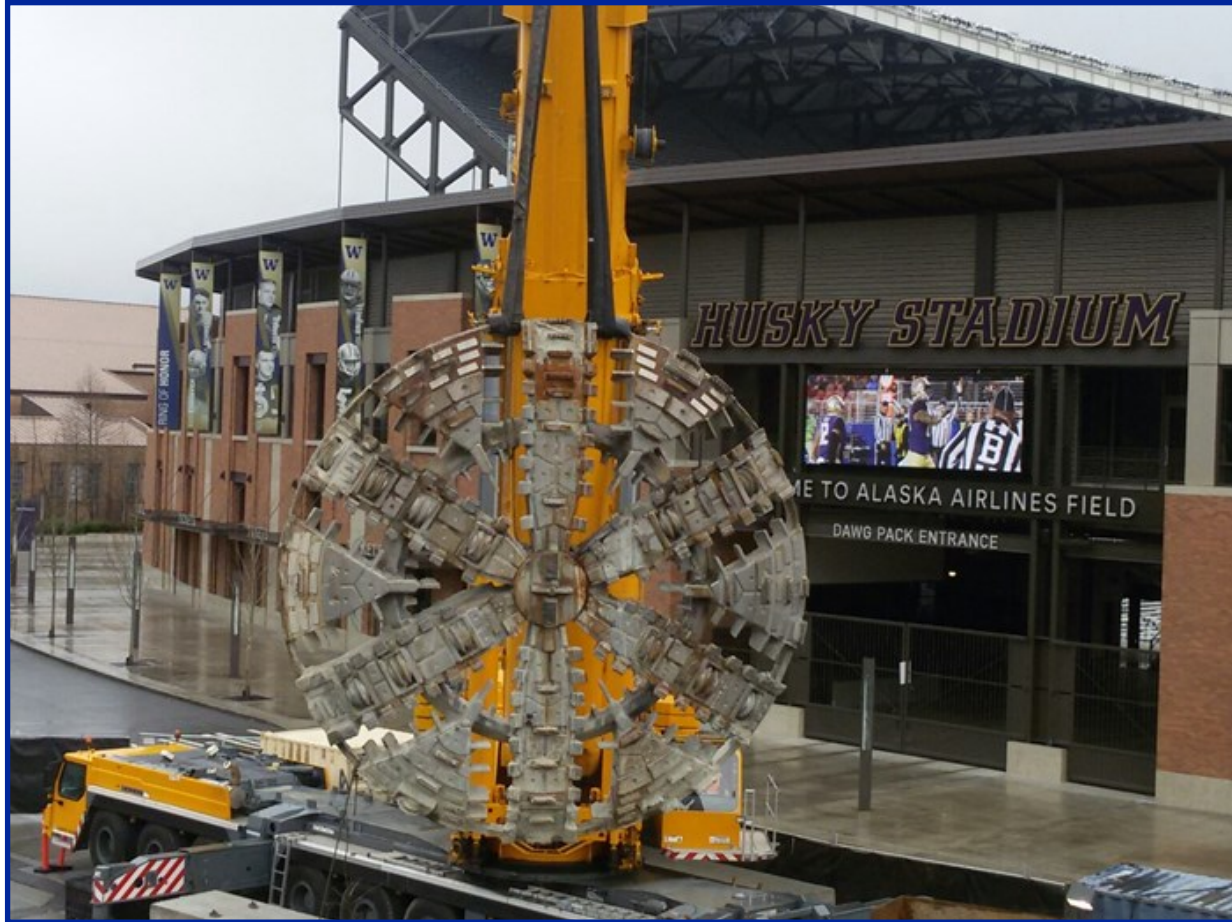


Progress Report

Link Light Rail Program



Removal of the southbound TBM cutterhead from the UW Station retrieval shaft

December | 2016



LINK LIGHT RAIL CURRENT SERVICE AND APPROVED EXTENSIONS



Projects

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. The project is in Final Design and Construction. 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 proposed budget for this project is \$487.9M.

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 Center is forecast for early 2023 with a tunnel route in Downtown Bellevue. The Sound Transit Board adopted the baseline capital budget of \$3.67B in April 2015.

South 200th Link Extension: S. 200th Link Extension consists of a 1.6-mile extension of the light rail from the SeaTac/Airport Station to an elevated station at South 200th Street. The Project was developed through a design-build (DB) delivery strategy. The Sound Transit Board adopted the baseline capital budget of \$383M in 2011. Revenue Service began on September 24, 2016.

Federal Way Link Extension: Sound Transit has identified the route and station location requirements for the extension of light rail to the Federal Way Transit Center; with preliminary engineering to be completed on the segment extending from S. 200th St. to Kent/Des Moines in the vicinity of Highline Community College. The proposed budget for this effort is \$48.8M.

Tacoma Link Extension: The 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 Final Design budget is \$33.02M.

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 pays, a LRV wash facility and storage for up to 96 light rail vehicles. The ST Board adopted the baseline capital budget of \$449M in July 2016.

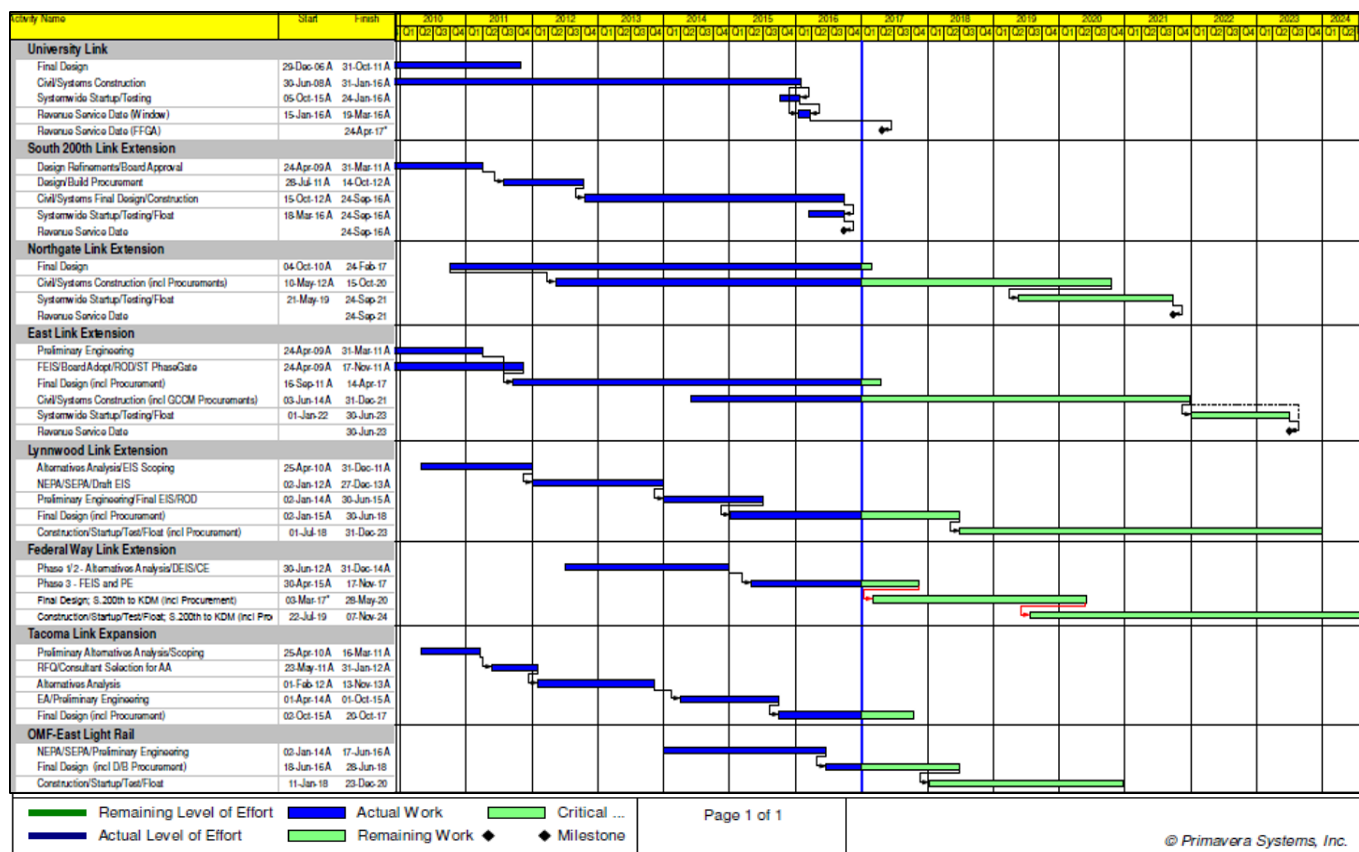
ST2 Light Rail Vehicles (LRV) Fleet Expansion: This project includes the design, manufacturing, inspection, testing and delivery of 122 low floor LRVs for service requirements of Northgate, East Link and Lynnwood Link Extensions. The Sound Transit Board adopted the baseline capital budget of \$733M in September 2015.

Program Budget

Project	Adopted Budget	Committed to Date	Incurred to Date	Forecast to Complete	Estimated Final Cost	Adopted Budget vs. EFC
University Link	\$1,756.0	\$1,512.2	\$1,499.5	\$43.3	\$1,555.5	\$200.5
Northgate Link Extension	\$1,899.8	\$1,139.9	\$788.8	\$759.9	\$1,899.8	\$0
Lynnwood Link Extension	\$487.9	\$178.6	\$90.0	\$309.3	\$487.9	\$0
East Link Extension	\$3,677.2	\$1,420.9	\$597.8	\$2,256.3	\$3,677.1	\$0
South 200th Link Extension	\$383.2	\$326.4	\$319.4	\$14.8	\$341.2	\$42.0
Federal Way Extension	\$48.8	\$38.6	\$35.4	\$10.2	\$48.8	\$0
Tacoma Link Extension	\$33.0	\$18.3	\$10.4	\$14.7	\$33.0	\$0
Link O & M Facility: East	\$449.2	\$36.0	\$34.4	\$413.3	\$449.2	\$0
ST2 LRV Expansion	\$733.0	\$522.6	\$4.5	\$210.4	\$733.0	\$0
Downtown Redmond Link Ext.	\$28.6	\$13.5	\$0.2	\$15.1	\$28.6	\$0
Total Link	\$9,496.6	\$5,207.0	\$3,380.3	\$4,047.2	\$9,254.2	\$242.5

Table in millions.

Program Schedule



Changes this period: None.

Link Light Rail University Link Extension

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:** 2 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.
- System:** 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 on March 19, 2016.



Key Project Issues

- Revenue Service commenced on March 19, 2016. Coordination between the Construction teams and the Operations group are ongoing to adjust the System for optimum operations. Contractors continue to perform punch list items but access to these activities poses to be challenging as they now have to work under Operations' rules and not Construction protocols.
- *U830 Systems:* Contractor is currently focusing on punch list on U-Link and systems refinement to achieve optimal operation status. U-Link Systems has encountered some issues related to this infancy period and is working for resolutions.
- *Certification of Occupancy:* University Link continues to operate under a temporary certification of occupancy until all permit requirements are fully met. The final items remaining are the utilities as-built to be submitted to City of Seattle (SPU) and a final review of the emergency ventilation systems by the Seattle Fire Department.
- Commercial issues with prime contractors are being negotiated as the project proceeds through the close out process.

Project Cost Summary

The U-Link project cost is summarized in two types of cost classifications. In the first table, cost is classified in accordance with Sound Transit's Work Breakdown Structure (WBS); and in the second table, cost is summarized in accordance to the FTA's Standard Cost Categories (SCC) format. (Both tables' figures in millions.)

WBS Phase Elements	Baseline Budget	Current Adopted Budget	Commitment to Date*	Incurred to Date	Est. Final Cost (EFC)	Adopted Budget vs. EFC
ADMINISTRATION	\$ 115.23	\$ 113.55	\$ 81.40	\$ 80.55	\$ 88.24	\$ 25.32
PRELIMINARY ENGINEERING	\$ 24.39	\$ 24.26	\$ 24.26	\$ 24.26	\$ 24.26	\$ -
FINAL DESIGN	\$ 77.94	\$ 90.31	\$ 87.81	\$ 86.00	\$ 88.66	\$ 1.65
CONSTRUCTION SERVICES	\$ 68.53	\$ 94.81	\$ 87.00	\$ 86.41	\$ 88.72	\$ 6.10
3rd PARTY AGREEMENTS	\$ 18.65	\$ 18.65	\$ 11.98	\$ 11.35	\$ 13.55	\$ 5.10
CONSTRUCTION	\$ 1,180.00	\$ 1,158.18	\$ 994.14	\$ 985.37	\$ 1,022.58	\$ 135.61
VEHICLES	\$ 103.91	\$ 103.91	\$ 99.20	\$ 99.19	\$ 101.91	\$ 2.00
ROW	\$ 167.33	\$ 152.33	\$ 126.43	\$ 126.43	\$ 127.62	\$ 24.71
Capital Total	\$ 1,755.97	\$ 1,756.01	\$ 1,512.21	\$ 1,499.55	\$ 1,555.53	\$ 200.48
FINANCE COST	\$ 191.71	\$ 191.71	\$ 191.71	\$ 174.87	\$ 191.71	\$ -
Project Total	\$ 1,947.68	\$ 1,947.72	\$ 1,703.92	\$ 1,674.42	\$ 1,747.24	\$ 200.48

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

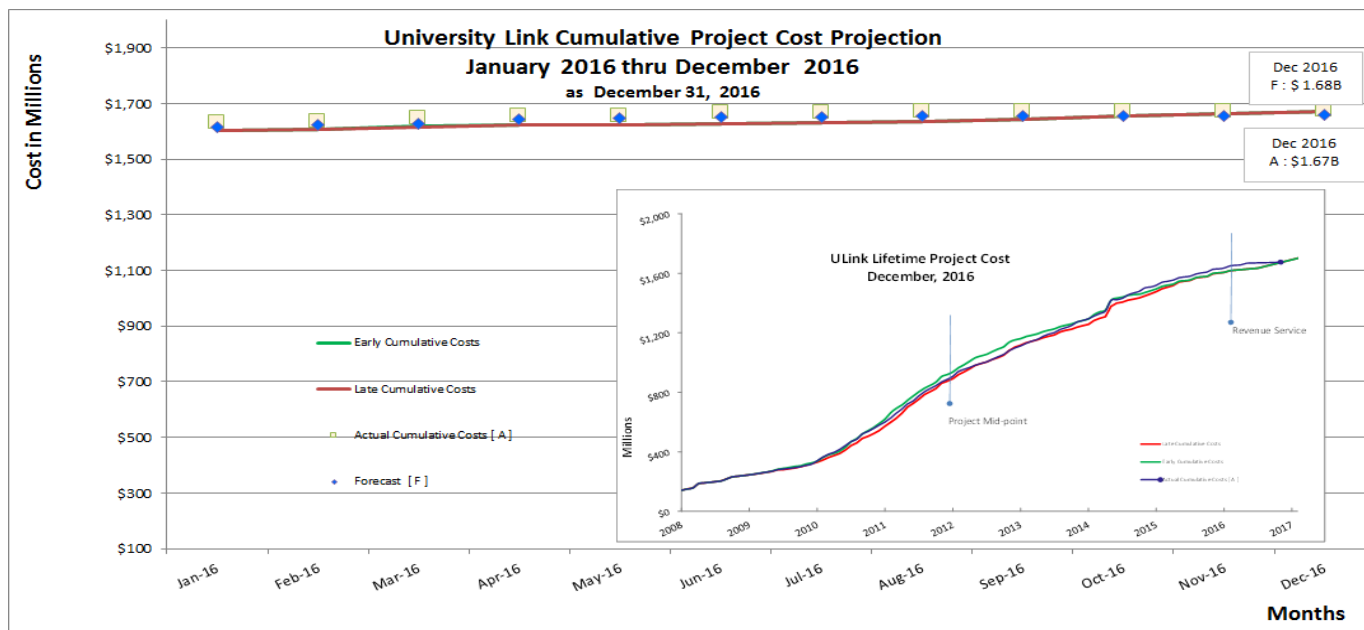
In December, the projected Estimated Final Cost (EFC) including Finance Cost remains at about \$1.75B. In this period, approximately \$1M was incurred and inching the project's Incurred to Date amount closer to \$1.5B (Finance Cost excluded). Direct construction cost in December is minimal as major construction activities have now winded down and only pertained to close out and follow on work. The construction EFC continues to be approximately \$1B. The trend continues to be intact as the project is completed with only miscellaneous follow on scope and commercial issues remain. Capitol Hill continues with punch list work, the Systems (U830) continues optimization process. The Total Incurred to Date for the Construction Phase is about \$984M with a current commitments about \$1.16B. Cost for LRV is at about \$99.2M. Cost of repairs are excluded from this project and tracked independently.

Construction EFC under the SCC format for this period remains stable and relatively unchanged at about \$1B. Construction SCC expenditures in December is about \$1M. This period, the bulk of U-Link construction cost has been attributed Station punch lists and Systems' continue optimization and resolutions to change order work and taking delivery of non-revenue vehicles. Incurred to date for Construction under the SCC is approaching \$973M and Vehicles \$99.9M Total capital cost incurred to date including non-construction cost (SCC 60 thru 90) now at \$1.5B or about 85% of total project budget scoped (excluding Finance Cost).

Project Elements by SCC	Baseline Budget	Current Adopted Budget	Commitment to Date*	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track Elements	\$ 626.83	\$ 450.46	\$ 456.15	\$ 455.98	\$ 461.24	\$ (10.78)
20 Stations	\$ 366.33	\$ 350.75	\$ 344.54	\$ 342.44	\$ 353.09	\$ (2.33)
30 Support Facilities: Yards, Shops	\$ 7.01	\$ 24.83	\$ 23.00	\$ 23.26	\$ 24.50	\$ 0.33
40 Sitework & Special Conditions	\$ 59.03	\$ 67.39	\$ 57.00	\$ 54.72	\$ 56.83	\$ 10.56
50 Systems	\$ 69.63	\$ 116.42	\$ 100.73	\$ 97.13	\$ 102.88	\$ 13.54
Construction Subtotal (SCC 10-50)	\$ 1,128.82	\$ 1,009.85	\$ 981.42	\$ 973.52	\$ 998.53	\$ 11.32
60 Row, Land, Existing Improvements	\$ 167.33	\$ 125.77	\$ 126.43	\$ 126.43	\$ 126.60	\$ (0.83)
70 Vehicles	\$ 99.76	\$ 100.16	\$ 99.87	\$ 99.87	\$ 100.16	\$ 0.00
80 Professional Services	\$ 306.41	\$ 346.58	\$ 304.49	\$ 299.73	\$ 318.75	\$ 27.83
90 Unallocated Contingency	\$ 53.65	\$ 173.64	\$ -	\$ -	\$ 11.48	\$ 162.16
Capital Cost Total (SCC 10-90)	\$ 1,755.97	\$ 1,756.01	\$ 1,512.21	\$ 1,499.55	\$ 1,555.53	\$ 200.48
100 Finance Cost	\$ 191.71	\$ 191.71	\$ 191.71	\$ 174.87	\$ 191.71	\$ -
Project Total	\$ 1,947.68	\$ 1,947.72	\$ 1,703.92	\$ 1,674.42	\$ 1,747.24	\$ 200.48

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

Link Light Rail University Link Extension



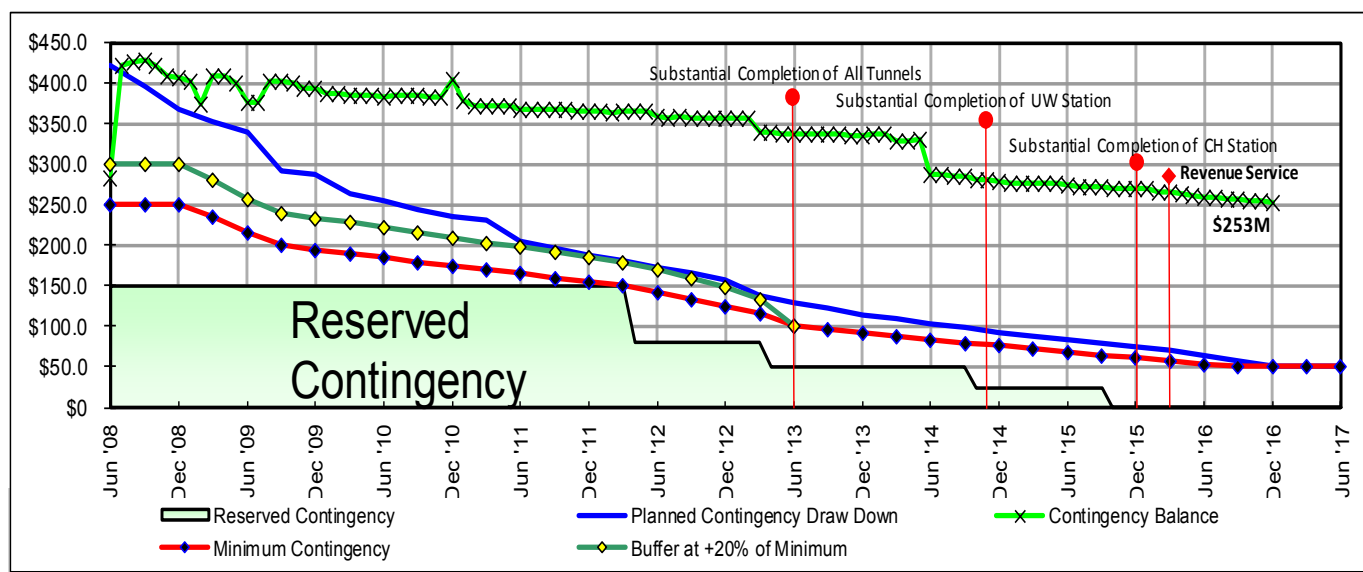
Total project cost incurred to date at December 2016 close including Finance Cost is at \$1.67B as close-out activities continue. The financing cost incurred to date is about \$175M. University Link EFC is projected at approximately \$200M under budget excluding financing cost.

Cost Contingency Management

Project contingencies remain at healthy at approximately \$255M due to the favorable construction bidding climate, ROW acquisition cost trends, diligent project risk management practices, and excellent tunneling conditions. December's overall contingencies notched down by about \$1.5M due to construction change orders and follow on project commitments. While major construction activities are now done, there are still considerable follow-on scope to complete (pertaining to close-out of the project, systems adjustments to optimize the operating systems as well as settlement of commercial issues). Barring any catastrophic event, the likelihood that this contingency stays on trend is high. The forecast indicates that approximately 78% of these contingencies will be remain unused; thereby, generating approximately \$200M of budget savings excluding financing cost.

MINIMUM CONTINGENCY CURVES as of December 31, 2016

\$ in millions



Project Schedule Summary

Revenue Service began on March 19, 2016.

U240 Contractor achieved Substantial Completion in December 2015. A Temporary Certificate of Occupancy was achieved on Revenue Service date of March 19, 2016. The U830 Contract has not achieved Substantial Completion but System Integration Testing is complete. U835 EMI/Vibration Testing is completed. The U810 MOW Building is complete; reviewing/processing outstanding commercial issues.

