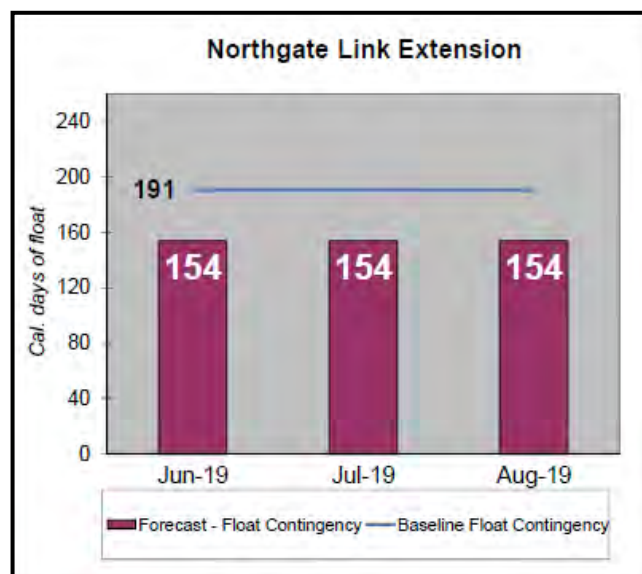
Completion of the civil construction remains in late 3rd quarter 2020, with systems construction & testing currently forecast to be complete in late 4th quarter 2020 as planned.

The revenue service date remains late September 2021.

Activity Name	Start	Finish	2015	2016	2017	2018	2019	2020	2021	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Northgate Link Extension Master Schedule - V12c	24-Dec-10 A	28-Sep-21								
Final Design	24-Dec-10 A	04-Nov-16 A								
Construction	01-Aug-12 A	09-Mar-21								
N105 Advanced Demolition & Site Prep - DBB	04-Aug-14 A	28-Nov-16 A								
N110 Construction Advanced Utility Relocation - DBB	06-Mar-13 A	28-May-13 A								
N111 Advance Utility Relocation, Northgate Area - DBB	17-Feb-14 A	22-Jun-16 A								
N112 Advanced Demolition & Site Prep, U District & Roosevelt - DBB	01-Aug-12 A	31-Aug-13 A								
N113 115kV Relocation at Northgate - DBB	31-May-16 A	21-Feb-17 A								
N125 TBM Tunnels (UW Station to Maple Leaf Portal) - DBB	30-Sep-13 A	13-Mar-18 A								
N140 U District Station Finishes - GC/CM	07-Apr-17 A	10-Apr-20								
N150 Roosevelt Station Finishes - GC/CM	02-Dec-16 A	24-Sep-19								
N160 Northgate Station and Elevated Guideway - DBB	02-Sep-16 A	31-Mar-20								
N180 Trackwork - DBB	25-Aug-16 A	31-Oct-19								
N830 Traction Electrification, Signal & Communications - GC/CM	12-Jun-17 A	07-Jan-21								
Vibration & EMI Testing	04-Aug-17 A	09-Mar-21								
Testing & Startup	20-Feb-18 A	28-Apr-21								
Lvl 1 - 2 Testing - Civil Contracts	20-Feb-18 A	10-Apr-20								
Lvl 1 - 3 Testing - Systems Contract	13-Feb-19 A	07-Jan-21								
Lvl 4 - Pre-Revenue Service	07-Jan-21	28-Apr-21								
Project Float	28-Apr-21	28-Sep-21								
Project Float & Revenue Service	28-Apr-21	28-Sep-21								
Program Wide Float (CD)	28-Apr-21	28-Sep-21								
Northgate Link Complete - Revenue Service Begins		28-Sep-21								

Project Float

The Northgate Link Project currently retains 154 days of un-allocated project float. The next significant re-evaluation of project float will likely occur as the rail activation plan continues to develop. Currently the project remains on schedule.



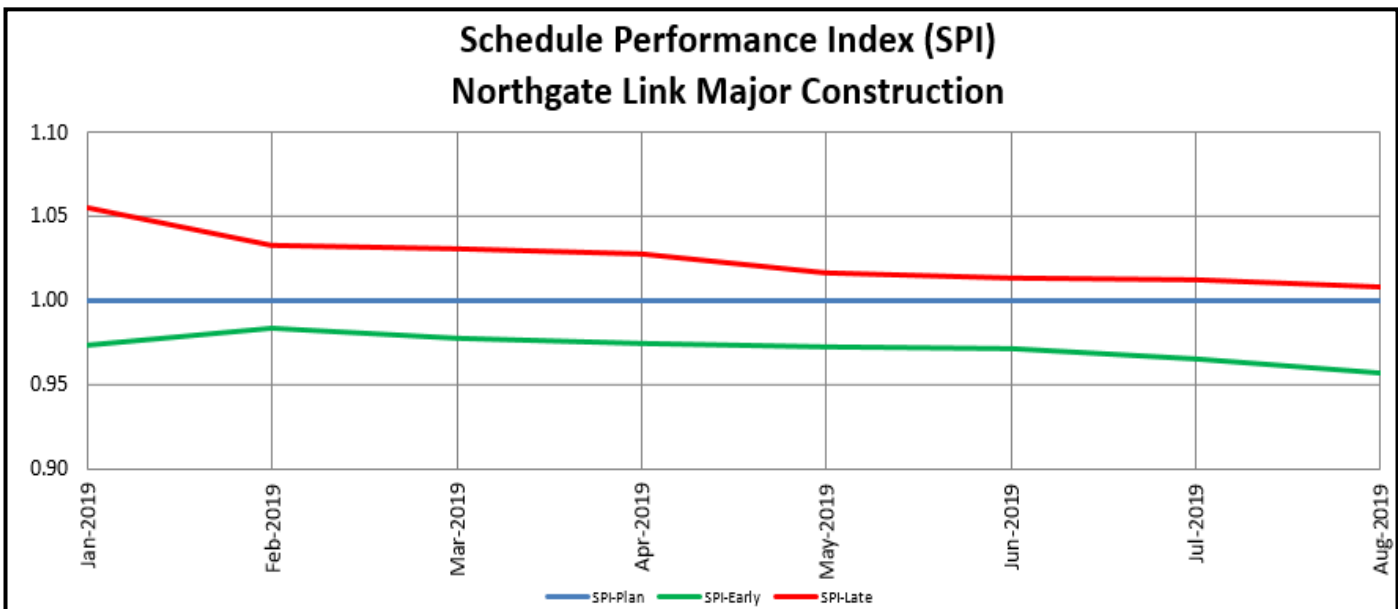
Critical Path Analysis

The critical path for the Northgate Link Extension remains unchanged, running through the N830 systems installations, then into the testing & commissioning proceeding the pre-revenue service period. Procurement, manufacturing, and installation of the signal systems continues to be the driver of the critical path.

Activity ID	Activity Name	Start	Finish	2020												2021																	
				Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Northgate Link Extension Master Schedule - V12c																																	
Testing & Startup																																	
	Lvl 1 - 2 Testing - Civil Contracts	20-Feb-18 A	10-Apr-20																														
	Lvl 1 - 3 Testing - Systems Contract	13-Feb-19 A	07-Jan-21																														
	Lvl 4 - Pre-Revenue Service	07-Jan-21	26-Apr-21																														
Project Float																																	
	Project Float & Revenue Service	26-Apr-21	26-Sep-21																														
	NGLSUM8010 Northgate Link Project Float (CD)	26-Apr-21	26-Sep-21																														
	NGLPMF1000 Program Wide Float (CD)	26-Apr-21	26-Sep-21																														
	NGLMS9000 Northgate Link Complete - Revenue Service Begins	26-Sep-21	26-Sep-21																														
N830/E750 - Systems																																	
General																																	
	Key Dates	12-Jun-17 A	16-Jan-22																														
	Procurement	12-Jun-17 A	20-Aug-18 A																														
N830 Project																																	
	N830 Engineering	18-Sep-17 A	11-May-18 A																														
	N830 Construction	15-Aug-18 A	23-Aug-19 A																														
	N830 Signals	15-Aug-18 A	23-Aug-19 A																														
	N830 Indirects	12-Jun-17 A	10-Jul-17 A																														
	N830 Change Orders / Provisional Sums	07-Sep-17 A	08-Dec-17 A																														
	E750 Project	12-Jun-17 A	15-Jan-22																														

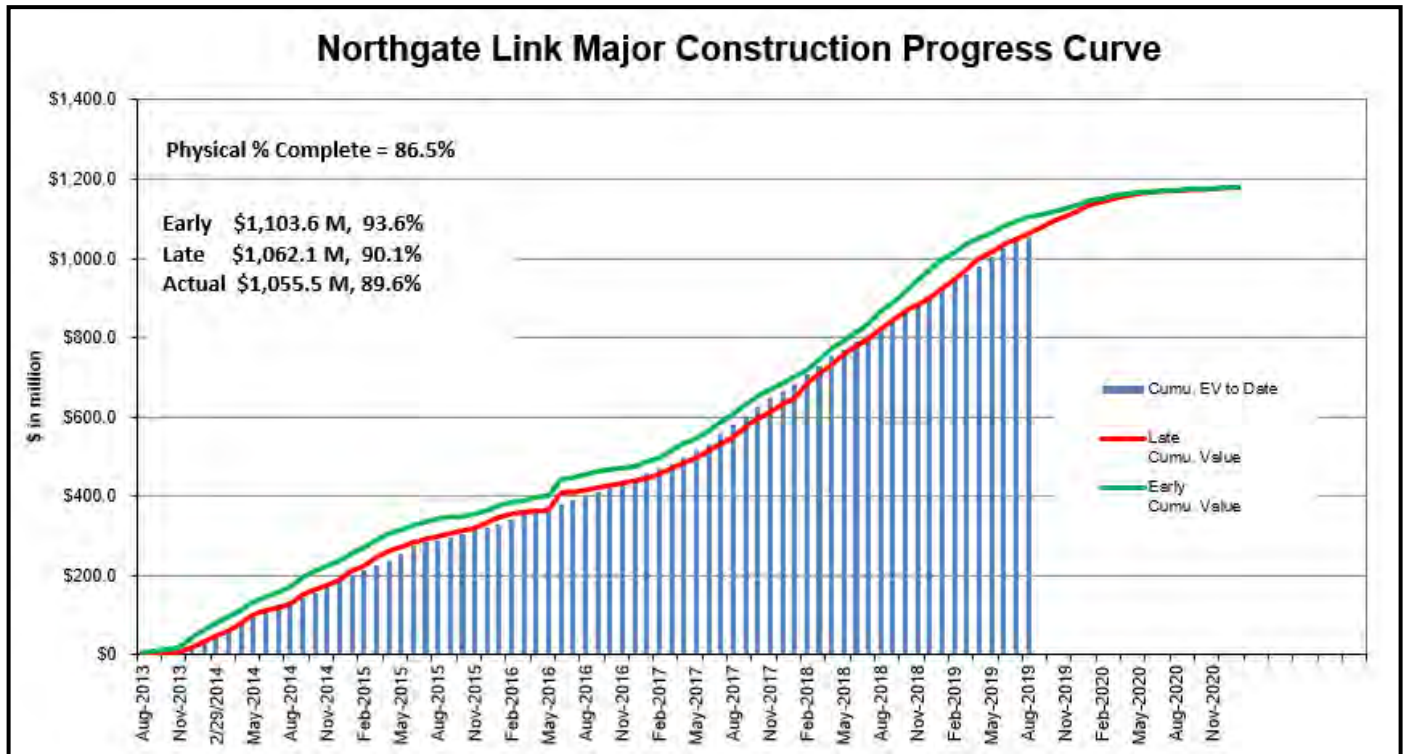
Schedule Performance Index

The early Schedule Performance Index (SPI) for the project is at 0.96 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 Extension Alignment:

Presented at Aljoia Retirement Center on Northgate Link Extension on Aug. 9th.

U District Station (N140):

Co-hosted a drop-in table at the UW Bookstore with SDOT for their street improvement project. (8/13). Helped give tour of the U District Station with #TakeTagWin promotion winners. (8/14). Distributed and published construction alert for Restoration of NE 43rd Street between Brooklyn Ave NE & University Way NE (8/21 – 9/4), and utility work along Brooklyn Ave NE (8/27).

Roosevelt Station (N150):

Distributed and published construction alert for early restoration work at Roosevelt Station near NE 67th Street (8/5 – 8/30), sidewalk improvements at NE 65th Street and 12th Ave NE (8/14 - 8/16), early morning concrete pour at RVS site (8/24), and extended sidewalk improvements at NE 65th Street and 12th Ave NE (8/14 – 8/26).

Northgate Station (N160):

Distributed construction alert to 3rd party entities, on the gov delivery listserv, and through the project update page for weekday closure of NE 100th street (8/5 – 8/9), early tree preparation work along I-5 near NE 80th to NE 85th street (8/12 – 8/30), weekend closure of 1st Ave NE between NE 95th Street – NE 100th Street (8/16 – 8/19), and weekday closure of NE 103rd and 1st Ave NE (8/26 – 8/31).

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	August 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	2	7	111
Days Away From Work Cases	0	0	6
Total Days Away From Work	0	0	397
First Aid Cases	4	22	174
Reported Near Mishaps	4	20	141
Average Number of Employees on Worksite	445	-	-
Total # of Hours (GC & Subs)	99,990	750,877	4,790,905
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	4.00	1.86	4.63
Lost Time Injury (LTI) Rate	0.00	0.00	0.25
Recordable National Average	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

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.

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.

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



N140 – Sprinkler Installation.

Contract N140—U District Station Finishes

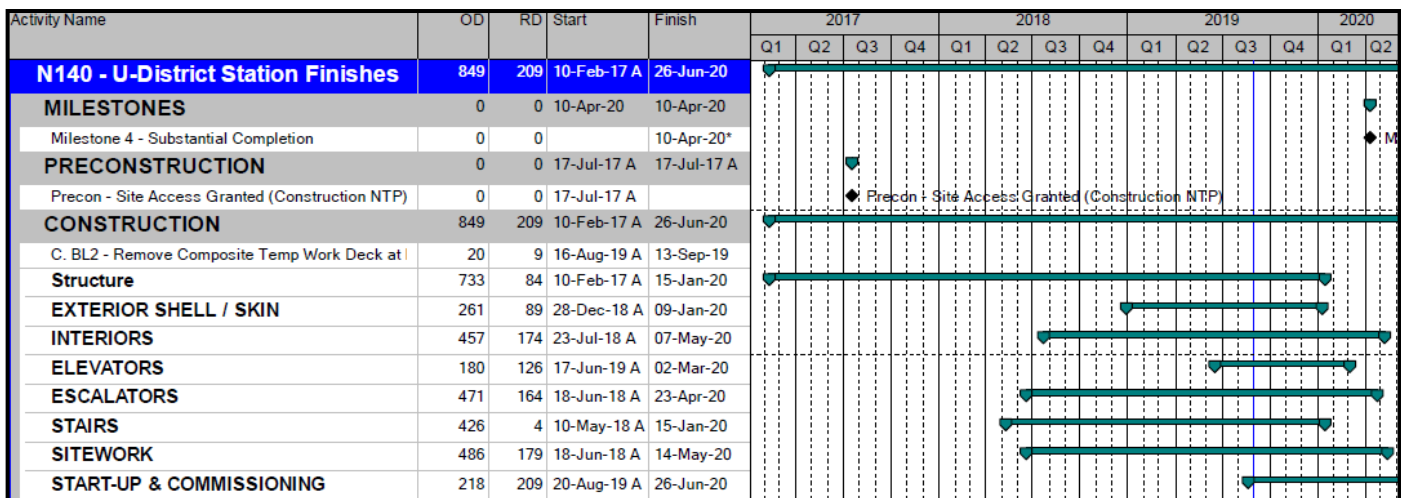
Current Progress

The N140 Contractor, Hoffman Construction, is continuing structural work above grade as well as mechanical, electrical, and plumbing (MEP) work below grade.

- Continued installation of elevator 2.
- Continued preparation for energization of switchgear
- Continued installation of Formed Metal Enclosure (FME) structural steel on Basement Level 2 (BL 2).
- Continued installation of metal ceiling panels on BL 2 ceiling.
- Continued installation of water main in Brooklyn St. alignment.

Schedule Summary

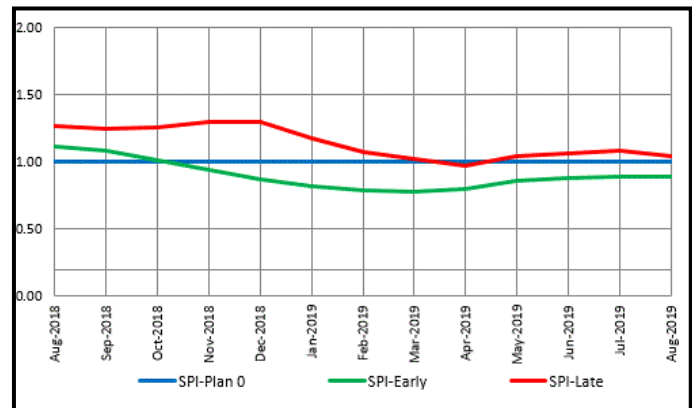
The August schedule update indicates work continuing to progress within the station. However, achievement of Permanent Power continued to slip with MVSS energization now forecast for mid-September. Slippage in the steel fabrication for Stair 8 is driving the new milestones out to mid-April. The August update also showed a late achievement of Milestone No. 4—Substantial Completion resulting the schedule being returned to Hoffman Construction for revision and resubmittal.



Schedule Performance Index

This period, the SPI early is at 0.89 and the SPI late is 1.05.

The early index indicates that the contractor has performed less work than planned compared to the “early finish” schedule. The late index indicates that the contractor has performed more work than planned compared to the “late finish” schedule.



Next Period's Activities

- Complete energization of switchgear.
- Continue installation of wall board on BL 1.
- Continue installation of elevator 2.
- Continue installation of FME on BL 2.
- Continue installation of perforated metal panels in circulation tube.
- Continue installation of resin wall panel on west wall below waler on BL 2.
- Continue installation of metal ceiling panels on platform level and ceiling and shroud walls of BL 2.
- Continue installation of stone veneer and cement wall panels at the headhouse.
- Continue support of Seattle Public Utilities (SPU) installation of water main laterals.
- Continue grading and compaction of base for NE 43rd.
- Continue installation of risers for Seattle City Light (SCL) vaults in alleyway.

Closely Monitored Issues

- Additional Stair: Structural steel fabrication commenced mid-month which was later than originally planned. The Contractor has submitted a Time Impact Analysis which shows a one month delay for MS 4A & MS 4B. The Construction Management (CM) team and the Contractor are reviewing options to mitigate the delay.
- Lid Level Stem Walls & 0053 N Plenum Insulation & Doors – The CM is reviewing the Contractor's proposal and will provide comments.
- Emergency Ventilation System (EVS) modifications at UW Station and Capitol Hill Station to support four car trains: Coordination meetings are being held for the next phase of testing planned for late September.
- Third Party Approvals: Issues related to obtaining approvals from third party agencies are impacting the schedule: SCL performed their portion of work for the vault riser repairs. Contractor is coordinating the work to form and pour the concrete risers. SPU has rejected Sound Transit's (ST) design proposal for the final inlet location at the south end of the ally. SPU has indicated work is to be per their details. ST is reviewing internally.

Cost Summary

Present Financial Status	Amount
N140 Contractor—Hoffman Construction	
Original Contract Value	\$ 159,836,688
Change Order Value	\$ 4,244,408
Current Contract Value	\$ 164,081,096
Total Actual Cost (Incurred to Date)	\$ 131,820,841
Financial Percent Complete	80.3%
Physical Percent Complete	80.0%
Authorized Contingency	\$ 7,991,834
Contingency Drawdown	\$ 4,244,408
Contingency Index	1.5



U District Station – Weather Air Barrier at North Headhouse

Contract N150—Roosevelt Station Finishes

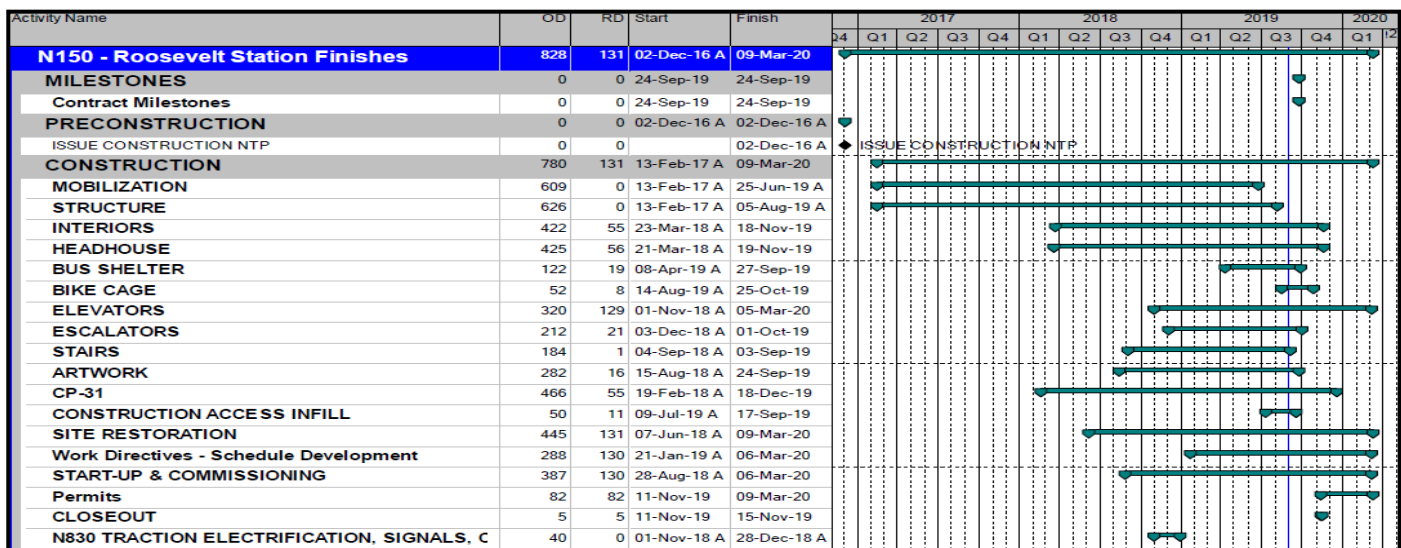
Current Progress

Hoffman Construction (HCC) continues to focus on interior mechanical and electrical installations, vertical transportation, and utility work. On-going work this period includes:

- Continued metal panel installation for escalators 1 & 2.
- Continued overhead electrical work at north and south head house entrances.
- Continued installation of Formed Metal Enclosure (FME) at platform level.
- Continued point-to-point terminations for Building Management System (BMS) equipment and level 1 commissioning throughout the station.
- Continue demolition of temporary power substation concrete pad.

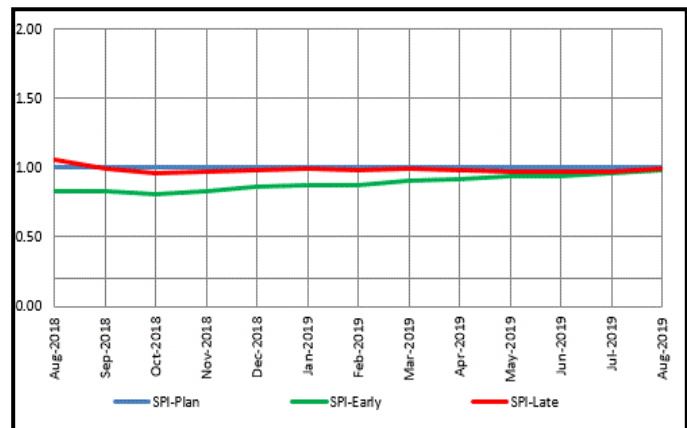
Schedule Summary

The N150 schedule update for August indicates an on time completion of 24-Sep-19 for Milestone 3—Substantial Completion. ST and Hoffman continue to evaluate the outstanding change notices for potential time impacts.



Schedule Performance Index

This period, the SPI early is at 0.90 and the SPI late is 1.0. The early index indicates that the contractor has performed less work than planned compared to the “early finish” schedule. The late index indicates that the contractor has performed more work than planned compared to the “late finish” schedule.



Next Period's Activities

- Continue ceiling installation at elevator 2 lobby area.
- Complete side metal panel installation for escalators 1 & 2.
- Complete soffit panel installation for escalators 3 & 4.
- Commence installation of downspouts at north and south head houses.
- Continue overhead electrical work at south head house entrance.
- Continue installation of FME at platform level.
- Complete installation of 2-hr ceiling at stair 3. Continue installation of electrical work at stair 3.
- Continue level 1 commissioning testing of electrical and mechanical equipment.
- Complete placement of sidewalk for plaza north and south of 66th Street.
- Complete removal of meter for water service on 67th Street feeding the tunnels.

Closely Monitored Issues

- Hoffman submitted all test data and information for re-submittal and closure of the Nonconformance Report (NCR) related to Emergency Fan (EMFN-02) fan repair. Submittal is with contractor to provide additional test information for closure of NCR.
- Switchgear Issue: Designers are working on modifications to drawings to add components to switchgear (PTs) which will correctly monitor the power in each transformer as required by code. A meeting is scheduled next month to meet with the Contractor and Designers.
- Designers continues to work on completing outstanding change notices. Late submission continues to impact the project by increasing costs of completing work due to late receipt of information. The Construction Management team continues to monitor project costs and design responses to ensure only required changes are being implemented.
- Contractor is working to complete balance of commissioning forms. Currently the 36% of all commissioning forms are completed and 61% of the IV forms are completed. Level 2 commissioning activities begin in mid-September.

Cost Summary

Present Financial Status	Amount
N150 Contractor - Hoffman Construction	
Original Contract Value	\$ 152,291,184
Change Order Value	\$ 10,088,711
Current Contract Value	\$ 162,379,895
Total Actual Cost (Incurred to Date)	\$ 152,071,000
Financial Percent Complete	93.7%
Physical Percent Complete	95.0%
Authorized Contingency	\$ 14,614,559
Contingency Drawdown	\$ 10,088,711
Contingency Index	1.4



Roosevelt Station — N. Entry Lobby Building Blocks Artwork

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

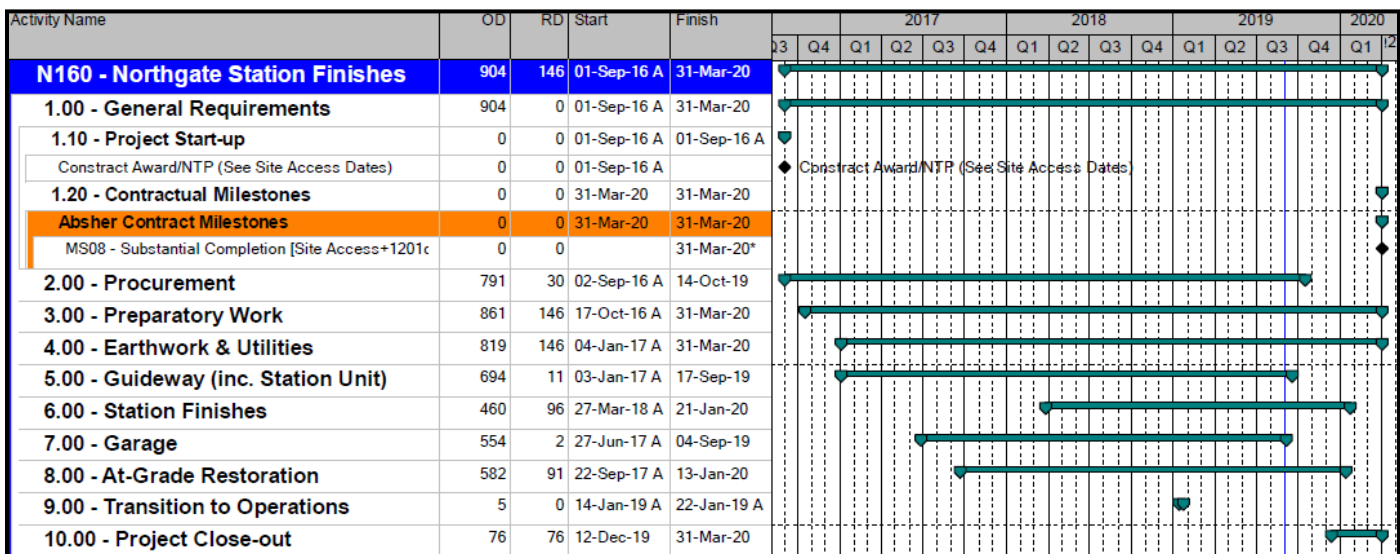
Current Progress

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

- Absher placed concrete for Stair 4 walls. Western Tile continued tile installation in Zone 2 at platform. Mission glass continued installing curtain wall glass along Escalator 2/3.
- Elcon worked on roof mounted transformers, installing conduits and junction boxes from the roof up to the Guideway girders at North Ancillary Building. Reliance continued installation of fire sprinklers and piping.
- KLB continued subgrade prep for curb, gutter, and sidewalk, and Belarde continued to place sidewalks at South Plaza.

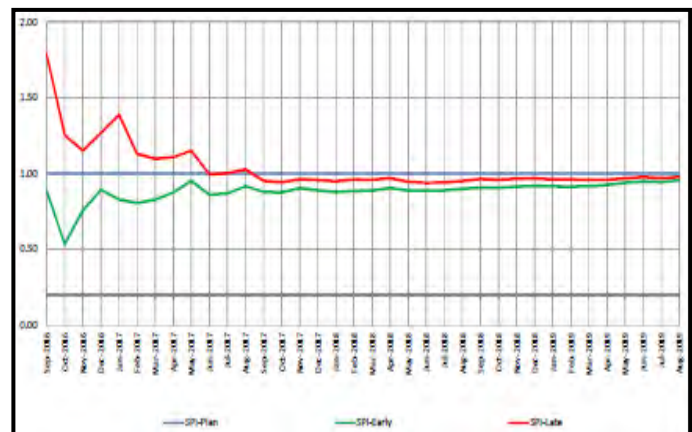
Schedule Summary

The project schedule for August moves the substantial completion date back to March 31, 2020, with 18-days of negative float. Station Permanent Power is still scheduled for Nov. 20th. The critical path for the project remains in the south ancillary building.



Schedule Performance Index

This period, the SPI early is 0.95 (up from 0.94 last period) and the SPI late is at 0.98 (up from 0.97 last period), indicating an upward trend 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 0.05 of its current trend over the last year.



Next Period's Activities

- Guideway Substructure/Superstructure: Under-guideway work only
- Station: Continue installing louvers at Stair 4 walls. Placing curb, gutter, and sidewalks along 1st Ave. Continue escalator installation. Continue plumbing, HVAC, and electrical work. Tile installation ongoing at platform.
- Maple Leaf Portal North and South: Installation of custom acoustic panels. Electrical lighting and conduit installation ongoing. Continue waterline extension.
- South Plaza: Continue installation of light pole foundations, vaults, ductbanks, and electrical equipment. Continue placing planter footings and begin landscaping.
- Utility & Drainage Work: Begin installation of logs, rockery, and outfall protection at South Watercourse. Absher to install bio-retention overflow to nearest MH west of parking garage, pending design routing.

Closely Monitored Issues

- Seismic Expansion Joints: RE has requested design team update RFI 1619 map of seismic vs expansion joints. This is the foundation of issues with fire suppression shop drawings, RFI 1785 Elevator 2/3 Utility Chase, and the seismic joint proposed in RFI 1863. Meeting with EOR is now scheduled for 9/4/19.
- MLP South: Plan to relocate SCL guy wires to permanent helical anchors outside the ST ROW is in progress. RFI request to modify screen wall footing (to prevent undermining SCL pole) has been approved with modifications.
- Garage: Turnover to Operations: Date of final acceptance June 15th, still pending spare parts and lock cylinder corrections. Warranty work has been necessary on Uninterrupted Power Supply (UPS). Corrections are still in progress to provide secondary security to prevent access to the elevator hoistway.

Cost Summary

Present Financial Status	Amount
N160 Contractor - Absher Construction	
Original Contract Value	\$ 174,000,000
Change Order Value	\$ 10,264,453
Current Contract Value	\$ 184,264,453
Total Actual Cost (Incurred to Date)	\$ 161,217,417
Financial Percent Complete	87.5%
Physical Percent Complete	83.9%
Authorized Contingency	\$ 17,400,000
Contingency Drawdown	\$ 10,264,453
Contingency Index	1.4



Installation of glass screen wall frames at station entrance.

Contract N180 – Trackwork UWS to Northgate Station

Current Progress

The N180 Contractor, Stacy and Witbeck, Inc. (SWI), continues to advance towards Substantial Completion with recent work activities including the following:

- Cleaning tunnels and cross passages in preparation for punch list in Work Areas 1 through 5. Final alignment, torquing and clipping for track in Work Areas 3-5.
- Working to complete thermite welds and Insulating Joints in Work Area 3-7
- Working to complete construction of the double crossover in Work Area 7, track concrete placement for all work areas, and the ballasted Maintenance of Way (MOW) track including installation of the rail seal and asphalt paving.

Schedule Summary

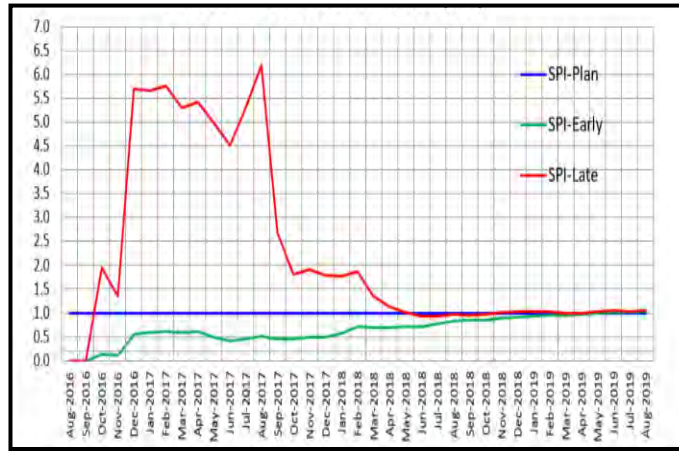
The N180 schedule for August continues to forecast an on-time completion of work. Stacy-Witbeck has achieved Milestones 7a, 7b, and 7c, completing the trackwork in the tunnels. Milestone 7d, the final for the project is expected to be October.

Activity Name	OD	RD	Start	Finish	Schedule															
					2016	2017				2018				2019						
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
N180 - Northgate Link Extension Trackwork - 21	797	39	25-Aug-16 A	27-Oct-19																
Milestones	0	0	27-Oct-19	27-Oct-19																
Construction	792	34	25-Aug-16 A	18-Oct-19																
Mobilization	683	34	25-Aug-16 A	18-Oct-19																
Submittals	1122	15	25-Aug-16 A	21-Sep-19																
Procurement	553	10	07-Oct-16 A	16-Sep-19																
Work Area 1 (N06 - UWS to UDS Tunnels)	230	0	13-Nov-17 A	09-Oct-18 A																
Work Area 2.1 and 2.2 (N07 - U-District Station)	321	0	15-Dec-17 A	27-Feb-19 A																
Work Area 3 (N08 - UDS to RVS Tunnels)	222	0	05-Feb-18 A	18-Feb-19 A																
Work Area 4 (N09 - Roosevelt Station)	186	0	19-Mar-18 A	11-Jan-19 A																
Work Area 5 (N10 - RVS to MLP Tunnels)	337	0	28-Feb-18 A	26-Jun-19 A																
Work Area 6 (MLP and At Grade Guideway)	367	10	19-Mar-18 A	16-Sep-19																
Work Area 7 (Elevated Guideway South of NGS)	185	16	12-Dec-18 A	24-Sep-19																
Work Area 7.1 (N11 - Northgate Station)	89	0	07-Jan-19 A	29-May-19 A																
Work Area 7.2 (Elevated Guideway North of NGS)	176	14	08-Jan-19 A	20-Sep-19																
Final Trackwork	148	19	15-Jan-19 A	27-Sep-19																

Schedule Performance Index

This period, the SPI early is at 1.03 and the SPI late is at 1.04. The expected performance is between early and late.

The work is progressing fast and the contractor has caught up and slightly exceeded the baselined schedule, meeting their goals for early work such as material procurement and fabrications. Work performed in the field has met or exceeded forecasts.



Next Period's Activities

- SWI to issue Milestone completion letters for 7a, 7b and 7c.
- Continue with reviewing and processing submittals and Requests for Information (RFIs).
- Crews will continue to de-stress rail for Work Areas 7
- Punchlist and final line-and-grade to continue in Work Areas 3-7; commence track-to-earth testing in WA 7
- Test Insulated Joints in all work areas and then install closure welds.
- Begin rail grinding starting at the north end and work south.

Closely Monitored Issues

- Final cleaning and rail final line and grade are the critical path to tunnel handover.
The as-built/rail final line and grade activities have been slow due to the work on the floating slabs. This work is now finished and production for these activities has improved significantly now that the work has moved to the direct fixation track sections.
- Communication and coordination between contracts is on-going and critical to progress in these last few weeks leading to Substantial Completion.

Summary of Work Areas

Work Area 1 - University Washington Station (UWS) to University District Station (UDS)

Work Area 2 - UDS Platform Level

Work Area 3 - UDS to Roosevelt Station (RVS)

Work Area 4 - RVS Platform Level

Work Area 5 - RVS to Maple leaf Portal (MLP)

Work Area 6 - MLP to Mechanically Stabilized Earth (MSE) wall

Work Area 7 - Northgate Station (NGS)

Cost Summary

Present Financial Status	Amount
N180 Contractor - Stacy and Witbeck, Inc.	
Original Contract Value	\$ 71,455,950
Change Order Value	\$ 3,656,021
Current Contract Value	\$ 75,111,971
Total Actual Cost (Incurred to Date)	\$ 72,321,999
% Authorized Billed-to-Date	96.3%
Physical Percent Complete	96.6%
Authorized Contingency	\$ 10,718,393
Contingency Drawdown	\$ 3,656,021
Contingency Index	2.8



Crews working on walkway in WA 7.2

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

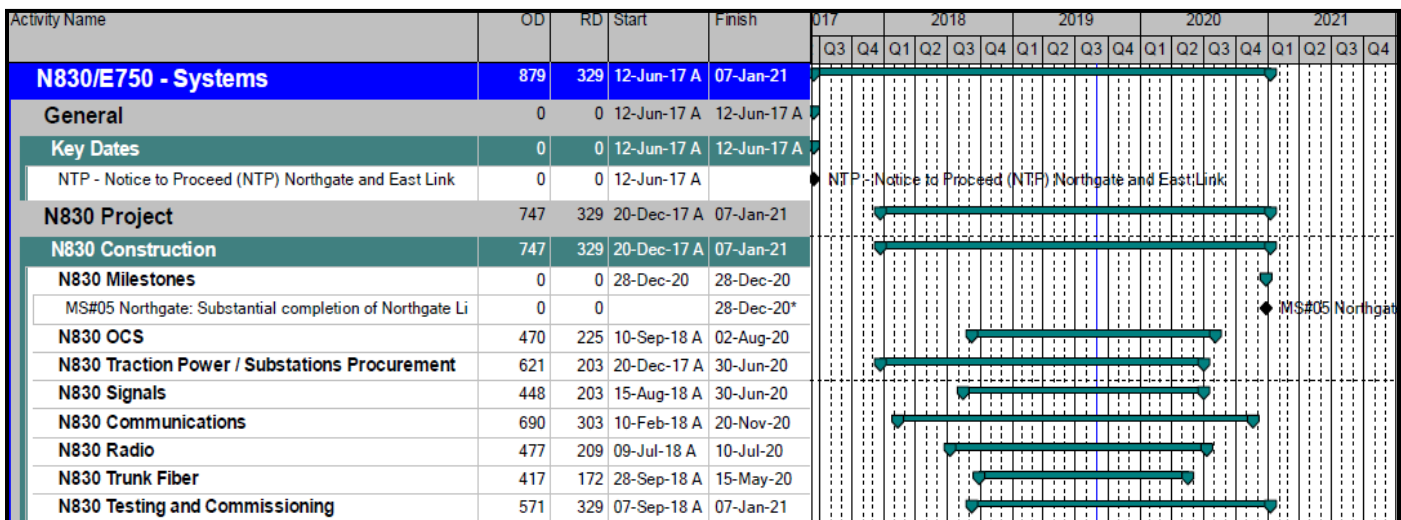
Current Progress

The N830 Contractor, Mass Electric Construction Co. (MEC), continues 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.
- Installing reverse running signals and testing at International District Station (IDS) / Downtown Seattle Transit Tunnel (DSTT).

Schedule Summary

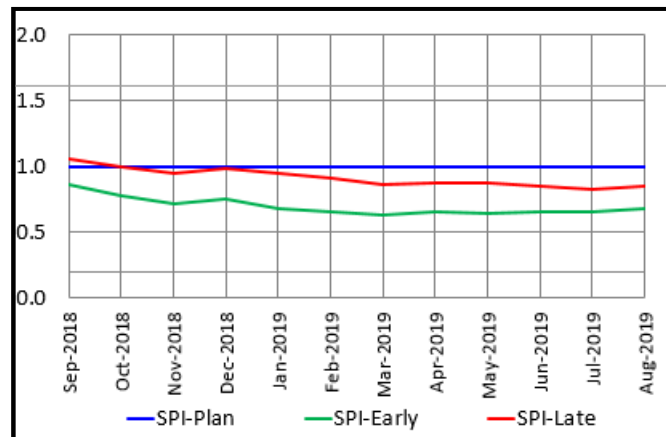
An updated N830 schedule for August forecasts an on-time completion of December 2020. The critical path remains in the signals fabrication and installation. This is followed by testing of the equipment in the field and finally, systems integrated testing. MEC will assume control of the Northgate Tunnels in early September to begin the OCS installation. This work will begin in earnest upon completion of the rail grinding by the N180 contractor.



Schedule Performance Index

This period, SPI early is 0.68 and SPI late is 0.85. The early/late index indicates the contractor continues to perform behind the plan compared to the baseline schedule.

The SPI is lagging as a result of delays in progressing engineering submittals and delivery of COM/Signal equipment. Contractor continues to work closely with subcontractors to help strengthen the schedule and improve performance.



Next Period's Activities

- Continue development and reviews of engineering submittals covering all disciplines: Traction Power Substations , Overhead Catenary Systems, Train Control Signal Systems, and Communications.
- Ongoing coordination meetings held between Systems and Civil Contractors for interface and access points for respective contracts.
- Two Milestones scheduled for completion in September: MS 2 Commissioning of MVSS at UDS and MS 12. SCADA EVS ready for Level 3 Testing. Additionally, Contractor will have access to Northgate tunnels and Station Systems rooms.
- Ongoing installation of the communication power panels and conduit installation for various field-end devices at UDS and RVS Stations.
- Ongoing installation of TPSS equipment and power conduits at RVS Station.
- Ongoing Offsite Factory Acceptance Testing (FAT) for Signal and COM equipment.

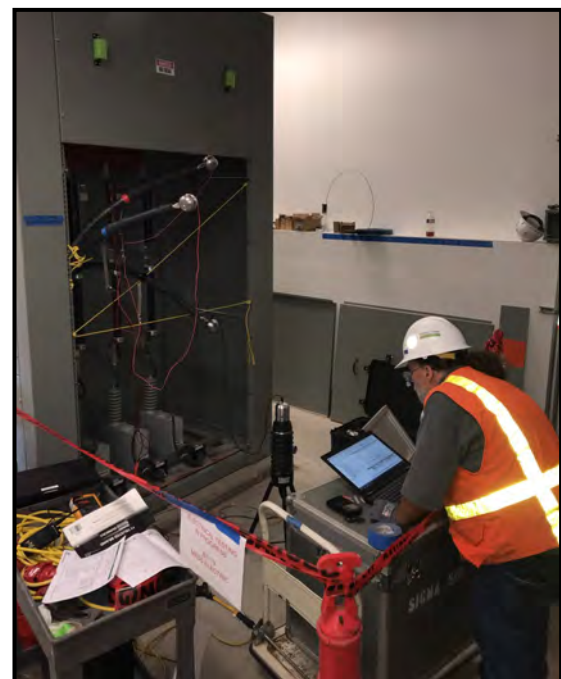
Closely Monitored Issues

- ST and CMC ongoing coordination for the IDS cutover change from full shutdown to single tracking.
- ST 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, ST, CMC, and Contractor held joint workshops to expedite the review process without impacting the quality of the review.

Cost Summary

Present Financial Status	Amount
N830 Contractor - Mass Electric Construction Co.	
Original Contract Value	\$104,660,444
Change Order Value	\$853,785
Current Contract Value	\$105,514,228
Total Actual Cost (Incurred to Date)	\$40,087,130
Financial Percent Complete	38%
Percent Complete	46%
Authorized Contingency	\$5,233,022
Contingency Drawdown	\$853,785
Contingency Index	2.8

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



Testing/Terminating the Cable to MVSS at UDS, Aug 1, 2019

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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 Final Design

Budget \$2.772 Billion (Baseline May 2018)

Schedule Revenue Service: July 2024



Map of Lynnwood Link Extension Alignment.

Key Project Activities

- Received Sound Transit (ST) Board approval to transfer the project unallocated contingency to the project construction budget.
- Received ST Board approval to modify the active Heavy Civil GC/CM contracts (L200 and L300), establishing the Total Construction Cost for each.
- Continued site/civil construction for the interim temporary parking lot at the former Roger’s Market site, with projected activation in October.
- Continued building abatement and demolition within the L200 and L300 package limits.
- Continued clearing, grading, and tree removals within the L200 and L300 limits, including site water management systems and BMPs.
- Continued construction of Phase 1 area mitigation work at the Ronald Bog site in Shoreline.

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 August 2019, \$19.3 M was incurred. The major project expenditures were for civil early work construction, property acquisition, and advancing civil & systems final design.

The remaining expenditures were for 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	\$98.2	\$33.8	\$33.5	\$98.2	\$0.0
Preliminary Engineering	\$39.1	\$39.1	\$39.1	\$39.1	\$39.1	\$0.0
Final Design	\$164.2	\$164.2	\$140.1	\$109.0	\$164.2	\$0.0
Construction Services	\$128.4	\$128.4	\$92.3	\$25.1	\$128.4	\$0.0
3rd Party Agreements	\$14.6	\$14.6	\$10.6	\$7.4	\$14.6	\$0.0
Construction	\$1,921.4	\$2,091.6	\$179.0	\$68.1	\$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	\$159.9	\$140.3	\$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	\$654.6	\$422.4	\$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	\$0.0	\$0.0	\$712.9	\$289.2
20 Stations	\$333.8	\$333.8	\$0.0	\$0.0	\$431.4	-\$97.6
30 Support Facilities	\$2.0	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
40 Sitework & Special Conditions	\$421.1	\$426.2	\$169.5	\$67.1	\$642.7	-\$216.5
50 Systems	\$244.4	\$244.4	\$0.0	\$0.0	\$219.5	\$24.9
Construction Subtotal (10 - 50)	\$1,793.0	\$2,008.5	\$169.5	\$67.1	\$2,008.5	\$0.0
60 Row, Land	\$235.7	\$235.7	\$159.9	\$140.3	\$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	\$325.2	\$215.0	\$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	\$654.6	\$422.4	\$2,771.6	\$0.0

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.

During this period, the board approved a reallocation of \$215.8 M in UAC. This contingency was transferred to the L200 and L300 contract line-item budgets.

AC decreased by \$16.2 M, including \$0.9 M for final design change orders and \$15.3 M for construction contract amendments.

Contingency Status

Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$247.9	8.9%	\$15.2	0.6%
Allocated Contingency	\$197.6	7.1%	\$182.1	7.8%
Unallocated Contingency	\$292.2	10.5%	\$75.4	3.2%
Total:	\$737.7	26.6%	\$272.7	11.6%

Contingency by Type

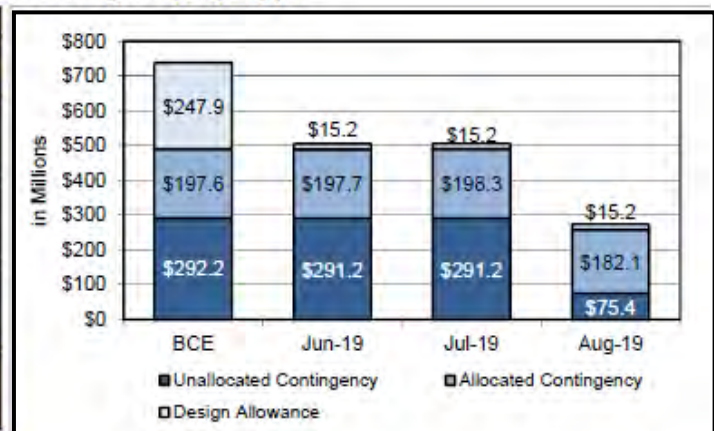
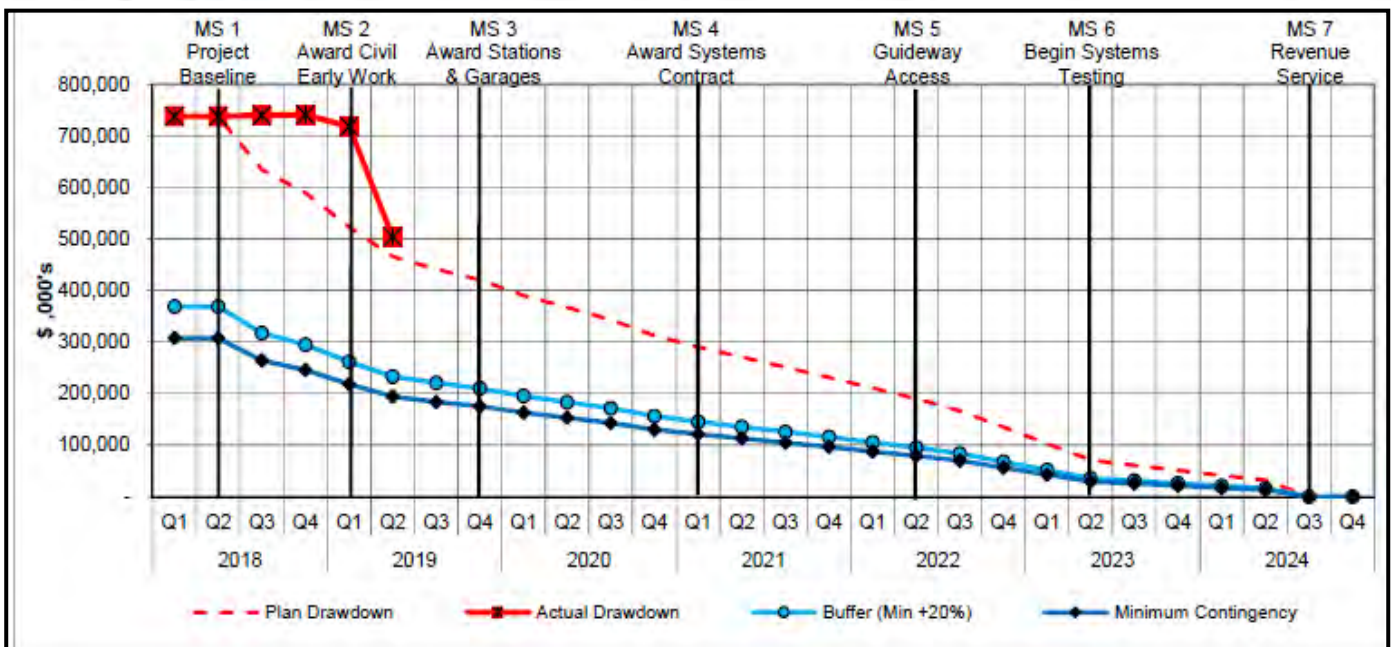


Table figures are shown in millions.

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
369	362	328	267	350	320
<i>* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.</i>					

Community Outreach

In August, the Lynnwood Link Community Outreach team:

- Continued performing walk-throughs with property owners where temporary construction easements are being activated as well as pre-construction documentation with contractors.
- Communicated the closure of a section of parking and relocation to temporary parking at the Lynnwood Transit Center.
- Informed the public about upcoming work activities, including noise wall removal, night work on and along Interstate-5, and the closure of a freeway bus stop.
- Attended community events in Seattle and Shoreline.

Sound Transit Board Actions

Board Action	Description	Date
R2019-24	Amending the Adopted 2019 Budget to transfer \$170,162,000 from the Project Contingency phase to the Construction phase, while maintaining the baseline budget of \$2,771,622,000.	8/22/2019
M2019-92	Authorizes the CEO to execute a contract modification with Stacy and Witbeck-Kiewit-Hoffman (SKH) for the L200 Northgate Station to NE 200th Street segment in the amount of \$789,443,556, for a new authorized contract amount not to exceed \$883,761,156.	8/22/2019
M2019-93	Authorizes the CEO to execute a contract modification with Skanska Constructors L300 for the L300 NE 200th Street to Lynnwood Transit Center segment in the amount of \$817,019,353, for a new authorized contract amount not to exceed \$877,888,048.	8/22/2019

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Construction Safety

Data/ Measure	August 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	0	2	2
Reported Near Mishaps	1	3	3
Average Number of Employees on Worksite	146	-	-
Total # of Hours (GC & Subs)	39,390	67,378	67,378
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	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

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.

Civil Final Design Overview

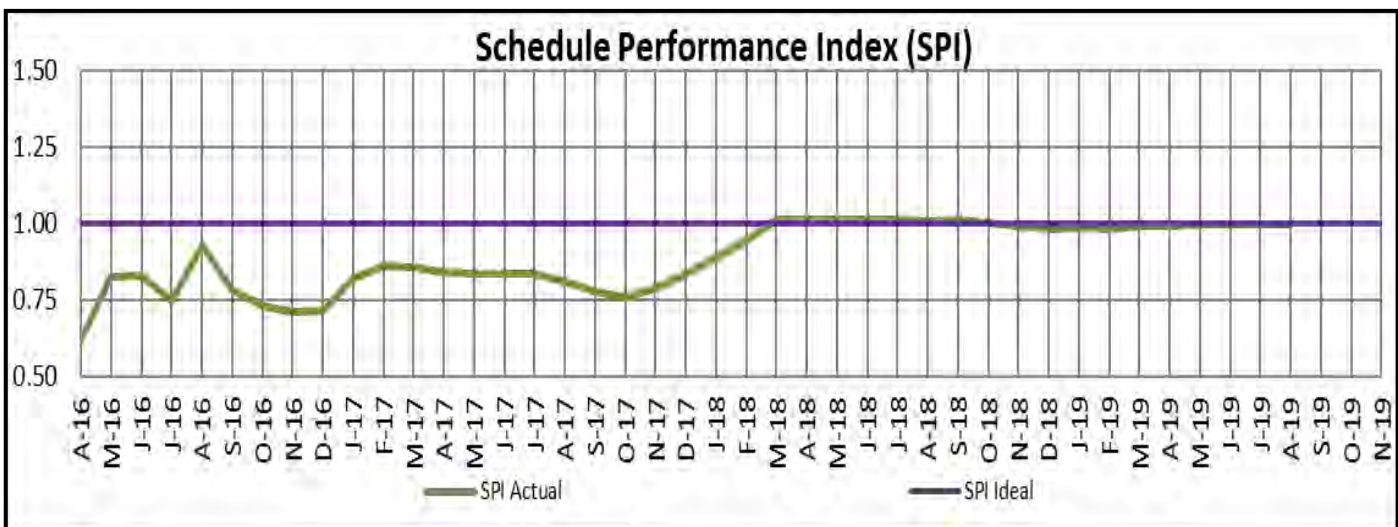
Sound Transit executed a professional services contract with HNTB Jacobs in April 2016 to perform civil final design along the entire Lynnwood Link alignment. Design services include preparation of comprehensive civil contract documents for construction, design coordination and cooperation with the GC/CM 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

- Submitted 100% design package for the 185th garage.
- Submitted Change Notice 006 which incorporates cost savings ideas for L200 and L300.
- Advanced cost savings idea to remove floating slab and reduce noise wall & ballast mat track section limits in L200.

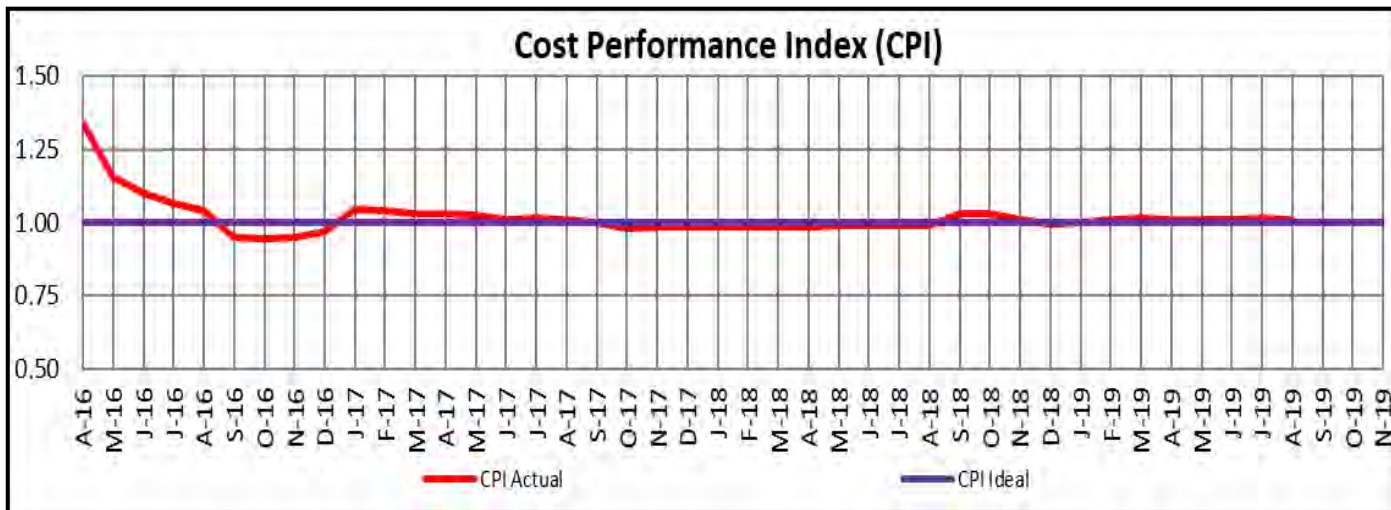
Schedule Performance Index

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



Cost Performance Index

\$98.3 M of the total contract amount, 97%, has been spent through August 2019. The civil final design percent complete is 98%, with an earned value of \$99.3 M. The cumulative Cost Performance Index (CPI) through August is 1.01 indicating that actual costs are close to the earned value of work performed.



Cost Summary

Contract	Cumulative To-date
Amount Invoiced	\$98.3 M
% Spent	97%
Earned Value	\$99.3M
% Complete	98%
SPI	1.00
CPI	1.01



Local residents provide input for station art at the Mountlake Terrace Tour de Terrace event.

Systems Final Design Overview

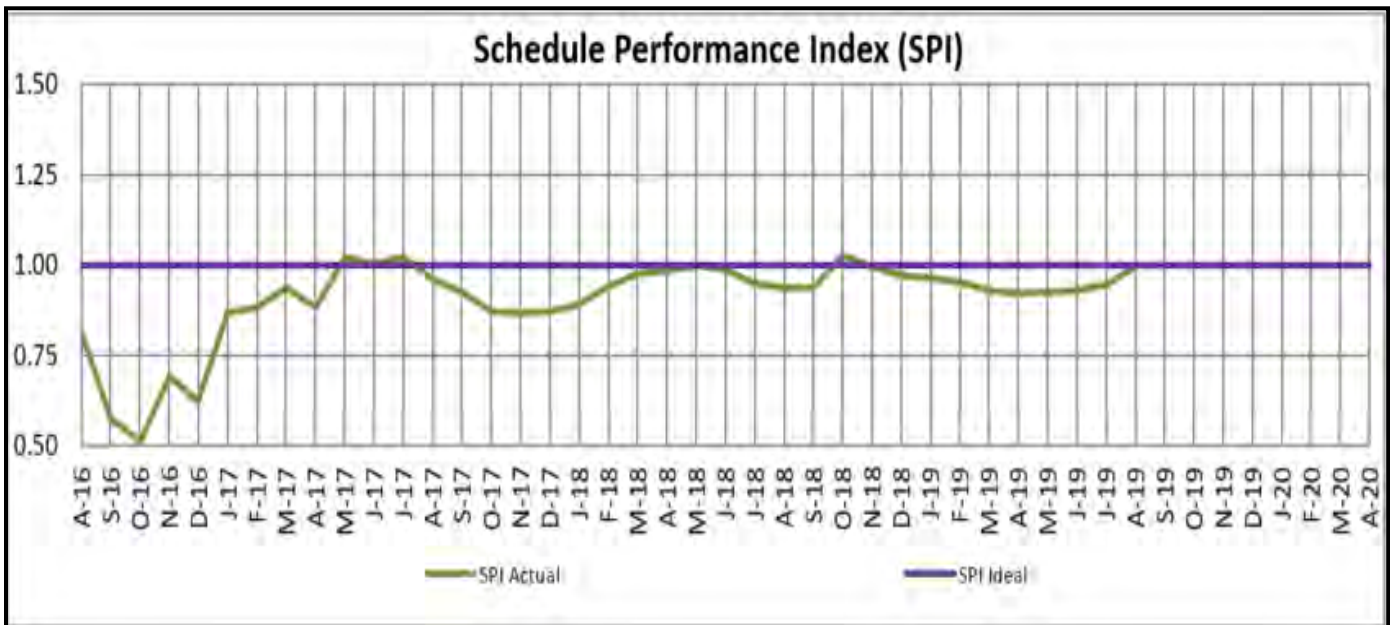
Sound Transit executed a professional services contract with LTK Engineering in July 2016 to perform systems final design along the entire Lynnwood Link alignment. Design services include preparation of comprehensive contract documents for construction, design coordination and cooperation with the civil 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

- Continued to advance toward completion of 100% system design, including traction electrification, system wide electrical, signals, and communications.
- Supported 185th Garage 100% quality assurance process
- Finalized responses to all remaining 90% design comments.

Schedule Performance Index

The planned value was reforecast based on the revised budget. The cumulative Schedule Performance Index (SPI) trends at 0.99 through August 2019, which means that cumulative amount of work accomplished is close to the overall value of work planned.



Link Light Rail Lynnwood Link Extension



Cost Performance Index

\$9.3 M of the total contract amount, 93.5%, has been spent through August 2019. The systems final design percent complete is 92.2%, with an earned value of \$9.1 M. The cumulative Cost Performance Index (CPI) is 0.99 indicating that actual costs are almost in line with the earned value of the work performed.