U240 Contract – Capitol Hill Station

Close-out Progress

The U240 Contractor achieved Substantial Completion on December 31, 2015.

Close-out Activities

Current Period

- Continued negotiating and finalizing outstanding commercial issues. The latest round of mediation was successful in resolving some subcontractor claims, but a final settlement with the general contractor has not been reached.

Next Period

- Continue negotiating and finalizing commercial issues.

Closely Monitored Issues

- Multiple commercial issues remain open including various notice of intents to claim and actual claims. These claims continue to be reviewed and assessed by Sound Transit and the Contractor.

U250 Contract –University of Washington Sta.

Close-out Progress

Milestone #7, Substantial Completion, was granted in November 2014. U250 achieved acceptance on April 26, 2016.

Close-out Activities

Current Period

- Continued closing out of all remaining commercial issues.

Next Period

- Continue closing out of all remaining commercial issues.

Closely Monitored Issues

- All outstanding claims have been verbally settled and will continue moving through the formal execution phase. A final settlement change order will be issued to the contractor.

Cost Summary

Present Financial Status	Amount
U240 Contractor - Turner Construction Co	
Original Contract Value	\$104,850,276
Change Order Value	\$11,254,629
Current Contract Value	\$116,104,905
Total Actual Cost (Incurred to date)	\$113,926,440
Financial Percent Complete:	98%
Physical Percent Complete:	98%
Authorized Contingency	\$11,742,514
Contingency Drawdown	\$11,254,629
Contingency Index	1.02

Cost Summary

Present Financial Status	Amount
U250 Contractor - Hoffman Construction Co.	
Original Contract Value	141,745,898
Change Order Value	8,670,311
Current Contract Value	150,416,209
Total Actual Cost (Incurred to date)	150,254,810
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	9,152,295
Contingency Drawdown	8,670,311
Contingency Index	1.05

U810 Contract – *Maintenance of Way*

Close-out Progress

Processing outstanding commercial issues.

Close-out Activities

Current Period

- Continued processing outstanding commercial issues.

Next Period

- Continue processing outstanding commercial issues and contract close-out.

Closely Monitored Issues

- ST and contractor have settled on a final contract amount. A final change order to the contract is pending formal processing.

Cost Summary

Present Financial Status	Amount
U810– Forma Construction (Design/ Build)	
Original Contract Value	\$11,998,725
Change Order Value	\$501,013
Current Contract Value	\$12,499,738
Total Actual Cost (Incurred to date)	\$12,438,547
Financial Percent Complete	99%
Physical Percent Complete:	99%
Authorized Contingency	\$959,898
Contingency Drawdown	\$501,013
Contingency Index	1.9

U830 Contract – *Track, Signal, Traction Power and Communications*

Close-out Progress

Began Revenue Service on March 19, 2016. Punchlist and close-out work continue.

Close-out Activities

Current Period

- Ongoing work on Systems punch list items; delivery of spare parts; and finalizing O&M Manuals, As-built drawings, and other final project documentation.
- Ongoing work on commercial closure of the U830 project. ST working closely with the GC/CM and the EC/CMs to ensure rapid and fair commercial settlement of claims.

Next Period

- Continue Systems punch list, spare parts delivery, and finalizing O&M Manuals and documentation.
- Continue work on commercial closure of the project.

Closely Monitored Issues

- ST working closely with the GC/CM and the EC/CMs to ensure rapid and fair commercial settlement of claims.

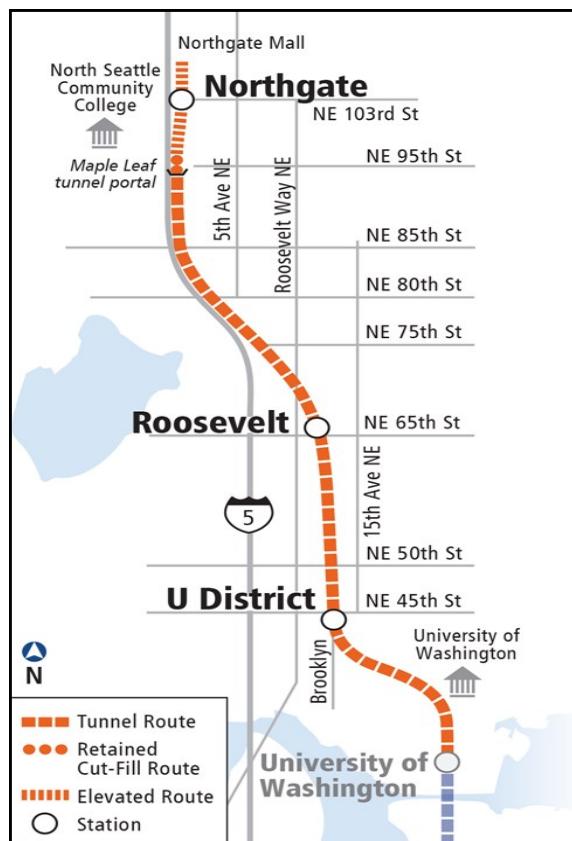
Cost Summary

Present Financial Status	Amount
U830 GC/CM Contractor - Stacy & Witbeck	
Original Contract Value	\$119,167,433
Change Order Value	\$4,335,415
Current Contract Value	\$123,502,848
Total Actual Cost (Incurred to date)	\$119,979,994
Financial Percent Complete	97.0%
Physical Percent Complete:	99.0%
Authorized Contingency	\$5,958,373
Contingency Drawdown	\$4,335,415
Contingency Index	1.4

Link Light Rail Northgate Link Extension

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 the UW Station, boring tunnels under campus then continues north to a portal located north of NE 94 th Street on the east side of I-5, then transitioning to an aerial structure running north to the Northgate Mall.
Stations:	The <i>U District Station</i> is an underground station located on the west side of the UW campus near Brooklyn Ave. and NE 45 th St. The <i>Roosevelt Station</i> is an underground station located near NE 65 th St. and 12 th Ave NE. The <i>Northgate Station</i> is an elevated station located at the southwest edge of the Northgate Mall property.
Systems:	Include Signals, track electrification, and SCADA communications.
Budget:	\$1.899 Billion
Service:	September 2021
Phase:	Final Design and Construction



Map of Northgate Link Extension route and stations.

Key Project Activities

- Provided ST-FTA Quarterly Meeting a project update.
- CCB approved the Northgate Link Project Management Plan.
- For N125 TBM Tunnels, Contractor continued work on the Cross passages. The TBM cutterhead was removed from the shaft at the UW Station and crews transported super loads of its components from UWS. Contractor completed excavation of RVS shaft (south) to bottom of base slab.
- For N150 Roosevelt Station, N125 & N150 contractors continued crane coordination; new temporary art was installed on the construction wall.
- For N160 Northgate Station, Building permit for the Station was issued by the City of Seattle and provided to the Contractor. Northgate Link and Lynnwood Link project teams provided early design information to the N160 Contractor to minimize risk of schedule impact due to the design revision of the tail track.
- For N180 Trackwork, Revision of rail specification is underway after internal discussion of need for additional rail specification requirements pertaining to mechanical and chemical properties of the ultra-straight rail, as well as additional QA requirements.

Closely Monitored Issues

- N125 Contractor's earlier probe drilling operation at Cross Passage (CP) 23 resulted in some ground loss, water ingress and settlement at the lower anchor of nearest extensometer. A decision has been made to use ground freezing at CP23. Drilling commenced on the south-bound tunnel freeze pipes drilling commenced and a change order is being negotiated.
- ST continues to review TBM data following additional boring and grouting work recently carried out on 12th Avenue NE and has issued a Work Directive for four additional boreholes. Drilling work is likely to commence in early 2017.

Project Cost Summary

The Northgate Link project cost is summarized below by two cost categories. In the first table, the cost is summarized in accordance with Sound Transit's 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.

Cost Summary by Phase

Project Phase	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
ADMINISTRATION	\$147.9	\$147.9	\$43.3	\$43.2	\$147.9	\$0.0
PRELIMINARY ENGINEERING	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$0.0
FINAL DESIGN	\$129.2	\$129.2	\$116.6	\$101.2	\$129.2	\$0.0
CONSTRUCTION SERVICES	\$118.3	\$118.3	\$84.8	\$44.8	\$118.3	\$0.0
3rd PARTY AGREEMENTS	\$11.8	\$11.8	\$9.9	\$6.0	\$11.8	\$0.0
CONSTRUCTION	\$1,328.0	\$1,328.0	\$776.6	\$484.9	\$1,328.0	\$0.0
ROW	\$127.3	\$127.3	\$93.6	\$93.2	\$127.3	\$0.0
PROJECT CONTINGENCY	\$22.2	\$22.2	\$0.0	\$0.0	\$22.2	\$0.0
Total	\$1,899.8	\$1,899.8	\$1,139.9	\$788.4	\$1,899.8	\$0.0

The Estimated Final Cost (EFC) for the project as of this reporting period is \$1,899.8M, which is equal to the current project budget. This period approximately \$11.9M was incurred, of which \$9.4M was for the N125 tunneling contract, the N160 Northgate Station and Elevated Guideway contract, the N180 Trackwork contract and other miscellaneous construction; \$0.4M was incurred for Civil and Systems Final Design and design support during construction; and \$1.5M was for construction management. The remaining expenditures were for third party coordination, permits, staff, legal, right-of-way and other direct charges.

Cost Summary by SCC

SCC Element	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 GUIDEWAY & TRACK	\$595.6	\$584.6	\$489.4	\$334.6	\$581.9	\$2.7
20 STATIONS	\$376.1	\$416.7	\$134.9	\$39.9	\$417.3	(\$0.6)
30 SUPPORT FACILITIES: YARD, SHOP	\$5.3	\$5.3	\$6.4	\$5.2	\$6.4	(\$1.1)
40 SITEWORK & SPECIAL CONDITIONS	\$140.8	\$190.5	\$132.6	\$96.2	\$189.2	\$1.3
50 SYSTEMS	\$110.9	\$95.1	\$3.2	\$1.0	\$97.4	(\$2.3)
Construction Subtotal (SCC 10 - 50)	\$1,228.7	\$1,292.2	\$766.5	\$476.9	\$1,292.2	\$0.0
60 ROW, LAND, EXISTING IMPROVEMENTS	\$119.9	\$119.9	\$93.6	\$93.2	\$119.9	\$0.0
80 PROFESSIONAL SERVICES	\$420.7	\$427.1	\$279.8	\$218.3	\$427.0	\$0.1
90 CONTINGENCY	\$130.4	\$60.6	\$0.0	\$0.0	\$60.6	(\$0.1)
Capital Total (SCC 10 - 90)	\$1,899.8	\$1,899.8	\$1,139.9	\$788.4	\$1,899.8	\$0.0

The Estimated Final Cost (EFC) for some contract packages have been reassessed and revised as a result of updated design development estimates and the actual contract award amounts.

Cost Contingency Management

Compared to the baseline amount of \$396.2M, the Total Contingency has decreased by \$121.7M to \$274.5M, which is 24.7% of project work remaining. During this reporting period, a net decrease of \$1.1M in the overall project contingency occurred.

Design Allowance – The baseline Design Allowance of \$113.9M has been fully depleted following the receipt of updated construction cost estimates on the N140, N150, and N160 Station Finishes contracts. DA has been utilized as scope development has progressed to 100% on N140, N150 and N160. No changes to DA occurred during this period.

Link Light Rail Northgate Link Extension

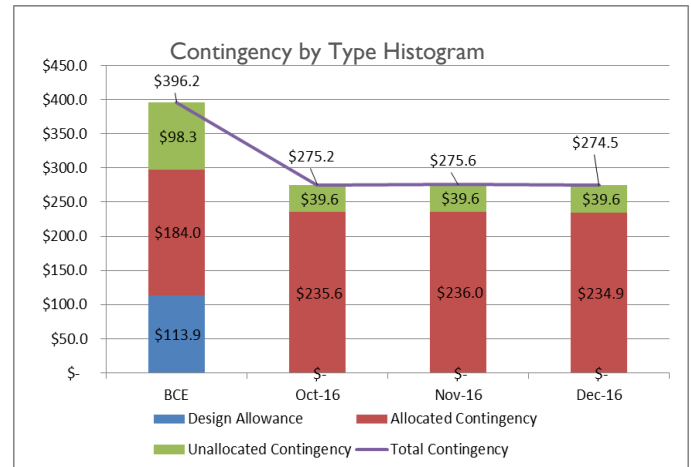


Cost Contingency Management, continued

Allocated Contingency – Compared to the baseline amount of \$184.0M, Allocated Contingency has increased by \$50.9M to \$234.9M. During this reporting period, AC was decreased by \$1.1M as a result of \$0.4M used on final design for the King County Bus Layover design scope, and \$0.7M used on N125 and N160 construction change orders.

Unallocated Contingency – Compared to the baseline amount of \$98.3M, Unallocated Contingency has decreased by \$58.7M to \$39.6M. No changes to the UAC occurred during this reporting period.

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ 113.9	5.3%	\$ -	0.0%
Allocated Contingency	\$ 184.0	8.6%	\$ 234.9	21.1%
Unallocated Contingency	\$ 98.3	4.6%	\$ 39.6	3.6%
Total	\$ 396.2	18.6%	\$ 274.5	24.7%



Project Schedule

The N105 Advance Demo & Site Prep has been completed and is in the process of final billing and close-out.

Work on the N111 Advanced Utility Relocation, contract is complete, and the infrastructure turned over to SCL. This contract is in the process of final billing and close-out.

The N113 SCL 115kV Relocation contractor Potelco has completed all work related to the transmission line. Site restoration on the west side of I-5 continues as does preparation for the MSE wall construction. Work is still expected to complete by the contract end date of February 21, 2017.

The N125 Tunneling Contractor is continuing work on cross passages and tunnel finishes. The Contractor's December schedule update was returned Revise and Resubmit twice due to invalid logic and significant negative float in achieving key milestones. As of the third revision, accepted Code 2, JCM is continuing to forecast negative float in achievement of the following milestones: MS-02—RVS Turnover (-19cd) (note: this is still ahead of the 2/13 N150 access date), MS-05—UDS Turnover (-158cd, due to Cross Passage 23), and MS-06—Substantial Completion (-22cd). ST is continuing to work with JCM on the accuracy of the schedule and validity of logic.

The N140 U District Station is currently in the process of issuing and receiving subcontract bid packages. No schedule changes were experienced this period.

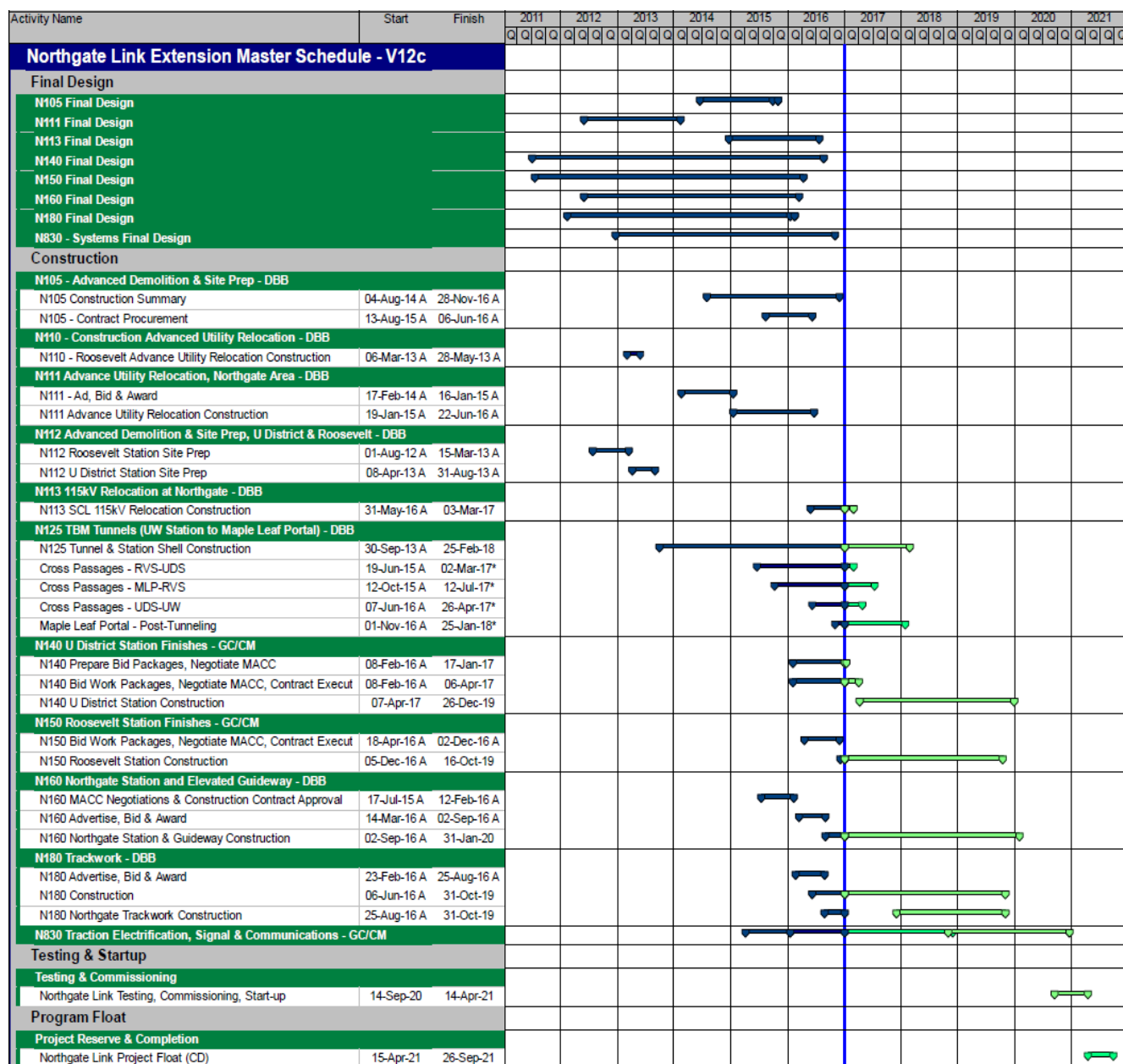
The N150 Roosevelt Station construction contract received ST Board approval on November 29, 2016. NTP was issued on December 2, 2016. Site access remains February 13, 2017. All contract milestones are based on the site access date.

Project Schedule, continued

The Baseline CPM schedule for the N160 Northgate Station and Elevated Guideway Contract was submitted, reviewed and returned for revision. The Contractor is using the cost-loaded schedule as the Schedule of Values. Sitework includes build out of the ST and contractor's offices, placement of site fencing, and mobilization of drilling equipment. Drilled shafts are scheduled to start after the New Year.

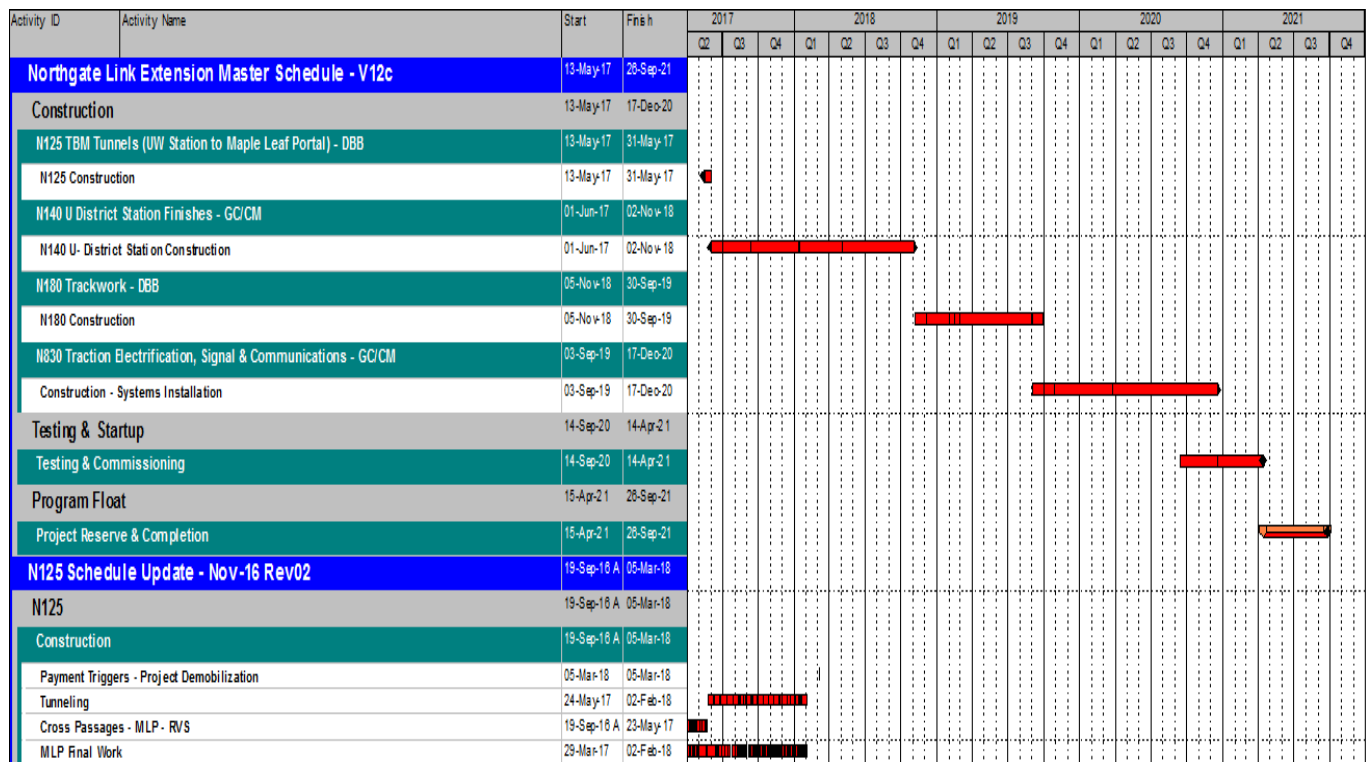
The N180 Trackwork contractor, Stacy and Witbeck, has revised the Baseline CPM schedule, and it is under review. The Contractor has identified two potential suppliers of Ultra-Straight Rail, both in Europe. Heavy aggregate is being delivered to the pre-cast yard in Woodland, WA.

The N830/E750 contractor, Mass Electric, is currently working on finalizing the MACC estimate.