Cost Summary

Contract	Cumulative To-date
Amount Invoiced	\$9.3 M
% Spent	93.5%
Earned Value	\$9.1 M
% Complete	92.2%
SPI	0.99
CPI	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 ST 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 (Northgate to NE 115th St): Finished clearing at Northgate pond. Basin A treatment system.
- WZ-3 (NE 130th St to NE 150th St): Continued structures access, started setup treatment system in Basin B, installed temporary lighting.
- WZ-5 (NE 150th to NE 155th): Basin C pipe welded, completed ground confirmation borings.
- WZ-7 (NE 155th St to NE 174th St): Completed residential demolition, installed pond liner.
- WZ-11 (Shoreline 200th): Finished pole foundations.

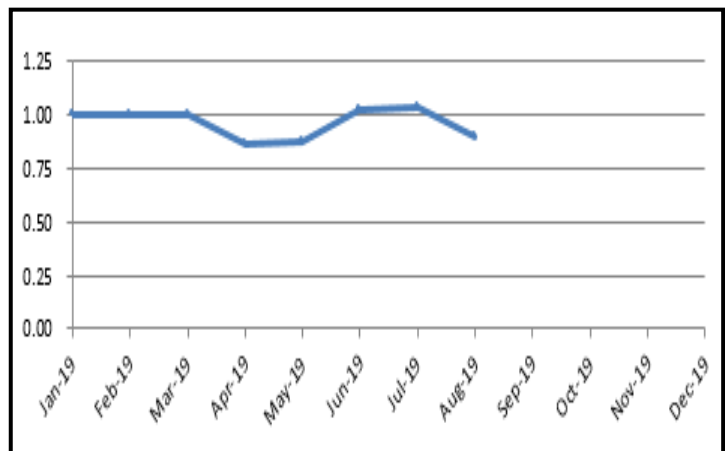
Schedule Summary

The August L200 schedule update forecasts late completion of early work. The driving activities are the completion of construction work plans and sanitary sewers for Ronald Wastewater District. Remaining major work was also changed this period, most notably with trackwork durations increased by 50% for some activities.

Activity Name	Start	Finish	2019 Float	2020				2021				
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
L200 Construction Schedule	08-Dec-18 A	25-Feb-24	-38									
Milestones	08-Jan-19 A	25-Feb-24	-38									
Right-of-Way	21-Mar-19 A	20-Feb-20	1167									
Temporary Construction Easement/Access	01-Sep-19	20-Feb-20	1167									
Wetland Impact	23-Mar-19 A	25-Jan-22	309									
Permits & Agreements	08-Jan-19 A	04-Jan-20	464									
Submittals	04-Jan-19 A	23-Sep-22	131									
Procurement	08-Jan-19 A	07-Mar-21	714									
Mobilization/Demobilization	07-Jan-19 A	14-Apr-23	175									
Demolition	21-May-19 A	07-Feb-20	-22									
Civil	23-Mar-19 A	12-Dec-23	8									
Utilities	15-Apr-19 A	25-May-23	146									
Maintenance of Traffic	19-Jul-19 A	12-Dec-23	-177									
TESC & Site Water Discharge	29-Mar-19 A	12-Dec-23	-177									
Dewatering	01-Aug-19	20-May-20	841									
Geotechnical	02-Jan-20	26-Jun-20	-120									
Structures	02-Dec-19	28-Sep-22	313									
Track Work	01-Aug-19	15-Nov-22	255									
Systems	10-Jun-20	07-Jul-22	127									
Station Work	18-Dec-20	30-Mar-23	-44									
Garage Work	23-Apr-20	14-Jun-22	82									
Punchlist & Commissioning	24-Aug-20	19-Sep-23	-98									
Schedule of Values	08-Dec-18 A	30-Jun-20	-122									
Deleted Activities	01-Aug-19	01-Oct-19	1075									

Schedule Performance Index

This period the cumulative SPI is at 0.89, which means that cumulative amount of work accomplished is lower than the value of work planned.



Link Light Rail Lynnwood Link Extension

Next Period Activities

- WZ-1 (Northgate to NE 115th St): Weld Basin A piping, structures access A4-A9.
- WZ-3 (NE 130th St to NE 150th St): Install temp lighting and flyer stop barriers. Setup Basin B treatment.
- WZ-5 (NE 150th to NE 155th): Complete residential demolition.
- WZ-7 (NE 155th St to NE 174th St): Install 8" water main, finish tree removal.
- WZ-9 (NE 176th St to north of NE 185th St): Continue residential abatement and demolition.
- WZ-11 (Shoreline 200th): Install steel pole #94 foundation.
- Excavation at Ronald Bog.

Closely Monitored Issues:

- Monitoring timing of receipt of all permits necessary for early work construction.
- Evaluating cost impact of plan set revision between the early work pricing and Issue for Construction (IFC) sets.
- Coordination of traffic control with I-5 paving project.
- Coordination of construction impacts to bicycle/pedestrian path between 1st Ave NE and NE 116th St.

Cost Summary

Financial Status	Amount
L200 Contractor - SKH	
Original Contract Value	\$88,147,258
Change Order Value	\$500,000
Current Contract Value	\$88,647,258
Total Actual Cost (Incurred to Date)	\$37,088,276
Financial Percent Complete	41.8%
Authorized Contingency	\$6,170,342
Contingency Drawdown	\$500,000
Contingency Index	5.1



Seattle City Light transmission pole foundation.

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 for early work scope in February 2019. In this period Skanska performed the following work in work areas (WA):

- WA 4: Clear and grub & bird surveys continue.
- WA 6: Working on staking out, cutting and grading access roads; bird surveys continue.
- WA 8: Completed site grading, working on paving for site work.
- WA 9 & 10: Bird surveys ongoing, clearing & grubbing, working on setting up access roads, installing storm water collection system.
- WA 11: Installing quarry rocks or aggregate base over wetland 6.

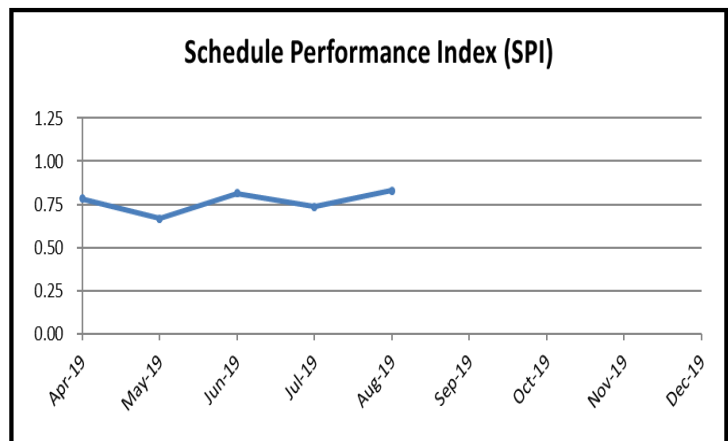
Schedule Summary

Skanska’s August schedule update shows a late completion of early work driven primarily by out-of-sequence progress which appears to result from access issues in Mountlake Terrace. Sound Transit is currently evaluating the schedule update.

Activity Name	Start	Finish	Total Float	2020				2021			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
L300 Construction Schedule	25-Sep-18 A	28-Sep-23	320								
L300 Construction Schedule			0								
MILESTONES											
ROW ACQUISITIONS (PARCELS & TCE'S)	05-Jun-19 A	02-Oct-20	735								
PERMITTING	01-Feb-19 A	02-Oct-19	214								
SUB-CONTRACTS	30-Oct-19	31-Dec-19	417								
SUBMITTALS	12-Apr-19 A	08-Jun-20	635								
MATERIAL PROCUREMENT	19-Aug-19 A	04-Apr-21	469								
EARLY WORK	12-Apr-19 A	21-Aug-20	877								
3RD PARTY UTILITIES	01-Sep-19	11-May-20	136								
CONSTRUCTION	02-Jan-20	28-Sep-23	310								
CHANGE ORDERS			0								

Schedule Performance Index

This period the cumulative SPI is at 0.83, which means that cumulative amount of work accomplished is lower than the value of work planned.



Next Period Activities

- Prioritization of upcoming demolition activities.
- Perform asbestos abatement at demolition properties in advance of demolition work.
- Continuing clear and grub activities and installation of BMPs (silt fence) along the project corridor.
- Begin saw-cutting activities along 46th Avenue West.
- Install temporary striping on I-5 during night work activities.
- Start laying asphalt with curb work to follow at Rogers Market.

Closely Monitored Issues:

- Monitoring timing of receipt of all land use approvals, permits, and property rights necessary for early work construction.
- Evaluating cost impact of plan revisions between the early work pricing and Issue for Construction (IFC) sets.
- Coordination with WSDOT's northbound I-5 resurfacing project near the King-Snohomish county line.

Cost Summary

Financial Status	Amount
L300 Contractor - Skanska Constructors	
Original Contract Value	\$ 56,886,631
Change Order Value	\$ 500,000
Current Contract Value	\$ 57,386,631
Total Actual Cost (Incurred to Date)	\$ 18,252,821
Financial Percent Complete	31.8%
Authorized Contingency	\$ 3,982,064
Contingency Drawdown	\$ 500,000
Contingency Index	2.5



Work Area 6—Regrading the slope.



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

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** – As-built plans review
- **Mercer Island Tunnel** – Complete punch list items
- **Mount Baker Ridge Tunnel** – Complete punch list items
- **SCADA** – Ongoing 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 continues to slip; granting of Substantial Completion (retroactive to June 2017) is anticipated for 4th Quarter 2019, due to the following:

- Challenges continue with final commissioning of the Fire/Life/Safety Systems, including incomplete Building Information Modeling (BIM) As-Built data, incomplete or missing Operations & Maintenance manuals, and missing test reports;
- Commissioning Agent Certification of all tests; and
- Final resolution of acceptance criteria.



Link Light Rail

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

Project Cost Summary

The following tables summarize the cost information for the I-90 Two-way Transit and HOV Operations (Stage 3) project. WSDOT has caught up on their invoice submittals, allowing resolution to past over-accruals and a more realistic expenditure forecast. Project expenditures for July were \$257.4K. 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	\$173.4	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$205.3	\$195.5	\$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	\$173.4	\$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	\$195.5	\$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 the total ST-controlled allocated contingencies. Reduction of the remaining work budgeted during the month of July included payments for identified scope gap work and WSDOT staff & their consultants; this resulted in a net 0.3% increase from last month 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%	\$2.2	7.3%
Unallocated Contingency	\$18.7	8.3%	\$8.7	28.7%
Total	\$35.7	15.8%	\$10.9	36.0%

Note: Table in millions.

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 approved by Sound Transit as part of a commercial issues resolution change order, which is pending final authorization.

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	Q4/2019

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 Center (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

Seattle to South Bellevue

- **Floating Bridge Retrofit (E130):** Cathodic protection continues; ongoing installation of direct fixation track and guide rail; placement and installation of modular track bridges progresses (2 of 8 completed).
- **Mercer Island (E130):** Continued progress at Mercer Island Station; continued mechanical installations and structural modifications at Mercer Island Tunnel; track installation on East Channel Bridge completed.
- **IDS to Mt. Baker Tunnel (E130):** Continued prerequisite work at the International District and Pioneer Square Stations; continued electrical and structural work in the Mt. Baker Tunnel; structural work at Judkins Park Station and area.

South Bellevue to Redmond

- **South Bellevue (E320):** Continued station and parking garage buildout, as well as progressing vertical conveyances in station and mechanical, electrical and plumbing work in garage. Continued long span work over I-90.
- **Downtown Bellevue Tunnel (E330):** Continued spray applied waterproofing crown and walls, installing reinforcement rebar and concrete placement for tunnel crown, exterior walls reinforcement at cut and cover and headwall.
- **Downtown Bellevue to Spring District (E335):** Removed I-405 false works. Completed formwork, and concrete placement for walls at Wilburton Station. Continued all phases of aerial guideway work and shoring for the elevated platform deck.
- **Bel-Red (E340):** Continued placing bridge deck rebar, forming bridge deck at the aerial guideway. Placed power and communication conduit, embedded track placement, grading for platform slab at 130th Station area.
- **SR520 to Redmond Technology Station (E360):** All design packages have been issued for construction. Continued erection of platform canopy steel and place column pour backs and aerial guideway work. Begun bus loop paving under garage.
- **Systems (E750):** Continued with submittals, component design/manufacturing/fabrication, site interface inspections.

Closely Monitored Issues

- Bellevue Downtown Station 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.

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 over \$75.6M, pushes the total expenditure to date from \$1.99B to \$2.07B. Project commitments is over \$3B with all major construction contracts in place and construction is on-going throughout the alignment. 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

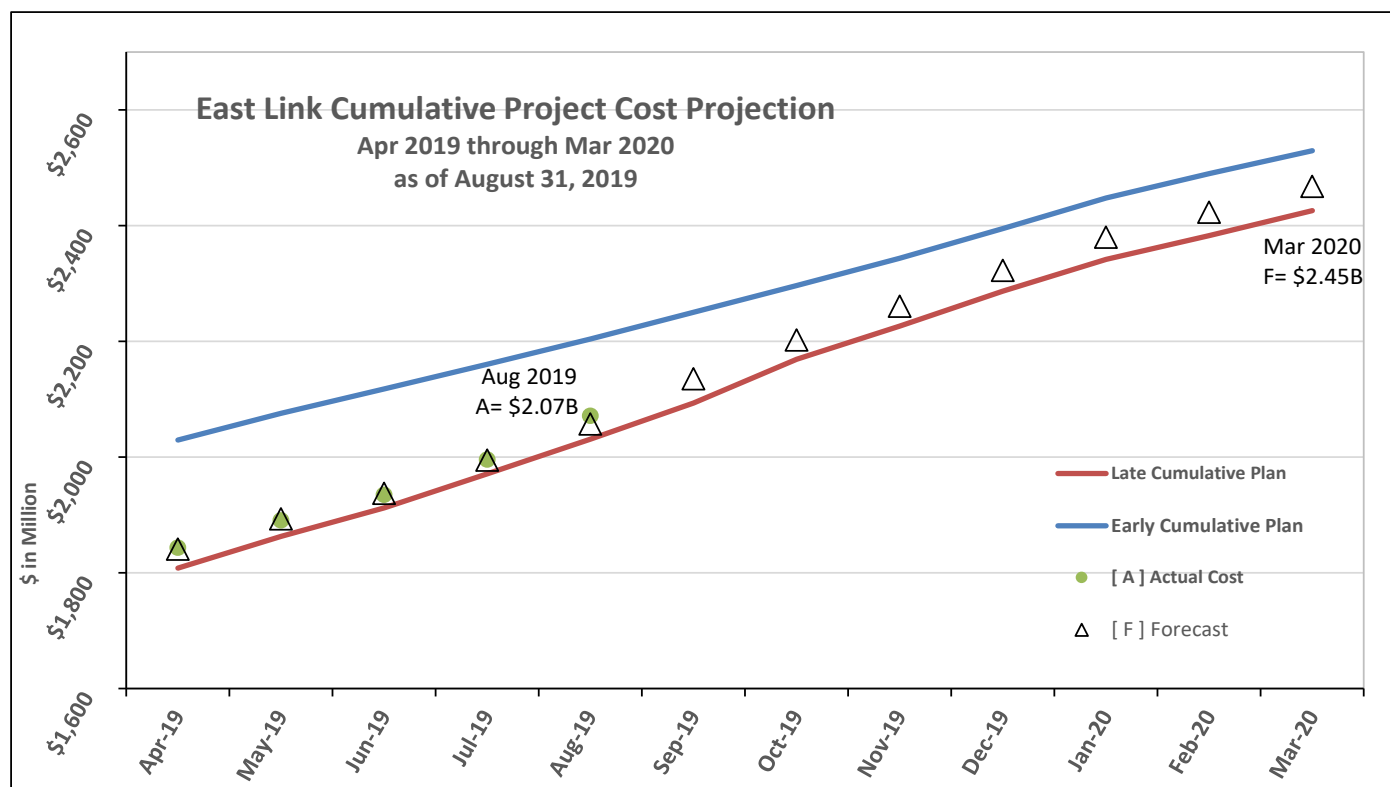
Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$186.2	\$186.2	\$85.0	\$84.8	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.8	\$54.8	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$245.7	\$219.5	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$196.7	\$104.3	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$38.3	\$25.9	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$2,165.5	\$1,309.6	\$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	\$270.0	\$269.0	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$3,055.9	\$2,068.0	\$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	\$891.8	\$631.1	\$956.7	(\$212.0)
20 Stations	\$397.7	\$474.2	\$437.3	\$229.7	\$469.6	(\$71.9)
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$808.5	\$568.3	\$465.6	\$329.1	\$603.0	\$205.5
50 Systems	\$353.8	\$367.9	\$346.7	\$102.4	\$330.6	\$23.2
Construction Subtotal (10 - 50)	\$2,304.6	\$2,360.1	\$2,141.4	\$1,292.3	\$2,359.9	(\$55.3)
60 Row, Land	\$288.5	\$288.5	\$270.0	\$269.0	\$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	\$644.5	\$506.7	\$889.3	\$9.1
90 Unallocated Contingency	\$182.9	\$136.6	\$0.0	\$0.0	\$136.6	\$46.2
Total (10 - 90)	\$3,677.2	\$3,677.2	\$3,055.9	\$2,068.0	\$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 \$75.6M where Construction Phase is responsible for about 90.3% or approximately \$68.2M of August's expenditure. Total project cost incurred to date topped \$1.93B, to which over \$1.19B was recorded in the Construction Phase. The project expenditures continue to pick up and is predicted to rise to approximately \$2.45B by March 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 2nd 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 3rd 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 \$407.2M (previously \$409.8M). 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 increased by a net amount of approximately \$200K due to construction credits. However, there was also an administrative adjustment due to a compounding processing error of \$39M leaving a balance of \$227.5M. The contingency draw in this period is primarily driven by aggregation of construction change orders in the project, primarily the construction contracts.

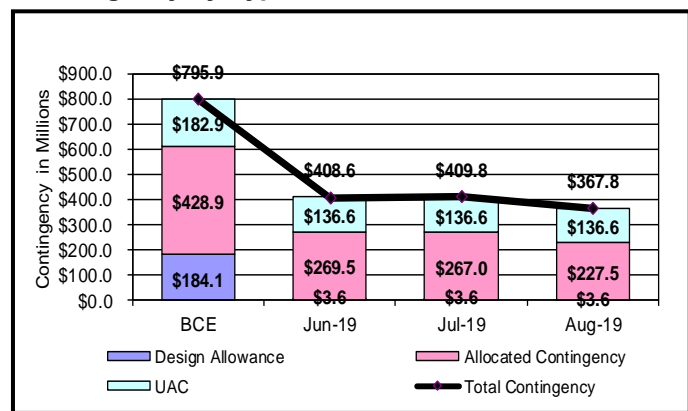
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance remains unchanged at \$136.6M.

Contingency Status

Contingency Type	Baseline		Current Status	
	Amount	% of Total Budget	Amount Remaining	% of Work Remaining
Design Allowance	\$184.1	5.0%	\$3.6	0.2%
Allocated Contingency	\$428.9	11.7%	\$227.5	14.1%
Unallocated Contingency	\$182.9	5.0%	\$136.6	8.5%
Total	\$795.9	21.6%	\$367.8	22.9%

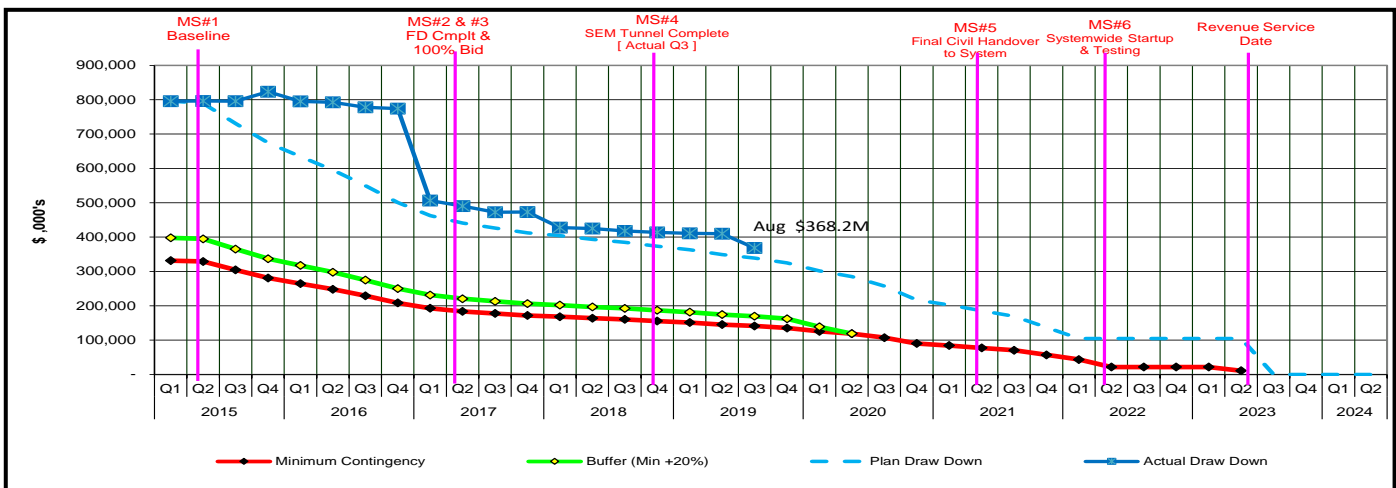
Table figures are shown in millions.

Contingency by Type



Contingency Drawdown

East Link Project's total contingency drawdown continues to trend within plan with an overall contingency balance at approximately \$367.8M 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 August represented an interim 3rd QTR draw of about \$2.4M with an administrative adjustment of approximately \$39M due to misclassification of ROW procurements to bring the contingency balance from July's \$409.8M to August's \$367.8M.



Link Light Rail East Link Extension



Project Schedule

The Integrated Master Schedule is presented below.

E130 continued placing track on the East Channel Bridge and the HMM floating bridge, and continued installing track bridges; work continued at both stations; continued demolition and utility work at International District Station.

E320 continued pouring the second long-span segment over I-90; continued excavation and track slab work, and OCS foundations; started CMU walls at the parking garage; poured undercrossing approach slab at 112th undercrossing.

E330 completed installation of reinforcing support dowels in the tunnel crown; continued walls at South Portal.

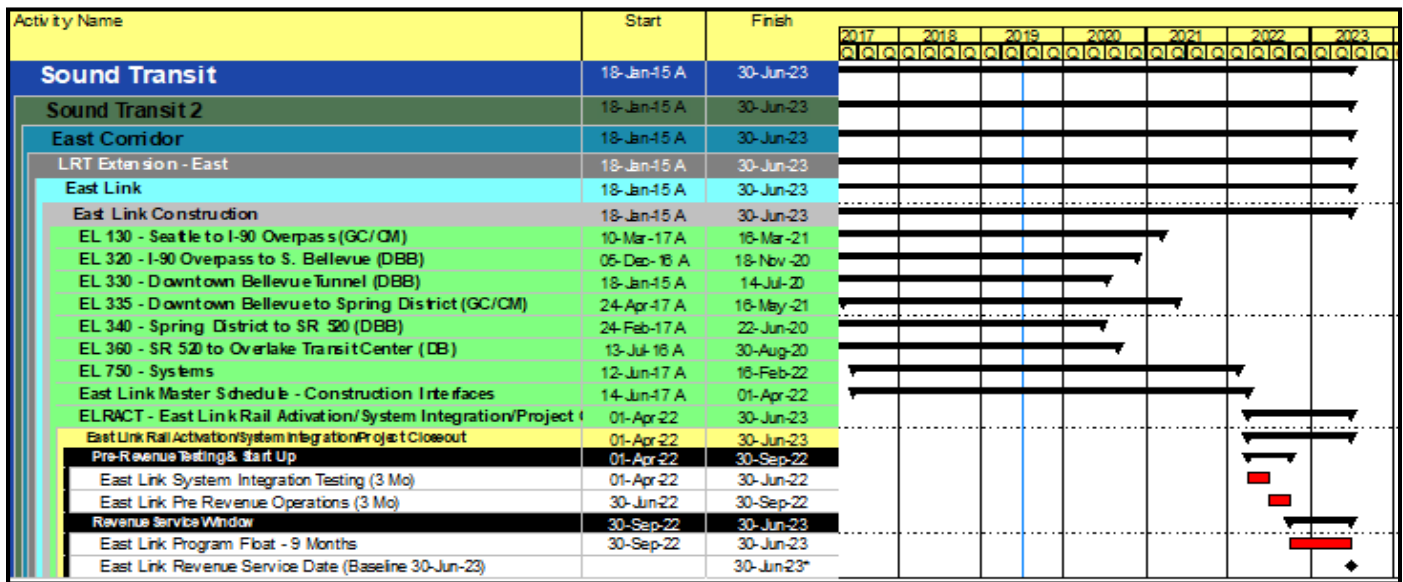
E335 continued utility tie-ins at North Portal; continued work at stations; took down falsework for long span over I-405.

E340 continued forming decks and placing rebar for aerial guideway; prepared to open 132nd Ave to traffic; installed underground power/communications at 130th Station.

E360 started placing track slab at the west end of the alignment; continued superstructure work and casting plinths on aerial guideway; continued fine grade and subballast for at-grade guideway; continued work at both stations.

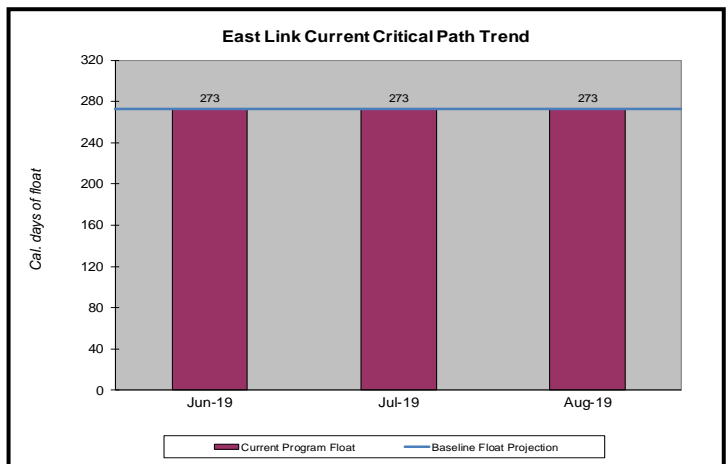
E750 Systems contractor continued procuring equipment and continued mobilizing for construction; preliminary work continued at International District Station; surveyed track alignment on East Channel Bridge.

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



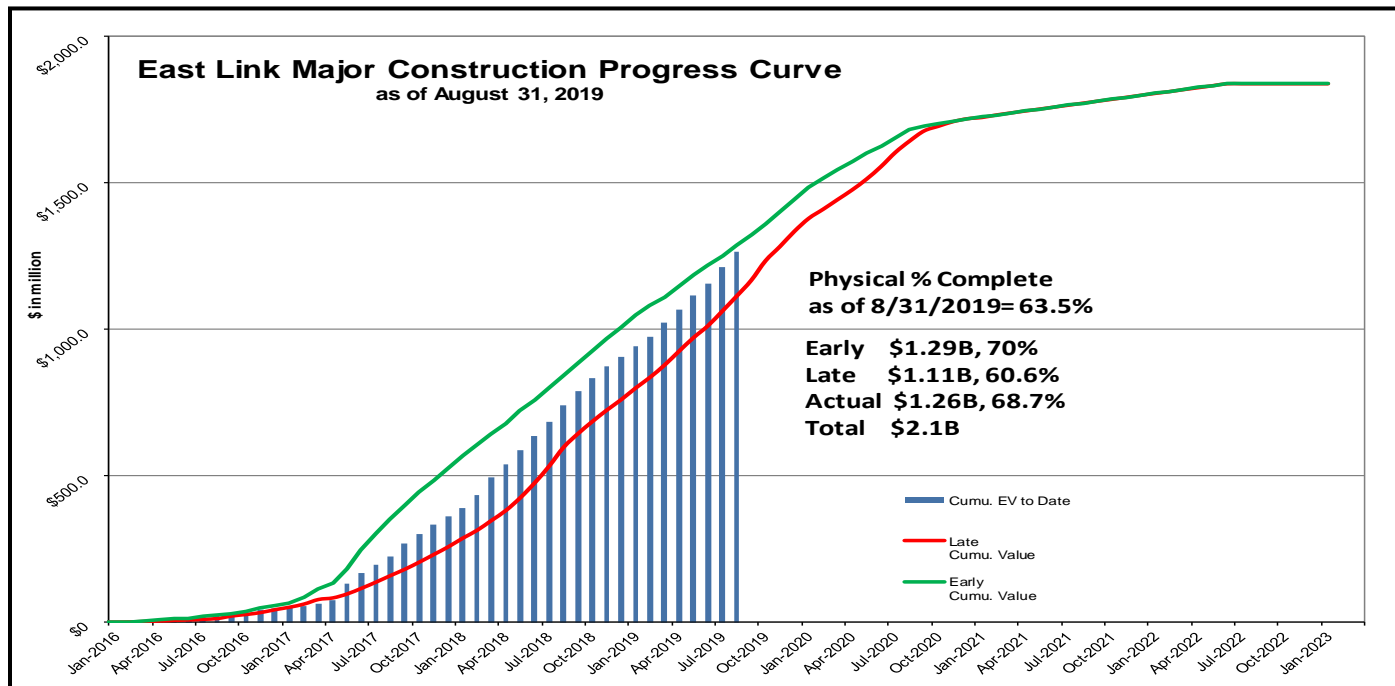
Project Float

East Link was baselined with 273 days of program float. No float has been used to date.



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 August, performance continues to trend appropriately between the early/late projection as drawn from the master schedule. The overall physical percent complete for East Link construction is 63.5%.



E130 Seattle to South Bellevue: Track Bridge installation on the I-90 floating bridge.

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.
- Ongoing engagement with individual property owners, members of the public and impacted neighbors on a variety of concerns including demolition, noise wall construction, signage, night time noise, traffic, access, maintenance of traffic, irrigation line repairs.
- Major collaborative efforts with WSDOT and City of Bellevue for the communications and notifications during the weekend directional closures of I-405 for two weekends (Aug. 9-12 and 16-19) including a media briefing on Aug. 8.
- Begun post-construction video/photo survey for properties adjacent to Downtown Bellevue Tunnel (E330 segment).



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

Sound Transit Board Actions

Board Action	Description	Date
	None this period	

Construction Safety

Data/ Measure	August 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	1	23	62
Days Away From Work Cases	0	4	11
Total Days Away From Work	0	354	738
First Aid Cases	11	67	188
Reported Near Mishaps	1	35	225
Average Number of Employees on Worksite	1,412	-	-
Total # of Hours (GC & Subs)	208,668	1,503,204	3,973,386
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.96	3.06	3.12
LTI Rate	0.00	0.53	0.55
Recordable National Average	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

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.

Note2: Pass reports included OMF East construction safety's statistics. From this current month forward, OMF East's statistic will be reported independently under the OMF East's section.

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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]

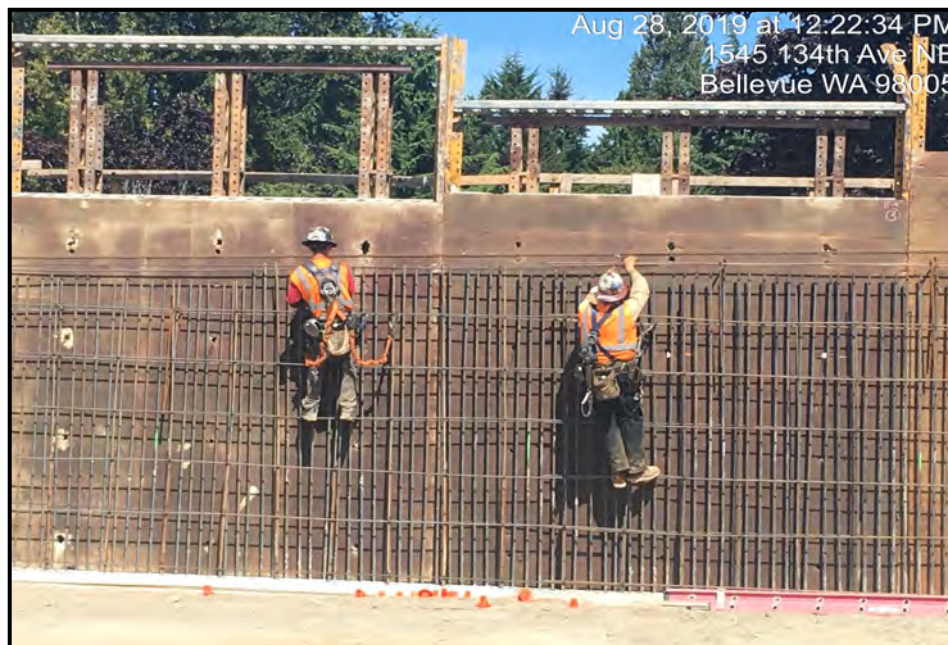
Status: See following pages under Contract E340.

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) and off site TPSS worksite interface inspections.



E340 Bel-Red: Workers placing reinforcing steel for a wall segment.

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

Current Progress

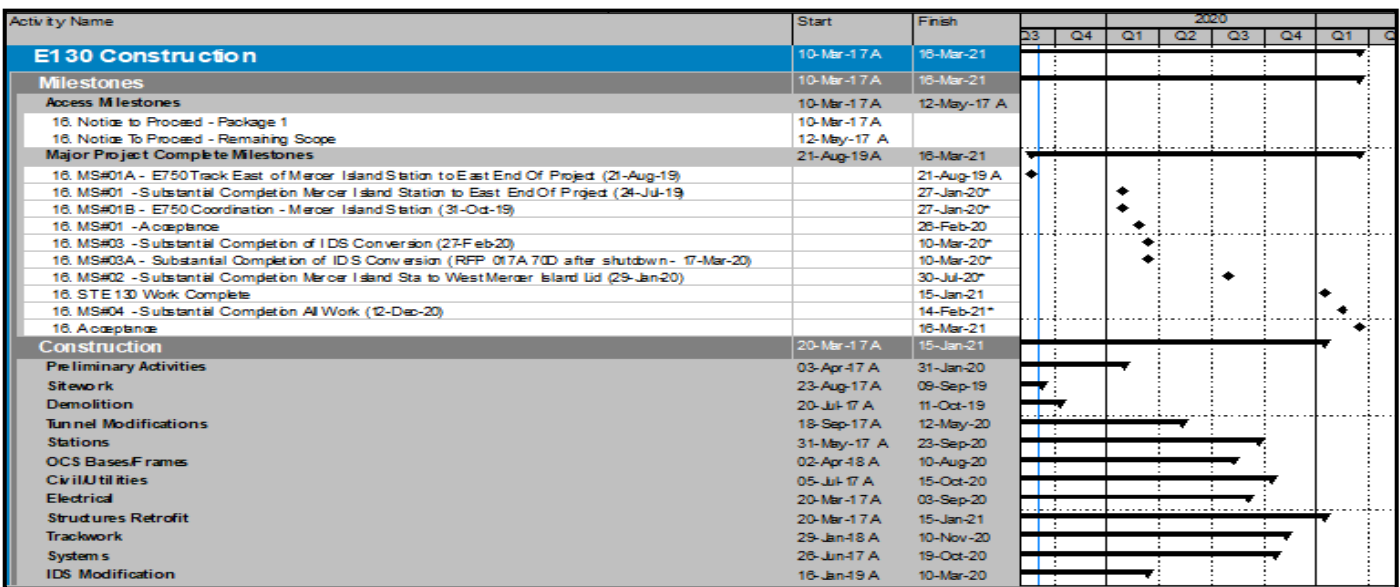
West Segment: Ongoing demo, utility work, isolation mat installation at International District Station; begin early work on temporary platform at Pioneer Square Station; continue electrical, structural work in the Mt. Baker Tunnel; structural work progresses at Judkins Park Station, the Pedestrian Access Building, and Ancillary Building.

Center Segment: Cathodic protection work continues; ongoing installation of direct fixation track and guide rail; placement and installation of modular track bridges progresses, with 2 of 8 now completed.

East Segment: Progress interior finishes, plaza hardscape, and mechanical rough-in at Mercer Island Station; continue mechanical installations and structural modifications at Mercer Island Tunnel; track installation on East Channel Bridge complete.

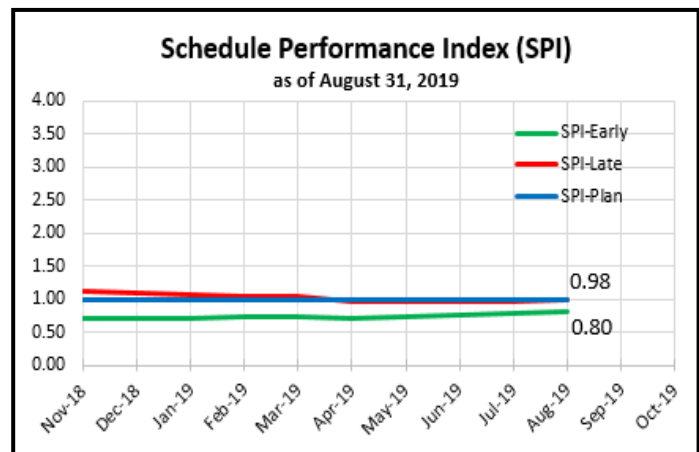
Schedule Summary

The critical path for this project currently runs through cathodic protection on the floating bridge. The contractor is currently behind on all milestones; however, they have been coordinating with the E750 systems contractor to ensure that access is preserved. In September, E130 is anticipated to hand over the East Channel Bridge to allow E750 to start work on the East Link alignment.



Schedule Performance Index

This period, the SPI early is 0.80, up from last month's 0.78, while SPI late is 0.98, up from last month's 0.96. These indices show the Contractor has fallen behind both their early and late finish plans, but is trending to the baseline. Resequencing due to modification of the Milestone 1 activities continues to affect the schedule, with continued pressure to the Milestone 2 date. The Contractor is in discussion with the CMC Team regarding sequencing, and it is anticipated the late finish SPI will continue to trend to the 1.00 baseline; the critical path runs primarily through MI Station, cathodic protection, and final commissioning.



Link Light Rail East Link Extension



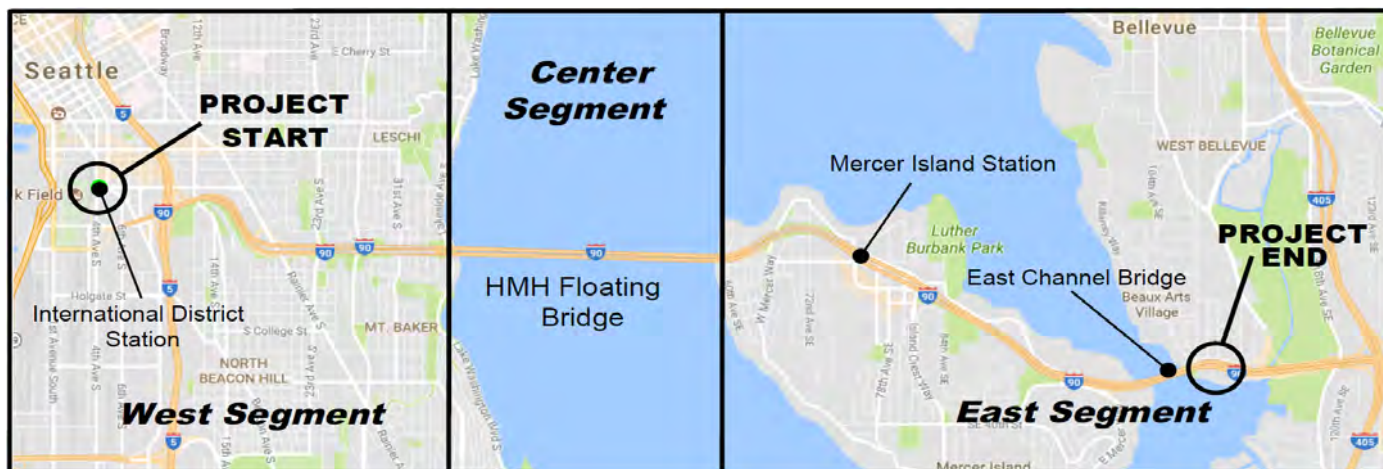
Next Period's Activities

- **West Segment:** Continue installation of Pioneer Square Station temporary platform, Judkins Park Station structures, and IDS utility work
- **Center Segment:** Progress cathodic protection; continue installation of direct rail attachment, track bridges; prepare for winter work limitations on floating bridge
- **East Segment:** Continue electrical/structures retrofits; advance East/West Head House finish work & platform at MI Station; progress installation of direct fixation track in MI Tunnel

Closely Monitored Issues

- Extent of variations in the actual deck thickness on the East Channel Bridge and potential ramifications
- Activity resequencing at Mercer Island station and Milestone 2 impacts
- Coordination of rail tie-in activities at the International District Station
- Requirement for shielding non-conductive wires for the cathodic protection on floating bridge

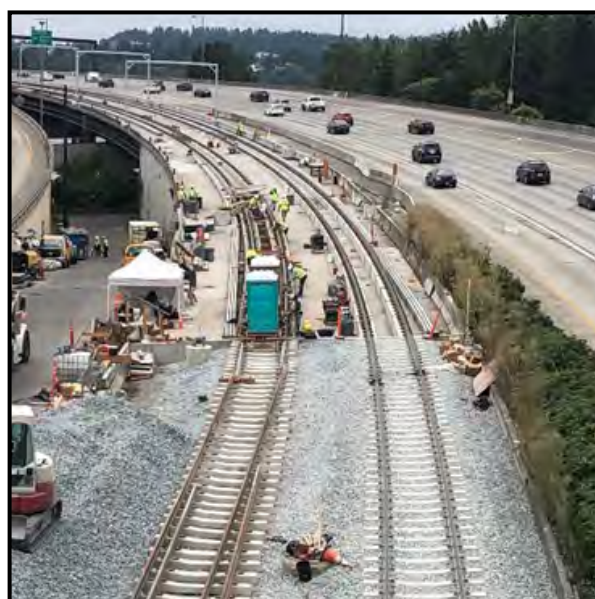
E130 Construction Segments



Cost Summary

Present Financial Status	Amount
E130 Contractor - Kiewit-Hoffman	
Original Contract Value (incl. Phase 2 MACC)	\$665,000,000
Change Order Value	\$21,705,677
Current Contract Value	\$685,750,677
Total Actual Cost (Incurred to Date)	\$440,977,712
Percent Complete	61.97%
Authorized Contingency	\$46,660,541
Contingency Drawdown	\$21,705,677
Contingency Index	1.3

Contract Value excludes Betterment



Transitioning from ballasted to direct fixation track, East Channel Bridge

Contract E320 – South Bellevue

Current Progress

I-90 Flyover: Continued main span work over I-90, Install expansion joints; Form/Rebar/Pour (FRP) coping wall and soldier pile wall and footing.

Bellevue Way SE: Continued overhead catenary system (OCS) work installing poles; Continued trench slab work and FRP shotcrete to trench walls; Backfill drainage vault and pour topping slab; Continued over-excavation and replacing of subgrade.

S. Bellevue Sta./P&R: Started building concrete masonry unit (CMU) walls on N. level of floors 1&2 in the garage; Install fire protection in garage; Continued structural steel canopy work & skylight installation above escalators, curtain wall (glass) and FRP stair landing in station.

Wye-to-East Main: Continued remainder embankment fill work on west side of 112th and started backfill with foam concrete; FRP undercrossing approach slab east and west; Construct traffic barrier wall.

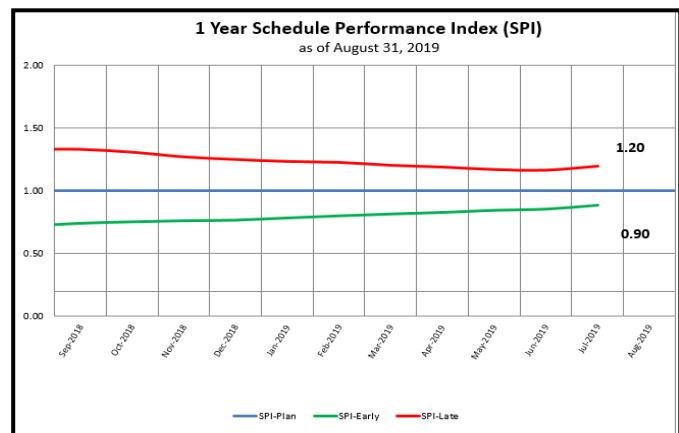
Schedule Summary

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 all milestones on schedule.

Activity Name	Start	Finish	2020					
			Q3	Q4	Q1	Q2	Q3	Q4
E320 Construction	06-Dec-18 A	17-Nov-20						
Milestones and Summary	06-Dec-18 A	17-Nov-20						
Contract Milestones	06-Dec-18 A	17-Nov-20						
Limited Notice to Proceed	06-Dec-18 A							
Notice to Proceed	13-Feb-17 A							
Milestone 3A - Clear & Grub Sveyoloken (Stat of "Wetland Fill" Work-35'D)		21-Dec-18 A						
Milestone 1 - (Alternate) Phase B 2.1 Not Used		31-May-19 A						
Milestone 3B - Clear & Grub Coal Creek		09-Sep-19*						
Milestone 4 - SIFT & SCADA Complete (NTP+116'D)		04-Feb-20*						
Milestone 5 - Acceptance of South Bellevue Station (NTP+122'D)		24-Jun-20*						
Milestone 2 - Final Restoration of Bellevue Way (Start-89'D)		09-Aug-20*						
Milestone 6 - Required Substantial Completion (NTP+136'D)		17-Nov-20*						
Construction-1	21-Apr-17 A	29-Oct-20						
Mobilization	21-Apr-17 A	16-Jul-18 A						
Area A - I-90 Mainline to Bellevue Interchange - Sta EB405+54 to EB438+20	16-Jun-17 A	23-Sep-20						
Area B - Bellevue Way SE, SE 30th St to 112th Ave SE Wye - Sta EB438+20 to EB476+75	30-May-17 A	29-Oct-20						
Area C - 112th Ave SE, 112th Ave SE Wye to SE 8th - Sta EB476+75 to EB508+00	13-Jun-17 A	19-Oct-20						
Area D - 112th Ave SE to SE 8th St to Main St - Sta 508+00 to EB528+25	22-May-17 A	08-Oct-20						
Area E - Coal Creek Stream Enhancement	09-Jul-18 A	09-Sep-19						
Area F - Sveyoloken 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 remains at 1.2. The numbers reflect the contractor's lag behind the early finish, which in part is due to the station conveyance systems slipping somewhat on the schedule this month. They are trending towards baseline, however. The contractor is ahead of schedule on the long span work over I-90, with the Traveler system coming down next week, reflecting being several months ahead of schedule for that piece of work. Critical path remains the work on 112th.



Next Period's Activities

- **I-90 Flyover:** Continue installing expansion joints and pouring footing on the traction power substation walls
- **Bellevue Way SE:** Continue FRP/shotcrete trench walls, and FRP OCS poles
- **S. Bellevue Sta./P&R:** Continue CMU on N. parking garage walls; install stairs in N. part of garage and have pre-install inspection of the S. elevator shaft in garage; Install underslab system/power conduit at station
- **Wye-to-East Main:** Grade over undercrossing; remove curb & gutter E. side of 112th and install underground conduit boxes and raceway

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	\$2,782,694
Current Contract Value	\$322,641,694
Total Actual Cost (Incurred to Date)	\$222,592,162
Percent Complete	67.37%
Authorized Contingency	\$38,532,000
Contingency Drawdown	\$2,782,694
Contingency Index	9.3

* \$ Amount excludes betterments and STArt.



Curtain wall (glass wall) work at station

Contract E330 – Downtown Bellevue Tunnel

Current Progress

Tunnel Crown: Completed grinding, patching and installing support dowels .Continued spray applied waterproofing Crown. Continued rebar and concrete placement for tunnel crown. Continued work in the mid-tunnel shaft by placing the exterior stairway wall and commenced backfill outside of the stair way.

South Portal: Continued installing exterior walls reinforcement and forming walls at Cut and Cover and started to install reinforcement at headwall. Continued to maintain the temporary erosion/sediment control and the traffic control at the South Portal (SP) and at the mid-access shaft. Continued remove temporary sound walls and forming for permanent sound walls by E335 Contractor.

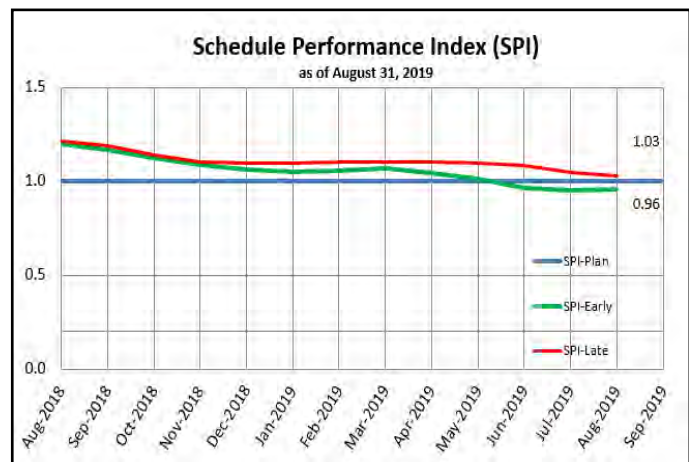
Schedule Summary

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				
			Q3	Q4	Q1	Q2	Q3
E330 Construction	15-Dec-15 A	15-Jun-20					
CONSTRUCTION	15-Dec-15 A	15-Jun-20					
MILESTONES/CONSTRUCTION EASEMENTS	15-Dec-15 A	15-Jun-20					
MILESTONES	15-Dec-15 A	15-Jun-20					
CALCULATED MILESTONES	15-Dec-15 A	15-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 #008 Work		14-Oct-16 A					
MLST3 - Substantial Completion of all Work from Station EB 542+64.52 to Station EB 562+47.91		15-Feb-20					
MLST4 - Substantial Completion Total Contract		15-Jun-20					
MOBILIZATION	08-Feb-16 A	19-Sep-19					
SITWORK	29-Feb-16 A	15-Jun-20					
PRECONSTRUCTION	21-Mar-16 A	06-Mar-20					
TRAFFIC CONTROL	25-Mar-16 A	24-Oct-19					
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	15-Jun-20					
SKYLINE BUILDING RETROFIT	17-Jan-17 A	18-Oct-17 A					
TUNNELING	01-Feb-17 A	21-Jan-20					
EXCAVATION	01-Feb-17 A	20-Jul-18 A					
FINAL TUNNEL LINING	20-Jul-18 A	18-Dec-19					
FINAL TUNNEL FINISHES	03-Sep-19	21-Jan-20					
MID TUNNEL	08-Mar-18 A	23-Oct-19					
DEMOBE	13-Mar-17 A	02-Jun-20					

Schedule Performance Index

In August, the SPI early is at 0.96 and the SPI late is at 1.03. The SPI curves started to recover after a few months of challenge with form carrier equipment failure and steep learning curve of crown placing applied waterproofing spray and concrete placement. SPI early continue to lag as challenges associated with concrete mix and voids repair in crown final lining.



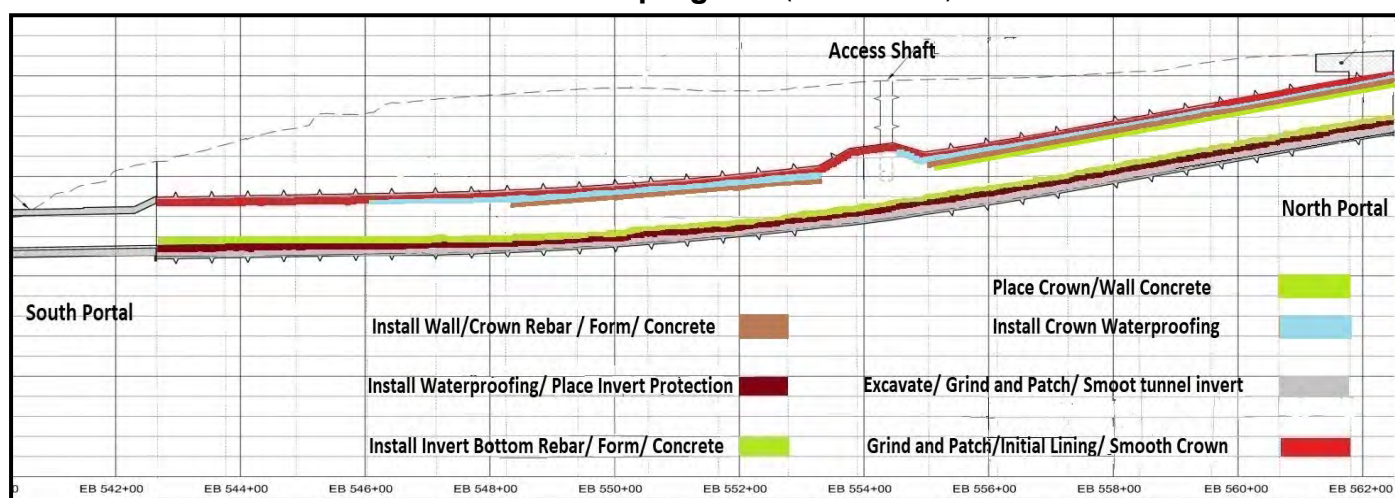
Next Period's Activities

- **South Portal:** Continue reinforcement and concrete placement of exterior wall and permanent structures at SP cut and cover.
- **Tunnel Crown:** Continue spray applied waterproofing application from north toward south. Continue reinforcing and concrete placement for crown and walls using form carrier. Commence rebar for center wall. Continue work at mid-tunnel shaft by waterproofing walls, back-filling exterior stair wall

Closely Monitored Issues

- Concrete mix issues have led to delays and quality issues that will require repair. Some placements require higher than normal quantity of contact grouting which increases exposure to potential waterproof damage. Voids that require repair have been identified and will be formed and filled with concrete. These repairs have the potential to effect and causing schedule impacts to center wall completion.
- The recent tunnel survey scan of the final lining indicate the final lining some areas appear to encroach into the tunnel envelope in the crown. Investigating with design team to determine if this will be an issue for E335.

E330 Downtown Bellevue Tunnel overall progress (As of 8/30/2019)



Cost Summary

Preset Financial Status	Amount
E330 Contractor– Guy F Atkinson Construction, LLC.	
Original Contract Value	\$121,446,551
Change Order Value	\$1,587,432
Current Contract Value	\$119,859,119
Total Actual Cost (Incurred to Date)	\$105,273,708
Percent Complete	85.02%
Authorized Contingency	\$13,732,087
Contingency Drawdown	\$1,587,432
Contingency Index	-6.5



Repair crown final lining by placing concrete .

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

Current Progress

Area 3: North Portal (NP)/ Bellevue Downtown Station (BDS): Continued install utility tie-ins, clean up and dry finishes on interior walls and lid at the NP. Continued formwork, reinforcing, concrete placement of platform elevated deck, stair and vertical transportation walls and installing utilities at BDS.

Area 4: Aerial Guideway/ Wilburton Station: Removed false works over I-405. Continued installing cable railing, acoustical panels, skeletonize tracks and rebar, form, pour concrete for tracks at Aerial Guideway. At Wilburton Station :Completed formwork, rebar, concrete placement for walls. Continued installation of shoring for the elevated platform deck.

Area 6: 120th-124th Trench/Station: Continued utility rough-ins, remove shoring towers, cure, patching walls and backfill and installing structural steel at plaza level of 120th Station. Installation of metal stud walls and stairs also started. Commenced install initial blast, distribute rails, sack and patch plinths for tracks at Kirkland wye to end of project through 120th Station.

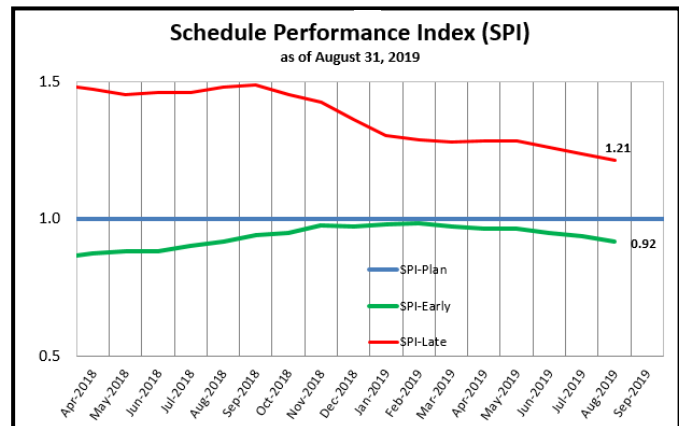
Schedule Summary

There are two primary critical paths for this contract, corresponding to the two handovers to the E750 Systems Contractor — one runs through BDS, and the other follows access to the SEM tunnel (E330 Contract) in Area 2 and goes through the South Portal and the South Portal Electrical Building. Tunnel work will not start until mid-2020. The contractor is currently forecasted to achieve each milestone in time to hand over work to E750.

Activity Name	Start	Finish	2019	2020						
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
E335 Construction	24-Apr-17 A	16-May-21								
Milestones	04-May-18 A	16-May-21								
Contract Milestones										
Milestone#1 - Complete North Portal Headwall Temporary Shoring	30-Sep-18 A	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		13-Jan-20								
E335 Achieves Milestone #3		26-May-20								
E335 Achieves Milestone #4		15-Jan-21								
E335 Achieves Milestone #5		13-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)	30-Nov-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	13-May-20								
Testing and Commissioning	30-Dec-19	15-Dec-20								

Schedule Performance Index

This period, the SPI early is at 0.92 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: Delivery of special tracks continued to lag behind schedule. Aerial Guideway is behind due to delay of installation of signal ductbank as result of delay in track works. Construction progress for Stations-BDS, Wilburton and 120th— slower than planned and are behind schedule.



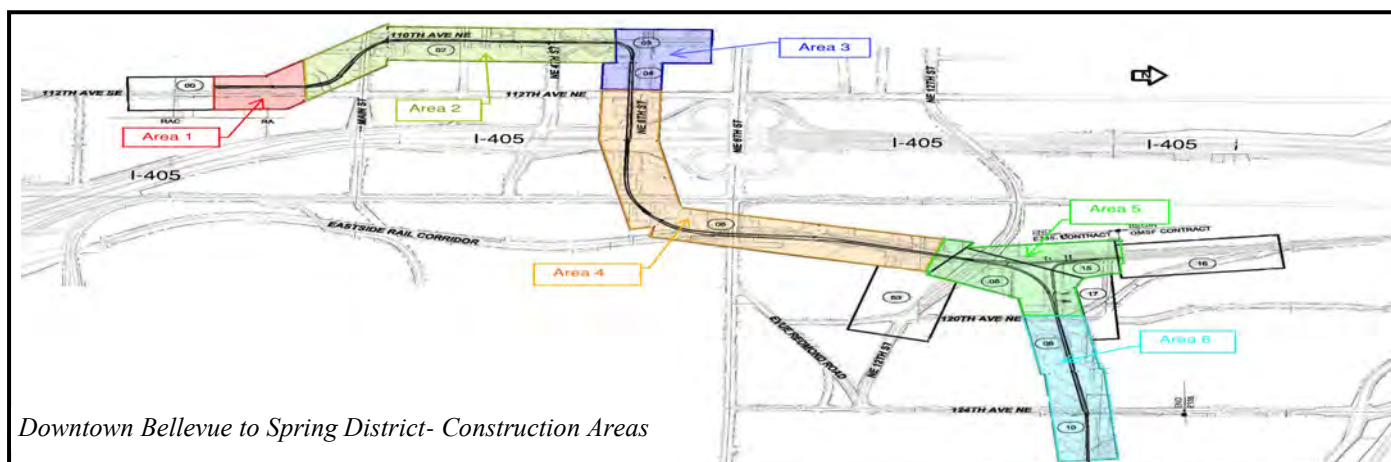
Link Light Rail East Link Extension

Next Period's Activities

- **Area 3:** North Portal/ Bellevue Downtown Station (BDS): Continue backfill and utility work at NP and demolish City Hall plaza. Continue removal of temporary road way and restoration 110th Ave. Continue form work, rebar and concrete placement for walls, columns and footing at BDS.
- **Area 4:** Aerial Guideway/Wilburton Station: Continue formwork, rebar, concrete placement and installing utilities at Wilburton Station. Complete acoustical panels and continue tracks works over the Aerial Guideway.
- **Area 6:** 120th-124th Trench/Station: Continue install vertical transportation and work on finishes at 120th Station. Continue track works at the wye to 124th Ave.

Closely Monitored Issues

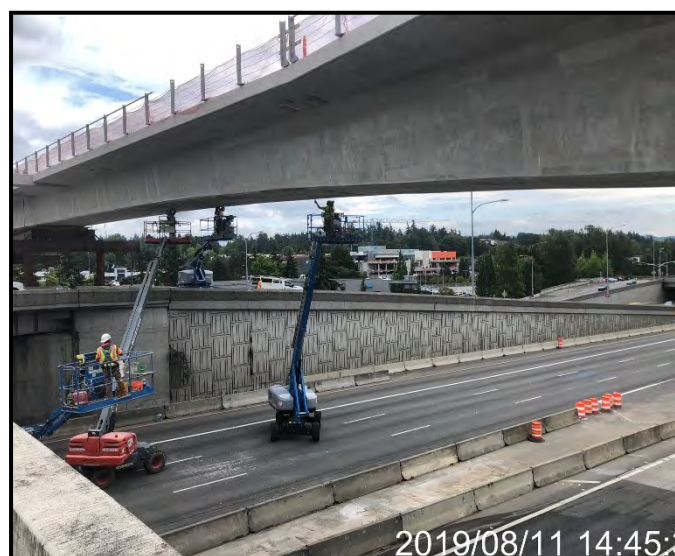
- Building Information Modelling (BIM) by SWA and their subcontractors is currently behind schedule. There are a number of electrical and plumbing coordination issues that need designer input and follow-on coordination. Recurring weekly meetings with Contractor, ST, and design team to address outstanding issues.
- Work under the road and to the east cannot be completed until City of Bellevue 124th Ave Project bridge is built and access is available. At a minimum, the partial completion of the 124th Ave Project by the City of Bellevue is necessary to complete the far east end of the scope and this project continues to be delayed. The construction of the walls to the east limit at 124th has started.



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	\$7,196,150
Current Contract Value	\$400,994,360
Total Actual Cost (Incurred to Date)	\$226,049,009
Percent Complete	65.03%
Authorized Contingency	\$19,689,911
Contingency Drawdown	\$7,196,150
Contingency Index	1.8



Finishing works after false work removal completed (Area 4)

Contract E340 – Bel-Red

Current Progress

Aerial Guideway: Continued forming bridge deck, placing bridge deck rebar, prepared for deck pour.

130th Ave Station: Installed underground power/communication. Embedded track placement, grading for platform slab.

NE Spring Blvd: Closed from 132nd Ave NE to 134th Ave NE. Prepared to open 132nd Ave NE to traffic. Placed systems ductbank and side services for gas. Paved westbound roadway.