Critical Path Analysis

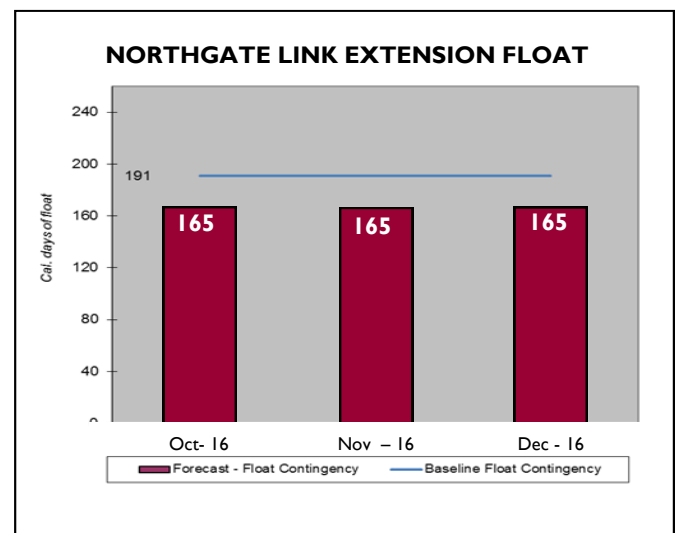
The longest path through the Northgate projects continues to be driven by the N125 contract and turnover of the UDS box to N140, N140 turnover to N180 for trackwork, and subsequently to the N830 Systems contract. The December update from JCM shows turn-over of the U-District Station on October of 2017 instead of the required May 2017 date. ST is currently evaluating the feasibility of allowing JCM to have after hours access to the tunnels while still turning over the station site to Hoffman Construction on time. Any impact from these discussions will be reflected once an agreement has been reached.



Critical Path Float

The Northgate Link Project currently retains 165 days of unallocated project float.

The Revenue Service date for the Northgate Link Extension remains September 2021.



Construction Safety

Data/ Measure	December 2016	Year to Date	Project to Date
Recordable Injury/Illness Cases	1	19	54
Days Away From Work Cases	0	2	4
Total Days Away From Work	0	5	219
Restricted or Modified Work Cases	0	5	23
Total Days Restricted or Modified Work	0	34	897
First Aid Cases	0	26	51
Reported Near Mishaps	0	13	54
Average Number of Employees on Worksite	315	-	-
Total # of Hours (GC & Subs)	52,300	703,672	1,972,872
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	3.82	5.40	5.47
DART Rate	0.00	1.99	2.74
<i>Recordable National Average</i>	<i>3.60</i>	<i>3.60</i>	<i>3.60</i>
<i>DART National Average</i>	<i>2.00</i>	<i>2.00</i>	<i>2.00</i>
<i>Recordable WA State Average</i>	<i>7.20</i>	<i>7.20</i>	<i>7.20</i>
<i>DART WA State Average</i>	<i>3.30</i>	<i>3.30</i>	<i>3.30</i>

Right of Way

The U District and Roosevelt stations required the acquisition of a range of property interests including fee takings for stations and staging areas; tunnel easements are required for the running tunnel. These acquisitions resulted in owner and tenant, residential and commercial relocations.

Roosevelt Station – All parcels have been acquired. One parcel de-certified.

U District Station – All parcels have been acquired. One parcel de-certified.

Northgate Station - Arbitration scheduled for two parcels.

Tunnel Easements: All parcels have been acquired.

Line Section	Total Parcels Certified	Offers Made	Signed Agree- ments	Admin. Settle- ments	Posses- sion and Use (P&U)	Closings to date	Baseline Relocations Required	Relocations Completed
U District Station	15	15	0	0	0	15	3	3
Roosevelt Station	19	19	0	0	0	18	26	26
Tunnel Easements	190	188	0	0	0	188	0	0
Northgate Station	11	11	1	0	2	6	13	13
Total	235	233	1	0	2	227	42	42

Quality Assurance Activities

Activities

- None to report.

Issues

- None to report.

Summary

Description	Nov 2016	Notes
No. of Audits Planned	0	None
No. of Audits Completed	0	None
Reports in Progress	1	N160 100% Design Submittal
No. of Audits Postponed	0	None

Sound Transit Board Actions

Board Action	Description	Date
M2016-129	Execute a property settlement agreement with King County to acquire property and temporary construction easements from King County to construct the Northgate Station and to provide design and construction services for bus station facilities to be constructed at or near the station on behalf of King County for a net payment amount of \$6,380,000.	Dec 15

Community Outreach

- Distributed various construction alerts which includes the following:
 - Dewatering well decommissioning on 65th Avenue NE and on Brooklyn Avenue NE.
 - Concrete pours at the RVS site.
 - Work along Banner Way NE.
- Continued emailing weekly updates regarding surface cross passage work.
- Met with residents of the Northgate Plaza condos regarding reports of cracking.
- Hosted quarterly drop-in session at the U District Farmers Market for U District/Roosevelt neighborhood; staff engaged with approx. 60 neighbors.
- Installed wayfinding signage of Northgate P&R to help vehicles navigate the new configuration.

Environmental

- None to report.

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Major Construction Contract Packages

Below are the major construction contract packages for the Northgate Link Extension 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)

N110 Utility Relocation at Roosevelt Station Area - Relocation of electrical and communication facilities at the Roosevelt Station site. (Complete)

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

N112 U District and Roosevelt Station Site Preparation - Demolition of existing structures, grading and paving at the U District and Roosevelt Station sites. (Complete)

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

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.

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.

Construction Schedule Highlights

Package	Bid Advertisement	NTP	Substantial Completion
N105-Advance Demolition & Site Prep	Mar 2016A	May 2016A	Nov 2016A
N111-Advanced Utility Relocation	Sept 2014A	Jan 2015A	Apr 2016A
N113-SCL 115kV Relocate	Feb 2016A	June 2016A	Feb 2017
N125-Station Box Exc. & TBM Tunnels	Jan 2013A	Sep 2013A	Jan 2018
N140-U District Station Finishes	Oct 2013A (GC/CM-Precon)	Jun 2017 (construction)	Dec 2019
N150-Roosevelt Station Finishes	Apr 2013A (GC/CM-Precon)	Jan 2017 (construction)	Sep 2019
N160-Northgate Station & Guideway & Parking Garage	Apr 2016A	Sept 2016A	Jan 2020
N180-Trackwork to Northgate Station	Apr 2016A	Sept 2016A	Oct 2019
N830-Traction Power, Signals & Com	May 2015A (GC/CM-RFQ)	Jan 2018 (construction)	Dec 2020

A = Actual

Contract N105- Advanced Demolition and Site Prep

Close-out Progress

The N105 Contractor, Pellco Construction, received Substantial Completion for the work at the Key Bank Site on November 23, 2016. Care and custody of the site has been returned to Sound Transit and will be transferred to the N140 contractor in 2017.

This project is in the process of final payment and close-out. *No further reports will be made on this contract.*

Close-out Activities

Current Period

- Field work completed.
- Transferred care, custody and control of the Key Bank site from the Contractor back to Sound Transit.
- Continued processing project records and document for closeout.

Next Period

- Continue processing project records and documents for closeout.

Closely Monitored Issues

- Additional compensation costs for RFC-001 for contaminated material removal quantities (DOE Contained-Out determination and increased tonnage) from the east Key Bank excavation site has been negotiated and accepted by both parties. This resolves the remaining RFCs on the project.

Cost Summary

Present Financial Status	Amount
N105 Contractor - Pellco Construction	
Original Contract Value	\$2,691,500
Change Order Value	\$50,254
Current Contract Value	\$2,741,754
Total Actual Cost (Incurred to date)	\$2,695,851
Financial Percent Complete:	98%
Physical Percent Complete:	100%
Authorized Contingency	\$269,150
Contingency Drawdown	\$50,254
Contingency Index	5.4

Link Light Rail Northgate Link Extension - Construction



Contract N111 – Advanced Utility Relocation

Close-out Schedule

The N111 contract was Substantially Complete on April 26, 2016. The infrastructure has been turned over to Seattle City Light. Walsh Constructors have demobilized from the site. *No further reports will be made for this contract.*

Close-out Activities

Current Period

- Contractor worked with SPU to identify last remaining item of work to achieve project acceptance. Contractor working to complete final close-out paperwork.

Next Period

- Continue contract close-out tasks.

Closely Monitored Issues

- Contractor has one final element of repair work to complete to satisfy SPU by replacing a short segment of damaged pipe.

Cost Summary

Present Financial Status	Amount
<i>N111 Contractor - Walsh Construction</i>	
Original Contract Value	\$9,370,000
Change Order Value	\$800,970
Current Contract Value	\$10,170,970
Total Actual Cost (Incurred to date)	\$10,135,970
Financial Percent Complete:	99.7%
Physical Percent Complete:	100%
Authorized Contingency	\$937,000
Contingency Drawdown	\$800,970
Contingency Index	1.16

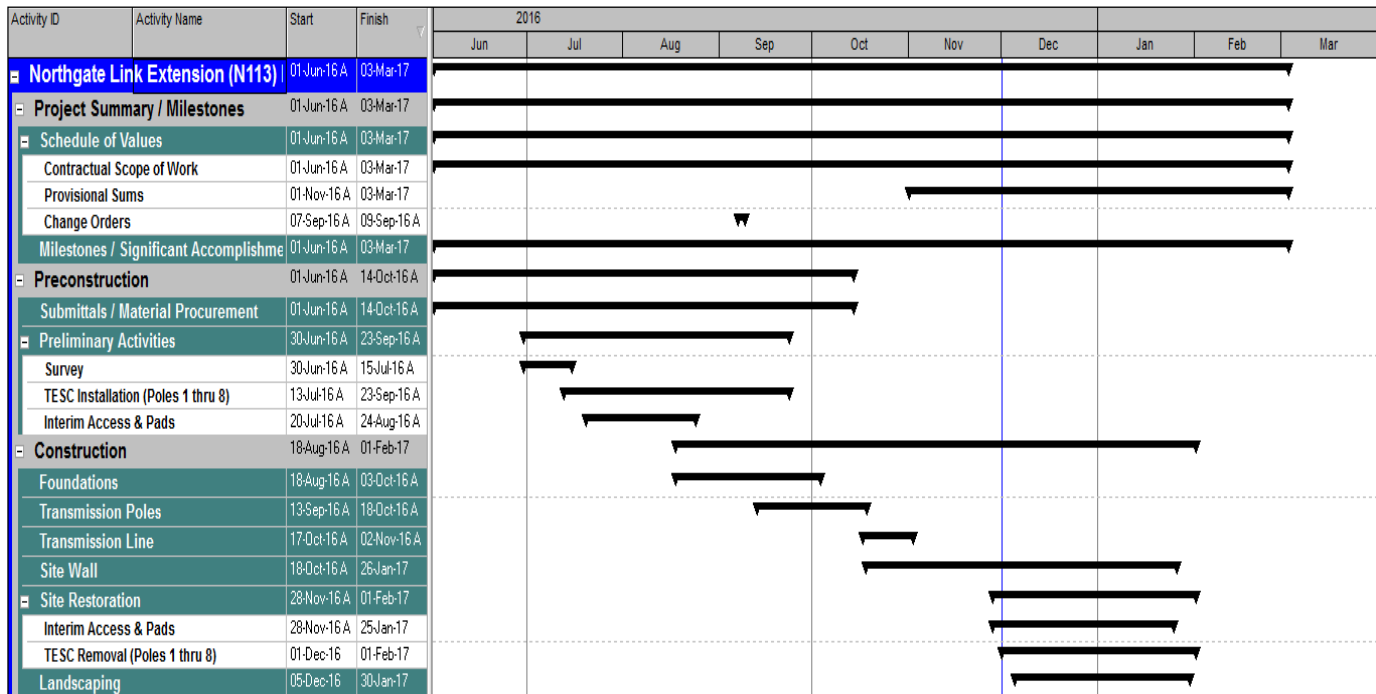
Contract N113– 115kv Relocation at Northgate Station

Current Progress

The N113 Contractor is currently working on site restoration and the MSE wall.

Schedule Summary

The N113 Contractor's December 2016 schedule update forecasts completion of the work of February 1, 2017. The contract end date remains February 21, 2017. The MSE wall west of I-5 remains the major feature of work to complete. All infrastructure to be removed from the guideway alignment has been removed. The Contractor has yet to remove the 30 days Owner Controlled Float activity from their CPM schedule. This requirement was to be dropped upon achieving Milestone No. 1.



Link Light Rail Northgate Link Extension - Construction

Key Activities

Current Period

- Transmitted construction geosynthetic samples to WSDOT Materials Lab for acceptance prior to MSE site wall construction.
- Continued various pole activities including pad installation, grading, and hydro seeding.

Next Period

- Continue MSE wall and site restoration at pole locations.

Closely Monitored Issues

- The Contractor has expressed that the cold weather and freezing ground conditions have slowed the pace of work and prevented planting or seeding.

Cost Summary

Present Financial Status	Amount
<i>NI13 Contractor - Potelco, Inc</i>	
Original Contract Value	\$2,811,926
Change Order Value	\$ 34,000
Current Contract Value	\$2,845,926
Total Actual Cost (Incurred to date)	\$2,580,926
Financial Percent Complete:	90%,
Physical Percent Complete:	90%
Authorized Contingency	\$281,194
Contingency Drawdown	\$ 34,000
Contingency Index	7.44



Hydro seeding at Pole site 6.

Contract N125 – TBM Tunnels

Current Progress

JCM is currently continuing work on the Cross Passages (CP), tunnel inverts, and troughs. TBM No. 1 was removed via the retrieval shaft and restoration of the Husky Stadium Plaza is under way.

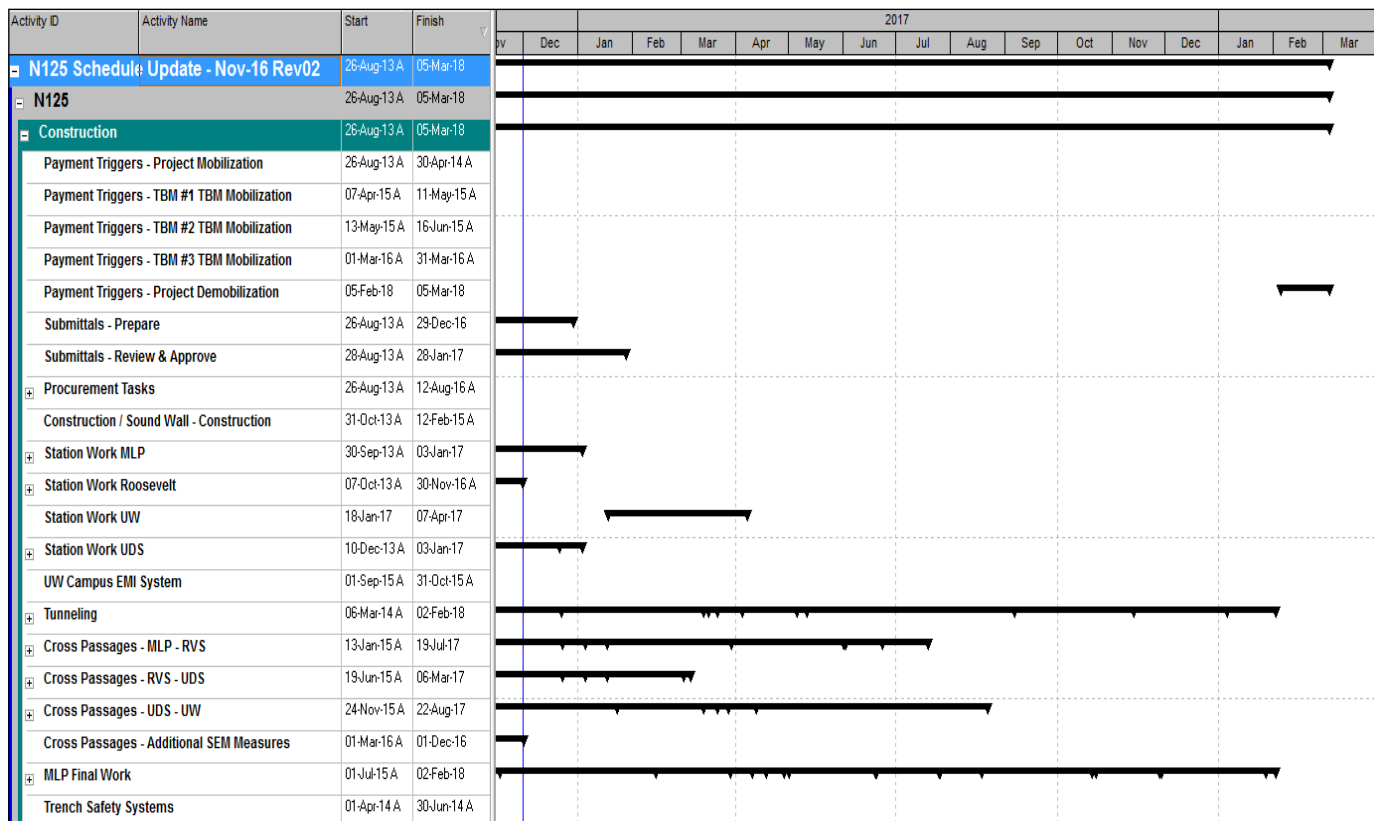
Tunnel Finishes – Installation of the sidewalk, cable trough, drainage pipe, and conduit is continuing in both tunnels.

Cross Passage Construction—Work in progress at the end of this period included ground freezing and in-tunnel freezing at multiple cross passages; and waterproofing installation, crown excavation, invert rebar installation and finishing work at various other CPs along the alignment.

Schedule Summary

Below is the latest approved schedule. JCM has submitted three revisions of the December 2016 schedule update. The initial update was returned Revise and Resubmit due to excessive negative float on Milestones (MS) 5 and 6. Sound Transit objected to the out-of-sequence and arbitrary logic in the schedule, which appeared to exist for the sole purpose of inflating the negative float. After meeting with JCM, the third update calculated –22 days of float in reaching MS -6. The negative 158 days in achieving MS -5 remained, tied to the differing site condition at CP 23. ST is continuing to evaluate this assertion and its impact.

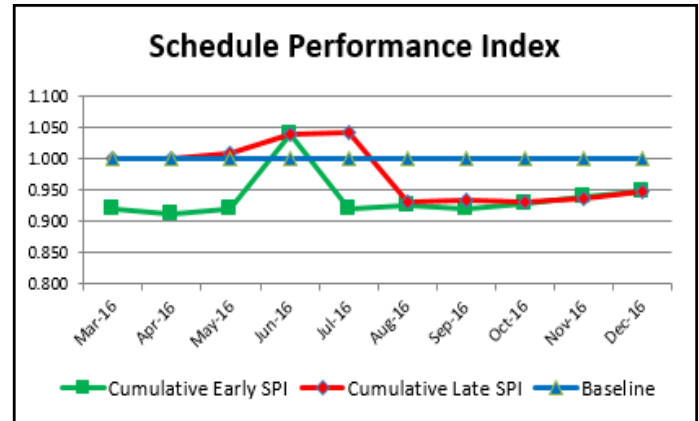
The critical path remains in the Cross Passage north of RVS and completion of the work at MLP. JCM has reduced the negative float associated with MS -2 and MS - 6, but has maintained a high level of negative float (–158 days) in achieving MS- 5.



Link Light Rail Northgate Link Extension - Construction

Schedule Performance Index

The schedule update reports a Performance Percent Complete of 89% with a Cost Percent Complete of 89%. The early SPI for this period remains 0.9, essentially unchanged from the 0.9 obtained in the previous period. The SPI continues to lag due to the pace of the cross passage work in comparison to the target dates for this work.



Key Activities

Current Period

- Removed TBM No. 1 from the retrieval shaft of UWS.
- Continued installation of walkway and cable trough rebar and concrete.
- Continued construction of MSE walls up to lift #8 at Maple Leaf Portal.
- Continued walkway concreting in both NB and SB tunnels.
- Completed/continued various cross passage activities including, internal electrical work, repairing/patching draining holes and endcaps, installing endcaps rebar, installing arch lining formwork and waterproofing, excavation and smoothing shotcrete.
- Completed permanent slab at RVS station box.

Next Period

- Continue cross passage excavation, forming, and pouring.
- Continue overhead electrical work in tunnel.
- Continue installation of fire standpipes.

- Continue tunnel walkway and cable trough pours.
- UWS special event plaza: begin plaza restoration work; complete installation of shotcrete for headwall waterproofing.
- Continue demobilizing to prepare for handing over the RVS shaft.
- Complete installation of MSE wall at MLP.

Closely Monitored Issues

- JCM has planned to complete the UW plaza/shaft restoration by end of March 2017 but detailed work sequence is still under discussion.

Cost Summary

Present Financial Status	Amount
NI25Contractor - JCM Northlink	
Original Contract Value	\$440,321,000
Change Order Value	\$ 45,070,344
Current Contract Value	\$485,391,344
Total Actual Cost (Incurred to date)	\$434,812,526
Financial Percent Complete:	89%
Physical Percent Complete:	89%
Authorized Contingency	\$66,048,150
Contingency Drawdown	\$45,070,344
Contingency Index	1.32



Completed permanent rat slab for the entire RVS station box.

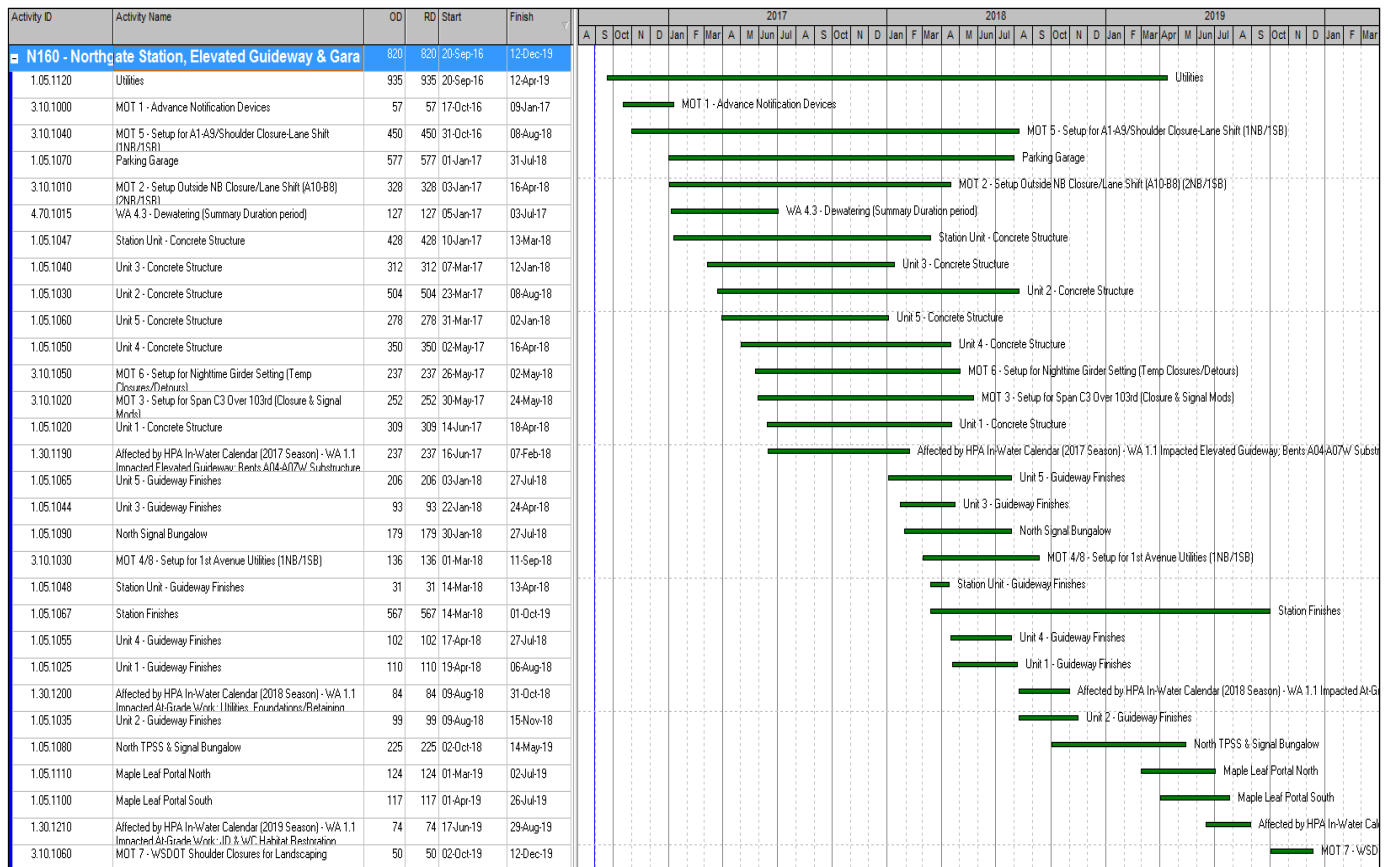
Contract N160 – Northgate Station, Elevated Guideway, and Parking Garage

Current Progress

The N160 project team is continuing to process contractor's submittals and RFIs. Absher Construction is working toward completing the project field offices and erecting construction fencing between work areas. The WSDOT parking lot (Area 1.2) has been opened to the public. The temporary driveway to the Transit Center has been completed.