136th PI NE: Storm drain placement. Placed first lift of asphalt in North MGI driveway area.

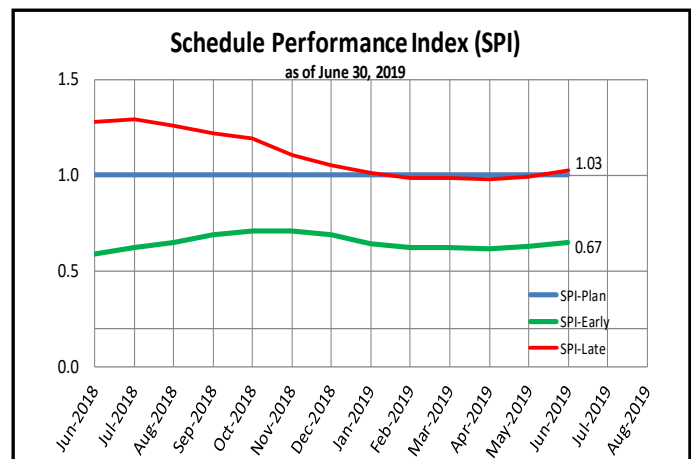
Schedule Summary

Critical path of this project now runs through the 130th Avenue Station. The contractor’s July update is presented below. The contractor is approximately one month behind their substantial completion milestone; ST and the contractor are currently in negotiations over applicable time extensions. No impact to the E750 systems contractor is anticipated.

Activity Name	Start	Finish	19	2020		
			Q3	Q4	Q1	Q2
E340 Construction	24-Feb-17 A	22-Jun-20				
CONSTRUCTION	24-Feb-17 A	22-Jun-20				
~MILESTONE S/EASEMENTS~	24-Feb-17 A	22-Jun-20				
~Milestones	24-Feb-17 A	22-Jun-20				
Contract Milestones	24-Feb-17 A	22-Jun-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 + 978 DAYS - (Nov 27, 2019)		10-Sep-19*				
MS #4 Substantial Completion - NTP + 1156 DAYS - (May 26, 2020)		22-Jun-20*				
~SUBMITTALS/PRELIMINARY ACTIVITIES~	24-Feb-17 A	07-Dec-19				
~MOBILIZATION~	24-Feb-17 A	12-Mar-20				
~SITEWORK~	04-Apr-17 A	24-Apr-20				
~RETAINING WALLS~	12-Feb-18 A	28-Feb-20				
~AERIAL STRUCTURES~	15-May-17 A	08-Jan-20				
~STATIONS~	01-Aug-18 A	21-May-20				
~ELECTRICALITS~	02-Jan-18 A	12-Sep-19				
~FINISHES~	01-Jul-19	21-Jan-20				
~TRACKWORK~	13-Jul-18 A	21-Apr-20				
~LANDSCAPING/FLATWORK~	22-May-18 A	07-Feb-20				
~TESTING AND COMMISSIONING~	09-Aug-19	08-Mar-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 June, 2019 pending the contractor submittal of their recovery schedule. As stated in the schedule summary above, the contractor is behind by 28 days and it is conceivable that the late SPI could drift below 1.0 as well.



Link Light Rail East Link Extension



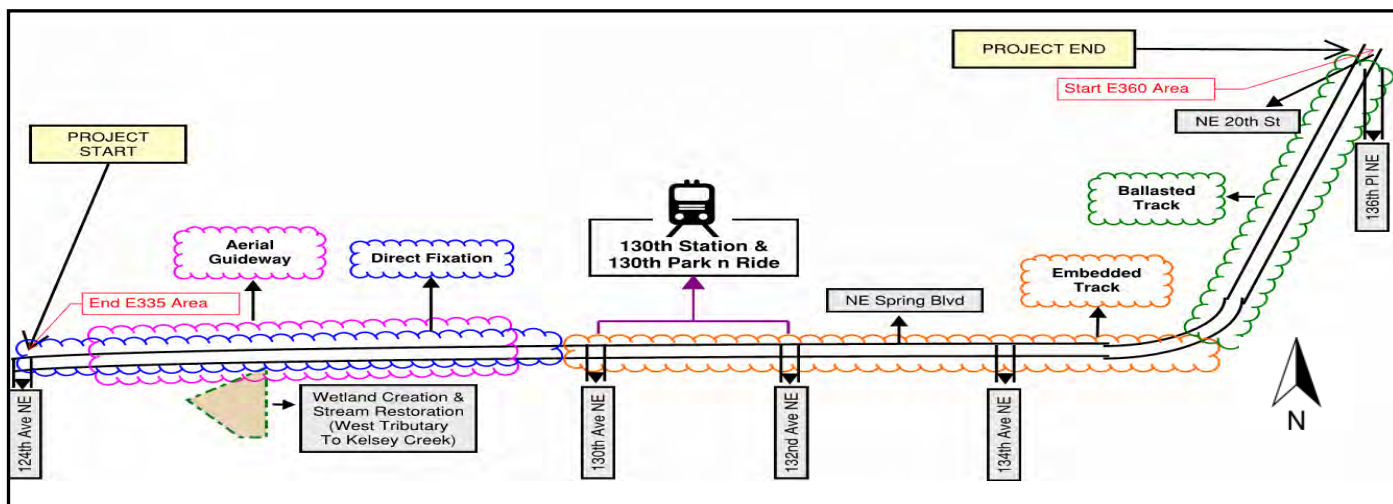
Next Period's Activities

- **Aerial Guideway:** Continue pouring the remaining end diaphragms, pouring overhead contact system (OCS).
- **130th Ave Station:** Erecting structural steel for north canopies. Begin forming eastbound platform slab; grade for entry slabs and ramps. Embedded track in westbound: place track slab lift adjacent to future north platform; in eastbound: prepare for second lift placement.
- **NE Spring Blvd:** Storm drain and track drain placement. Place eastbound waterline. Place concrete intersection at 136th PI NE and NE Spring Blvd. Place remaining two wall sections.

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. Seattle City Light has agreed to allow early works while compatibility is discussed.
- The progress towards the opening of NE Spring Blvd between 132nd and 134th has been delayed due to the backfilling of existing eco block wall and storm water design.
- Initial projected opening of 132nd Ave has been delayed to August 30th due to the gas line and waterline clearance.

E340 Construction Work Areas



Cost Summary

Present Financial Status	Amount
E340 Contractor– Max J Kuney	
Original Contract Value	\$93,170,012
Change Order Value	\$4,209,460
Current Contract Value	\$97,379,472
Total Actual Cost (Incurred to Date)	\$61,473,851
Percent Complete	63.5%
Authorized Contingency	\$9,317,000
Contingency Drawdown	\$4,209,460
Contingency Index	1.41



Placing the station rail on the ties and rolled out the boot, looking west.

Contract E360 – SR 520 to Redmond Technology Center (RTC)

Current Progress

Design: All design packages are Issued for Construction. Notice of Design Change from Sweeper Site ongoing. Continue Sound Transit initiated design changes: Rectangular Rapid Flashing Beacon, PSE meter Relocation, BMS Monitoring Changes and Track Access at Signal House.

Construction:

- Work Area (WA) #1 Start form and place track slab.
- WA #2 Continued aerial guideway superstructures work for diaphragms and precast panels. Poured deck and curb for five spans. DF track work ongoing with final line through Spans 21 (20-1 remaining).
- WA #3/4 Start sub-ballast at grade guideway. Continue erection of platform canopy steel and place column pour backs.
- WA #5 Continue security fence installation along east bound and west bound track. Start initial ballast placement.
- WA #6 Start bus loop paving under garage. Exterior façade at ancillary rooms started (framing/sheathing/weather barrier). Station platform canopy erection and column pour backs complete. Tower crane removal complete.
- WA #7 Continue OVS Pedestrian Bridge paperclip ramp.

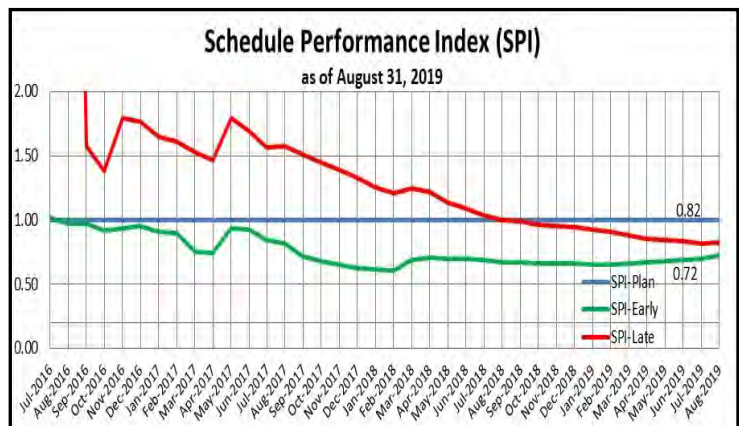
Schedule Summary

The critical path currently goes through the structural work at RTS and into the Leased Office Building near the station. The contract milestones have been revised to mitigate delays associated with permitting; no impact to the interface with the E750 systems contract is expected.

Activity Name	Start	Finish	Q3	Q4	Q1	Q2	Q3	Q4	Q
E360 Construction	13-Jul-16 A	31-Jul-20							
Base Contract	13-Jul-16 A	31-Jul-20							
Design	13-Jul-16 A	18-Oct-19							
Design Milestones	03-Oct-16 A	01-Sep-19							
Design Submittals Start		03-Oct-16 A							
30% Design Submittals Complete		28-Oct-16 A							
60% Design Submittals Complete		25-Feb-18 A							
100% Design Submittals Complete		06-May-19 A							
IFC Design Submittals Complete		01-Sep-19							
Design Overhead	13-Jul-16 A	18-Jul-17 A							
Design and Engineering	13-Jul-16 A	18-Oct-19							
Construction	13-Jul-16 A	31-Jul-20							
General	13-Jul-16 A	31-Jul-20							
Project Milestones	13-Jul-16 A	31-Jul-20							
Notice to Proceed	13-Jul-16 A								
Civil/Systems 100% Design Submittal (NTP +300d) (09May-2017)		10-Apr-17 A							
Milestone 3A for E750 Work		29-Jan-20*							
Milestone 3B Substantial Completion		31-Jul-20*							
WA #1 - Track Slab Guideway	22-May-17 A	27-Dec-19							
WA #2 - Aerial Guideway	01-Jun-17 A	02-Apr-20							
WA #3 - Ballasted Guideway Block#1	01-May-17 A	18-Mar-20							
WA #4 - Overlake Village Station	14-Jul-16 A	22-Jun-20							
WA #5 - Ballasted Guideway Block#2	15-Aug-17 A	28-Mar-20							
WA #6 - Overlake Transit Center	01-May-17 A	01-Jul-20							
WA #7 - OVS Pedestrian Bridge	01-Oct-18 A	24-Jun-20							
WA #8 - OTC Pedestrian Bridge	31-Jul-20	31-Jul-20							

Schedule Performance Index

This period, early SPI is .72 and late SPI is .82. 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 OTC 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:** Continue form and place track slab.
- **Work Area #2:** Complete deck and curb placement. On-going guardrail and plinth/DF track set and alignment.
- **Work Area #3/4:** Continue ballast track work and plinth/rail placement. OV station M/E/P fitout.
- **Work Area #5:** Continue ballast track work and plinth/rail placement. Continue fence installation.
- **Work Area #6:** Continue masonry/roofing/drywall at ancillary rooms. Continue bus loop paving and stair installation at garage. Start glazing and elevator installation at garage VCT. MEP wall and ceiling rough-in at shafts, ancillary spaces garage decks.

Closely Monitored Issues

- OTC Pedestrian Bridge - negotiations with Contractor to remove this scope.
- OVS Pedestrian Bridge - Fabrication delays due to welding and fabrication criteria.
- Permanent bus loop transition under the OTC Garage that will require garage Temporary Cert. Occupancy from the City of Redmond.
- Commercial issues for revised As-Built Specification, Safety/Security, City of Redmond CDF, Bike Storage and Exothermic welding.
- Clearance requirements between the WSDOT Aggregate Disposal Site access road and aerial guideway.

E360 Construction Work Areas



Cost Summary

Present Financial Status	Amount
E360 Contractor— Kiewit-Hoffman	
Original Contract Value	\$225,336,088
Change Order Value	\$2,960,322
Current Contract Value	\$228,755,884
Total Actual Cost (Incurred to Date)	\$161,768,361
Percent Complete	79.6%
Authorized Contingency	\$23,540,649
Contingency Drawdown	\$3,419,796
Contingency Index	5.5

Excludes Betterment



Overlake Village Station—Placing Concrete Ties

Contract E750 – Systems Heavy Civil GC/CM

Current Progress

The E750 Contractor, Mass Electric Construction Co. (MEC), continues to work on engineering submittals, component design/manufacturing/fabrication, and site interface inspections. Contractor also began the removal of bus signal equipment in Downtown Seattle Transit Tunnel (DSTT) in preparation for East Link tie in to the operating mainline for Link Light Rail.

Schedule Summary

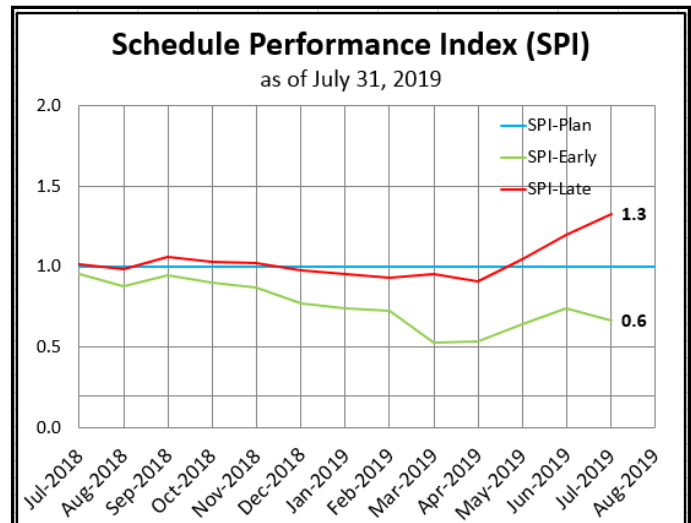
The contractor’s August update is presented below. The critical path for this project is driven by the handover from the E320 civil contractor, and follows OCS installation. The contractor is currently on target to meet their milestones.

Activity Name	Start	Finish	Total Float	2020				2021			
				Q3	Q4	Q1	Q2	Q3	Q4		
E750 Construction	12-Jun-17 A	12-Jan-22	366								
General	12-Jun-17 A	12-Jun-17 A									
Key Dates	12-Jun-17 A	12-Jun-17 A									
NTP - Notice to Proceed (NTP) Northgate and East Link	12-Jun-17 A										
E750 Project	11-Jul-17 A	12-Jan-22	366								
E750 Engineering	11-Jul-17 A	02-Jan-22	0								
E750 Construction	12-Sep-18 A	12-Jan-22	366								
E750 Construction (General)	15-Mar-19 A	19-Mar-19 A									
E750 Milestones	18-Mar-19 A	02-Jan-22	373								
E750 Contract Milestones	08-Feb-20	02-Jan-22	-2								
MS#00a East Link: Substantial completion of IDS Station Tie-in Work For North Bound (3/9/20)		09-Feb-20*	0								
MS#00b East Link: Substantial completion of IDS Station Tie-in Work (CNRFP 27)		15-Mar-20*	0								
MS#08 EastLink: Limited systems, Overlake transit center parking garage (CCTV, Tele) (7/29/20)		27-Jul-20*	2								
MS#07 EastLink: Limited systems, South Bellevue parking garage (CCTV, Telephone) (3/13/21)		05-Mar-21*	9								
MS#09 EastLink: Substantial completion of East Link Systems (12/31/21)		02-Jan-22*	-2								
E750 Access Dates	18-Mar-19 A	19-May-21	528								
E750 SCCCRM	25-Jan-19 A	04-Mar-21	61								
E750 OCS	14-Feb-19 A	04-Jun-21	-2								
E750 Traction Power / Substations	01-Oct-18 A	04-Jun-21	142								
E750 Signals	12-Sep-18 A	24-May-21	146								
E750 Communications	13-Nov-18 A	14-Jun-21	144								
E750 Radio	28-Jan-19 A	28-May-21	20								
E750 SCADA	26-Apr-21	25-May-21	23								
E750 Trunk Fiber	19-Dec-18 A	11-May-21	23								
E750 Testing and Commissioning	24-Feb-20	12-Jan-22	2								

Schedule Performance Index

This period, SPI early is 0.6 and SPI late is 1.3. The SPI index indicates the contractor is behind early SPI and ahead of late SPI compared to the baseline schedule.

The SPI is lagging as a result of delays in progressing engineering submittals and delivery of COM/Signal equipment. Contractor working closely with subcontractors to help strengthen the schedule and improve performance.



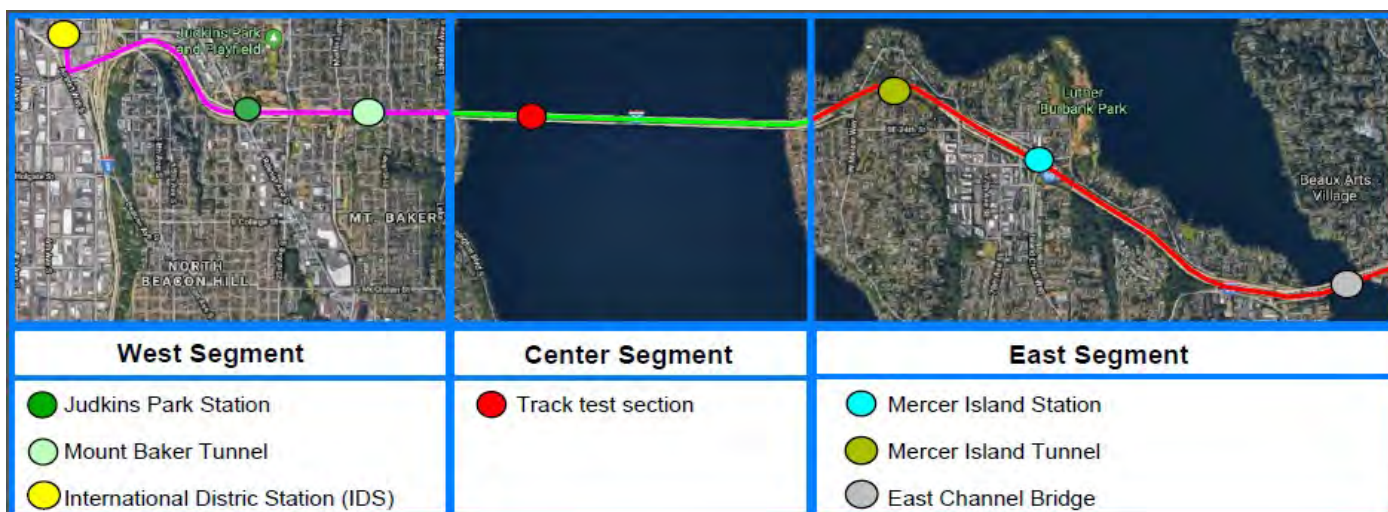
Link Light Rail East Link Extension

Next Period's Activities

- Continue engineering submittals: Traction Power Substations (TPSS), Overhead Catenary Systems (OCS), Train Control Systems (TCS)/Signals and Communications.
- Ongoing meetings between Systems and Civil Contractors to coordinate interface/access points for respective contracts.
- Ongoing removal and installation of conduits and signal at stations in the DSTT in preparation of East Link tie-in.
- Ongoing offsite prefabricated building and Factory Acceptance Testing (FAT) for TPSS.

Closely Monitored Issues

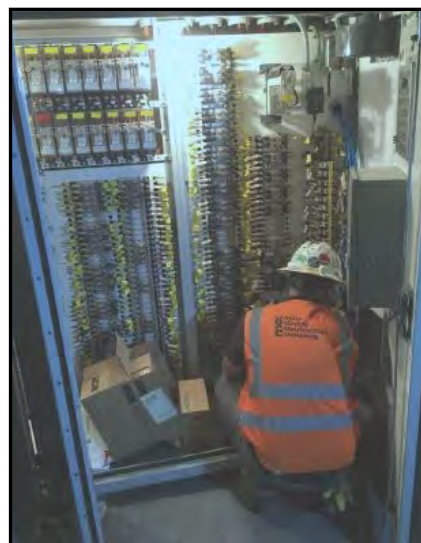
- The Construction Management Consultant and Sound Transit continue ongoing coordination for the IDS cut-over change from full shutdown to single tracking.
- ST and CMC are expecting a sudden surge in the number of submittals for review over the coming weeks; this has the potential to result in delays to document approvals. ST and CMC are closely working with the Contractor on possible ways to limit the impact by identifying priority submittals and finding other methods of expediting the document review process without impacting the quality of the review (joint workshop reviews).



Cost Summary

Present Financial Status	Amount
E750 Contractor - Mass Electric Construction Co.	
Original Contract Value	\$255,768,128
Change Order Value	\$1,322,314
Current Contract Value	\$257,090,441
Total Actual Cost (Incurred to Date)	\$44,936,574
Percent Complete	28.0%
Authorized Contingency	\$12,788,406
Contingency Drawdown	\$1,322,314
Contingency Index	2.7

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



IDS Station Bus Signal Removal, Antenna, and Cable Removal, 7/1/19

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Link Light Rail

Downtown Redmond Link Extension

Project Summary

Scope

Limits The Downtown Redmond Link Extension 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

- Continued progressing permit applications including submittal of the City of Redmond Administrative Modification at Microsoft Building 50.
- Received approval from Dept. of Ecology on the King County Shoreline Permit decision.
- Sound Transit Board approved Phase 2 of the Design Build Project Management contract.
- City of Redmond Development Agreement for DRLE was fully executed.
- Temporary Airspace Lease with WSDOT for DRLE was fully executed.
- Continued development of O & M Letters of concurrence to identify ownership and maintenance responsibilities along the alignment.
- Continued preparation of offer packages to property owners for ROW acquisitions.
- Continued development of Utility Relocation Settlement Agreements with private utilities for relocation.
- Continued development of Betterment Agreements with Microsoft for the project.
- Continued development of a Construction Services Task Order with WSDOT in support of the DRLE project.

Project Cost Summary

Voters approved funding for preliminary engineering for the Redmond Link extension 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, the Redmond Link project incurred approximately \$3.9M of expenses bringing the total expenditure to date from \$52.5M to \$56.4M. Right-of-Way acquisition continues to be the main cost drivers during this period. Agency Administrative activities are primarily staffing cost, while expenditures related to third parties are for coordination and fees. Also noticeable is the commitment of the design build scope in the amount of over \$719M.

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	\$6.9	\$6.9	\$77.0	\$0.0
Preliminary Engineering	\$23.0	\$23.0	\$19.0	\$18.0	\$23.0	\$0.0
Final Design	\$4.5	\$4.5	\$0.2	\$0.1	\$4.5	\$0.0
Construction Services	\$58.0	\$58.0	\$1.8	\$1.5	\$58.0	\$0.0
Third Party Agreements	\$17.0	\$17.0	\$6.4	\$1.5	\$17.0	\$0.0
Construction	\$1,151.5	\$1,151.5	\$724.5	\$2.6	\$1,151.5	\$0.0
ROW	\$199.0	\$199.0	\$30.2	\$25.9	\$199.0	\$0.0
Total	\$1,530.0	\$1,530.0	789.1	\$56.4	\$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	\$228.6	\$0.0	\$332.4	\$0.0
20 Stations	\$261.9	\$261.9	\$182.5	\$0.0	\$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	\$179.8	\$0.0	\$287.1	\$0.0
50 Systems	\$108.6	\$108.6	\$65.2	\$0.0	\$108.6	\$0.0
Construction Subtotal (10 - 50)	\$990.0	\$990.0	\$2.8	\$0.0	\$990.0	\$0.0
60 Row, Land	\$168.5	\$168.5	\$30.2	\$25.8	\$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	\$102.8	\$30.5	\$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	\$789.1	\$56.4	\$1,530.0	\$0.0

Link Light Rail Downtown Redmond Link Extension



Risk Management

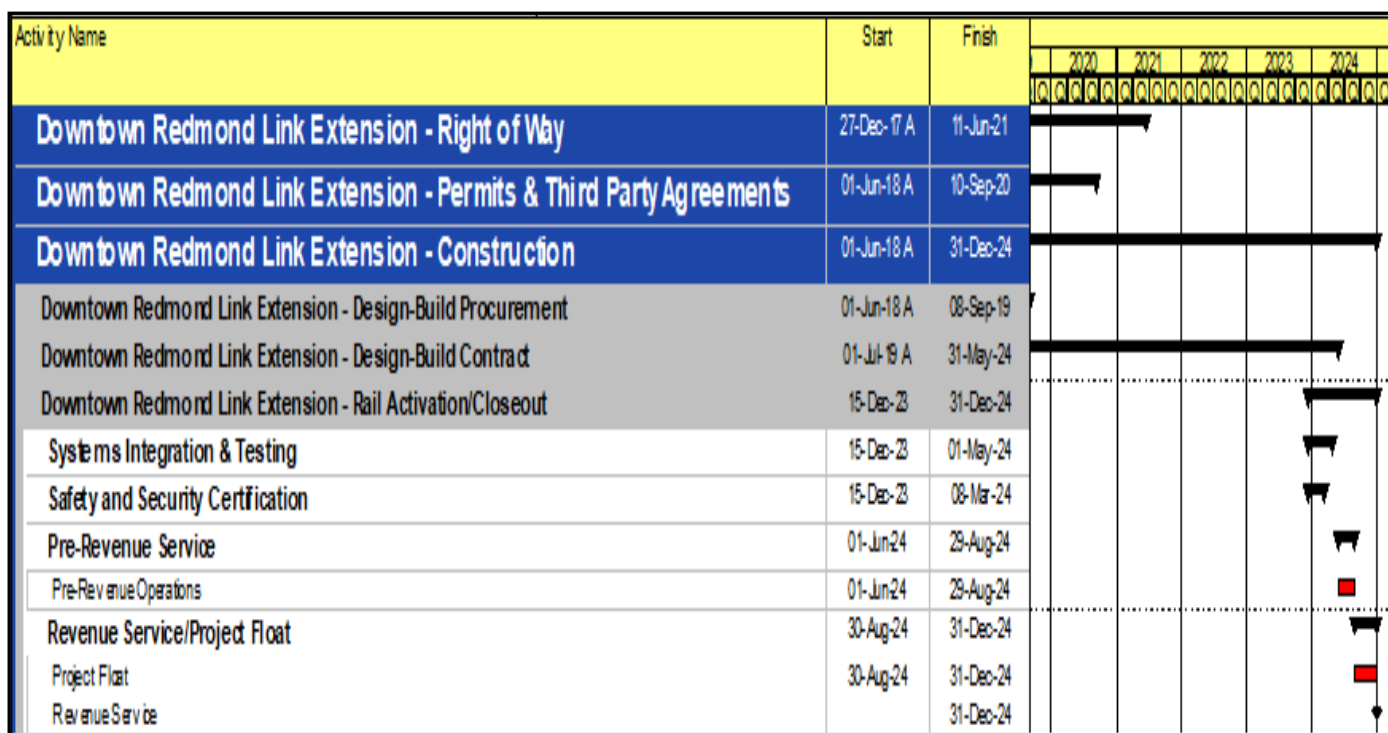
The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit’s 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 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.
- 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).
- 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. The ST Board approved the design-build contract in July and Notice to Proceed is anticipated within the first two weeks of September. Property acquisition is underway and environmental permitting is ongoing. 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	68	4	1547	136
* 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.
- Continued engagement with the community on a variety of concerns including schedule, property acquisition and station access.
- Continued filling requests to provide a project briefing to individual neighborhood associations in Redmond.

Sound Transit Board Actions

Board Action	Description	Date
M2019-89	Authorizes the chief executive officer to execute a contract modification with WSP USA, Inc. to exercise the contract option for Phase 2 of the design-build project management services for the Downtown Redmond Link Extension in the amount of \$49,727,000, with a 10 percent contingency of \$4,973,000 totaling \$54,700,000, for a new total authorized contract amount not to exceed \$56,530,000.	8/22/2019

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

- Continued initial assessment of potential alternatives options identified during the EIS scoping period, as directed by the Board of Directors (Motion M2019-51).
- Continued defining alternative and station footprints for evaluation in the Draft EIS.
- Kicked off Phase 2 monthly interagency group meetings; discussed outcomes from Board Motion M2019-51, and timeline for environmental process.
- Continued engagement with City of Seattle, WSDOT, Port of Seattle, King County and other regulatory and partner agencies regarding the alternatives development process and design, permitting, construction and operational considerations.
- Held workshop and developed staffing agreement with King County Wastewater Treatment Division to study potential relocation of Interbay pump station, if impacted.
- Analyzing environmental condition of Puget Sound Energy site as potential location of a tunnel portal.
- Developed potential RapidRide C and D packages of improvement for inclusion in final report. Continued discussion on operational improvements with SDOT and King County Metro.



Link Light Rail West Seattle and Ballard Link Extensions

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	\$8.5	\$7.9	\$63.1	\$0.0
Preliminary Engineering	\$205.4	\$82.3	\$31.1	\$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	\$1.1	\$0.2	\$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	\$0.5	\$0.4	\$6.0	\$0.0
Total	\$285.9	\$92.4	\$39.6	\$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	\$0.5	\$0.4	\$5.0	\$0.0
80 Professional Services	\$263.4	\$91.9	\$39.2	\$263.4	\$0.0
90 Unallocated Contingency	\$17.5	\$0.0	\$0.0	\$17.5	\$0.0
Total (10 - 90)	\$285.9	\$92.4	\$39.6	\$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.