Schedule

See latest schedule below.



Link Light Rail Northgate Link Extension - Construction

Key Activities

Current Period

- Continued to process and review submittals and RFIs.
- Continued start-up activities.
- Continued further planning for the North end design changes.
- Opened Work Area 1.2 parking lot to the public on December 5, 2016.
- Constructed temporary driveway to accommodate KCM Transit Center parking.
- Set up fencing to delineate Work Areas 3.2 and 3.3.
- Installed BMPs in Work Area 1.1 and 1.2.
- PSE relocated 2-inch gas line on NE 1st Ave. This line was in conflict with N160 contract scope.

Next Period

- Continue to process and review submittals and RFIs.
- Continue start up and mobilization activities.
- Continue to plan for the North end design changes.

Closely Monitored Issues

- Interface coordination associated with the Lynnwood Link track re-alignment design changes continue. Sound Transit is working to identify the required dates for design and approval information and communicate this information to the Contractor.

Cost Summary

Present Financial Status	Amount
<i>N160 Contractor - Absher Construction</i>	
Original Contract Value	\$174,000,000
Change Order Value	\$ 600,000
Current Contract Value	\$174,000,000
Total Actual Cost (Incurred to date)	\$3,682,249
Financial Percent Complete:	2.1%
Physical Percent Complete:	2.0%
Authorized Contingency	\$17,400,000
Contingency Drawdown	\$ 600,000
Contingency Index	0.58



PSE gas line relocation along NE 1st Avenue.

Contract N180 – Trackwork UWS to Northgate Station

Current Progress

The N180 contractor, Stacy and Witbeck, submitted the Preliminary CPM in mid-November. A draft of the Contract Baseline was submitted a week later. The draft schedule and SOV have been reviewed and revised by the Contractor. The baseline schedule is expected to be in place by mid-January. The Contractor is continuing to take delivery of the hematite heavy aggregate at the pre-cast yard in Woodland, WA. The Contractor is continuing to work on the required pre-construction plans. The Buy America waiver has been granted and the Contractor is currently in discussion with rail suppliers in the United Kingdom and Austria for the ultra-straight rail.

Key Activities

Current Period

- Contractor and their supplier gave a presentation of the high resilient fasteners; reviewing with Sound Transit possible changes to the current design.
- Met N140 Contractor at the UDS site to review concrete truck access and potential locations to place the N180 tremie pipe; both contractors to review findings and continue coordination.
- Ongoing review of floating slab and isolation pad submittals.

Next Period

- Continue floating slab mix designs development and trial batch runs.
- Continue submitting crucial early submittals.
- Contractor to revise and resubmit Contract Baseline Schedule.

- Continue negotiations with European Ultra-straight rail providers on pricing and quantity.

Closely Monitored Issues

- Ultra-straight rail procurement still in progress. Manufacturer requiring minimum quantities in excess of amount needed for contract.

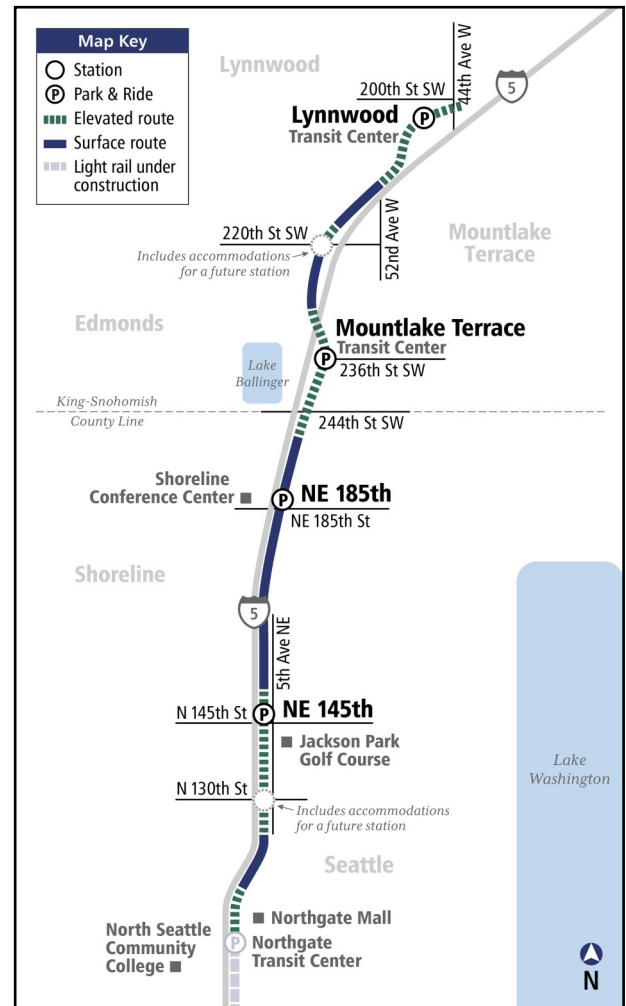
Cost Summary

Present Financial Status	Amount
N180 Contractor - Stacy and Witbeck, Inc.	
Original Contract Value	\$71,455,950
Change Order Value	\$0
Current Contract Value	\$71,455,950
Total Actual Cost (Incurred to date)	\$2,885,071
Financial Percent Complete:	4%
Physical Percent Complete:	4%
Authorized Contingency	\$10,718,393
Contingency Drawdown	\$0
Contingency Index	N/A

Link Light Rail Lynnwood Link Extension

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:	NE 145th (Shoreline), NE185th (Shoreline), Mountlake Terrace Transit Center, Lynnwood Transit Center
Systems:	Signals, traction power, and communications (SCADA).
Budget:	\$487.9 Million Phase Gate 4 budget; excludes Construction (Year of Expenditure Dollars)
Phase:	Final Design
Const. Starts:	2018
Service:	Late 2023



Map of Lynnwood Link Extension Alignment.

Key Project Activities

- Developing 60% civil & systems design, including stations.
- Continuing right of way acquisition and pre-construction planning.

Project Cost Summary

The Lynnwood Link 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	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$88.3	\$12.7	\$12.6	\$88.3	\$0.0
Preliminary Engineering	\$42.0	\$39.9	\$39.1	\$42.0	\$0.0
Final Design	\$111.5	\$80.2	\$16.5	\$111.5	\$0.0
Construction Services	\$104.9	\$18.0	\$2.1	\$104.9	\$0.0
3rd Party Agreements	\$17.4	\$4.4	\$1.4	\$17.4	\$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	\$123.8	\$23.3	\$18.3	\$123.8	\$0.0
Total	\$487.9	\$178.6	\$89.9	\$487.9	\$0.0

Cost Summary by SCC

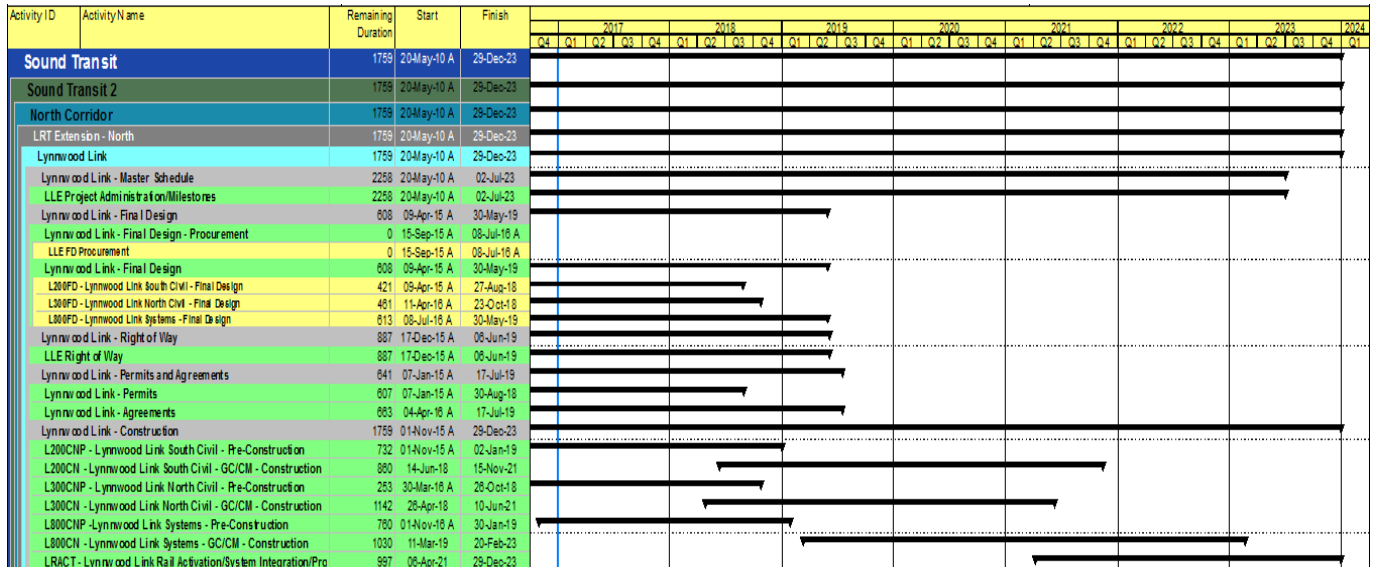
SCC Element	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$0.0	\$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	\$123.8	\$23.3	\$18.3	\$123.8	\$0.0
80 Professional Services	\$364.1	\$155.3	\$71.7	\$364.1	\$0.0
90 Unallocated Contingency	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total (10 - 90)	\$487.9	\$178.6	\$89.9	\$487.9	\$0.0

Risk Management

The Lynnwood 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 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, 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 most recent Lynnwood Link Quarterly Risk Review Workshop was held in December 2016 and ST will participate in an FTA-led risk assessment workshop in February 2017.

Project Schedule

The project schedule is shown below.



Sound Transit Board Actions

Board Action	Description	Date
M2016-112	To execute a Permit and project Review Reimbursement Agreement with the City of Montlake Terrace in the amount of \$903,586 with a 10% contingency for a total authorized agreement amount not to exceed \$993,945.	Dec 15

Community Outreach

- Received and tabulated station naming suggestions at meetings and online; final comprehensive report will be ready next period.
- Continued sending notifications to residents about upcoming geotechnical and well monitoring work near their homes.

Right-of-Way

- Continuing early right of way acquisition activities.
- Continuing to identify critical acquisitions for L200 with GC/CM.

Quality Assurance Activities

Activities/Issues

- None to report.

Summary

Description	Nov 2016	Notes
No. of Audits Planned	0	None
No. of Audits Completed	0	None
Reports in Progress	1	LLE
No. of Audits Postponed	0	None

Civil Final Design Overview

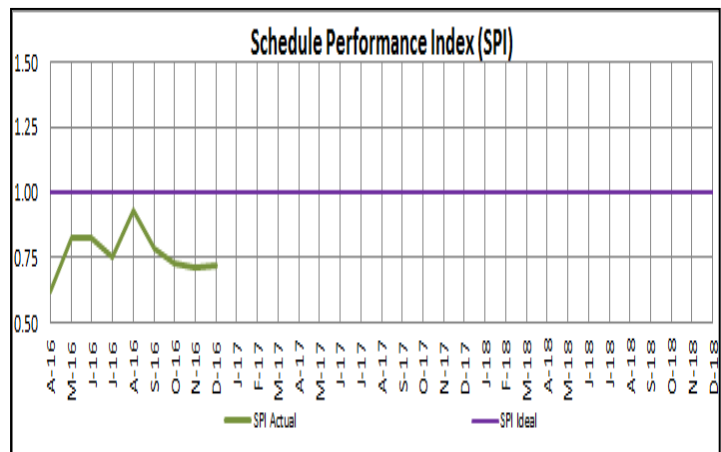
Sound Transit executed a professional services contract with HNTB Jacobs in April 2016 to perform Civil Final Design Services.

Civil Final Design Activities

- Progressing L100, L200 & L300 60% Design.

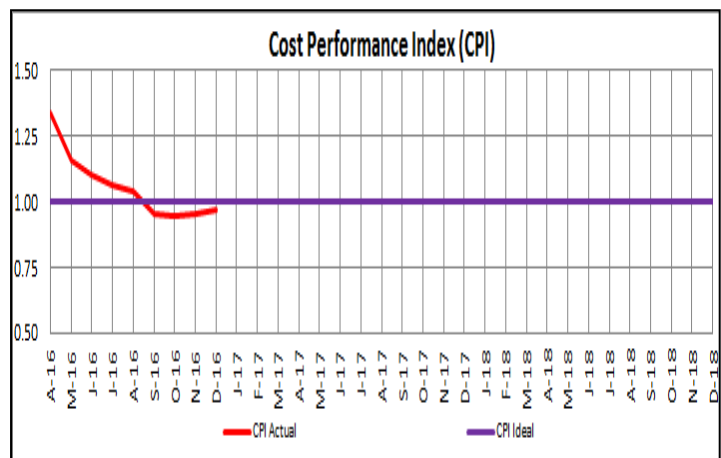
Civil Final Design SPI

The cumulative Schedule Performance Index (SPI) trends at 0.72 through December 2016, which means that cumulative work accomplished is significantly less than work planned. Currently the civil final design is behind schedule due to modifications to the 30% design.



Civil Final Design Cost Performance

\$15.9M of the total contract amount, 22%, has been spent through December 2016. The Civil Final Design percent complete is 21%, with an earned value of \$15.4M. The cumulative Cost Performance Index (CPI) through December is 0.97 indicating that expenditures are slightly higher than the planned value of work performed.



Final Design Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$12,241,521	\$3,658,641	\$15,900,162
% Spent	17%	5%	22%
Earned Value	\$11,645,172	\$3,769,181	\$15,414,353
% Complete	16%	5%	21%
SPI	0.71	0.73	0.72
CPI	0.95	1.03	0.97

Systems Final Design Overview

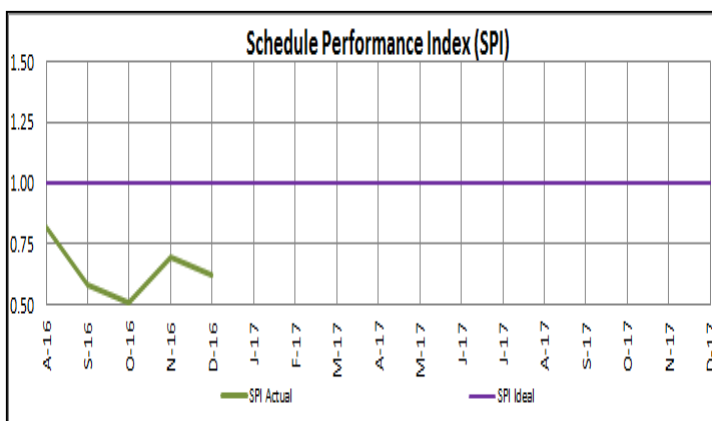
Sound Transit executed a professional services contract with LTK Engineering in July 2016 to perform Systems Final Design Services.

Systems Final Design Activities

- Proceeding with 60% Design Activities.

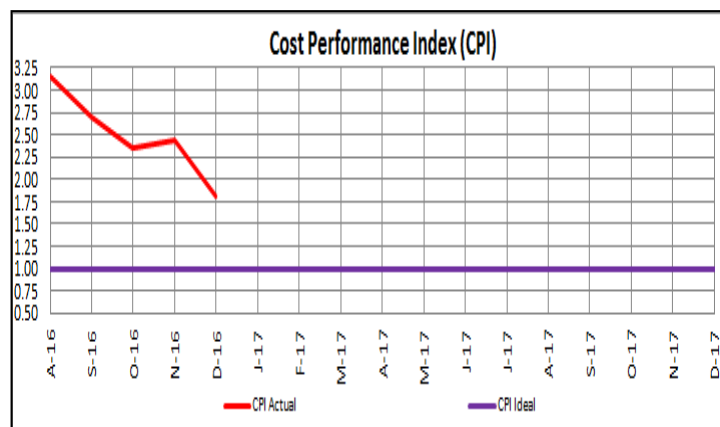
Systems Final Design SPI

The cumulative Schedule Performance Index (SPI) trends at 0.62 through December 2016, which means that cumulative work accomplished is significantly less than work planned. The monthly SPI for December was 0.45.



Systems Final Design Cost Performance

\$459K of the total contract amount, 5%, has been spent through December 2016. The Systems Final Design percent complete is 9%, with an earned value of \$833K. The cumulative Cost Performance Index (CPI) through December is 1.82 indicating that expenditures are significantly lower than the planned value of work performed.



Final Design Performance	Previous Period	Current Period	Cumulative To Date
Amount Invoiced	\$273,151	\$185,589	\$458,740
% Spent	3%	2%	5%
Earned Value	\$665,882	\$167,393	\$833,276
% Complete	7%	2%	9%
SPI	0.69	0.45	0.62
CPI	2.44	0.90	1.82

Civil Construction Management Overview

Sound Transit executed a professional services contract with PGH Wong in May 2016 to perform Civil Construction Management (CMC) Services

Civil Construction Management Activities

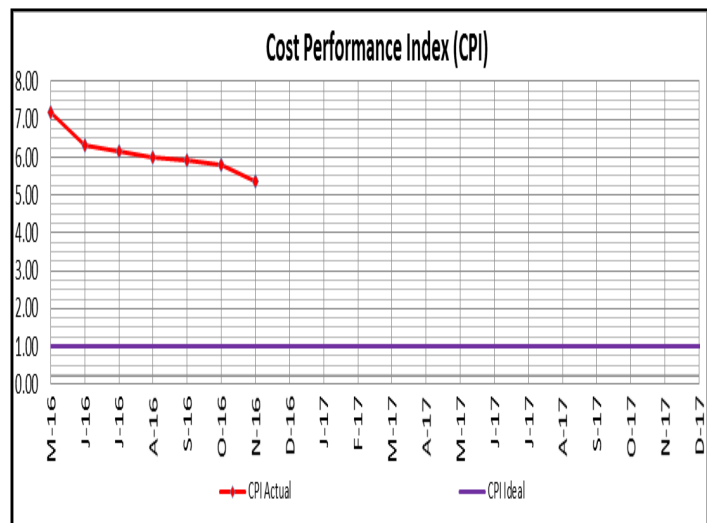
- Coordinating meetings with design, GC/CM, and ST teams.
- Coordination on various preconstruction activities including cost estimates, schedule, and constructability.

Civil Construction Management SPI

Work by the CMC is on a level-of-effort basis to support Sound Transit during the final design/pre-construction period. Earned value for level-of-effort is calculated as equal to the planned value, so SPI = 1.00.

Civil Construction Mgmt Cost Performance

\$445K of the total contract amount, 6%, is spent through December 2016, with an earned value of \$2.3M. The cumulative Cost Performance Index (CPI) through December is 5.08; indicating significantly lower costs than expected on the contract. The monthly CPI for December was significantly high at 3.83. The consultant assumed more support staff would be required early in the contract schedule and that has not been the case, leading to a high CPI.



Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$367,567	\$77,762	\$445,329
% Spent	5%	1%	6%
Earned Value	\$1,964,522	\$297,571	\$2,262,093
CPI	5.34	3.83	5.08

GC/CM Pre-Con Overview - L200 Northgate to NE 200th Street

Sound Transit executed a professional services contract with Stacy & Witbeck Kiewit Hoffman in June 2016 to perform GC/CM Pre-Construction Services for the L200 segment.

GC/CM Pre-Con Activities

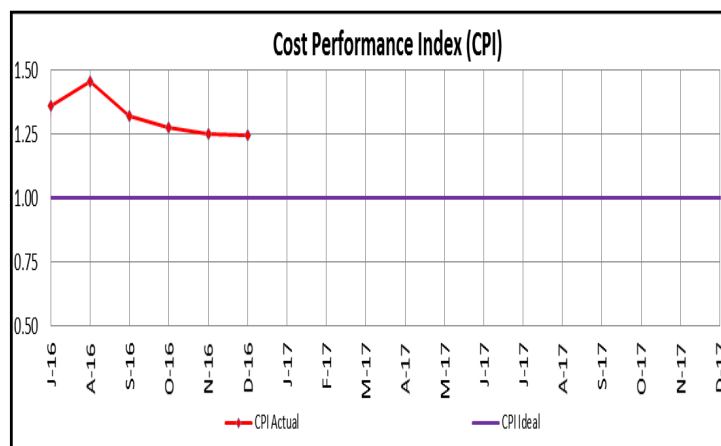
- Coordinating meetings with design, CM, and ST teams.
- Progress on various preconstruction activities including cost estimates, schedule, and constructability.

GC/CM Pre-Con Schedule Performance

Driving the L200 GC/CM Contract is the LLE Final Design contract; GC/CM Pre-Construction work is on a level-of-effort basis to support Sound Transit during the final design/pre-construction period. Earned value for level-of-effort is calculated as equal to the planned value, so SPI = 1.00.

GC/CM Pre-Con Cost Performance

\$1.1M of the total contract amount, 21%, is spent through December 2016, with an earned value of \$1.4M. The cumulative Cost Performance Index (CPI) through December is 1.25; indicating actual costs are lower than planned.



Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$999,577	\$89,199	\$1,088,776
% Spent	20%	1%	21%
Earned Value	\$1,252,562	\$103,337	\$1,355,899
CPI	1.25	1.16	1.25

GC/CM Pre-Con Overview - L300 NE 200th St. to Lynnwood Transit Center

Sound Transit executed a professional services contract with Skanska in October 2016 to perform GC/CM Pre-Construction Services for the L300 segment.