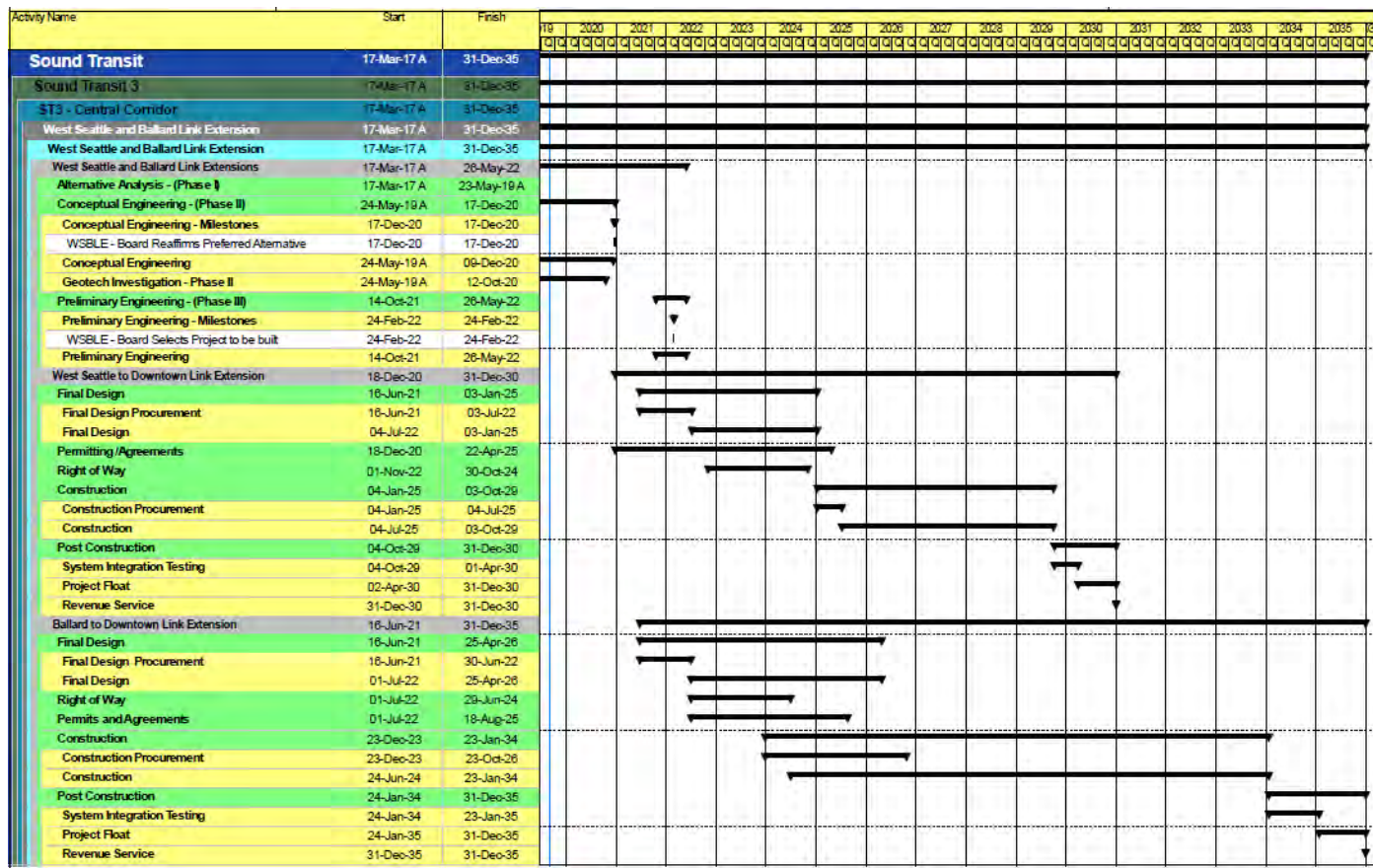
Project issues and risks identified at this stage include:

- 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. ST 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

- Continued outreach to neighborhood and stakeholder groups throughout the project corridor.
- Participated in community outreach opportunities at Summer fairs and festivals throughout the region.

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	\$2.451 Billion (Baseline Sep 2018)
Schedule	Revenue Service: December 2024



Map of Federal Way Link Extension.

Key Project Activities

- Full Funding Grant Agreement (FFGA) application under review by FTA.
- Design Build (DB) Contract F200: DB Contractor engaged with design development with Authorities-having-jurisdiction (AHJs), Design Build Project Management Consultant (DBPM) and FWLE team.; Co-location of key Sound Transit (ST) staff with DB Contractor is scheduled for mid-September 2019.
- DBPM phase 2 contract amendment was executed. NTP delayed until ST & FTA approve their Quality Management Plan.
- Negotiations complete with City of Federal Way for city service agreement; agreement execution next month pending Change Control Board approval.
- Continue preparing task order scope of work for advanced utility relocation with Century Link.
- Puget Sound Energy (PSE) master and first task order agreement is pending execution for utility relocation early work.
- Discussions continue with Seattle Public Utility (SPU) & WSDOT and FTA for Midway Landfill betterment agreement.
- Discussions continue with King County Metro for temporary lease parking during construction at Starlake Park & Ride
- Progress continues with settling Right-of-Way acquisition and relocations this period.
- Next month ST, King County, and Federal Way Public Schools will discuss rights of entry timing and resolve design & schedule concerns.

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 \$27.5M was incurred for August 2019, of which \$3.1M incurred was for Right-Of-Way; \$0.6M incurred for Construction Services; \$22.9M for Construction phase comprised mainly of \$22.6 for Design Build construction contract and \$0.1M for Construction Permits. Remaining major expenditures of \$0.9M were for Preliminary Engineering, Third Party and Administration. Overall the project Estimate at Completion continues to reflect \$2.45B.

NOTE: Pending future board approval, adding a Project Reserve for \$459.3M represents 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	\$18.5	\$18.4	\$96.5	\$0.0
Preliminary Engineering	\$46.5	\$45.5	\$44.2	\$46.5	\$0.0
Final Design	\$3.1	\$0.9	\$0.8	\$3.1	\$0.0
Construction Services	\$107.0	\$15.6	\$5.0	\$107.0	\$0.0
3rd Party Agreements	\$27.7	\$6.9	\$3.9	\$27.7	\$0.0
Construction	\$1,831.9	\$1,273.6	\$65.8	\$1,831.9	\$0.0
ROW	\$338.8	\$79.0	\$68.1	\$338.8	\$0.0
Total	\$2,451.5	\$1,440.0	\$206.3	\$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	\$10.6	\$517.7	\$0.0
20 Stations	\$316.1	\$244.5	\$6.6	\$316.1	\$0.0
30 Support Facilities	\$5.3	\$11.5	\$0.3	\$5.3	\$0.0
40 Sitework & Special Conditions	\$557.7	\$407.2	\$10.7	\$550.8	\$6.9
50 Systems	\$153.0	\$116.5	\$3.1	\$153.0	\$0.0
Construction Subtotal (10 - 50)	\$1,549.9	\$1,172.4	\$31.3	\$1,543.0	\$6.9
60 Row, Land	\$338.8	\$79.0	\$68.1	\$338.8	\$0.0
70 Vehicles	\$1.8	\$0.0	\$0.0	\$1.8	\$0.0
80 Professional Services	\$383.0	\$188.6	\$106.8	\$391.3	(\$8.3)
90 Unallocated Contingency	\$178.1	\$0.0	\$0.0	\$176.7	\$1.4
Total (10 - 90)	\$2,451.5	\$1,440.0	\$206.3	\$2,451.5	\$0.0

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 \$418.3M.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. During this period remaining DA of \$9.3M will no longer be necessary and shall be transferred to AC.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. During this period the AC was increased overall by \$9.9M due to transfer of \$9.3M unused DA budget no longer needed and the execution of two Change Orders, net result \$0.6M, for the DBPM Contract.

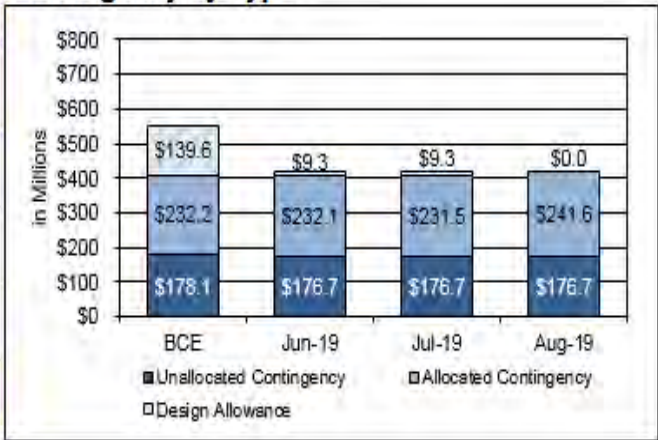
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. During this period no drawdowns from UAC occurred.

Contingency Status (Monthly)

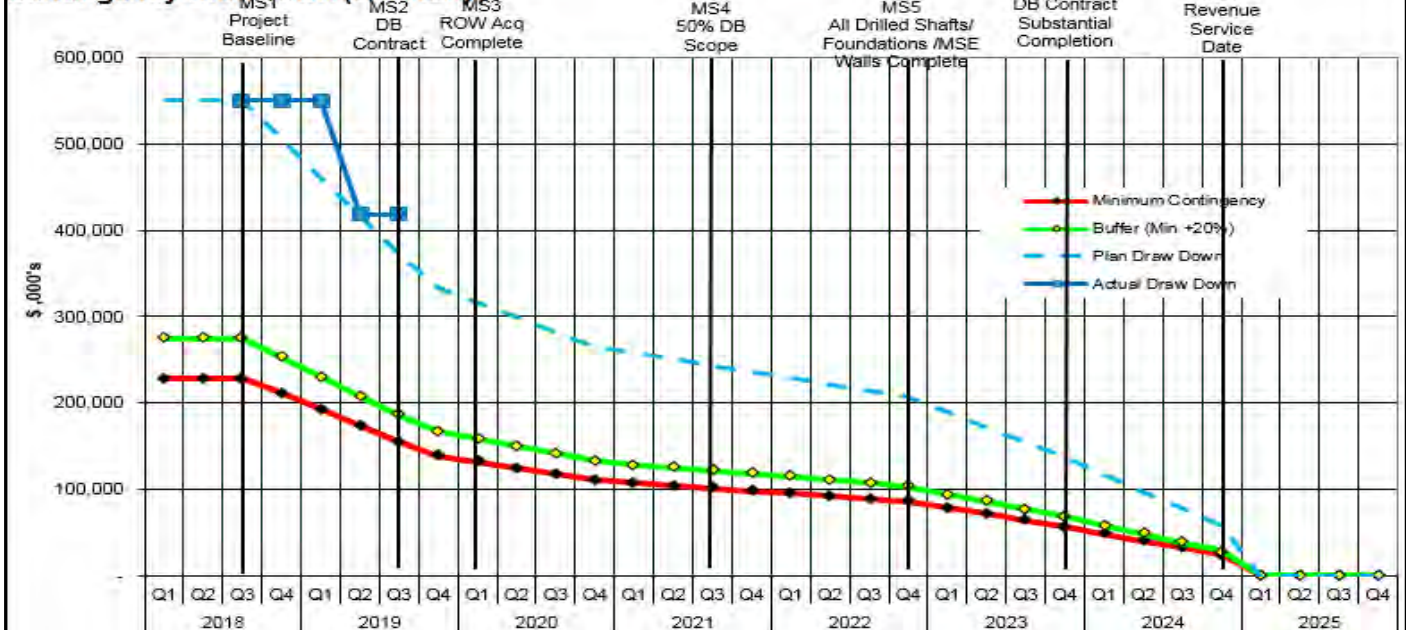
Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$139.6	5.7%	\$0.0	0.0%
Allocated Contingency	\$232.2	9.5%	\$241.6	10.3%
Unallocated Contingency	\$178.1	7.3%	\$176.7	7.6%
Total:	\$549.9	22.4%	\$418.3	17.9%

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	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
256	353	226	77	430	259

* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.

- The Acquisition only includes parcels (recognizing only land not owners).
- The 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.
- Staffed FWLE informational tables at:
 - 8/7/19 Kent Station Concert
 - 8/10/19 Flavor of Federal Way
 - 8/15/19 SeaTac Back to School Fair
- Held neighborhood briefings for the following areas:
 - 8/8/19 Heritage Court, Newport Village and Silverwood Apartments in Des Moines
 - 8/14/19 South Midway area of Kent
 - 8/22/19 Greenfield, Saybrooke Condos and Mark Twain Elementary School areas of Kent and Federal Way
 - 8/28/19 Military Rd S area of Federal Way



Community Outreach at SeaTac Back to School Fair

Sound Transit Board Actions

Board Action	Description	Date
	None	

Phase 3 Preliminary Engineering (PE)

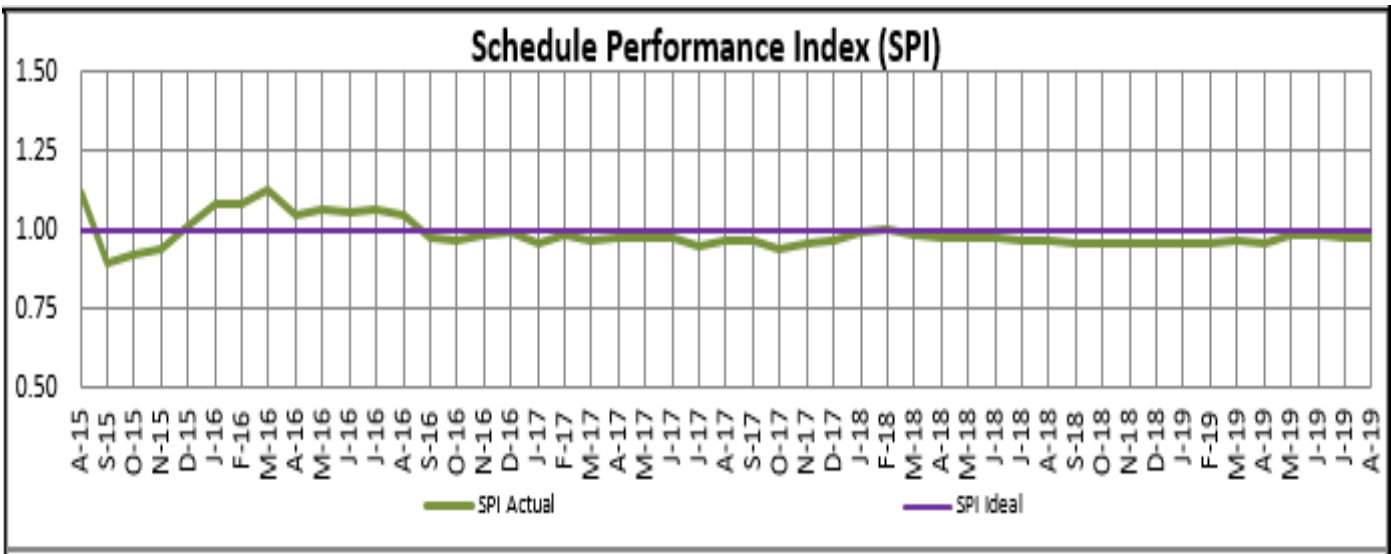
In July 2015, Sound Transit executed an amendment to the professional services agreement with HDR Engineering, Inc. for Phase 3 professional services, including completion of a Final Environmental Impact Statement (FEIS) using the preferred alternative and the other alternatives in the Draft EIS, preliminary 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

- Coordination efforts with the Design Build Project Management Consultant (DBPM) continued.
- Continued environmental work including the NEPA/SEPA “additional Information for Project Refinements” and permitting work.
- Right-of-Way (ROW) support for property acquisition continued including ROW drawings and parcel maps continued.

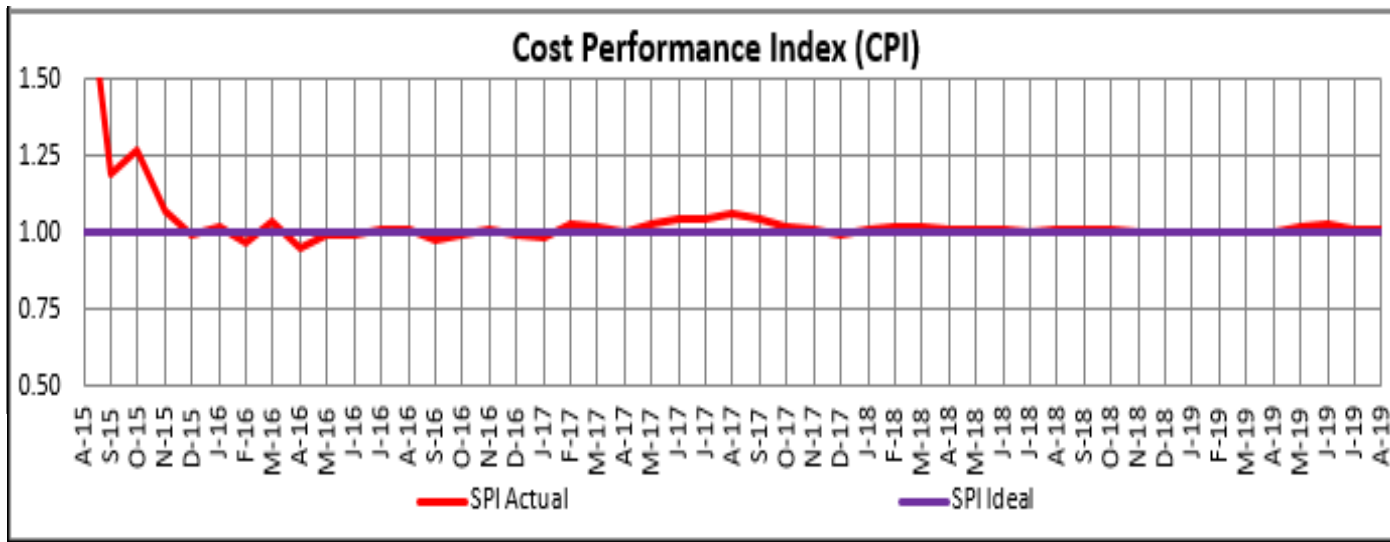
Schedule Performance Index

The cumulative Schedule Performance Index (SPI) is 0.98 through August 2019, indicating the overall amount of work accomplished is as planned. The consultant is fully engaged on coordination efforts with the DBPM, Environmental works including NEPA/SEPA, and in property acquisition support with parcel maps.



Cost Performance Index

Phase 3 expenditures through August 2019 totaled \$36.0 M, approximately 96.8% of the amended total contract. The Phase 3 percent complete is reported at 98.2%, with an earned value of \$36.9M. 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, environmental works, and ROW acquisition support and parcel maps.



Cost Summary

Contract (Phase 3 portion)	Cumulative To-date
Amount Invoiced	\$36.0M
% Spent	96.8%
Earned Value	\$36.5M
% Complete	98.2%
SPI	0.98
CPI	1.01

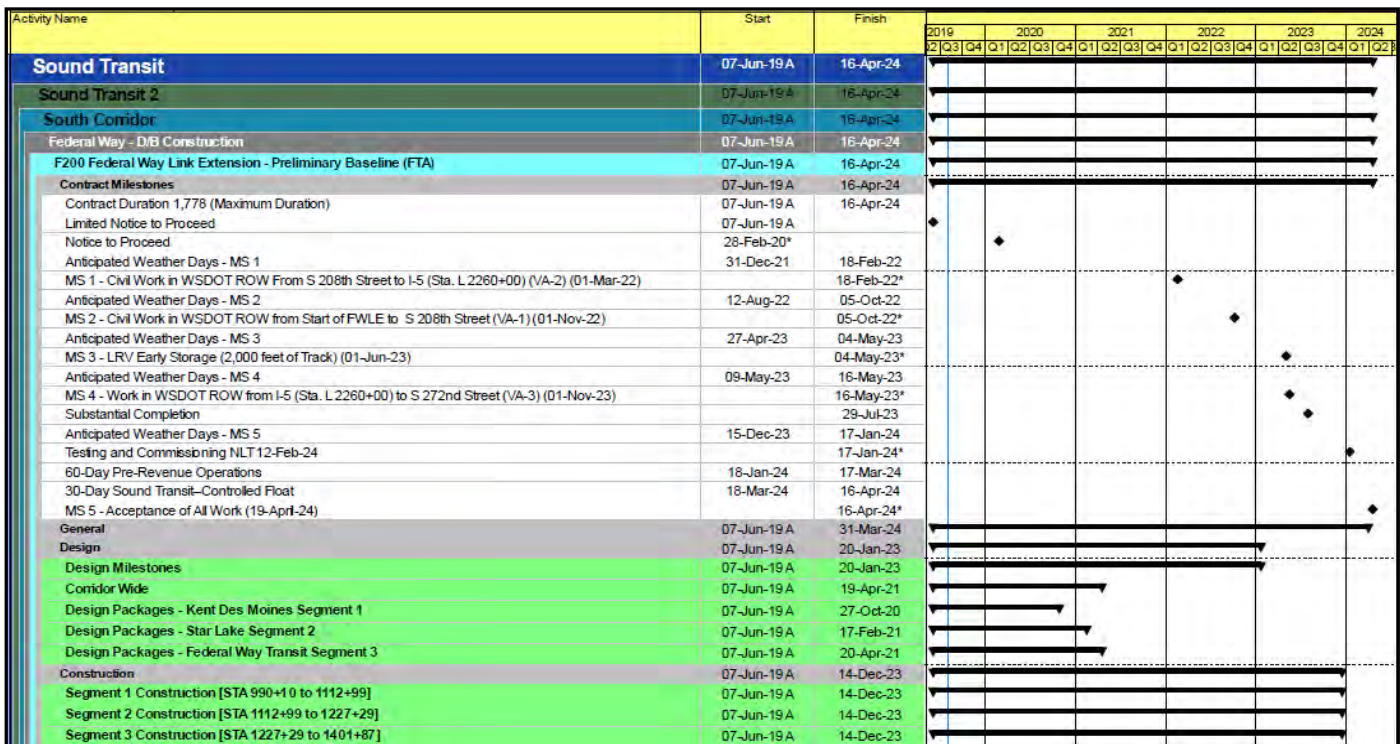
F200 Design Build Contract

Current Progress

The second progress payment was submitted and is under review covering continuing mobilization, management, and design submittal activities. The baseline cost-loaded schedule and schedule of values has been submitted and reviewed and is currently awaiting resubmittal. Design work continues with 30% packages being submitted as they're completed.

Schedule Summary

LNTP was issued June 7th. 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 October. Below is a summary schedule from the contractor's preliminary baseline schedule.



Schedule Performance Index

The SPI will be included in the report once the cost loaded baseline schedule is fully approved.

Next Period's Activities

- Continue design development and coordination
- Continue 30% design package submittals
- Continue other early critical submittal activity
- Continue geotechnical borings along alignment

Closely Monitored Issues

- None

Cost Summary

Present Financial Status	Amount
Contractor-	
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)	\$63,687,447
Percent Complete	4.95%
Authorized Contingency	\$128,520,000
Contingency Drawdown	\$500,000
Contingency Index	12.7

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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: Work resumed on TPSS No. 1 following resolution of water infiltration at tiebacks. Contractor commenced rework of specific test track slab sections due to quality issues.
- Heading 2: Continued track slab installation and completed electrical vault and OCS foundations on Stadium Way adjacent to high school. Performed storm and sewer relocations at 1st St./Tacoma Ave. intersection.
- Heading 3: Continued storm drainage, sewer, waterline and OCS foundation work along MLK at various locations.
- OMF: Completed structural slab and began structural steel erection at bldg.

Right-of-Way:

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

Vehicles:

- Held monthly progress meeting with representatives from Brookville Equipment Corporation on LRVs. Sound Transit (ST) staff and vehicle consultant reviewed vehicle subsystem design submittals. Team is working toward conditional acceptance of 70% design submittals in advance of preliminary design review in late October.

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.

In the July 2019 period approximately \$7.7M was incurred, with most expenditures occurring in the Construction Phase related to the T100 construction contract. ST continues to anticipate majority of expenditures in the construction phase.

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	\$16.9	\$16.9	\$9.8	\$9.7	\$16.9	\$0.0
Preliminary Engineering	\$5.6	\$5.6	\$5.6	\$5.6	\$5.6	\$0.0
Final Design	\$10.8	\$12.8	\$12.4	\$10.5	\$12.8	\$0.0
Construction Services	\$9.9	\$10.3	\$8.9	\$3.2	\$10.3	\$0.0
3rd Party Agreements	\$1.5	\$1.5	\$1.4	\$1.1	\$1.5	(\$0.0)
Construction	\$127.2	\$130.1	\$118.5	\$53.1	\$130.1	(\$0.0)
Vehicles	\$35.4	\$32.8	\$30.3	\$0.7	\$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	\$189.1	\$85.8	\$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	\$22.7	\$10.2	\$24.9	(\$0.0)
20 Stations	\$1.8	\$2.8	\$2.5	\$1.1	\$2.8	\$0.0
30 Support Facilities	\$26.6	\$33.1	\$30.1	\$13.5	\$33.1	\$0.0
40 Sitework & Special Conditions	\$40.0	\$41.6	\$37.9	\$17.0	\$41.6	\$0.0
50 Systems	\$25.0	\$27.8	\$25.3	\$11.3	\$27.8	\$0.0
Construction Subtotal (10 - 50)	\$115.4	\$130.12	\$118.5	\$53.1	\$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	\$0.7	\$32.8	(\$0.0)
80 Professional Services	\$48.4	\$47.1	\$38.1	\$30.1	\$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	\$189.1	\$85.8	\$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 is planned for mid to late October to update the risk model following review of secondary risk mitigations and updated estimate at completion. Per the August 2019 Register Update the current top project risks include:

- 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.
- Unidentified utilities under the proposed alignment lead to increased cost and schedule delays for mitigation during construction.
- City of Tacoma betterment requests and response to community concerns lead to extended durations for planned activities and may incur additional costs beyond the bid price for the work.
- Contractor assumed City of Tacoma discretion to relax code requirements regarding material stockpiles in public ROW.
- Redesign of Division St./J/K intersection work leads to schedule delay and higher costs.



Placing Concrete for Track Slab south of Station

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 \$0M, 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 reduced based on for executing T100 Change Orders and more are in process. The balance is \$8.9M.

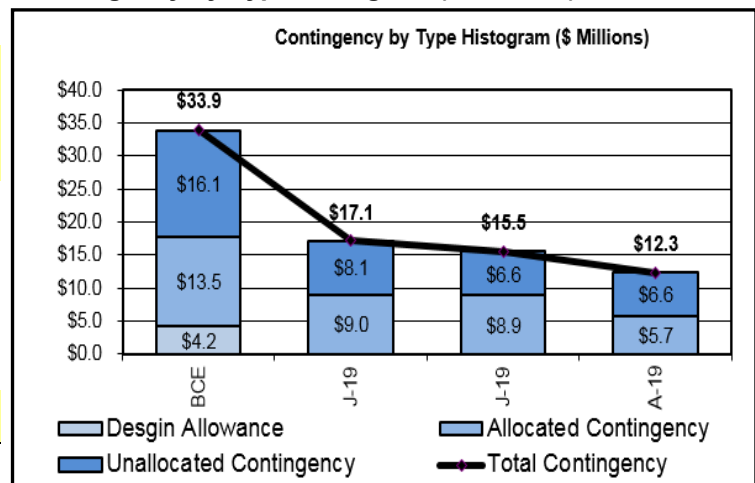
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance was reduced by \$1.4M in July for the DSDC HDR Change Order. The a net balance amount is \$6.6M.

Contingency Status (Monthly)

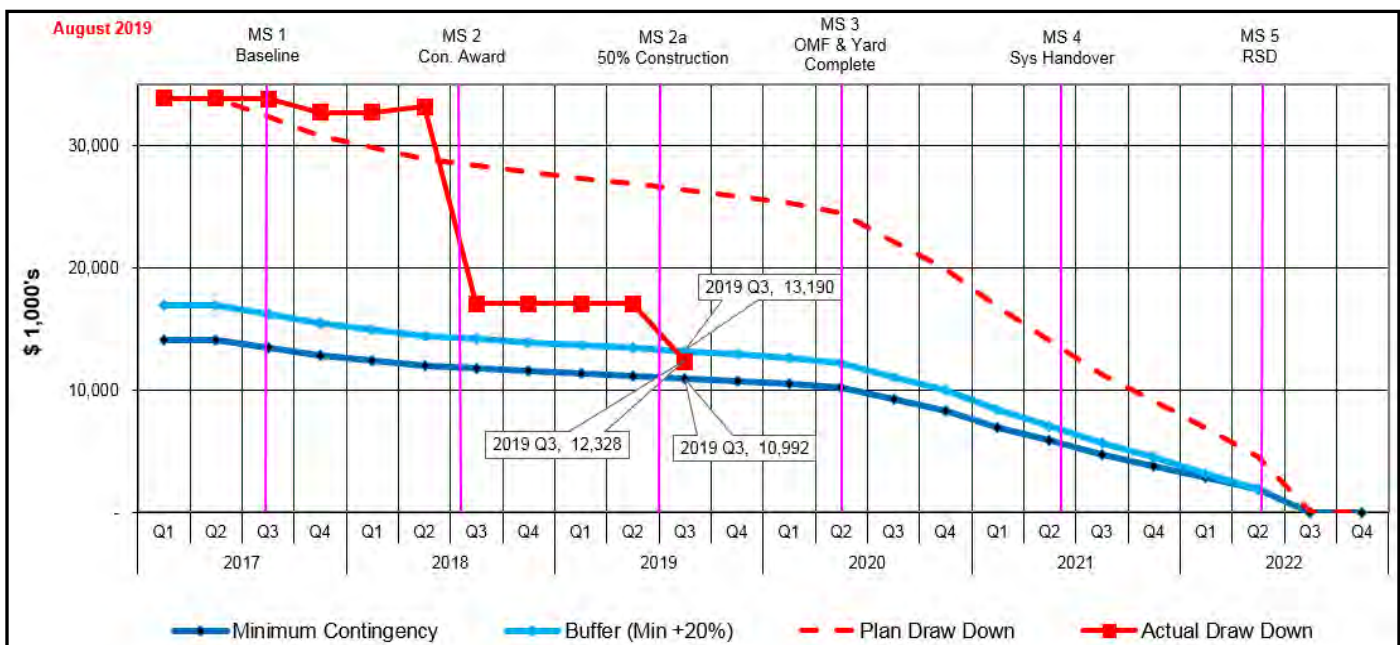
Type	Baseline		Current	
	Amount	% of Total	Amount	% of Work
Design Allowance	\$4.2	2.2%	\$0.0	0.0%
Allocated Contingency	\$13.5	6.8%	\$5.7	4.3%
Unallocated Contingency	\$16.1	8.2%	\$6.6	5.0%
Total	\$33.8	17.2%	\$12.3	9.4%

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 August 2019. The LRV procurement contractor has slipped Preliminary Design Review #2 to 3rd QTR 2019 and Final Design Review (FDR) completion in 4th QTR 2019. Forecast delivery of the LRVs forecasts the first car arriving in 4th QTR 2020 and last car in 1st QTR 2021. Despite the slip in schedule all cars will still be delivered in time to support pre-revenue service startup in 2nd QTR 2021.

Activity Name	Start	Finish	2020				2021				2022			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Hilltop Tacoma Link Expansion - August 2019 Update	02-Feb-18 A	23-May-22												
Project Milestones	28-Sep-17 A	23-May-22												
MS-01 - Project Baseline		28-Sep-17 A												
MS-02 - Construction Contract Award		27-Aug-18 A												
MS-03 - Submit Design & Delivery Schedule for the Automata Vehicle Locator		21-Nov-18 A												
BEC - LRV Deliver Car 1 to ST (Contractual Date Jun 4 2020)		13-Nov-20												
BEC - LRV Deliver Car 2 to ST (Contractual Date Aug 4 2020)		08-Jan-21												
BEC - LRV Deliver Car 3 to ST (Contractual Date Sep 4 2020)		12-Feb-21												
MS-01 - OMF & Yard Complete (Contractual Date Nov 21 2020)		12-Feb-21												
BEC - LRV Deliver Car 4 to ST (Contractual Date Oct 4 2020)		09-Mar-21												
MS-04 - Systems Handover		14-Apr-21												
BEC - LRV Deliver Car 5 to ST (Contractual Date Nov 4 2020)		14-Apr-21												
MS-02 - Substantial Completion of all work (Contractual Date May 29 2021)		23-Sep-21*												
MS-05 Revenue Service Date		23-May-22												
Preliminary Engineering	02-Feb-18 A	04-Nov-18 A												
Final Design	04-Jan-18 A	31-May-18 A												
ROW & Third Parties	01-Oct-15 A	30-Oct-20												
Owner Furnished Materials / Equipment Procurement	16-Mar-18 A	09-Jul-21												
Systems Training for Operations	18-May-21	08-Jul-21												
Owner Furnished Material	02-Oct-17 A	08-Jul-21												
Light Rail Vehicles	16-Mar-18 A	02-Jun-21												
Construction	23-Jan-18 A	27-Jul-18 A												
Construction Contract Procurement	23-Jan-18 A	27-Jul-18 A												
T100 Construction	28-Jun-18 A	13-Jan-22												
Milestones	28-Jun-18 A	23-Oct-21												
PreConstruction	09-Aug-18 A	20-Jul-21												
Heading 1: 7th & Commerce to Stadium Way & Division	15-Oct-18 A	08-Mar-21												
Heading 2: Stadium Way & Division to Division St and MLK	23-Oct-18 A	18-May-21												
Heading 3: Division St and MLK to MLK & 19th	15-Oct-18 A	25-Aug-21												
OCS Wire Runs	21-Dec-20	08-Sep-21												
Train Signal System	24-Sep-20	18-Dec-20												
OMF Facility	28-Aug-18 A	23-Dec-20												
Change Orders	24-Dec-18 A	13-Jan-22												
RFCs	28-Jan-19 A	23-Oct-19												
Provisional Sums	08-Dec-18 A	28-May-21												
Weather Days	04-Feb-19 A	01-Mar-19 A												
Testing/Startup/Commissioning	10-Aug-20	23-Sep-21												
Systems Integration Testing	10-Aug-20	23-Sep-21												
Safety & Security Certification	02-Feb-18 A	03-Sep-21												
Safety and Security Certification Conformance	02-Feb-18 A	03-Sep-21												
Pre-Revenue Testing	23-Sep-21	08-Nov-21												
Simulated Revenue Service	23-Sep-21	08-Nov-21												
Revenue Service	23-May-22	23-May-22												
Revenue Service Begins (BL Date May 23 2022)		23-May-22												

Critical Path Analysis

The Hilltop Tacoma Link Extension project critical path analysis for August 2019.

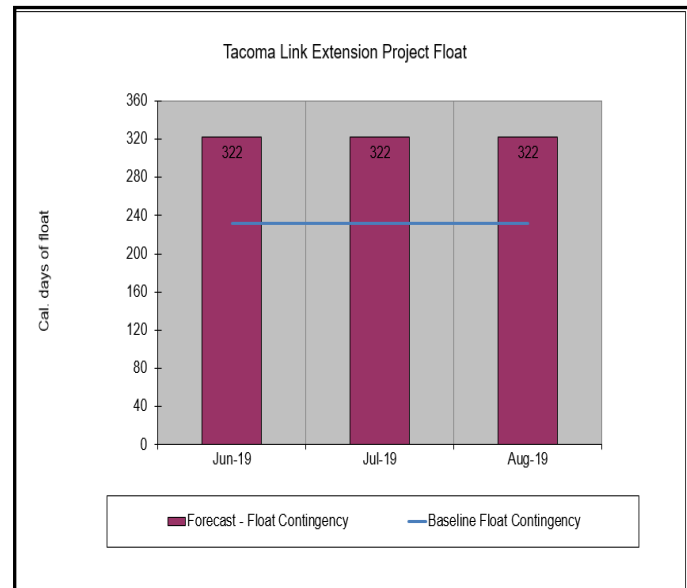
T100 Construction critical path continues to be the completion of wet utilities, which impact the installation of inbound/outbound track for all headings. The contractor is currently working on a recovery schedule to show the resequencing of the remaining work in the Stadium High School area and track installation which will be required in order to achieve the MS #2 Substantial Completion in 2nd QTR 2021.

Activity ID	Activity Name	OD	RD	Start	Finish	TF	2019			2020				2021				
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
T100 Hilltop Tacoma Link Extension Schedule Update August 2019																		
Tacoma Links Baseline Schedule																		
Milestones																		
Job Milestones																		
Contractual Milestones																		
0123CMS100	Contr: MILESTONE2+Potential Impacts Substantial Completion of All Work (NTP+1005-9/29/21)	0.00	0.00		23-Jul-21*	-5.00												
Heading 1: 7th & Commerce to Stadium Way & Division																		
9th & Commerce Intersection Work																		
Outbound																		
Inbound																		
Pave																		
Heading 2: Stadium Way & Division to Division Stand MLK																		
Pave																		
Heading 3: Division Stand MLK to MLK & 19th																		
Utilities																		
Jack & Bore																		
Outbound																		
Pave																		
Landscape																		

Project Float

The Tacoma Link Extension project currently forecasts 322 days of unallocated project float. Seven days of project float have been used for weather delays. The program was baselined with 232 days of project float from MS# 2 Substantial Completion to Start of Revenue Service May 23, 2022.

RFC#148 Request for a time extension due to differing site conditions and design issues are still being negotiated with contractor and have not been 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

- Sponsored and staffed the Hilltop Street Fair, Aug. 24. An estimated 25,000 – 28,000 people attended the event.
- Continued to inform residents on construction work in the Stadium HS street closure, the N. 1st St. and Tacoma Ave. intersection.
- Provided 2-week notification to MultiCare about the jack-and-bore work starting on Sept. 9
- Provided MultiCare a site walk of the jack-and-bore work and answered questions, primarily about pedestrian access.
- Coordinated with the Edgecliff Apartments about access and parking options during paving on Stadium Way.
- Met with Stadium Thriftway to talk about construction and ways to minimize impacts to businesses, August 22.
- Produced and distributed notification about utility work at MLK and 13th St., electrical work in the alley west of MLK Jr. Way at S. 15th St., utility work at MLK Jr. Way and S. 8th St, the night-time MLK & 18th St. water tie-in, utility work at Division Ave. and J St., and a lane closure near the OMF to offload steel.
- Coordinated with the Stadium Business District on the Stadium Art, Beer and Wine Walk.
- Staffed information booths at National Night Out at the People’s Community Center on Hilltop (August 6) and at Downtown on the Go’s Scavenger Hunt (August 7).
- Gave a tour of the OMF and HTLE route to the winners of the Loyal to the Local Instagram promotion, August 8.
- Met with the City of Tacoma’s stakeholder outreach group, August 22.
- Coordinated photos of the Harvester Restaurant as part of the Loyal to the Local campaign.
- Responded to Councilmember Thoms’ question about Sound Transit’s risk and claims process.
- Responded to community questions/complaints about parking and homelessness issues near Johnson Candy, City parking enforcement writing lots of parking tickets near construction, compensation for lost business, and contractors storing equipment near businesses and residences during off-hours.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	August 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	1	2
Days Away From Work Cases	0	0	0
Total Days Away From Work	0	0	0
First Aid Cases	2	5	6
Reported Near Mishaps	3	4	11
Average Number of Employees on Worksite	136	-	-
Total # of Hours (GC & Subs)	9,772	83,729	95,542
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	2.39	4.17
LTI Rate	0.00	0.00	0.00
Recordable National Average	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

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

Link Light Rail Hilltop Tacoma Link Extension



Contract T100 — Hilltop Tacoma Link Extension

Current Progress

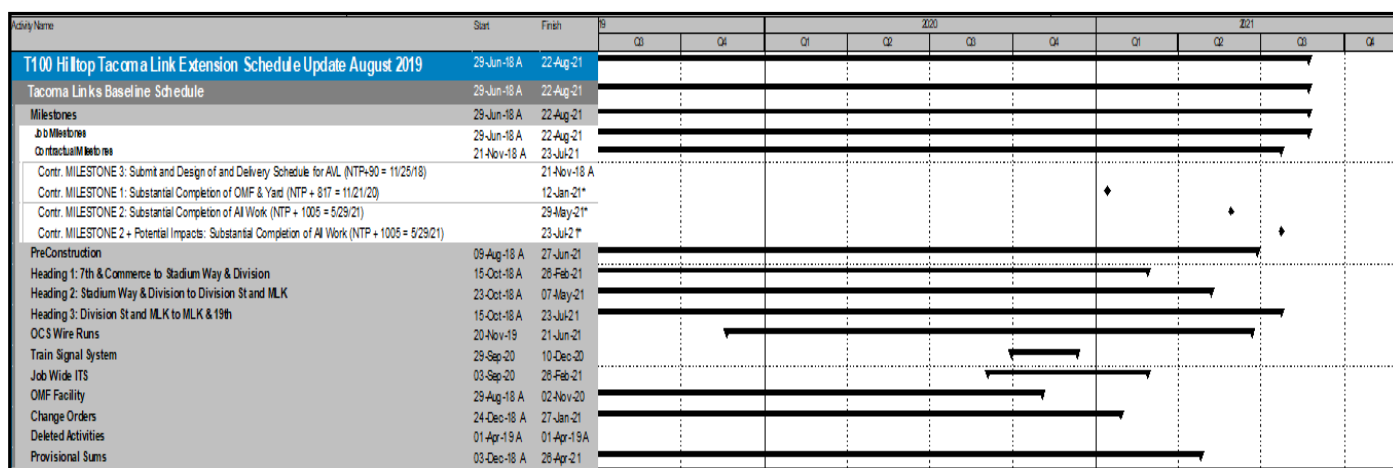
The T100 Contractor, Walsh Construction Company II, LLC, is continuing OMF and Mainline work at grade.

- Storm drainage and water work continues in Heading 2B and 3.
- Form, place, strip and sawcut the middle slab for outbound track installation in Heading 2A.
- Started track inbound installation in Heading 1.
- Drilling for additional drainage at TPSS#1 retaining wall.
- Installing of the sewer, water and storm drains at East 25th Ave and East J Street.
- FRP structural slab and erect structural steel in the OMF Facility.
- Completing wet utility work and curb, gutter & sidewalk repairs throughout Heading 2A.

Schedule Summary

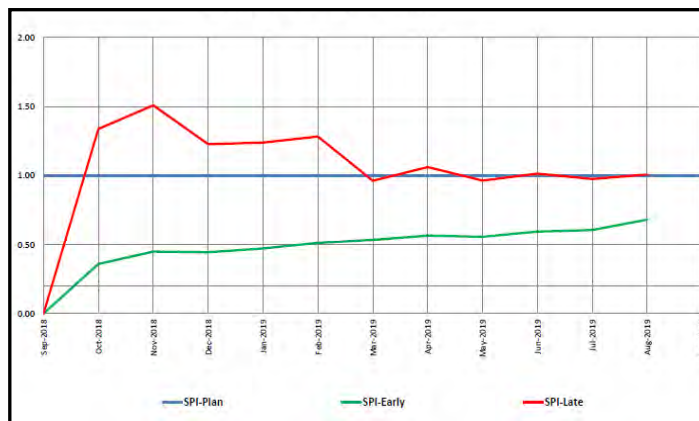
The schedule update for August 2019 indicates a revised completion date for the OMF Substantial Completion in 1st QTR 2021 and MS#2 Substantial Completion of all Work is completing in 3rd Quarter 2021. The wet utility work continues to be behind schedule due to differing site conditions, which in turn affects track installation. Contractor has submitted a request for a time extension for contract MS #2 Substantial Completion of All Work; request is being reviewed by Sound Transit for merit. Contractor is preparing a recovery schedule which will be submitted in September 2019.

Weighted Percent Complete is currently 36%.



Schedule Performance Index

This period, the SPI-early improved to .68 and the SPI-late slightly improved to 1.01. The early index indicates that the contractor continues to perform behind the plan when compared to the baseline schedule. The SPI-late did decrease to below 1 this month. Based on the current trends there is a high likelihood of schedule impacts to the current T100 contract milestones.



Next Period's Activities

- Heading 1: Continue drainage work at TPSS No. 1.
- Heading 2A (Stadium High School): Continue electrical vault installations; installed rail and poured track slab at curve.
- Heading 2B: Continue storm drain and sewer work in Stadium District; .
- Heading 3: Continue waterline, storm drainage work and installed water services. Continue OCS foundation installation.
- OMF: Complete structural slab and begin building structural steel erection activities.

Closely Monitored Issues

- 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 Contractor, City of Tacoma and ST field staff.
- TPSS#1 retaining wall drainage issue was resolved but delay to work is likely to have schedule and cost implications.

Cost Summary

Present Financial Status	Amount
T100 Contractor— Walsh Construction Company	
Original Contract Value	\$ 108,295,000
Change Order Value	\$ 2,220,230
Current Contract Value	\$ 110,515,230
Total Actual Cost (Incurred to Date)	\$ 50,264,135
Percent Complete	37%
Authorized Contingency	\$ 3,194,520
Contingency Drawdown	\$ 2,220,230
Contingency Index	0.9



Night crew installing storm drainage

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

- TDLE Notice to Proceed for Phase 2 Contract issued 8/1.
- OMF South Landfill Workshop#1 held 8/13 that included staff from SPU, cities of Kent and Federal Way and Seattle and WSDOT; discussed possible development scenarios for construction methods on the landfill.
- Held meeting with Puyallup Tribe and FTA to initiate Environmental process 8/14.
- Station Planning workshop held with City of Tacoma 8/26.
- Received comments from Inter-Agency Group (IAG) agencies on Environmental Impact Statement (EIS) Methodology Reports for OMF South.
- Submitted draft EIS Methodology Reports to FTA for TDLE.

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	\$5.1	\$4.7	\$26.8	\$0.0
Preliminary Engineering	\$87.1	\$47.2	\$9.6	\$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	\$0.3	\$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	\$0.0	\$0.0	\$6.0	\$0.0
Total	\$125.7	\$52.6	\$14.6	\$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	\$0.0	\$0.0	\$5.0	\$0.0
80 Professional Services	\$110.9	\$52.6	\$14.6	\$110.9	\$0.0
90 Unallocated Contingency	\$9.8	\$0.0	\$0.0	\$9.8	\$0.0
Total (10 - 90)	\$125.7	\$52.6	\$14.6	\$125.7	\$0.0

Link Light Rail Tacoma Dome Link Extension



Risk Management

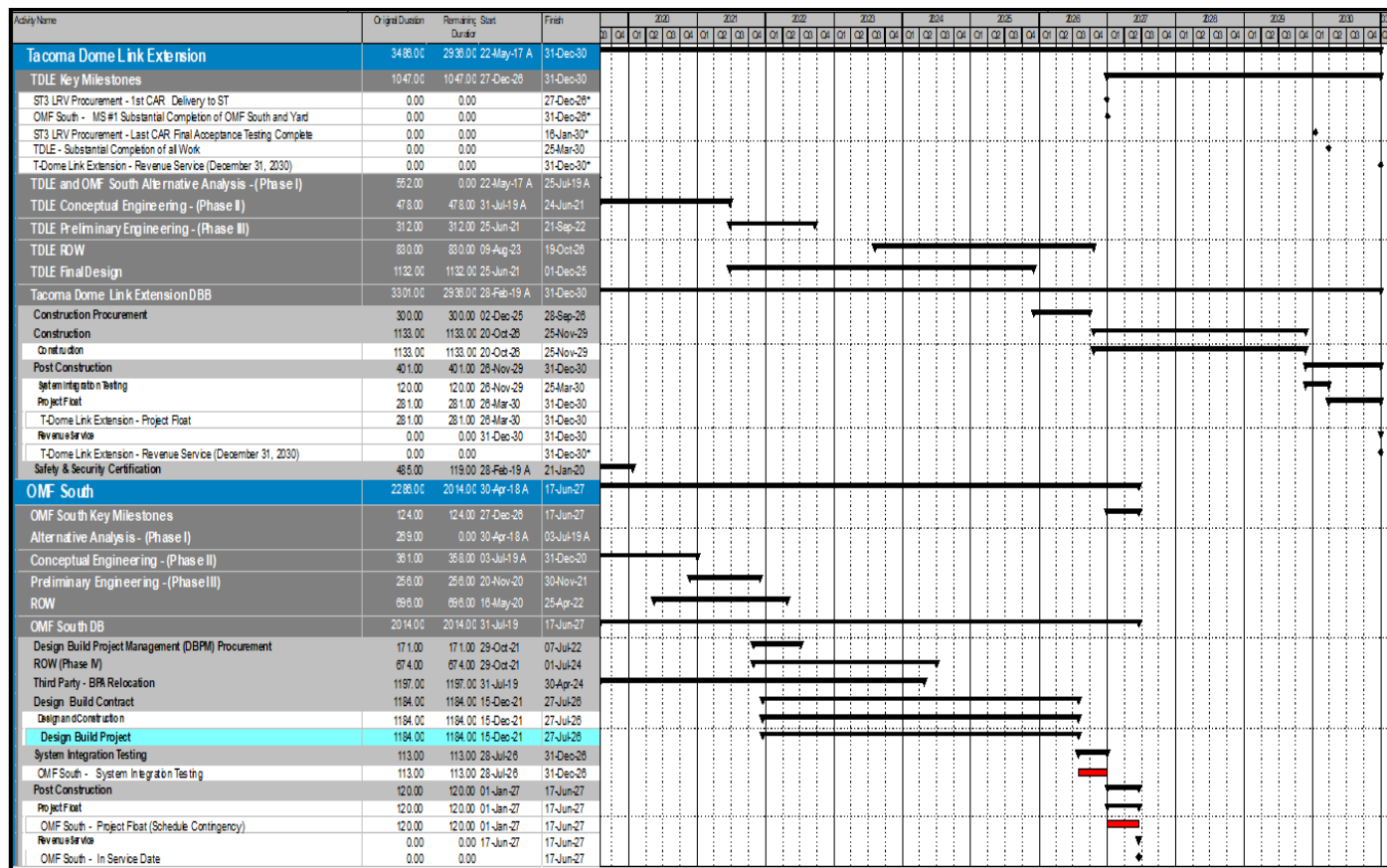
The Tacoma Dome Link Extension and OMF South Risk and Contingency Management Plan (RCMP) will establish a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It will provide a tool for the project team to proactively manage 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 2nd QTR 2019 risk review workshop was held in June. 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.
- OMF South can not be built in time for ST3 vehicle schedule.
- Lack of federal funding for public transit projects could delay the project.
- Puyallup Tribe may take longer than planned to provide cultural resources and/or fisheries, stormwater mitigation approvals.

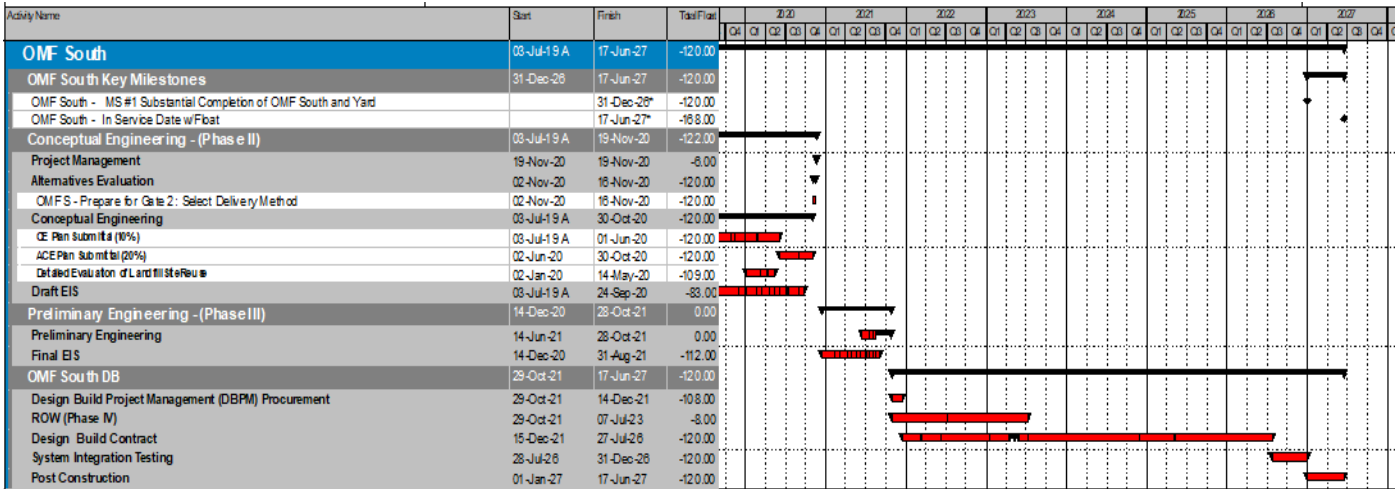
Project Schedule

Below is the HDR detailed schedule as of Aug 30, 2019. The schedule indicates OMF South is tracking the Draft EIS publication completion in August 2020 and a Final EIS publication completion in August 2021. The Final EIS must be on time in order to maintain a required OMF S completion of December 2026 to support receipt of the 1st LRV ST3 Light Rail Vehicles. TDLE Draft EIS publication is scheduled for completion in 1st QTR 2021 and Final EIS publication completion in 2nd QTR 2022.



Critical Path Analysis

The critical path for the TDLE program continues to run through Sound Transit Board selecting the Draft Environmental Impact Statement alternatives for OMF South. The critical path then continues through the project life cycle of conceptual, preliminary design, final design, permitting and Right-of-Way acquisition, construction in order to meet a target substantial completion of December 2026.



Community Outreach

- TDLE – Participated in Salishan Association’s National Night Out festival (8/6)
- OMFS – Provided briefing to Rock Automotive and Sunset Motel in Kent (8/7)
- TDLE - Participated in monthly Dome District meeting (8/8)
- OMFS/TDLE – Participated in Flavor of Federal Way event (8/10)
- TDLE – Participated in the Milton Days event (8/17)
- TDLE/OMFS – Provided briefing to residents of Belmor Park (8/20)

Sound Transit Board Actions

Board Action	Description	Date
	None to Report	

Link Light Rail

Link Operations & Maintenance Facility: East



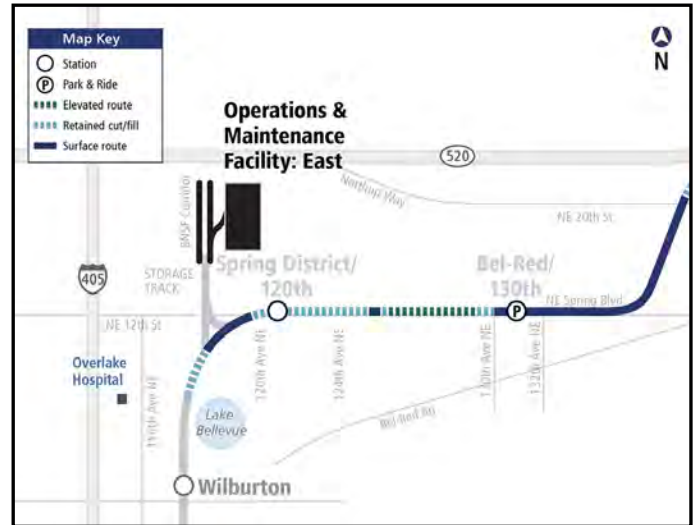
Project Summary

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

- Design Package (DP) development for DP3A was approved & reviewing DP3B.
- Underground electrical and systems conduit R/I was substantially completed site wide.
- OMF East building continues with slab-on-grade and exterior metal framing was substantially completed.
- Maintenance of Way (MOW) building perimeter walls are substantially completed and slab-on-grade activities began.
- Periodic deliveries and installation of pre-curved rail and turnouts.

Closely Monitored Issues

- Elements of Design Build (DB) contractor's proposal (shear wall elimination for future development) may require MOU amendment with City of Bellevue (CoB). CoB Council action may be required.
- Spur property exchange proposal with CoB may complicate the timing of the RFP for Transit Oriented Development.
- Supply and delivery delay of track switches.



Link Light Rail

Link Operations & Maintenance Facility: East

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 \$8M. The total project cost incurred increased from \$242.6M to \$250.6M. The primary cost drivers during this period on the OMF East project comes from the design build (construction) phase at \$7.1M or roughly 89% of the total monthly expenditures. The next cost driver this period are the Construction Services and Administrative Phase (predominantly staff cost) expenditures at about \$700K and \$100K respectively.

Cost Summary by Phase

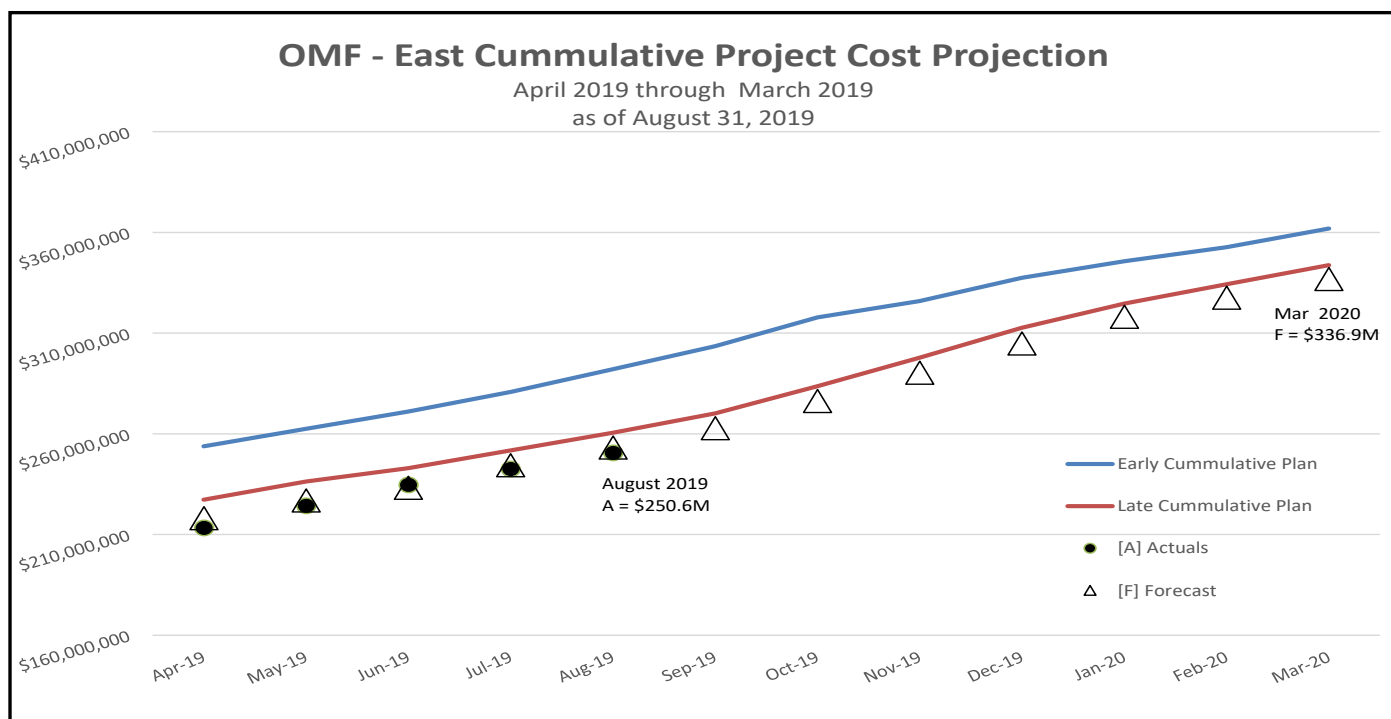
Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$17.6	\$17.6	\$6.1	\$6.1	\$17.6	\$0.0
Preliminary Engineering	\$9.5	\$9.5	\$9.0	\$8.7	\$9.5	\$0.0
Final Design	\$0.4	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
Construction Services	\$19.3	\$19.3	\$17.5	\$8.0	\$19.3	\$0.0
3rd Party Agreements	\$3.1	\$3.1	\$0.3	\$0.1	\$3.1	\$0.0
Construction	\$264.8	\$264.8	\$223.6	\$125.3	\$264.8	\$0.0
ROW	\$134.5	\$134.5	\$102.8	\$102.5	\$134.5	\$0.0
Total	\$449.2	\$449.2	\$359.4	\$250.6	\$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	\$2.0	\$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	\$124.7	\$69.4	\$145.1	-\$9.0
40 Sitework & Special Conditions	\$43.6	\$48.5	\$39.8	\$19.9	\$42.8	\$5.7
50 Systems	\$43.0	\$41.6	\$38.7	\$19.0	\$38.7	\$2.9
Construction Subtotal (10 - 50)	\$229.3	\$230.6	\$207.2	\$110.3	\$230.6	-\$0.1
60 ROW, Land, Improvements	\$134.5	\$134.5	\$102.8	\$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	\$49.4	\$37.9	\$70.3	\$0.1
90 Unallocated Contingency	\$13.8	\$13.8	\$0.0	\$0.0	\$13.8	\$0.0
Total (10 - 90)	\$449.2	\$449.2	\$359.4	\$250.6	\$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 approximated \$250.6M with Construction Phase contributing 50% surpassing Right-of-Way (ROW) phase at 40.9%. Construction activities is now the leading and main cost driver going forward from hereon. The projected 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 \$336.9M by March 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 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. The current top actively managed risk areas remains similar to the previous quarter and are listed below:

- **Design:** As the project approaches the 100% design milestone, 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 moves into full swing, normal and routine construction risks will be encountered and post-IFC change to design may also drive cost growth to the project. Most underground work is now complete, limiting further risk from soils or contamination. Safety and environmental compliance is another area to monitor.

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 \$68.8M (previous period at \$68.9M).

Design Allowance (DA): N/A

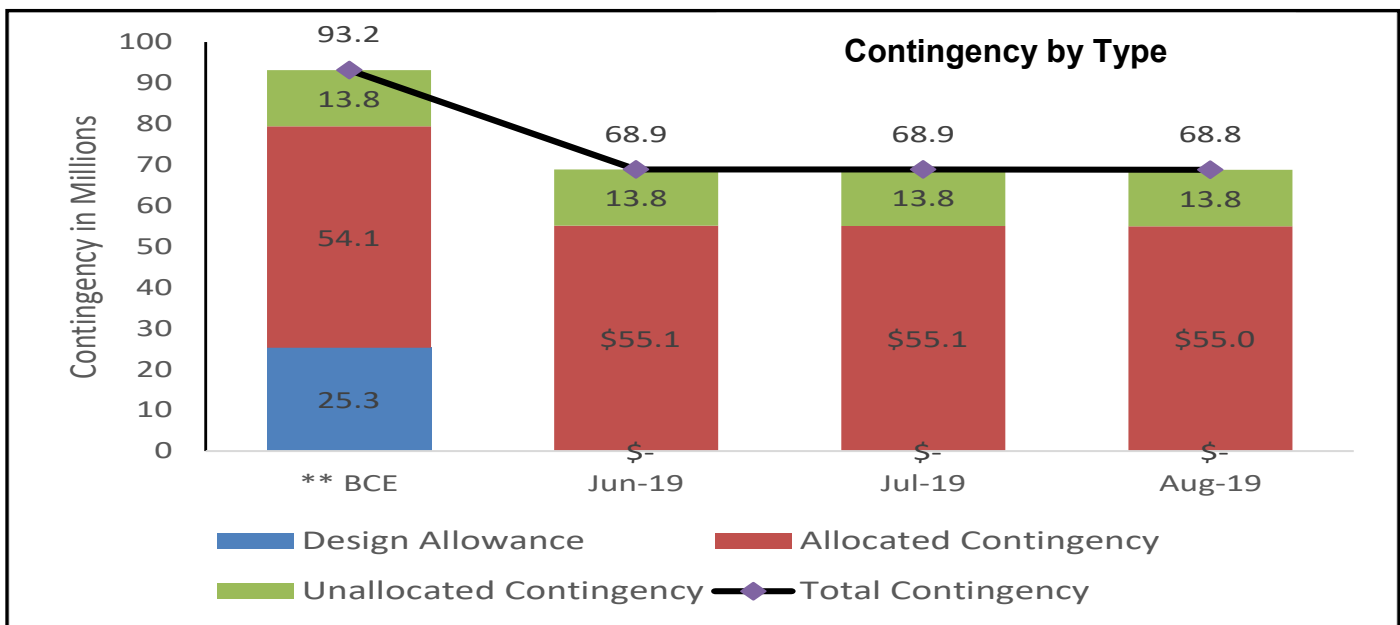
Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. Allocated contingency balance at the end of this period remains at \$55.0M (the previous period at \$55.1M).

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%	\$ 55.0	27.7%
Unallocated Contingency	\$ 13.8	3.1%	\$ 13.8	6.9%
Total	\$ 93.2	20.7%	\$ 68.8	34.6%

Table figures are shown in millions.