GC/CM Pre-Con Activities

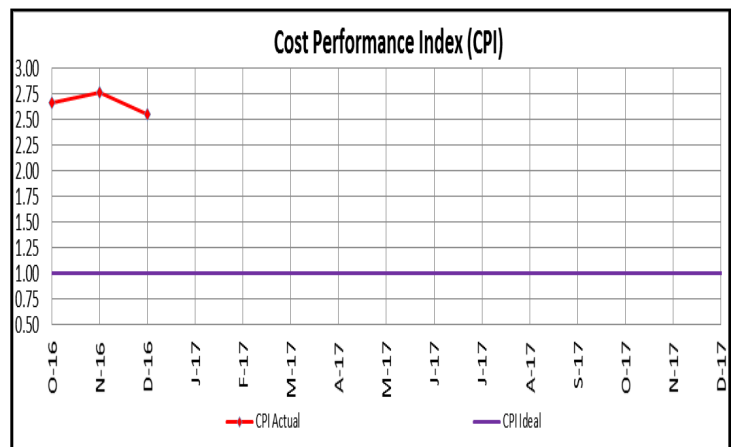
- Mobilizing Construction Management team, reviewing preliminary engineering design, cost estimates, and schedule.

GC/CM Pre-Con Schedule Performance

Driving the L300 GC/CM Contract is the LLE Final Design contract; GC/CM Pre-Construction work is on a level-of-effort basis to support Sound Transit during the final design/pre-construction period. Earned value for level-of-effort is calculated as equal to the planned value, so SPI = 1.00.

GC/CM Pre-Con Cost Performance

\$468K of the total contract amount, 9%, is spent through December 2016, with an earned value of \$1.2M. The cumulative Cost Performance Index (CPI) through December is 2.55; indicating actual costs are significantly lower than planned.



Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$277,976	\$190,450	\$468,246
% Spent	5%	4%	9%
Earned Value	\$768,297	\$426,806	\$1,195,103
CPI	2.76	2.24	2.55

Link Light Rail

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



The project, when completed, will enable 24/7 HOV access on I-90 between Seattle, Mercer Island and Bellevue.

Scope: The I-90 Two-Way Transit and HOV Operations (Stage 3) project will provide approximately four miles of the 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, the installation of screening on the shared-use pathway on the I-90 floating bridge. Following completion of this project, the center roadway will be closed to allow the construction and operation of East Link Extension.

Budget: \$225.6 Million

Phase: Construction

Construction Start: January 2015

Construction Completes: June 2017

Major Contracts

	Scope	Agreement/Contract
WSDOT	Final Design	\$ 20,942,000
WSDOT	CM Services	\$ 16,358,000
IMCO	Construction	\$122,021,000

Key Project Activities

- *Work outside the tunnels* – Sweep roadway shoulders, pump foam affluent to sewer at Mercer Island Tunnel (MIT)/ Mount Baker Ridge Tunnel (MBRT), install luminescent sensors at west portal of MBRT, set tank cabinets & wire to tank valves, pull wire for CM signs, install barrier on 76th Ave SE, westbound on-ramp.
- *Mercer Island Tunnel (MIT)* – Install & terminate plenum lighting at west portal, MIT exhaust fans cabling / terminations, Mercer Island Tunnel IR detector cabling, exhaust fans startup and testing.
- *Mount Baker Ridge Tunnel (MBRT)* – Continue supply/exhaust fans startup and testing, demo and installation; east-bound CCTV installation, and westbound fire control station.
- SCADA – Simplex interface, startup/testing of control of exhaust fans; preparation for PLC cutover, coordination with GE and testing for Versamax.
- Simplex– Submittal for IR camera startup, and testing new software.
- Continue discussions with WSDOT regarding schedule performance and mitigation.

Closely Monitored Issues

- Closely monitoring schedule, meeting with WSDOT on mitigation strategies to ensure timely completion
- Monitoring progress fan installation.
- SCADA implementation remains to be a major risk.
- Live fire tests scheduled for March 2017 closures.

Project Cost Summary

Total Project Cost expended this period is \$6.8M. The following tables summarize the cost information for the I-90 Two-way Transit and HOV Operations (Stage 3) project. Tables in millions.

Cost Summary by Phase

Project Elements by Phase	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$3.6	\$3.6	\$1.6	\$1.6	\$3.6	\$0.0
Preliminary Engineering	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$0.0
Final Design	\$22.1	\$22.1	\$18.6	\$17.9	\$22.1	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$198.3	\$198.3	\$166.3	\$131.8	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$188.1	\$152.9	\$225.6	\$0.0

Cost Summary by SCC

Project Elements by SCC	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
40 Sitework & Special Conditions	\$180.6	\$180.6	\$166.3	\$131.8	\$180.6	\$0.0
80 Professional Services	\$26.3	\$26.3	\$21.7	\$21.0	\$26.3	\$0.0
90 Unallocated Contingency	\$18.7	\$18.7	\$0.0	\$0.0	\$18.7	\$0.0
Project Total (SCC 10-90)	\$225.6	\$225.6	\$188.1	\$152.9	\$225.6	\$0.0

Cost Contingency Management

In the table below, the Allocated Contingency includes both WSDOT-controlled construction contingency & the total ST-controlled allocated contingencies. Changes to the contingency level since last period are due to WSDOT executing change orders to the construction contract.

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$0.0	0.0%	\$0.0	0.0%
Allocated Contingency	\$17.0	7.5%	\$15.0	20.6%
Unallocated Contingency	\$18.7	8.3%	\$18.7	25.7%
Total	\$35.7	15.8%	\$33.7	46.3%

Note: Table in millions. Contract does not carry Design Allowance.

Contingency % of Work Remaining based on Contingency Remaining as a % Budget Remaining.

Allocated contingency includes WSDOT-controlled contingency & ST-controlled Contingency.

Project Schedule

WSDOT has negotiated a schedule recovery plan with the Contractor to preserve the May 31, 2017 commitment to turn over the center roadway to Sound Transit. Once a change order has been executed to implement the plan, a schedule update will revise the remaining Project Milestones for construction while maintaining the May 31st turnover date; the current milestones are indicated below:

Contract	Start of Final Tunnel Commissioning Period		Final Tunnel Commissioning Complete		Substantial Completion		Commence Final Pavement Marking		Physical Completion & Center Roadway Turnover	
	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual
I-90 Two-Way Transit & HOV Operations Stage 3	12/6/2016	11/17/2016	2/16/2017	2/16/2017	2/20/2017	2/20/2017	5/20/2017	5/20/2017	5/31/2017	5/31/2017

Changes from previous update are indicated in **RED**

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Link Light Rail

East Link Extension

Scope

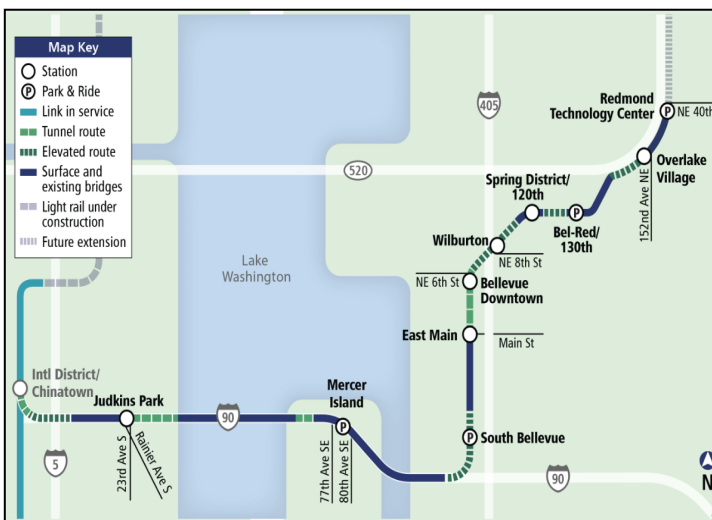
Limits/Alignment: 14 miles extension from Downtown Seattle to Mercer Island, Bellevue and the Overlake area of Redmond. The extension includes 10 stations along a route that include at-grade, elevated, bridges, new and retrofitted tunnels.

Stations: Judkins Park (formerly Rainier), Mercer Island, South Bellevue, East Main, Bellevue Downtown, Wilburton (formerly Hospital), Spring District/120th, Bel-Red/130th, Overlake Village and Redmond Technology Center (RTC).

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

Budget: \$3.677 Billion Year of Expenditure Dollars

Schedule: Revenue Service - June 2023



Map of East Link Extension Alignment.

Key Project Activities

Seattle to South Bellevue

- *Floating Bridge, Fixed Structures, Judkins Park and Mercer Island Stations:* Pricing set submitted. Consultant working on 100% submittal for QC; QA scheduled through end of January 2017.
- DAP approved by FHWA, PDA is complete and execution will be concurrent with execution of air space leases. Public Art Plan was submitted to WSDOT in mid-December.

South Bellevue to Redmond

- *E320 South Bellevue:* WSDOT and ST finalizing acquisition of South Bellevue Park and Ride property; On-going discussions with Bellevue regarding recently issued ROW Use Permit; Finalizing I-90 ASL and TCAL (completion in early 2017); Finalizing Project Design Approval (PDA).
- *E330 Downtown Bellevue Tunnel:* Installation of settlement monitoring instrumentation, dewatering wells, and noise monitoring equipment continued; performing additional modeling of the 3-Drift tunnel design to reflect shotcrete strength requirements and preparing drawings for Change Order; ST and Contractor developing estimates for cast iron water line work scheduled to begin in January 2017.
- *E335 Downtown Bellevue to Spring Dist.:* Finalizing TCAL and ASL (completion in early 2017); Finalizing Project Design Approval (PDA); Providing construction support on Bellevue's Spring Blvd.; Initiating GC/CM negotiations.
- *E340 Bel-Red:* Preparing to award construction contract; Continued permit development – applications for all construction permits have been submitted, Construction Noise permit in review; Developing Task Order #4 with Olympic Pipeline for removal of their old infrastructure; Began discussions with Integra/Verizon regarding relocation.
- *E360 SR 520 to RTC:* Continued development of 60% design.

Closely Monitored Issues

- Meeting Civil and Systems construction procurement schedules
- Timely property acquisitions including Air Space Leases.
- Timely submissions and issuance of permits and resolution of appeals.
- Resolutions of access and mobility issues related to Mercer Island.
- Competitiveness in the construction market and potential shortage of skilled labor.

Project Cost Summary

The East Link project cost is summarized below in two cost categories. In the first table, the cost is summarized in accordance with Sound Transit's 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 this project is \$3,677.2M in year of expenditure dollars. Approximately \$26.7M was incurred this period. The (\$2.4M) Baseline Budget vs. EFC in construction SCCs was due to a slight difference in actual cost allocation of E360 DB contract compared to Baseline Budget. This was offset by a positive variance in non-construction SCCs.

Cost Summary by Phase

Project Phase	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$186.2	\$186.2	\$53.4	\$52.7	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.6	\$54.4	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$231.6	\$188.5	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$137.2	\$22.1	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$34.7	\$9.2	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$704.3	\$68.9	\$2,544.3	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$298.2	\$298.2	\$205.1	\$202.0	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$1,420.9	\$597.8	\$3,677.2	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$744.6	\$744.6	\$280.2	\$34.6	\$698.4	\$46.2
20 Stations	\$397.7	\$397.7	\$156.3	\$4.5	\$423.2	(\$25.4)
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$808.5	\$808.5	\$230.8	\$27.0	\$836.1	(\$27.6)
50 Systems	\$353.8	\$353.8	\$15.8	\$0.5	\$349.4	\$4.4
Construction Subtotal (10 - 50)	\$2,304.6	\$2,304.6	\$683.1	\$66.6	\$2,307.1	(\$2.4)
60 Row, Land	\$288.5	\$288.5	\$205.1	\$202.0	\$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	\$900.3	\$532.7	\$329.2	\$897.8	\$2.4
90 Unallocated Contingency	\$182.9	\$181.0	\$0.0	\$0.0	\$181.0	\$0.0
Total (10 - 90)	\$3,677.2	\$3,677.2	\$1,420.9	\$597.8	\$3,677.2	\$0.0

Risk and Contingency Management

Risk Management

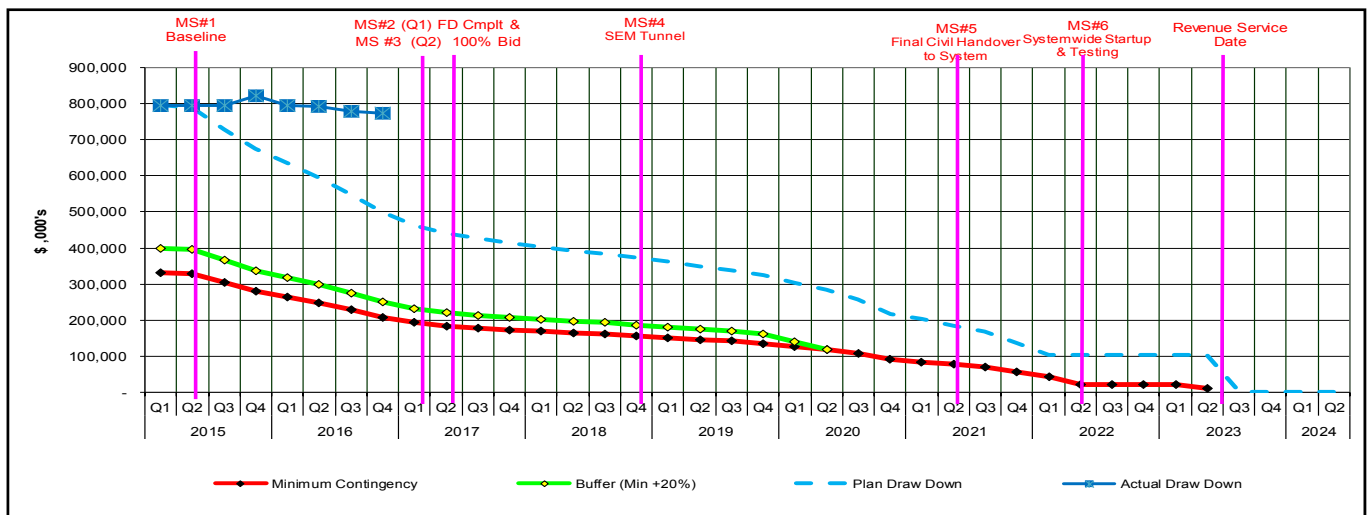
The RCMP established a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring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

This period, Sound Transit finalized the 3rd quarter risk assessment workshops, and prepared the report including detailed risk management plans for the top risks. Sound Transit included participation of construction management consultants and construction contractors who are already under contracts (E130, E330, E335, E360 and E750) in its risks management program. The 4th QTR risk assessment will be performed in January 2017 and completed by February

Risk and Contingency Management (continued)

Contingency Status

Sound Transit has completed a draft Risk and Contingency Management Plan (RCMP) for East Link, and is currently addressing review comments from the Project Management Oversight Consultant (PMOC). The project's baseline budget, which was approved by the Sound Transit Board in April 2015, contained a total of \$795.9M contingency. This period, total contingency decreased by \$2.1M, to a new total amount of \$774.2M. The contingency balance remained higher than the anticipated draw down.



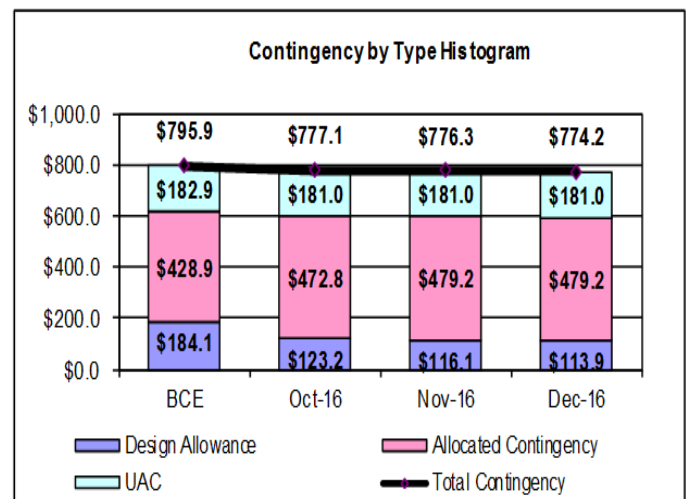
Design Allowance is used to account for scope that could not be quantified at the time of the cost estimate. This period, the design allowance for Private Utility work in Redmond and City of Bellevue-led 120th and 124th Ave NE Roadway Projects were transferred to future commitment, since the design for that work has been completed. The balance of overall Design Allowance is now \$113.9M. As the designs continues to be progress to completion and the engineer's cost estimates are prepared, design allowance is expected to be reduced.

Allocated Contingency is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement (market risk). This period, the total amount of allocated contingency remained at \$479.2M.

Unallocated Contingency is used to address general project-wide cost risks and uncertainties. The total amount of unallocated contingency UAC in the baseline cost estimate is \$182.9M. UAC had been drawn down to \$181.0M in the Fall of 2015, but has not been changed since then.

Contingency Status	BCE		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$184.1	5.0%	\$113.9	3.7%
Allocated Contingency	\$428.9	11.7%	\$479.2	15.6%
Unallocated Contingency	\$182.9	5.0%	\$181.0	5.9%
Total:	\$795.9	21.6%	\$774.2	25.1%

Dollar figures on this page are displayed in millions.



Project Schedule

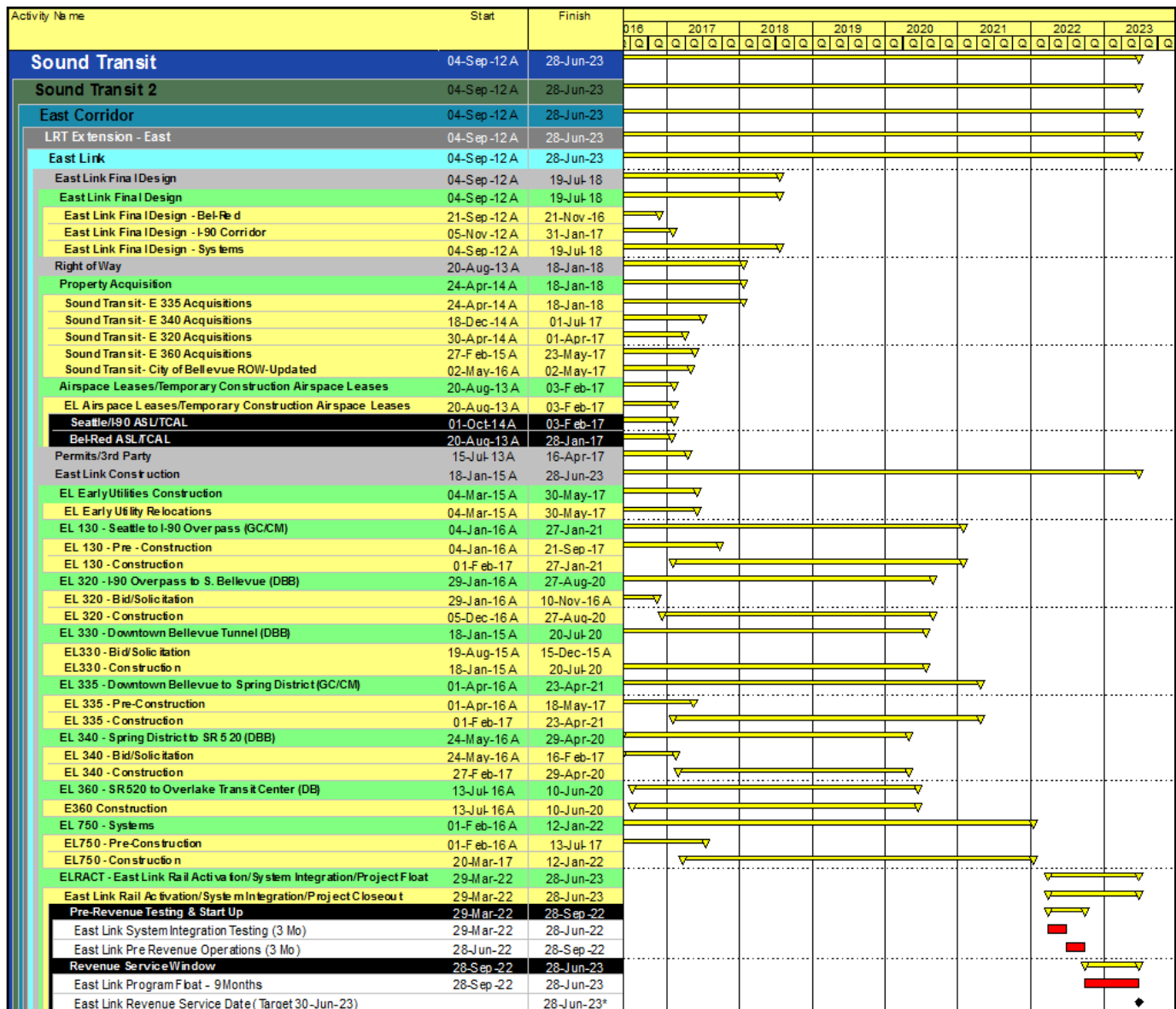
With the E340 Bel-Red bid opening on December 6th, all construction contracts are now in or past the procurement phase. The E130 I-90, E335 Downtown Bellevue to Spring District, and E750 Systems GC/CM contracts have formally entered MACC negotiations. Notice to Proceed (NTP) for every contract is anticipated in 2017.

LNTN for E320 South Bellevue contract was issued on December 5th. The Contractor is preparing key submittals in anticipation of work beginning shortly after the full NTP in February 2017.

E330 Downtown Bellevue Tunnel completed work on the Pipe Canopy and continued work on soil nail walls 6 and 7. Piezometers, inclinometers, and extensometers were installed at the South Portal. Contractor continued mobilizing tunnel equipment and is expected to start tunneling in January 2017.

E360 SR 520 to RTC design is progressing and refinements continue to be made to the logical ties between design and construction activity. The first construction tasks are anticipated in Spring 2017 with the removal of trees. Civil construction will start in earnest in July 2017.

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

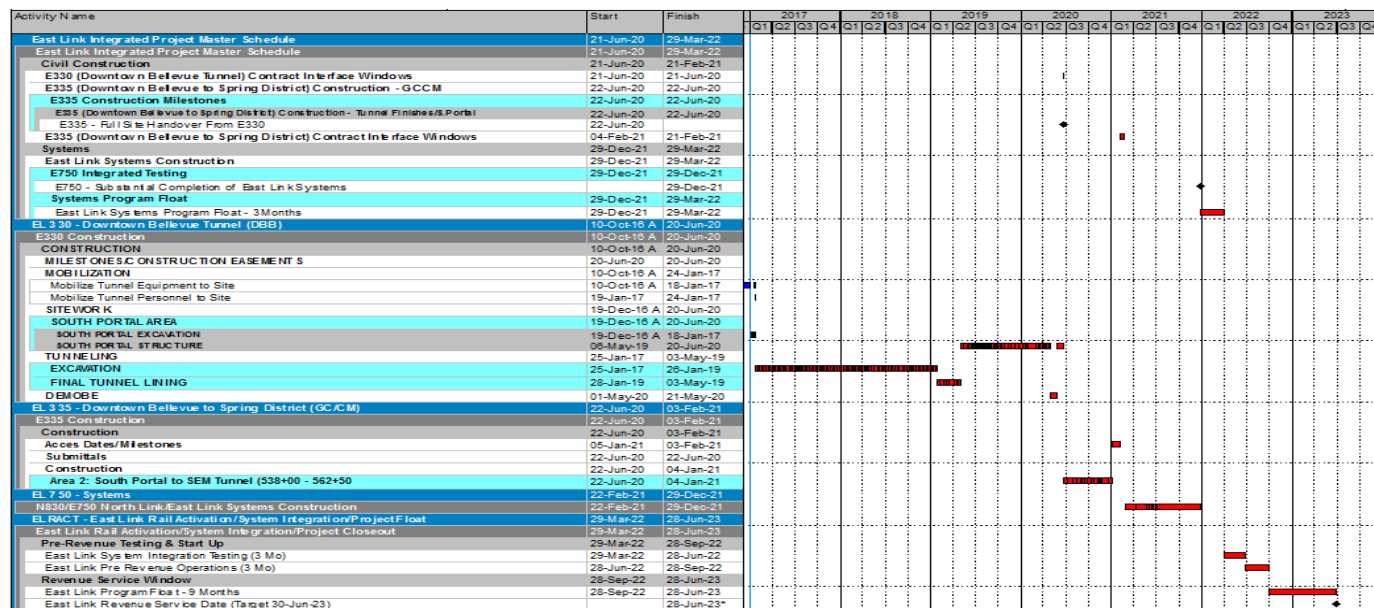


Link Light Rail East Link Extension



Critical Path Analysis, continued

The East Link critical path is currently running through the handover of the E330 tunnel to the E335 contractor; work on the South Portal Electrical Building drives substantial completion of E335 and subsequently the critical path of E750. However, there is language in pending CO #10 to switch from 6-drift to 3-drift construction in the tunnel which will add 60 days of shared access for E335. This should relax the interface significantly, at which time E130 will return to the critical path. The EL critical path schedule is shown below. ASL coordination with WSDOT is recognized as a high priority, as is a successful MACC negotiation for E130, and resolution of access and mobility issues on Mercer Island.



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 will result in owner and tenant residential and commercial relocations. The East Link Extension included the advance acquisition of approximately one mile of an existing railroad parcel ("Bellevue Mile") that the Sound Transit Board approved in June 2011. The right-of-way program status for this period is summarized in the following table. Market value trends in both residential and commercial properties are exhibiting strong upward pressure. The overall impact on the Right-of-Way (ROW) budget is being closely monitored. Efforts are also underway to prioritize acquisitions by contract package to help ensure timely availability of property. Property acquisition is recognized as a high priority and the management team has formed an ad hoc ROW team consisting of internally involved departments to prioritize and manage the process.

East Link Extension Property Acquisition Status								
Line Section	Board Approved	Offers Made/In Negotiations	Signed Agreements	Possession and Use	Admin Settlement	Closings to date	Relocations Required	Parcels Vacated
Total	240	230	6	26	3	156	237	191

Note: Excluded from the table above are 9 parcels that were approved under a separate ST Board authorized agreement. These parcels are tracked in a working file and will be added to the table above when they are fully certified and approved.

Right of Way, continued

Seattle to S. Bellevue

E130 IDS Rail Connection & IDS & I-90 Upgrades - Air Space Lease discussions with WSDOT continue.

S. Bellevue to RTC parcels

E320 S. Bellevue– 2 parcels closed. Air Space Lease discussions with WSDOT continue.

E330 Downtown Bellevue – No new activity.

E335 Downtown Bellevue to Spring District - 3 parcels vacated and 1 parcel closed.

E340 Bel-Red - 3 parcels vacated; 8 parcels closed

E360 SR 520 to OTC– No new activity. Air Space Lease discussions with WSDOT continue.

Construction Safety

Data/ Measure	December 2016	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
Restricted or Modified Work Cases	0	0	0
Total Days Restricted or Modified Work	0	0	0
First Aid Cases	0	4	4
Reported Near Mishaps	0	13	13
Average Number of Employees on Worksite	26	-	-
Total # of Hours (GC & Subs)	3,846	40,581	40,581
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	0.00	0.00
DART Rate	0.00	0.00	0.00
<i>Recordable National Average</i>	<i>3.60</i>	<i>3.60</i>	<i>3.60</i>
<i>DART National Average</i>	<i>2.00</i>	<i>2.00</i>	<i>2.00</i>
<i>Recordable WA State Average</i>	<i>7.20</i>	<i>7.20</i>	<i>7.20</i>
<i>DART WA State Average</i>	<i>3.30</i>	<i>3.30</i>	<i>3.30</i>

Quality Assurance Activities

Activities/Issues

- None to report.

Summary

Description	Nov 2016	Notes
No. of Audits Planned	0	None
No. of Audits Completed	1	E335 100% Design Submittal
Reports in Progress	1	E750/N830 90% Design Submittal Audit
No. of Audits Postponed	0	None

Sound Transit Board Actions

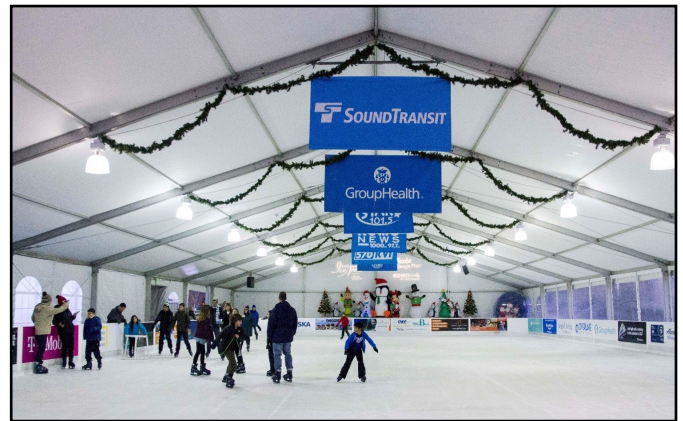
Board Action	Description	Date
	None to report.	

Community Outreach

- Held the Rail and Ice holiday event for So. Bellevue community and 65 residents attended for skating and getting project information.
- Posted a video of the Mercer Island 90% design presentation on website and emailed to gov delivery list.
- Presented to FTA an outreach update as part of their E330 site visit.

Environmental

- Continued developing environmental permit application packages. Environmental commitments are being incorporated into the design, program, and specifications of the project.



Rail and Ice event in South Bellevue sponsored by Sound Transit.

Major East Link Construction Contract Packages

Below are the major construction contract packages for the East Link Extension with a brief scope description and status of each.

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

Status: Completed.

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: Continued work on the mock-up of track and plinths attachment on the floating bridge. Continued procurement of subcontract packages.

E160 Track Bridge System – Fabrication, delivery and install eight track bridges that will span over fixed structures and the floating bridge. [Furnish and Install]

Status: Incorporated as part of 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: ST Board approved. LNTP issued as of reporting with NTP anticipated 1st QTR 2017.

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

Status: See following pages.

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: Continued procurement of subcontract packages.

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

Status: Bids opened as of reporting period, with Notice of Intent to Award in December 2016. Award is anticipated in February 2017.

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

Status: NTP issued on July 13, 2016. Advancing design to 60%.

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: GC/CM reviewing design documents, and coordinating with designers.

Contract E330 – Downtown Bellevue Tunnel

Current Progress

South Portal: The Contractor completed soil nail wall excavation thru lift 7 during the month and will continue with lifts 8-9 excavation. Completed drilling and grouting of the pipe canopy at the tunnel headwall. The Contractor continued setting up tunnel support structures and continued mobilizing additional tunnel equipment in preparation for tunneling to begin in January 2017. Continued to maintain TESC and Traffic Control measures, and continued installation of tunnel monitoring equipment throughout the site in preparation for tunneling.

North Portal: Continued efforts to obtain outstanding rights of entries and temporary construction easements for outstanding monitoring equipment that needs to be installed ahead of tunneling. Continued preparations for the start of the Skyline Building scope of work anticipated to begin mid January. Skyline work will run primarily on the night shift.

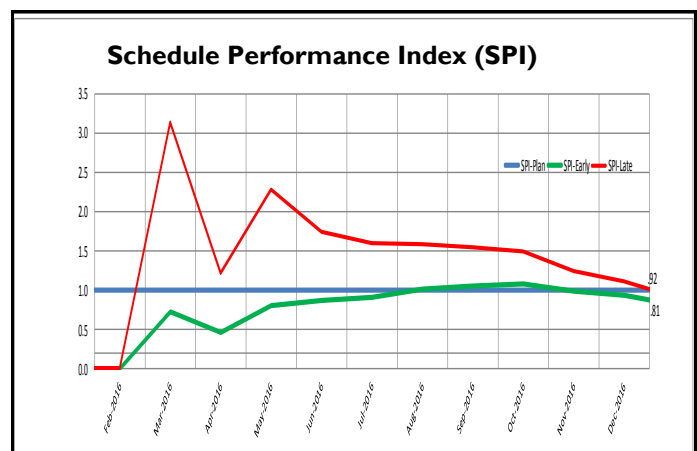
Schedule Summary

The critical path for this contract continues to follow the South Portal excavation through the tunnel excavation and the completion of the South Portal structure. The decision to use CLSM in lieu of the grouted pipe canopy at the North Portal allowed for a resequencing of work which removes the need for an interim interface with E335, providing some schedule relief. A Change Order directing the Contractor to utilize a different excavation method for the southern 60% of the tunnel is likely to be finalized soon, which will allow the Contractor to realize up to three months of additional schedule savings.

Activity Name	Start	Finish	2017				2018				2019				2020			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
E330 Construction	15-Dec-15 A	20-Jun-20																
CONSTRUCTION	15-Dec-15 A	20-Jun-20																
MILESTONES/CONSTRUCTION EASEMENTS	15-Dec-15 A	20-Jun-20																
MILESTONES	15-Dec-15 A	20-Jun-20																
CALCULATED MILESTONES	15-Dec-15 A	20-Jun-20																
L-NTP	15-Dec-15 A																	
NTP	08-Feb-16 A																	
MLST 1 - Acceptance of the 110th Ave Controlled Low Strength Material Work		14-Oct-16 A																
MLST 2 - Acceptance of CO #008 Work		14-Oct-16 A																
MLST 3 - Substantial Completion of all Work from Station EB 542+64.52 to Station EB 562		02-Feb-20																
MLST 4 - Substantial Completion Total Contract		20-Jun-20																
MOBILIZATION	08-Feb-16 A	22-Feb-19																
SITEWORK	29-Feb-16 A	20-Jun-20																
PRECONSTRUCTION	21-Mar-16 A	24-Apr-20																
TRAFFIC CONTROL	25-Mar-16 A	28-Jan-20																
SURVEY & MONITORING	29-Feb-16 A	11-May-18																
NORTH PORTAL AREA	13-Jun-16 A	14-Oct-16 A																
SOUTH PORTAL AREA	29-Feb-16 A	20-Jun-20																
SKYLINE BUILDING RETROFIT	03-Jan-17	15-Jul-17																
TUNNELING	25-Jan-17	03-Jan-20																
EXCAVATION	25-Jan-17	26-Jan-19																
FINAL TUNNEL LINING	28-Jan-19	26-Oct-19																
FINAL TUNNEL FINISHES	16-May-19	03-Jan-20																
MID TUNNEL	09-Apr-18	07-Jun-19																
DEMOBE	02-Feb-17	21-May-20																

Schedule Performance Index

This period, the SPI early (.81) continues trending behind of schedule and the SPI late is now at (.92). Both the early and late indexes indicate that the contractor is trending behind schedule at minus 11 days when compared to the baseline schedule. This slowing trend indicated in the SPI is supported by the fact that the soil nail wall installation continues to take longer than expected, as experienced during the past three periods of performance. The additional time taken in the soil nail installation are the cause for the decreased productivity and is pushing the start of tunnel excavation out further.



Link Light Rail East Link Extension - Construction

Next Period's Activities

- Layout Piezometers, Inclinometers and Extensometers throughout the site. This activity could be delayed further if right of entries are not obtained in time.
- Continue excavation and installation of the soil nail walls at the South Portal. Lifts 8-9 should be completed.
- Continue mobilizing equipment and support structures ahead of tunneling.
- Begin tunneling.
- Begin Skyline building work.

Cost Summary

Present Financial Status	Amount
E330 Contractor– Guy F Atkinson Construction, LLC.	
Original Contract Value	\$121,446,551
Change Order Value	\$973,214
Current Contract Value	\$122,419,765
Total Actual Cost (Incurred to date)	\$23,365,150
Financial Percent Complete:	19%
Physical Percent Complete:	19%
Authorized Contingency	\$12,144,655
Contingency Drawdown	\$973,214
Contingency Index	2.38

Closely Monitored Issues

- Alternate SEM excavation sequence proposed by the contractor decision continues to be pending, awaiting additional design reviews and modeling information.
- Obtaining right of entry agreements and temporary construction easements for properties along alignment.
- The TCE for the Skyline property does not match the requirements in the Contract Documents. The CM Team continues working to have an executed change order in place prior to starting the work in January 2017.
- Soil nail wall progress slower than anticipated. The Contractor currently projects to start tunneling late-January instead of the baseline projection of mid-December 2016.



Tunnel construction briefing for FTA/PMOC prior to site visit.



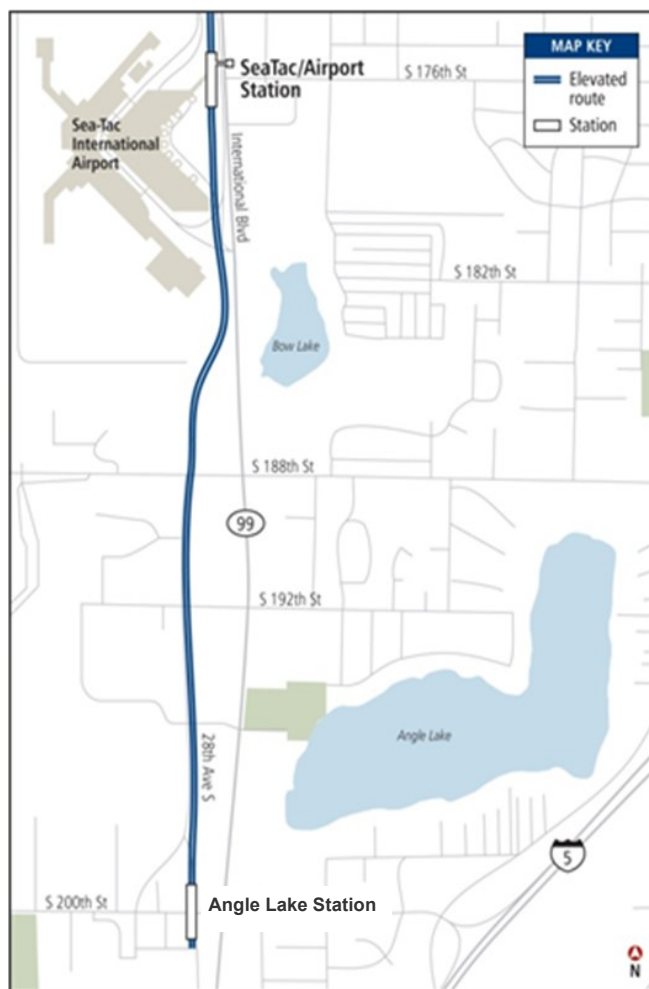
Preparing headwall for shotcrete.

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Link Light Rail S. 200th Link Extension

Scope

Limits:	South 200th Link Extension consists of 1.6-mile extension of light rail from the SeaTac/Airport Station to South 200th Street.
Alignment:	The extension continues in an aerial configuration heading south of the existing SeaTac/Airport Station, east of Air Cargo Road across South 188th Street, and continuing south along the east side of 28th Avenue South to the elevated Angle Lake Station located at South 200th Street. A passenger pickup/drop-off area, bus transfer, plaza, and a minimum 700-space structured park and ride facility will be located at Angle Lake Station. Up to 400 additional spaces may be developed for interim parking while Angle Lake Station is the interim southern terminus of the Link system. Guideway/Station and Parking Garage/Plaza are being delivered under a Design Build contract.
Station:	Angle Lake Station is located at South 200th Street.
Systems:	Signals, track electrification, and SCADA communications
Budget:	\$383.2 Million
Schedule:	Revenue Service began on September 24, 2016



Map of S. 200th Link Extension.

Key Project Activities

- *Design Build Guideway and Station (S440):* The project team continued working with the Contractor and Operations to identify remaining work to achieve Acceptance on the contract.
- *Design Build Parking Garage (S445):* Substantial Completion was issued December 21, 2016 and a claim for elevator is under review.
- *Military Road/South 200th (S446):* Construction work managed by WSDOT continues.
- *Roadway Improvements (S447):* Substantial Completion was issued December 19, 2016 and a claim for DSC, 3rd Party and new Post Revenue work is under review.
- *Project-wide:* Finalize Plaza licensing agreement with City of SeaTac and advertise Retail Space; working with PEPPD to determine ¾ acre property qualifies for TOD or surplus.

Closely Monitored Issues

- *S440:* Completion of Training, O&M Manuals – corrective actions need to be completed.
- *S440, S445, S447:* Continue evaluation/negotiation of Contractor request for change.

Project Cost Summary

The South 200th Link Extension cost is summarized into two cost tables. The current Adopted Budget column reflects the 2016 Adopted Budget. 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.

Cost Summary by Phase

WBS Phase Elements	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Est. Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$16.1	\$16.8	\$15.5	\$15.5	\$16.7	\$0.1
Preliminary Engineering	\$5.9	\$5.7	\$5.7	\$5.7	\$5.7	\$0.0
Final Design	\$20.0	\$9.9	\$8.7	\$8.7	\$8.8	\$1.1
Construction Services	\$15.1	\$17.3	\$16.9	\$16.6	\$17.2	\$0.1
3rd Party Agreements	\$6.9	\$7.1	\$5.7	\$3.8	\$5.2	\$1.9
Construction	\$275.7	\$282.9	\$235.7	\$231.1	\$248.7	\$34.2
Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$43.5	\$43.5	\$38.2	\$38.0	\$38.9	\$4.7
Capital Total	\$383.2	\$383.2	\$326.4	\$319.4	\$341.2	\$42.0
Finance Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Project Total	\$383.2	\$383.2	\$326.4	\$319.4	\$341.2	\$42.0

The overall project Estimated Final Cost (EFC) for this period reflects \$341M, a savings projection of \$42M. . This period incurred cost increased by approximately \$2M, of this \$0.2M was for construction services, \$1.8M for various construction phase activities, and the remaining expenditures of \$0.1M were related to administrative charges.

The EFC grouped by SCC is also reflecting \$341M, a savings projection of \$42M. The work remaining can be achieved under the adopted budget.

Cost Summary by SCC

Project Elements by SCC	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Est. Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track Elements	\$144.8	\$133.0	\$98.9	\$99.4	\$110.7	\$22.3
20 Stations	\$46.4	\$51.3	\$39.6	\$39.5	\$40.4	\$10.9
30 Support Facilities: Yards, Shops	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$34.6	\$55.3	\$56.4	\$51.9	\$57.3	-\$2.0
50 Systems	\$30.8	\$19.9	\$19.9	\$19.3	\$20.0	-\$0.1
Construction Subtotal	\$256.6	\$259.6	\$214.7	\$210.2	\$228.4	\$31.1
60 Row, Land, Existing Improve-	\$43.5	\$43.5	\$38.2	\$38.0	\$38.9	\$4.7
70 Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
80 Professional Services	\$64.1	\$72.1	\$73.5	\$71.3	\$67.8	\$4.3
90 Unallocated Contingency	\$19.0	\$8.0	\$0.0	\$0.0	\$6.2	\$1.8
Project Total (SCC 10-90)	\$383.2	\$383.2	\$326.4	\$319.4	\$341.2	\$42.0
100 Finance Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Project Total (SCC 10-90)	\$383.2	\$383.2	\$326.4	\$319.4	\$341.2	\$42.0

Cost Contingency Management

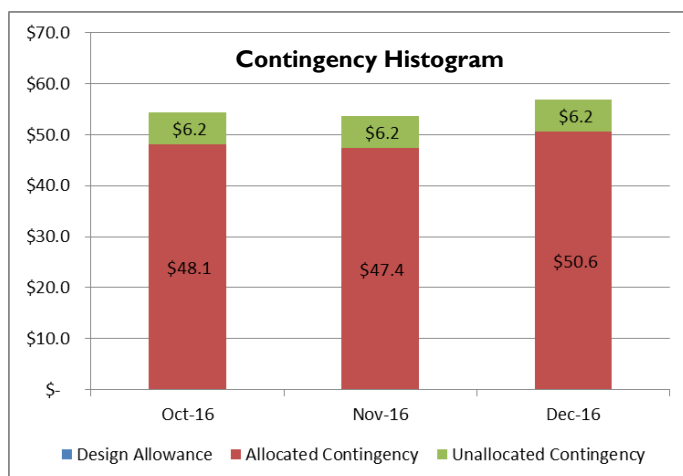
The overall project contingency balance as of this period is \$56.8M.

Design Allowance (DA): N/A

Allocated Contingency (AC): This period the AC shows a current balance of \$50.6M, an increase of \$3.2M from the previous period. This change is mostly due to a commitment correction in ROW of \$4.6M which increased AC but offset by a decrease in AC of \$1.7M from the construction phase for change orders [S440 construction contract = \$0.7M, construction services contract = \$0.7M] and two SCADA commitments of \$0.4M.

Unallocated Contingency (UAC): This period the UAC balance is \$6.2M, no change from previous period.

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$26.7	7.0%	\$ -	0.0%
Allocated Contingency	\$29.8	8.0%	\$50.6	231.7%
Unallocated Contingency	\$19.0	5.0%	\$ 6.2	28.4%
Total	\$75.5	20.0%	\$56.8	260.1%



Project Schedule

Revenue Service commenced on September 24, 2016. The S440 contractor continues to work on closeout and punchlist items. S445 DB Parking Garage Design/ Builder has opened to the public and continues to work on closeout documentation, and punchlist items; Substantial Completion was issued in December 2016.

S440 Contract—Design -Build (Guideway and Station)

Close-out Progress

Revenue Service began on September 24, 2016. The S440 Contractor continues to work on closeout and punchlist items.

Key Activities

Current Period

- Continued post revenue work arounds.
- Continued punch list work for Guideway Substructure, Site Restoration, Landscaping, and Communication Systems.
- Continued safety certification.
- Continue troubleshooting cistern at Station platform.
- Continue change order work and address contract close-out items.
- Continue coordination meetings for Systems Task Force, Commissioning, Change Management, and Punch List.

Next Period

- Continue punch list and work around work.
- Continue troubleshooting cistern and relocate cameras at Station plaza and platform.

Closely Monitored Issues

- Need to complete Training and O&M Manuals, Safety Certification, and as-built to transfer maintenance responsibilities to Operations and Facilities.

Cost Summary

Present Financial Status	Amount
S440 Contractor—PCL Civil Contractors, Inc.	
Original Contract Value	\$169,000,000
Change Order Value	\$5,359,278
Current Contract Value	\$174,359,278
Total Actual Cost (Amount Billed)	\$172,726,102
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	\$13,520,000
Contingency Drawdown	\$5,359,278
Contingency Index*	2.5



Angle Lake Station on snow day.