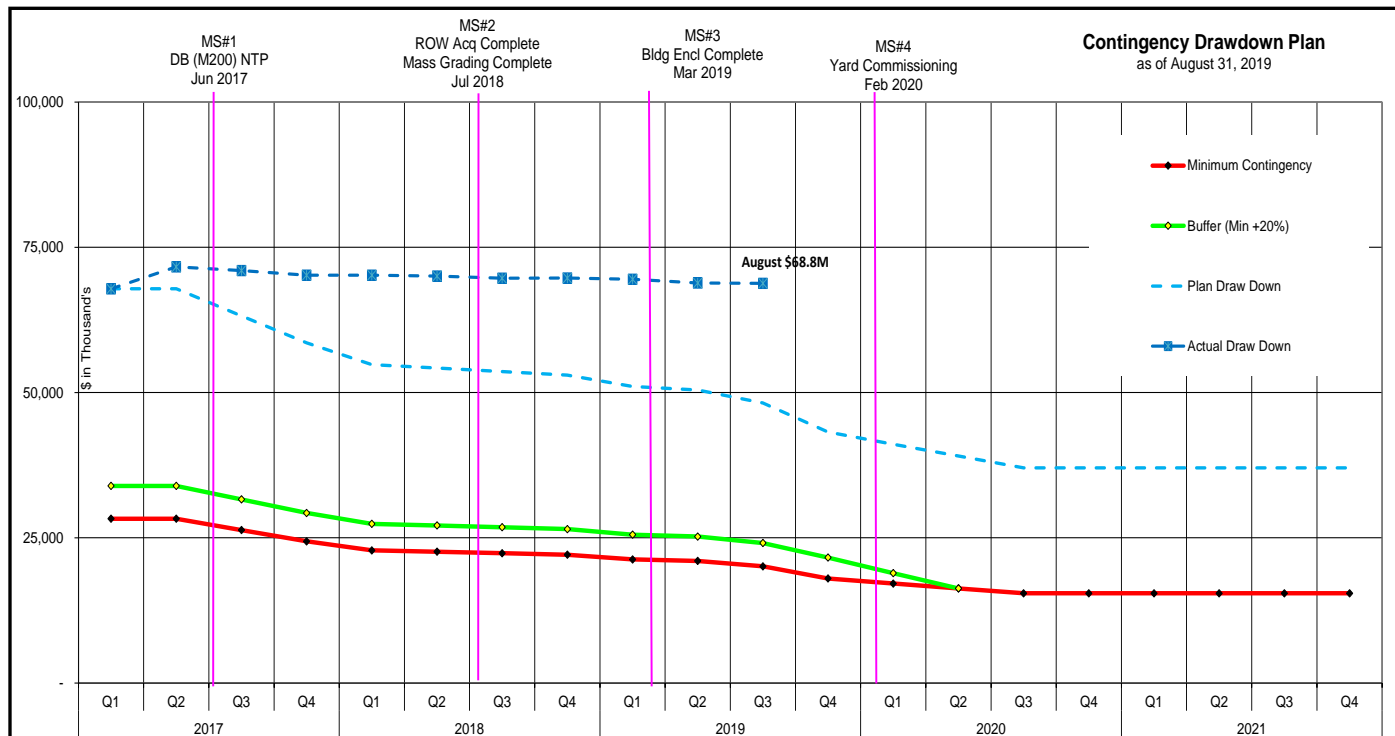


Link Light Rail Link Operations & Maintenance Facility: East



Contingency Drawdown

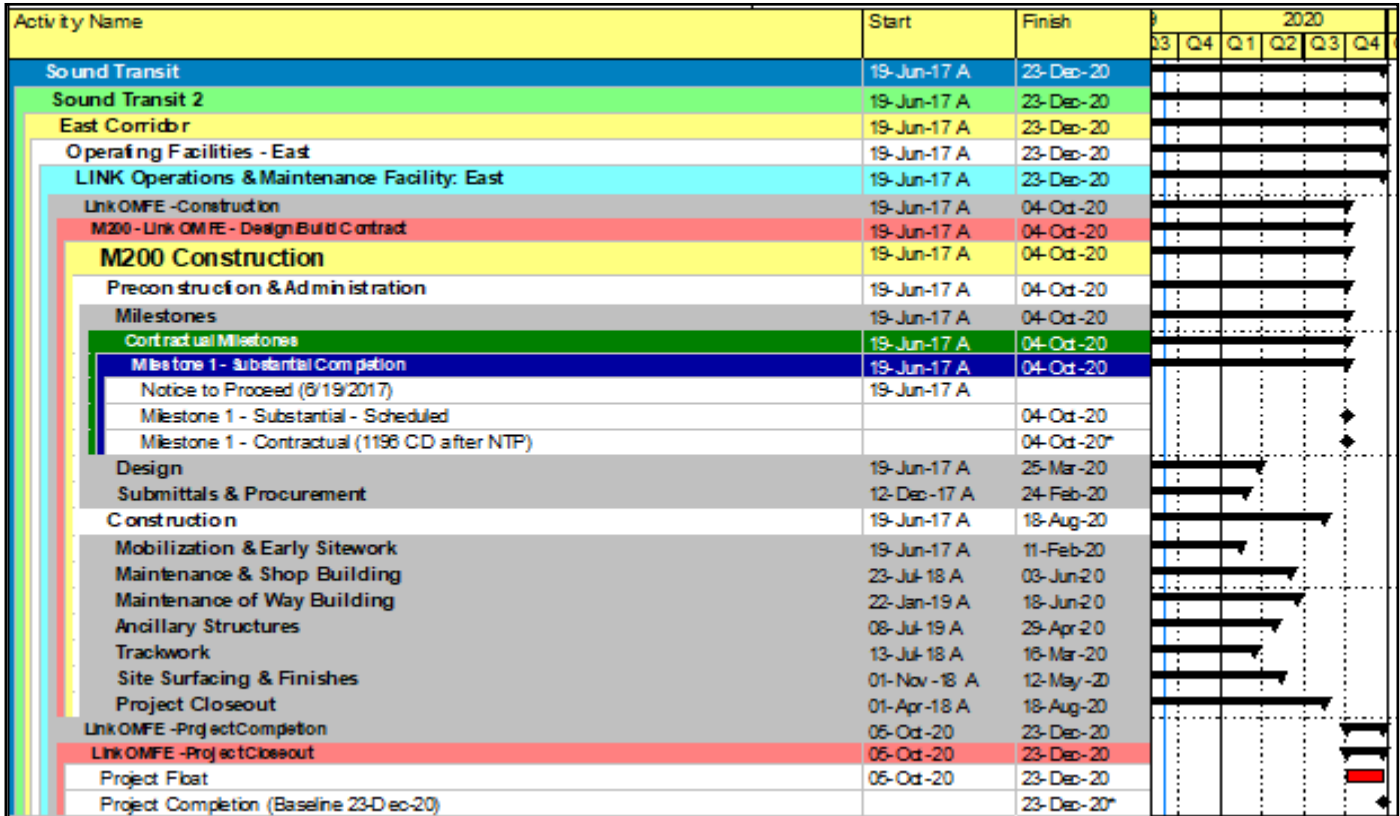
At the end of the 2nd QTR 2019, OMF East Project's total contingency drawdown plan is trending positively. Total contingencies balance is at approximate \$68.8M (previously quarter at \$69.5M) and remains above all the baseline draw down projection and well above both the minimum contingency and the buffered (minimum plus 20%) contingency levels. The next update will be at end of the 3rd QTR 2019. Risk Mitigation Milestone #3 has been revised to be met in 3rd QTR 2019.



OMF East looking north taking shape with yard scope and steel structure framing on August 30, 2019

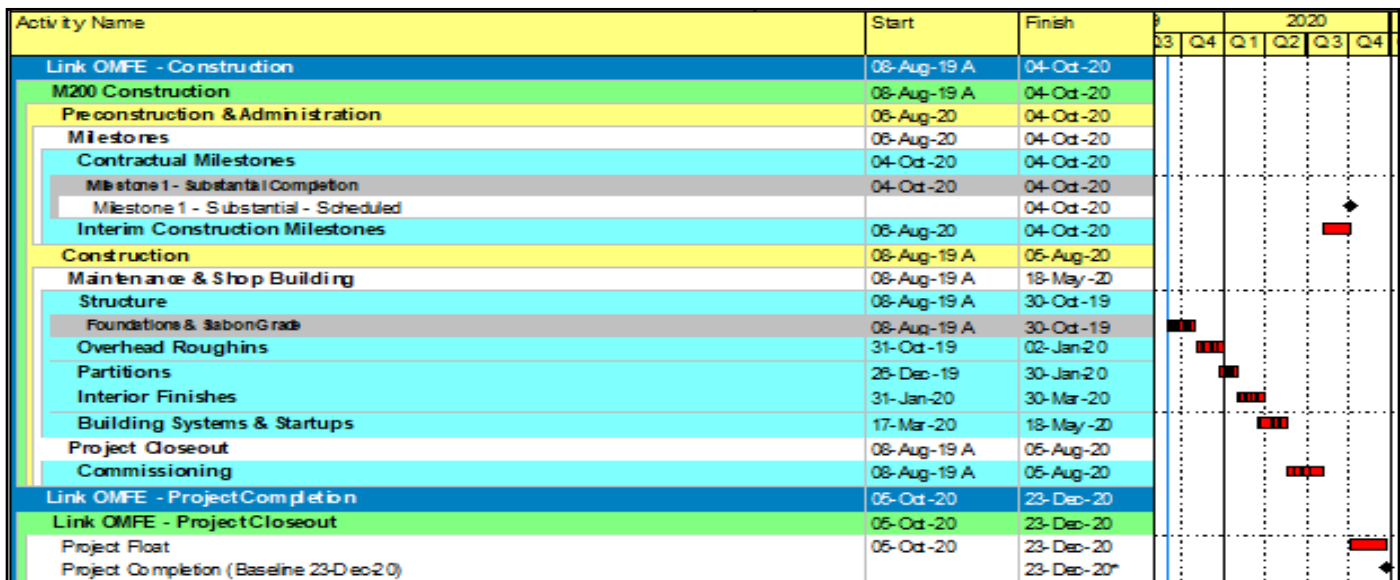
Project Schedule

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 currently runs through the shop area and equipment in the Maintenance & Shop Building, and then through building commissioning and project closeout.



Link Light Rail Link Operations & Maintenance Facility: East



Community Outreach

- Provided construction update—notification for one lane traffic control on 120th Ave NE for utility work.
- Contributed to ST’s Platform blog post on “Nails” Start installation along the Eastside Rail Corridor.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	August 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	2	3	4
Days Away From Work Cases	2	2	2
Total Days Away From Work	10	10	10
First Aid Cases	0	2	5
Reported Near Mishaps	2	7	10
Average Number of Employees on Worksite	110	-	-
Total # of Hours (GC & Subs)	16,700	125,731	218,735
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	23.95	4.77	3.66
LTI Rate	23.95	3.18	1.83
Recordable National Average	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

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 the following areas: Sound Transit’s (ST) comments were incorporated in HP’s resubmittal of DP 003A and was approved this month. Sound Transit returned comments on Design Package 03B IFC on August 21, 2019 and Hensel Phelps is tracking for resubmittal in September.

Construction: HP skeletonized standard and pre-curved track continued in the storage track and south storage fan area. Ballasted track assembly is ongoing for both south and north runaround tracks. Underground electrical and systems conduit R/I was substantially completed site wide. Placement of slab on grade continued at the OMF and MOW buildings. Perimeter walls are substantially completed at MOW along with the exterior metal framing at OMF.

Next Period’s Activities

- Approval of DP #003B IFC.
- Continue work at OMF East Building.
- Continue work at MOW Building.
- Continue electrical utility work.
- Continue installation of ballast and pre-track.
- Begin installation of OH plumbing and HVAC ducts.

Closely Monitored Issues

- **Site infiltration issue:** Sound Transit’s Capital Program Control Board approved the soil infiltration and differing site conditions settlement for \$1,500,000.
- **North Vault Subgrade Condition:** Contractor has submitted an RFC stating that the subgrade was unsuitable for vault placement. Mediation has begun.

Cost Summary

Present Financial Status	Amount
M200 Contractor – Hensel Phelps	
Original Contract Value	\$218,912,000
Change Order Value	\$4,391,739
Current Contract Value	\$223,303,739
Total Actual Cost (Incurred to Date)	\$124,424,794
Percent Complete	58.45%
Authorized Contingency	\$21,891,200
Contingency Drawdown	\$4,391,739
Contingency Index	2.9

*Excludes Betterments



Track-work, Ballast Adjustment

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



Artist rendering of the new light rail vehicles fleet.

Key Project Activities

- Car 204 received in OMFC, Seattle on August 22, 2019
- Of the 21 design reports, 7 approved, 13 conditionally approved, 1 disapproved (currently in final review)
- Car 201, 205 through 210, 212 through 231 in final assembly stage
- Car 203 completed static tests and low speed test at yard and started mainline testing.
- Siemens' wheel truing "hold downs" have been delivered

Closely Monitored Issues

- High schedule risk for commissioning and burn-in of Siemens' LRVs until lift jacks and wheel truing tooling issues are resolved.
- OMFC yard storage capacity in 2020 may limit Siemens LRV delivery schedule; production progress is being monitored closely.
- High number of documents on CIL (Certifiable Items List) pending approval: Design (60%), Qualification (100%).



Car 211 in final inspection at Sacramento, CA



ST2 LRV mainline testing in 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 \$136.1M to which a majority of the cost is attributed to the vehicles phase. The current period expenditure is approximately \$22.9M, where the majority cost is associated to LRVs of \$22.5M. The other incurred costs were attributed from staff costs of \$109.2K and engineering and inspection of \$218.9K.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost	Authorized Allocation
ADMINISTRATION	\$6.4	\$6.4	\$2.2	\$2.1	\$6.4	\$0.0
CONSTRUCTION SERVICES	\$18.0	\$18.0	\$15.1	\$5.0	\$18.0	\$0.0
VEHICLES	\$716.3	\$716.3	\$649.8	\$129.0	\$716.3	\$0.0
Total	\$740.7	\$740.7	\$667.1	\$136.1	\$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
70 VEHICLES	\$702.8	\$702.8	\$664.9	\$134.0	\$702.8	\$0.0
80 PROFESSIONAL SERVICES	\$6.1	\$6.1	\$2.2	\$2.1	\$6.1	\$0.0
90 CONTINGENCY	\$31.7	\$31.7	\$0.0	\$0.0	\$31.7	\$0.0
Capital Total (SCC 10 - 90)	\$740.7	\$740.7	\$667.1	\$136.1	\$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 if modifications to existing lift beam is not completed by September 2019.
- 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 \$69.6M or about 13.1 % of remaining work in the project.

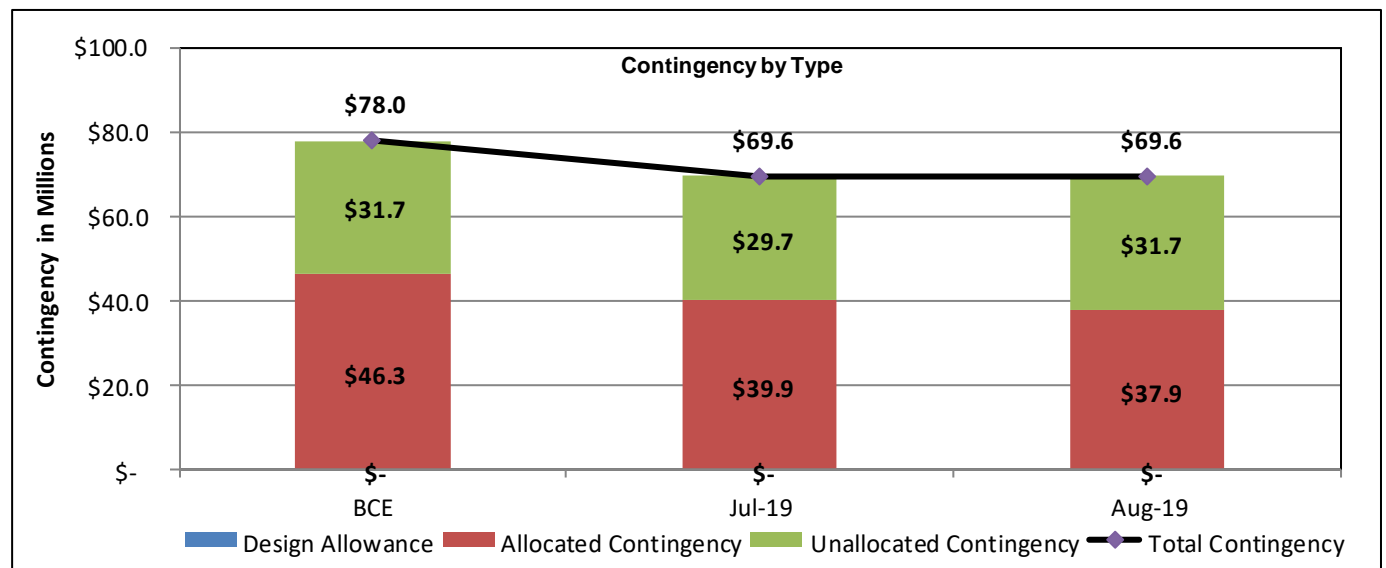
Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. This project contains \$0 design allowance.

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 allocated contingency decreased by \$2.0M mainly offset from July's funding for the needs to perform miscellaneous modification on the existing OMF Central and to support Test & Commissioning of the LRVs.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC increased by \$2.0M due to offset from the July's funding of immediate needs as mentioned in the Allocated Contingency.

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ -	0.0%	\$ -	0.0%
Allocated Contingency	\$ 46.3	6.4%	\$ 37.9	7.1%
Unallocated Contingency	\$ 31.7	4.3%	\$ 31.7	6.0%
Total	\$ 78.0	10.7%	\$ 69.6	13.1%

Contingency by Type



Project Schedule

The progress schedule below was established by using the last monthly production schedule submittal and forecast milestones updates for engineering final design during the weekly progress and coordination meeting.

As of August 2019, Siemens has shipped three cars, three cars are being prepped for shipment and fifteen cars in various stages of final assembly. Siemens is forecasting they will continue shipping the cars at a rate of three to four cars per month. As well as complete conditional acceptance testing in order to support Northgate Pre-Revenue service per the recovery schedule plan.

Activity ID	Activity Name	Start	Finish	2020				2021				2022				2023				2024		
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
ST2 Light Rail Vehicle Fleet Expansion																						
ST2 Light Rail Vehicle Fleet Expansion				24-Feb-15 A to 10-Oct-16 A																		
RFP Preparation				24-Feb-15 A to 22-Sep-15 A																		
Baseline Process				25-Aug-15 A to 24-Sep-15 A																		
Advertisement through Award				06-Nov-15 A to 10-Oct-16 A																		
LRV Engineering and Manufacture				11-Oct-16 A to 17-Feb-20																		
A1620	LRV Design Reviews, Manufacturing, and System Tests	11-Oct-16 A	17-Feb-20	[Green bar from Q3 2020 to Q2 2021]																		
LRV Delivery Schedule				07-Jun-19 A to 24-Aug-24																		
LRV #1-122 (122 LRV Base Order)				07-Jun-19 A to 28-Feb-23																		
A1625	Delivery of 1st LRV (BL 27-Mar-19)		07-Jun-19 A	[Diamond marker]																		
A1655	Delivery of 40th LRV - Northgate Link Vehicle Deliveries Complete (BL 28-Jun-20)		29-May-20*	[Diamond marker]																		
A1658	Delivery of 42nd LRV - Existing OMF at capacity (104 LRVs) (BL 27-Jul-20)		19-Jun-20*	[Diamond marker]																		
A2070	Delivery of 12nd LRV - Final ST2 Delivery (BL 28-Aug-22)		01-Aug-22*	[Diamond marker]																		
A2080	Final Acceptance of Vehicles (BL 28-Feb-23)		28-Feb-23*	[Diamond marker]																		
LRV #123 - 152 (30 LRV Options) - Change Order #4				23-Jan-23 to 24-Aug-24																		
A2080	Delivery of 12nd LRV - Final Delivery (BL 28-Feb-24)		23-Jan-23*	[Diamond marker]																		
A2090	Final Acceptance of Vehicles (BL 28-Aug-24)		24-Aug-24*	[Diamond marker]																		
Project Closeout				28-Feb-23 to 22-Sep-24																		
LRV #1-122 - Base Order				28-Feb-23 to 28-May-23																		
A1600	ST-Controlled Float	28-Feb-23	28-May-23	[Green bar]																		
A1670	LRV Procurement Complete - LRV #1 - #122		28-May-23	[Diamond marker]																		
LRV #123 - #152 - CO #4				22-Sep-24 to 22-Sep-24																		
A1600	LRV Procurement Complete - LRV #123 - #152		22-Sep-24	[Diamond marker]																		

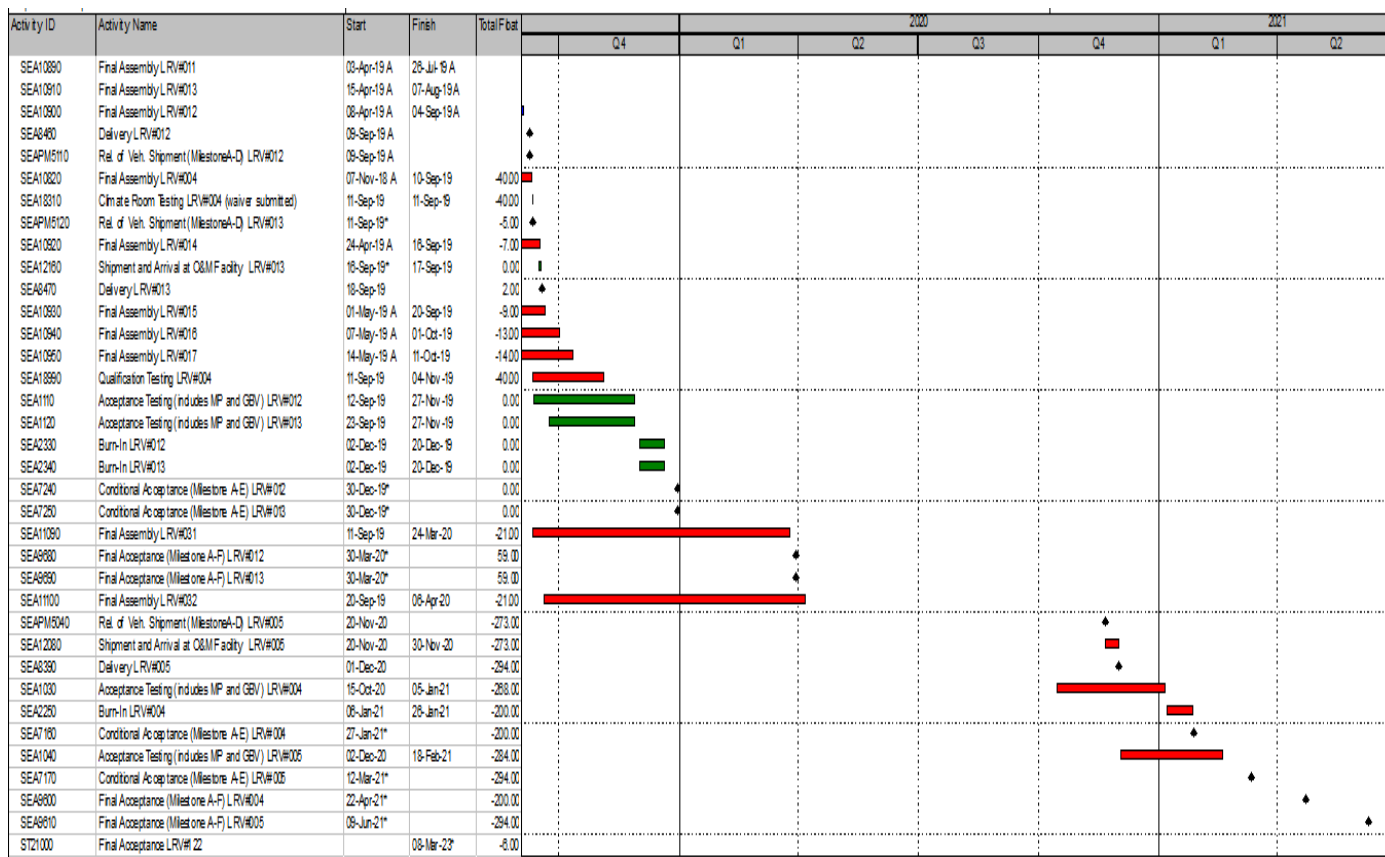
Link Light Rail Light Rail Vehicle Fleet Expansion



Critical Path Analysis

The critical path is the delivery of the 4th LRV required for running qualification and final assembly of the next four cars in September 2019. This will maintain the required amount of cars for the start of Northgate Link Extension Revenue Service.

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 arrive 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.



Link Capital Program Staffing April – June 2019 (updated quarterly)

Recruiting Status

The following positions were filled in 2nd QTR 2019 to support the Link Capital Program:

Position	Position
DECM Executive Director	Sr. Scheduling Engr
Deputy Project Director, Lynnwood Link	Risk Engineer
Permit Administrator (2)	Principal Construction Manager (2)
Sr. Land Use Permitting	Deputy Construction Manager
Manager, Civil Engineering	Sr. Project Manager
Mechanical Engr, Fire Protection	Deputy Project Director, Vehicles
Sr. Systems Engr, Traction Electrification	Capital Signage Specialist
Sr. Systems Engr, Rail/Vehicle	Project Director, Environmental Affairs
Project Control Coordinator (2)	Sr. Environmental Planner
Sr. Project Control Specialist	Environmental Planner

As of the end of 2nd QTR 2019, below is the current DECM and PEPD staffing levels:

Division	Total Positions	Open Positions	Filled Last
Executive, includes Project Directors	22	3	2
Project Management	34	2	3
Civil/Structural Engineering	60	13	1
System Engineering	40	2	2
Architecture & Art	18	0	1
Permitting	13	1	3
Construction Management	31	3	3
Project Control	62	3	5
Real Property	19	2	0
Capital Project Development	34	2	0
Environmental Affairs & Sustainability	27	2	3
TOTAL	360	33	23

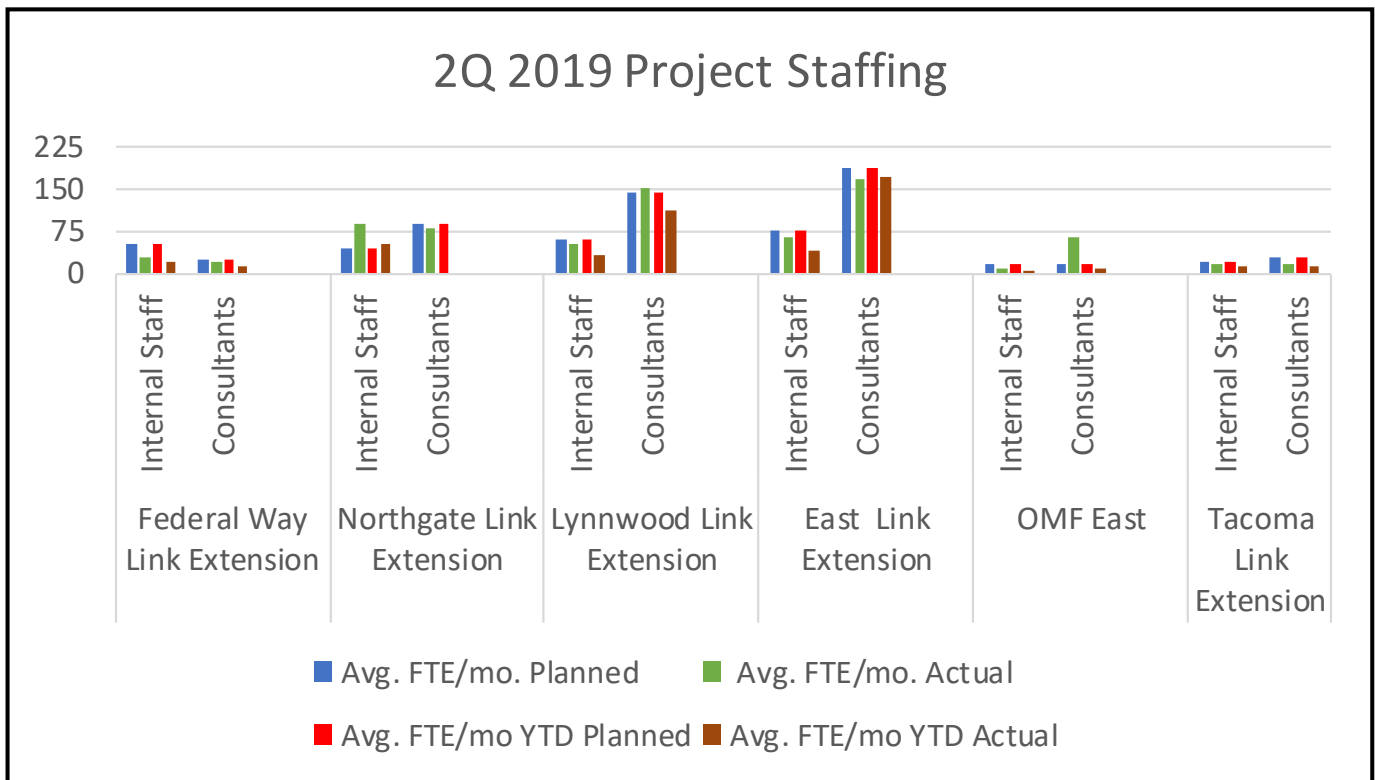
Link Light Rail Staffing Report



Staffing Variance relative to Plan

There were 255 internal and 500 consultant full time equivalents (FTE) supporting design and construction of Link light rail extensions (table below).

Project	Consultants				Sound Transit Staff				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	24.0	20.1	-3.9	-16%	51.9	29.8	-22.2	-43%	75.9	49.9	-26.1	-34%
Northgate Link Extension	90.0	80.5	-9.5	-11%	42.8	89.3	46.5	109%	132.8	169.7	36.9	28%
Lynnwood Link Extension	145.0	153.4	8.4	6%	59.2	50.4	-8.8	-15%	204.2	203.8	-0.4	0%
East Link Extension	187.0	167.5	-19.5	-10%	76.5	62.5	-14.0	-18%	263.5	230.0	-33.4	-13%
OMF East	16.0	62.4	46.4	290%	14.2	7.3	-6.9	-49%	30.2	69.7	39.4	130%
Tacoma Link Extension	30.0	16.6	-13.4	-45%	22.0	16.2	-5.8	-26%	52.0	32.8	-19.2	-37%
Total	492.0	500.5	8.5	2%	266.6	255.4	-11.2	-4%	758.6	755.9	-2.7	0%



AA	Alternative Analysis	GC/CM	General Contractor /Construction Management
APE	Area of Potential Impact	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 Preser-	LTK	LTK Engineering Services
DART	Days Away, Restricted or Modified	MACC	Maximum Allowable Construction Cost
DB	Design -Build	MDA	Major Discharge Authorization
DBPM	Design-Build Project Management	MLK	Martin Luther King, Jr. Way
DECM	Design, Engineering and Construction Man-	MOA	Memorandum of Agreement
DEIS	Draft Environmental Impact Statement	MOS	Minimum Operable Segment
DP	Design Package	MOU	Memorandum of Understanding
DPD	Seattle Department of Planning and Develop-	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 Admin- istration
FSEIS	Final Supplemental Environmental Impact	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

Link Light Rail Acronyms



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		