S445 Contract—Design -Build Parking Garage

Close-out Progress

The S445 parking garage is now open to the public. Substantial Completion issued on December 21, 2016.

Key Activities

Current Period

- Obtained Substantial Completion for Milestone #2 (complete commissioning of elevator systems).
- Completed TOD site restoration activities, seeding, fencing and gates.
- Completed L&I inspection for Elevator #2.
- Completed elevator training and field orientation with ST staff.

Next Period

- Continue NCR work and verification.
- Continue addressing preliminary punch-list items.

Closely Monitored Issues

- In early December, the Contractor submitted the Notice of Intent to Claim (for additional time and cost associated with elevator procurement and installation). RE received the claim package on December 23 from Contractor which is being reviewed by Sound Transit.

Cost Summary

Present Financial Status	Amount
S445 Contractor—Harbor Pacific/Graham	
Original Contract Value	\$29,978,000
Change Order Value	\$2,518,772
Current Contract Value	\$32,496,772
Total Actual Cost (Amount Billed)	\$32,312,624
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	\$2,798,240
Contingency Drawdown	\$2,518,772
Contingency Index*	1.12



Installed overhead garage sign.

S447 Contract – Station Area Roadway Improvements and Surface Parking

Current Progress

S447 Contractor continues punchlist work. Substantial Completion issued December 19, 2016.

Key Activities

Current Period

- Completed pedestrian signal system at Des Moines Creek.
- Continued punch list work ongoing.
- Addressing NCR for surface parking lot.
- Continued weekly closeout meeting.
- Issued Substantial Completion this period.
- Reviewing claim regarding DSC, City of SeaTac and post revenue work.

Next Period

- Finalize punchlist work and contract closeout work.
- Demobilize from site.

Closely Monitored Issues

- Notice of Intent to Claim is close to being settled.

Cost Summary

Present Financial Status	Amount
S447 Contractor – Johansen Excavating, Inc	
Original Contract Value	\$8,426,400
Change Order Value	\$2,642,640
Current Contract Value	\$11,069,040
Total Actual Cost (Amount Billed)	\$11,068,476
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	\$2,642,640
Contingency Drawdown	\$2,642,640
Contingency Index*	1



Activation of pedestrian signal.

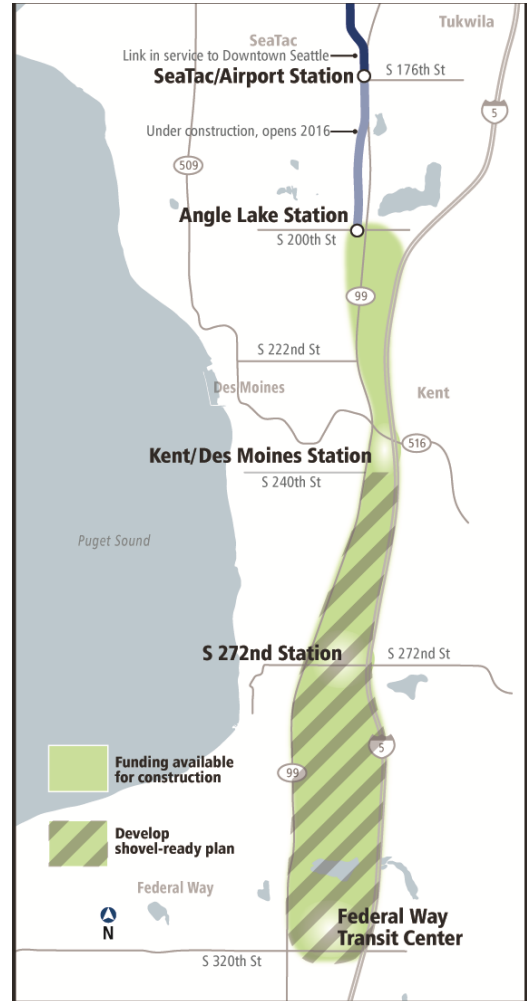
Link Light Rail Federal Way Extension

Scope

The Federal Way Link Extension includes alternatives analysis, environmental work and conceptual engineering for an extension of Link Light Rail from S. 200th St. in SeaTac to the Federal Way Transit Center. Preliminary engineering will be performed for the segment from S. 200th St. to Kent/Des Moines (in the vicinity of Highline College) and to the Federal Way Transit Center.

Key Project Activities/Issues

- Completed Phase 1 work (Alternatives Analysis) in Sept. 2013.
- DEIS alternatives identified by the Board in Sept. 2013.
- Executed Phase 2 contract amendment with HDR for Conceptual Engineering and Draft EIS work in October 2013.
- Published Draft EIS on April 2015. Comment period ended May 26, 2015.
- Board identified a Preferred Alternative and approved Phase 3 contract amendment on July 23, 2015.
- Executed Phase 3 contract amendment with HDR for Final EIS and Preliminary Engineering on July 24, 2015.
- ST Board approved contract amendment in February 2016 to extend Preliminary Engineering from Kent/Des Moines to the Federal Way Transit Center.
- Final EIS published in Nov 2016. Board selection of project to be built anticipated in early 2017.



Map of Federal Way Link Extension.

Project Cost Summary

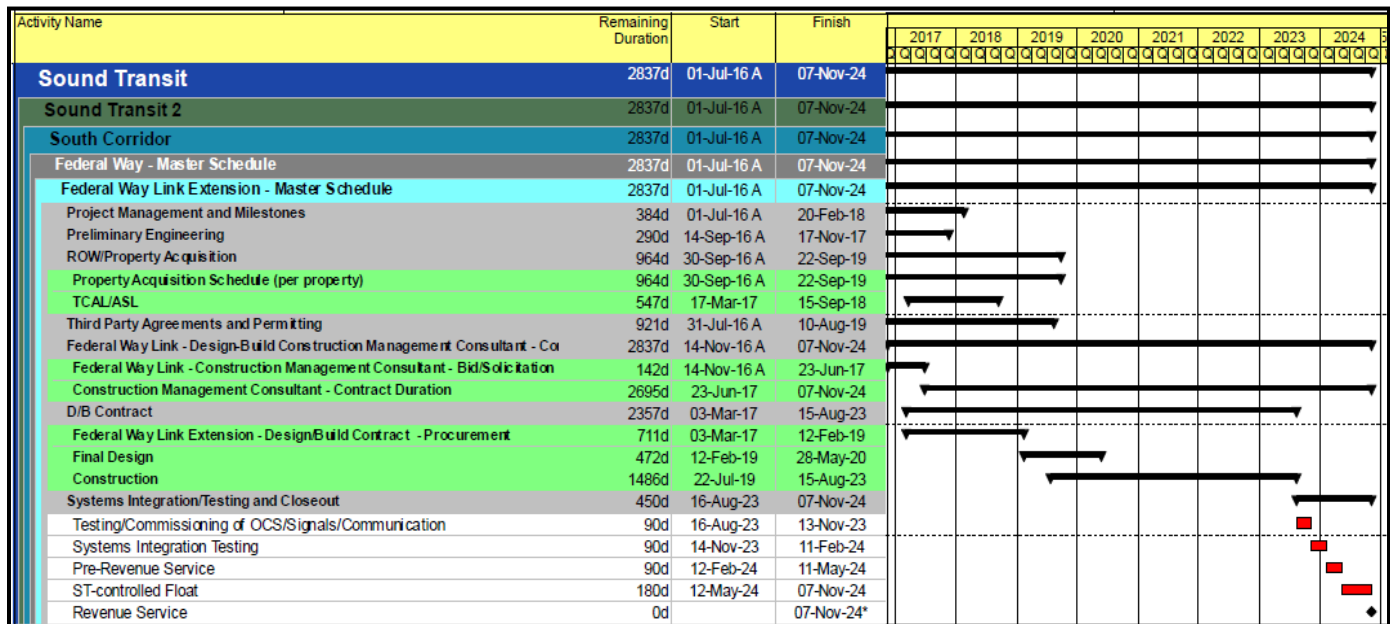
In July 2015, the Sound Transit Board identified the preferred alternative and station locations and approved the Federal Way Link Extension Phase 3 (PE and Final EIS) contract amendment.

The Federal Way Link Extension is currently funded through the completion of preliminary engineering (PE) and environmental documentation, with the exception of the segment from Kent/Des Moines to Federal Way, which is only funded through environmental documentation. Table (below) figures in millions.

Phase	Adopted Budget	Commitment to Date	Incurred to Date	Forecasts and Trends	Estimated Final Cost (EFC)	Budget Versus EFC
Administration	\$9.4	\$5.5	\$5.6	\$3.9	\$9.4	\$0.0
Preliminary Engineering	\$33.3	\$30.8	\$28.3	\$2.6	\$33.3	\$0.0
Third Parties	\$2.4	\$1.2	\$0.8	\$1.2	\$2.4	\$0.0
Right of Way	\$3.6	\$1.1	\$0.8	\$2.5	\$3.6	\$0.0
Total	\$48.8	\$38.6	\$35.4	\$10.2	\$48.8	\$0.0

Project Schedule

Below is the latest Federal Way Link schedule.



Sound Transit Board Actions

Board motions and resolutions directly related to Federal Way Link Extension is summarized in the table below.

Motion Number	Description	Date
	None to report.	

Community Outreach

- Continued hosting neighborhood briefings with residents in various neighborhoods in Des Moines.
- Continued following-up on inquiries regarding the Final EIS.
- Continued following-up with individuals from prior neighborhood briefings to answer additional questions.

Environmental

- None to report.

Phase 3 Preliminary Engineering (PE)

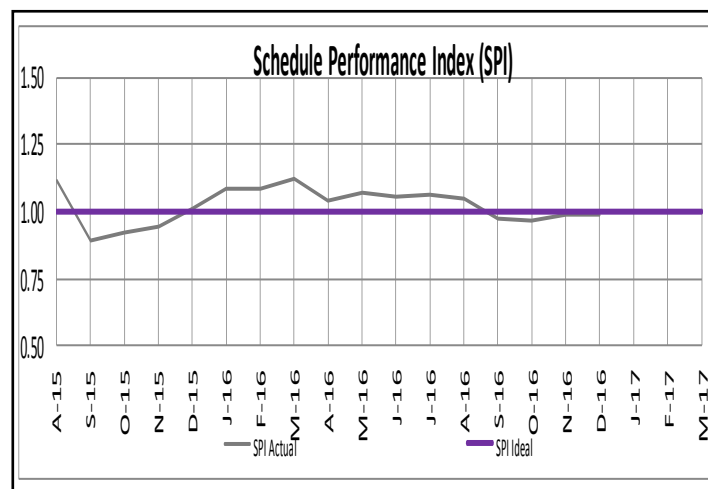
In July 2015, Sound Transit executed an amendment to the professional services agreement with HDR Engineering, Inc. for Phase 3 professional services, including completion of a Final Environmental Impact Statement (FEIS) using the preferred alternative and the other alternatives in the Draft EIS, preliminary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

Phase 3 Key Activities

- Provided support for activities leading to Board selection of the project to be built and development of draft FTA and FHWA RODs.
- Ongoing resolution of Pre-Final PE submittal comments by third parties and initiation of development of project requirements associated with RFP development for design-build contract.
- Continued coordination with potentially affected property owners including neighborhood briefings and one-on-one meetings.
- Completed term sheets with affected jurisdictions documenting concurrence on project improvements, impacts analysis and mitigation and initiation of future agreements.
- Continued discussion with FTA regarding New Starts requirements for Entry to Engineering.

Phase 3 Schedule Performance

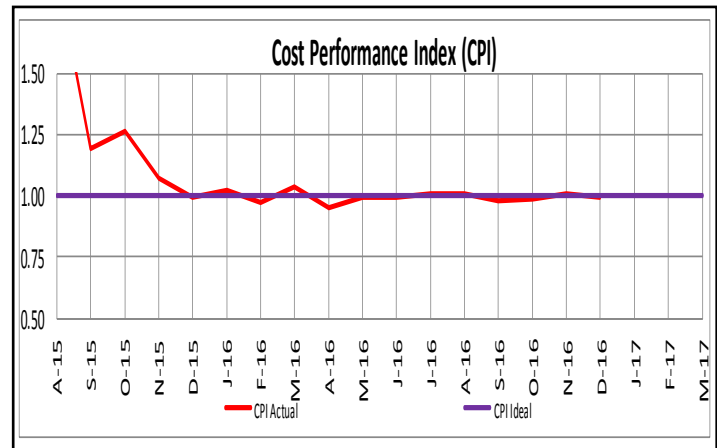
The cumulative Schedule Performance Index (SPI) is 0.99 through December 2016, indicating the overall amount of work accomplished is nearly on planned. Review of the consultants draft Phase 3 schedule indicates that the EIS comments response leading to publishing the ROD.



Phase 3 Cost Performance

\$27.8M of the total contract amount has been spent through December 2016.

Phase 3 expenditures totaled \$15.9M, approximately 81% of the Phase 3 contract total. The Phase 3 percent complete reported at 81%, with an earned value of \$15.9M. The cumulative Cost Performance Index (CPI) is 1.00, indicating costs are on track with work accomplished. Based on the current trend, the Phase 3 cost is expected to be on budget.



Phase 3 Performance	Previous Period	Current Period	Cumulative To Date
Amount Invoiced	\$15,309,895	\$644,554	\$15,954,449
% Spent	84%	-3%	81%
Earned Value	\$15,445,710	\$443,900	\$15,889,610
% Complete	84%	-3%	81%
SPI	0.99	1.11	0.99
CPI	1.01	0.69	1.00

Link Light Rail Tacoma Link Extension

Scope

Limits: City of Tacoma

Alignment: The 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.

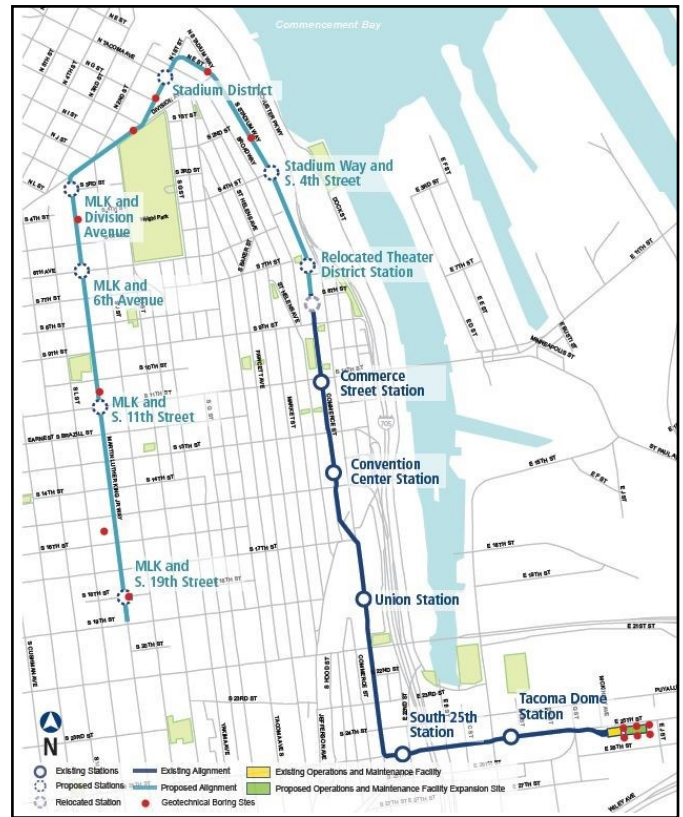
Stations: Relocated Theater District Station, Stadium Way & 4th St, Stadium District, MLK Jr. Way and Division, MLK Jr. Way and 6TH Ave, MLK Jr. Way and S. 11th St., and MLK Jr. Way and S. 19th St.

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

Budget: \$33.02 Million Phase Gate 4 budget; excludes Construction (Year of Expenditure Dollars)

Phase: Final Design

Const. Starts: 2018



Map of Tacoma Link Extension.

Key Project Activities

Final Design

- Executed the contract for the Final Design Consultant in 3rd QTR 2016.

Pre-Construction Services

- Continued procuring CMC contract.

Third Parties

- Advancing formal agreements with City of Tacoma.

Right of Way

- Continued early right of way property acquisition activities as they relate to the expansion of the Operations and Maintenance.

Vehicles

- Finalized commercial and technical provisions for the RFP.

Project Cost Summary

The Tacoma Link 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

WBS Phase Elements	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$10.6	\$2.9	\$3.0	\$10.6	\$0.0
Preliminary Engineering	\$5.9	\$5.6	\$5.6	\$5.9	\$0.0
Final Design	\$10.8	\$7.7	\$1.5	\$10.8	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.5	\$0.0	\$0.0	\$0.5	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Vehicles	\$2.0	\$1.9	\$0.2	\$2.0	\$0.0
ROW	\$3.2	\$0.2	\$0.1	\$3.2	\$0.0
Total	\$33.0	\$18.3	\$10.4	\$33.0	\$0.0

Cost Summary by SCC

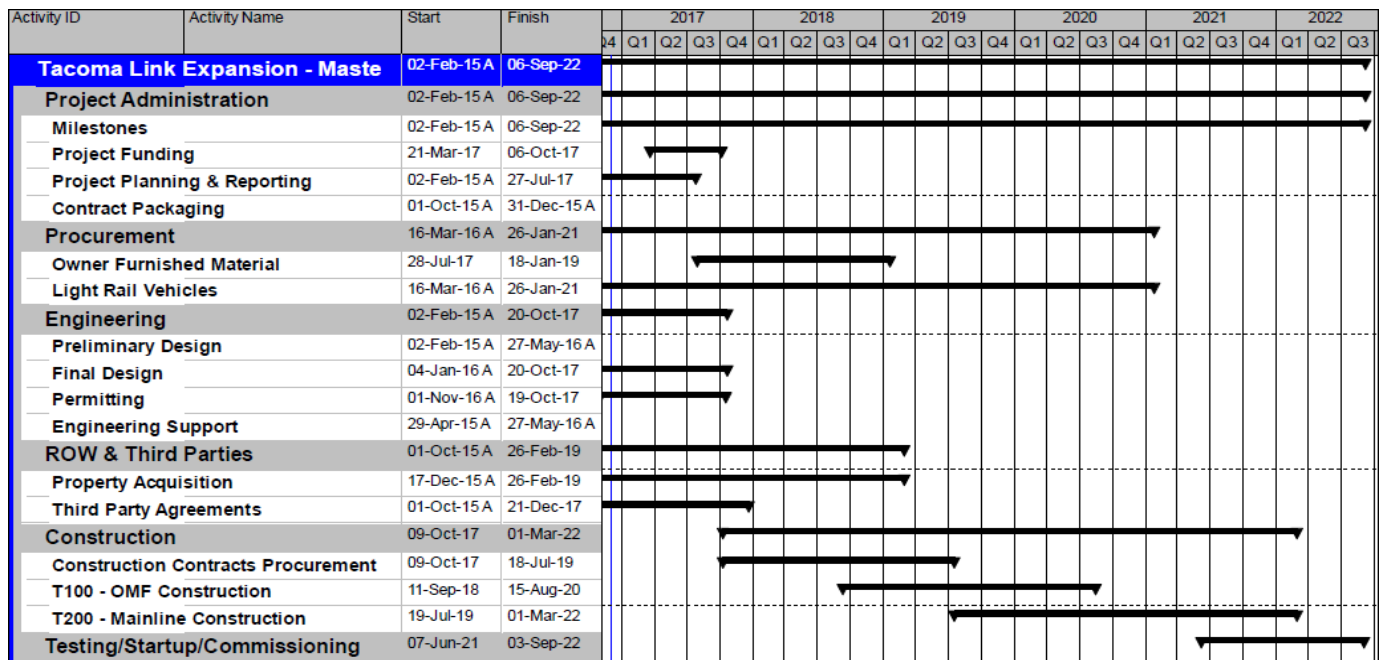
Project Elements by SCC	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$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	\$3.2	\$0.2	\$0.1	\$3.2	\$0.0
70 Vehicles (non-revenue)	\$2.0	\$1.9	\$0.2	\$2.0	\$0.0
80 Professional Services	\$27.8	\$16.2	\$10.1	\$27.8	\$0.0
90 Unallocated Contingency	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total (10 - 90)	\$33.0	\$18.3	\$10.4	\$33.0	\$0.0

Risk Management

The Tacoma Link Risk and Contingency Management Plan (RCMP) will be completed in 2nd QTR 2017. This 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 Tacoma Link Quarterly Risk Review Meeting was held on November 29 and December 19, 2016. Next meeting will be in March 2017.

Project Schedule

Final Design continues toward 60% Design, with the submittals still on track for February 2017 (T200 Mainline Construction) and March 2017 (T100 OMF Construction). HDR has revised their initial schedule submittal based on ST Review comments. ST is continuing to work with the City of Tacoma to finalize the Right of Use, City services agreements and has initiated permit discussions. The condemnation process for the future OMF site is currently in legal review. The project team is continuing to work toward identifying the TCEs along the alignment.



Sound Transit Board Actions

Board motions and resolutions directly related to Tacoma Link Extension is summarized in the table below.

Motion Number	Description	Date
	None to report.	

Community Outreach

- Hosted Open House and a Stakeholder Roundtable for pre-60% design in mid- December.
- Launched online Open House live.

Final Design

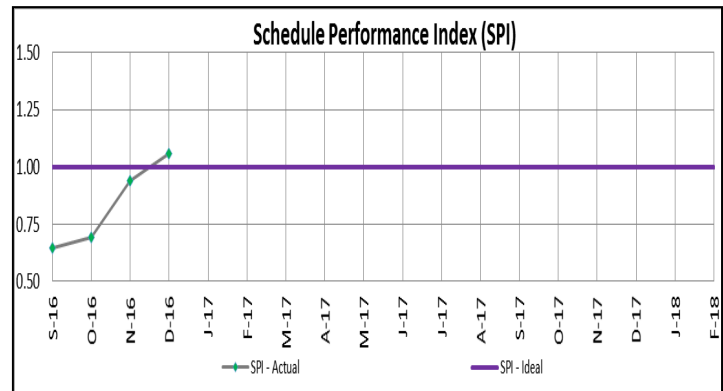
In July 2016 Sound Transit executed a contract with HDR Engineering, Inc. to provide civil and systems final design services for Tacoma Link.

Final Design Key Activities

- Continued evaluating Value Engineering (VE) recommendations.
- Continued design efforts for Utility (development of plans and models of existing utilities); for OMF (space planning, Leed certification process, etc.); and for Systems (OCS pole locations, track coordination, etc.).
- Continued developing curb & roadway improvements, TPSS and platform site designs, track alignment & profiles, station canopy and furnishings concepts.

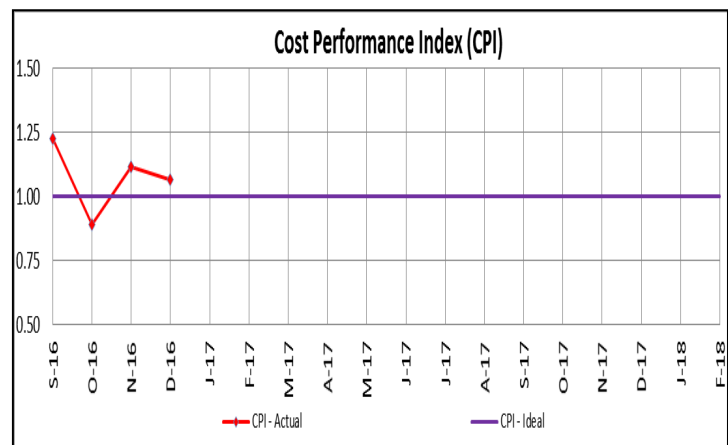
Final Design Schedule Performance

The cumulative Schedule Performance Index (SPI) for the Final Design contract is 1.06 through December, indicating that the project Earned Value is slightly higher than planned. Initial schedule delays have been corrected.



Final Design Cost Performance

Contract expenditures through December totaled \$1.46M, approximately 19% of the Final Design contract total. The Final Design contract percent complete reported at the end of December is 15%, with an earned value of \$1.56M. The cumulative Cost Performance Index (CPI) through December is 1.07; indicating the cost efficiency for work completed.



Phase 3 Performance	Previous period	Current Period	Cumulative To-Date
Amount Invoiced	\$849,597	\$612,578	\$1,461,175
% Spent	11%	8%	19%
Earned Value	\$949,561	\$612,860	\$1,562,421
% Complete	13%	7%	15%
SPI	0.94	1.30	1.06
CPI	1.12	1.00	1.07

Link Light Rail

Link Operations and Maintenance Facility: East

Project Summary

Scope: The Link Operations and Maintenance Facility: East (OMFE) 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.

Budget: \$449.2 Million (Baselined July 2016)

Schedule: Project completion December 2020

Phase: Proceed to Construction

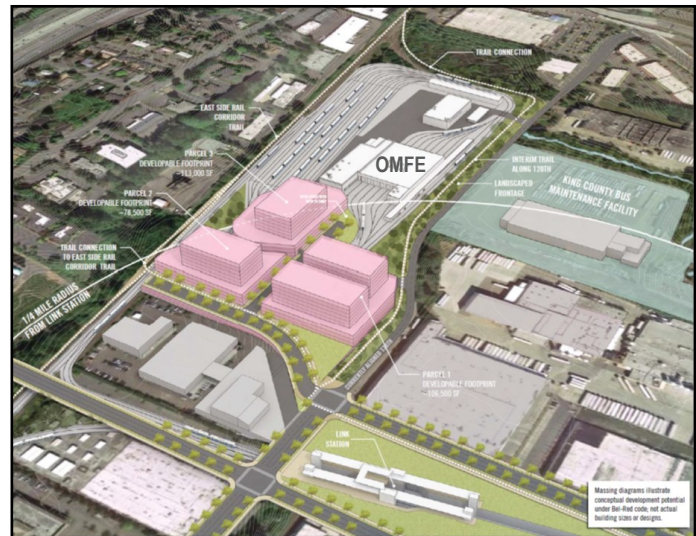


Illustration of OMFE site

Key Activities

- Request for Proposal (RFP) submittal date revised to mid- January 2017. Evaluation team continued responding to open RFIs from proposers.
- Executed TOD advisor contract for support during evaluation and concept validation phase of RFP .
- DBPM procurement continues, anticipate ST Board action to award contract in February 2017.
- Procurement of TOD advisor support during Concept Validation period continues; evaluations and selection scheduled for first week in December.
- PSE and Sound Transit signed the Letter of Understanding.
- Discussed with City of Bellevue MOU elements and Critical Areas Permit application. However the City rejected the application for Critical Areas Permit due to lack of property ownership.
- Provided tour of project to USDOT CFO.

Closely Monitored Issues

- Property acquisition activities continue to be challenging. Formulating meetings and offers for property acquisition.

Project Cost Summary

In July 2016, the Sound Transit Board authorized the project to be baselined (Gate 5) and advance to construction (Gate 6). This increased the Adopted Capital Budget for the OMFE from \$133.6M to \$449.2M. The OMFE 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.

Cost Summary by Phase

WBS Phase Elements	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$17.6	\$17.6	\$2.3	\$2.3	\$17.6	\$0.0
Preliminary Engineering	\$9.5	\$9.5	\$8.9	\$8.5	\$9.5	\$0.0
Final Design	\$0.4	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
Construction Services	\$19.3	\$19.3	\$0.0	\$0.0	\$19.3	\$0.0
3rd Party Agreements	\$3.1	\$3.1	\$0.0	\$0.0	\$3.1	\$0.0
Construction	\$264.8	\$264.8	\$0.0	\$0.0	\$264.8	\$0.0
ROW	\$134.5	\$134.5	\$24.8	\$23.6	\$134.5	\$0.0
Total	\$449.2	\$449.2	\$36.0	\$34.4	\$449.2	\$0.0

The Estimated Final Cost (EFC) for this reporting period is \$449.2M, which is equal to the current project budget. This period incurred cost increased by approximately \$0.2M, of this \$0.12M was Administration, PE was \$0.02M and ROW was \$0.1M expenditures.

The Estimated Final Cost (EFC) reflects the current adopted budget values due to project baselined this period. ROW and Professional Services categories are active at this stage of the project.

Cost Summary by SCC

Project Elements by Phase	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track Elements	\$37.9	\$37.9	\$0.0	\$0.0	\$37.9	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities: Yards, Shops	\$104.8	\$104.8	\$0.0	\$0.0	\$104.8	\$0.0
40 Sitework & Special Conditions	\$43.6	\$43.6	\$0.0	\$0.0	\$43.6	\$0.0
50 Systems	\$43.0	\$43.0	\$0.0	\$0.0	\$43.0	\$0.0
Construction Subtotal (SCC 10-50)	\$229.3	\$229.3	\$0.0	\$0.0	\$229.3	\$0.0
60 Row, Land, Improvements	\$134.5	\$134.5	\$24.8	\$23.6	\$134.5	\$0.0
70 Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
80 Professional Services	\$71.6	\$71.6	\$11.2	\$10.7	\$71.6	\$0.0
90 Unallocated Contingency	\$13.8	\$13.8	\$0.0	\$0.0	\$13.8	\$0.0
Project Total (SCC 10-90)	\$449.2	\$449.2	\$36.0	\$34.4	\$449.2	\$0.0

Cost Contingency Management

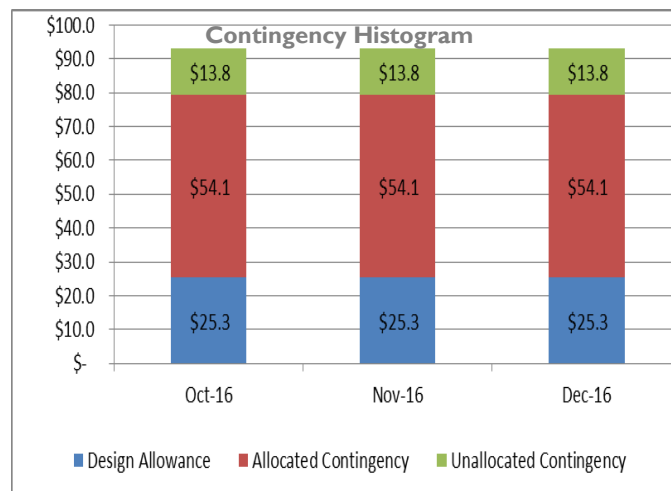
Compared to the Baseline amount of \$93.2M, the current Total Contingency remains the same at \$93.2M.

Design Allowance (DA) – The baseline DA of \$25.3M reflects no changes this period.

Allocated Contingency (AC) – Compared to the baseline amount of \$54.1M, AC reflects no changes this period.

Unallocated Contingency (UAC) – The baseline UAC amount of \$13.8M reflects no changes this period.

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ 25.3	5.6%	\$ 25.3	6.1%
Allocated Contingency	\$ 54.1	12.0%	\$ 54.1	13.0%
Unallocated Contingency	\$ 13.8	3.1%	\$ 13.8	3.3%
Total	\$ 93.2	20.7%	\$ 93.2	22.4%



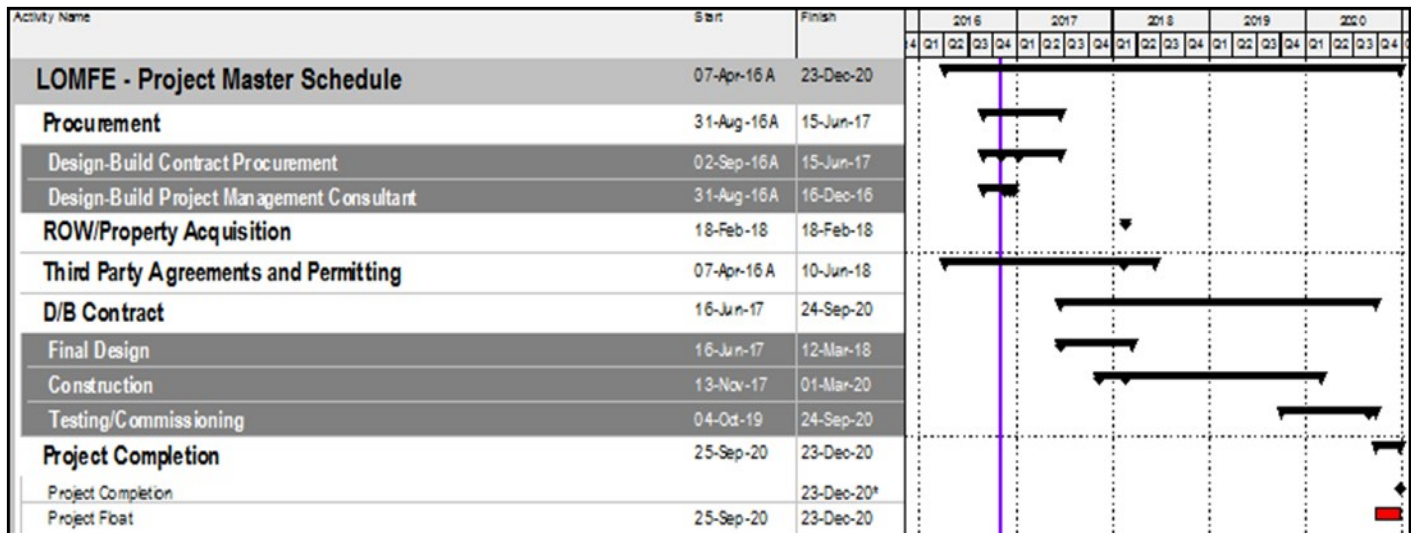
Risk Management

The Project has a Risk Register and is actively managing risks. The following are the top five risks:

- Volatility in property values around the Bel-Red area.
- Third Party requesting additional site improvements not included in the agreements.
- Authorities Having Jurisdiction not fully communicating all of their requirements to Sound Transit.
- Interface point of E335/OMFE and ST3 leads to change in track, systems, signals and utilities.
- Third Party not satisfied with progress on MDP causing reconsideration for use of a development agreement process and late permits.

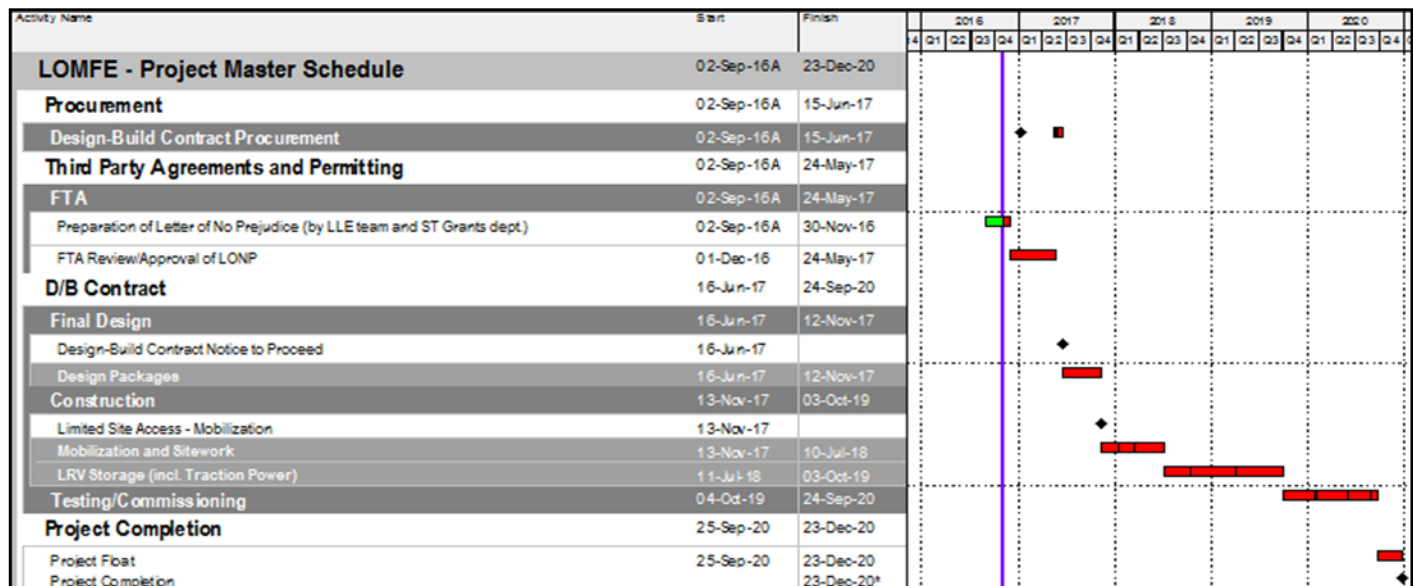
Project Schedule

The project schedule is presented below as baselined this period. The RFP for the Design-Build contractor was issued in early September. Property acquisitions are on schedule to be completed in late 2017 or early 2018, in time for construction to start as planned.



Critical Path Analysis

The project critical path this period is through the Letter of No Prejudice to allow work to progress ahead of the Full Funding Grant Agreement for Lynnwood Link Extension. The current conceptual construction plan shows a critical path through the foundation design and subsequently the construction of the LRV storage yard.



Link Light Rail

Link Operations and Maintenance Facility: East



Sound Transit Board Actions

Board motions and resolutions directly related to OMFE is summarized in the table below.

Motion Number	Description	Date
	<i>None to report.</i>	

Environmental

- None to report.

Community Outreach

- None to report.

Phase 2 Preliminary Engineering and FEIS

Sound Transit executed a professional services agreement with Huitt-Zollars, Inc. (HZ) for civil engineering and architectural design services and issued NTP for Phase 2, Preliminary Engineering and FEIS for the Link Operations and Maintenance Facility: East (OMFE) in September 2014.

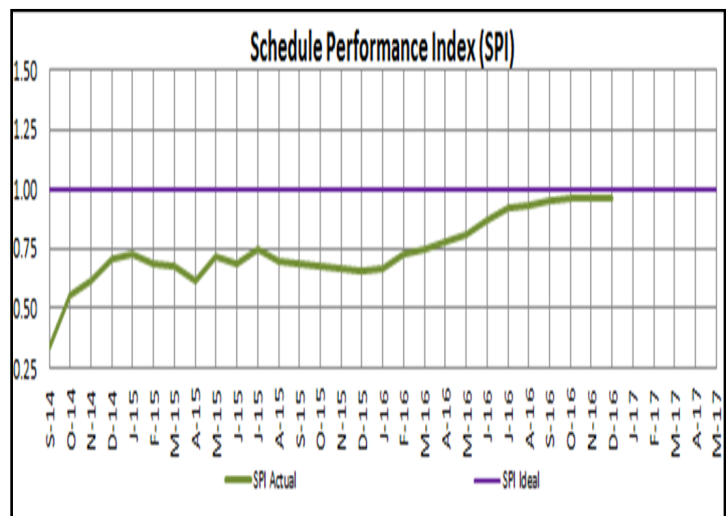
Phase 2 Key Activities

- Continued drafting agreement with King County regarding mainline sewer replacement.
- Final Mitigation Screening Memo and In Lieu Fee Use Plan; submitted to ST as an appendix to the CAR. Finalized Critical Areas Report, JARPA application, and exhibits; submitted to ST for submittal to jurisdictions.
- HZ supporting addenda and RFI issuance during procurement.
- Continued issuing OMF East design build RFP addenda and clarifications on a weekly basis.
- Finalized responses to all Alternative Technical Concepts submitted by the proposers
- Received and began review of Pre-Proposal Submittal – for the OMF East design build contract.
- Finalizing agreements with King County and PSE.
- Coordinated permit support services payment concurrence with the City of Bellevue.

Phase 2 Schedule Performance

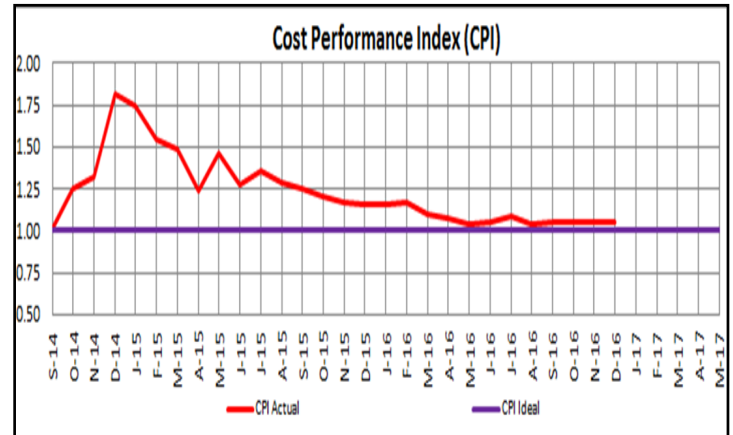
The cumulative Schedule Performance Index (SPI) trends at 0.96 through December 2016, which means that cumulative work accomplished is slightly less than work planned.

Change Order 008 incorporated Phase 2A of the project in February 2016. The remaining Phase 2 scope has been re-negotiated to reflect the recent Design Build Project Delivery decision. The consultant has been directed to focus efforts on delivering Design Build bridging documents to help inform the procurement of the final design build team starting February 2016 as Phase 2A.



Phase 2 Cost Performance

\$4.9M of the total Phase 2 contract amount, approximately 92%, was spent through December 2016. The Phase 2 percent complete is 96%, with an earned value of \$5.1M. The cumulative Cost Performance Index (CPI) is 1.05, meaning that expenditures are slightly less than the earned value.



Phase 2 Performance	Previous Period	Current Period	Cumulative To Date
Amount Invoiced	\$4,898,372	\$13,602	\$4,911,974
% Spent	92%	<1%	92%
Earned Value	\$5,125,352	\$8,012	\$5,133,363
% Complete	96%	<1%	96%
SPI	0.96	0.00	0.96
CPI	1.05	0.59	1.05

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Link Light Rail ST2 LRV Fleet Expansion

Project Summary

Scope: Design, manufacturing, assembly, inspection, testing and delivery of 122 low floor light rail vehicles for service requirements of Northgate, East Link and Lynnwood Link Extensions.

Budget: \$733 Million (Baseline September 2015)

Schedule: Project completion 3rd QTR 2024



Graphic rendering of the new light rail vehicles.

Key Activities

- Vehicle manufacturer, Siemens is currently preparing key submittals ahead of the Engineering Phase.

Project Cost Summary

The ST2 LRV Fleet Expansion project cost is summarized below by two cost categorizations. In the first table, the cost is summarized in accordance with Sound Transit's Work Breakdown Structure (WBS) at the Phase Level. The second table summarizes the project in accordance with the FTA's Standard Cost Category (SCC) format. Both tables below are shown in millions. TIFIA is financing 28% of this project.

To date, approximately \$4.5M has been expended. This period LTK prepared cost estimates, and modified the technical specification for pending change orders with Siemens Industry Inc.

Cost Summary by Phase

Project Phase	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget Vs. EFC
Administration	\$4.7	\$4.7	\$0.2	\$0.2	\$4.7	\$0.0
Construction Services	\$14.1	\$14.1	\$4.8	\$1.7	\$14.1	\$0.0
Vehicles	\$714.2	\$714.2	\$517.6	\$2.6	\$714.2	\$0.0
Total	\$733.0	\$733.0	\$522.6	\$4.5	\$733.0	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Current Adopted Budget	Commitment	Incurred to Date	Estimated Final Cost	Adopted Budget
Construction Subtotal (SCC 10-50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 ROW, Land, Existing Improvements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
70 Vehicles	\$696.7	\$696.7	\$522.4	\$4.3	\$696.7	\$0.0
80 Professional Services	\$4.5	\$4.5	\$0.2	\$0.2	\$4.5	\$0.0
90 Contingency	\$31.7	\$31.7	\$0.0	\$0.0	\$31.7	\$0.0
Capital Total (SCC 10-90)	\$733.0	\$733.0	\$522.6	\$4.5	\$733.0	\$0.0

Project Staffing – Link Light Rail Program – November 2016

Staffing variance reported in the following section is relative to the April 2016 Agency Staffing Plan (Version 6). During this period, the following positions were filled to support the Link capital program:

Position	Project Assignment	Planned Hire Date
Construction Manager	Northgate Link Extension	March 2016*
Deputy Director	Systems Engineering and Integration	2016 Attrition*

**Attrition resulting from internal promotion.*

Recruiting is on-going for the following design, engineering and construction management staff.

Position	Project Assignment	Planned Hire Date
Sr. Project Manager	Northgate Link Extension	2016 Attrition*
Civil Engineer	Right-of-Way	2016 Attrition*
Civil Engineer	East Link Extension	2016 Attrition*
Design Technology Specialist	Civil and Structural Engineering	2016 Attrition*
Design Technology Specialist	Civil and Structural Engineering	2016 Attrition
Electrical Engineer	Systems Engin. and Integration	2016 Attrition*
Principal Architect	Federal Way Link Extension	2016 Attrition*
Corridor Design Manager	Systems	2016 Attrition*
Construction Contracts Claims Sp.	Construction Management	2016 Attrition*
Director	Construction Management	2016 Attrition
Sr. Systems Engineer	LRV Procurement and Testing	2016 Attrition
Deputy Director	Real Property	2016 Attrition
Sr. Real Property Agent	Appraisals	2016 Attrition
Construction Manager	Federal Way Link Extension	March 2016
Deputy Executive Director	Project Management	April 2016

**Attrition resulting from internal promotion.*

Project Staffing – Link Light Rail Program continued

There were 545.9 (97% of plan) consultant and internal staff full time equivalents (FTE) participating in the on-going planning, design and construction of Link light rail extensions in November. Staffing was within 10% of plan for the Northgate, East, and Tacoma Link Extensions. With the start of revenue service, staffing for the University and S. 200th Link Extensions was 55% and 73% of plan, respectively. Staffing for the Lynnwood Link Extension was 112% of plan.

Staffing variance to plan for the month and year to date summary by project follows.

	November 2016 Staffing Plan Variance Summary								2016 Average Monthly Staffing Variance			
	Consultant Staff				Sound Transit Staff				Total (YTD)			
	FTE		Variance		FTE		Variance		FTE		Variance	
Project	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan
University Link Extension	0.0	2.4	2.4		20.3	10.9	-9.4	53%	20.3	43.2	22.9	213%
Northgate Link Extension	73.9	77.4	3.5	105%	47.7	38.4	-9.4	80%	121.6	123.1	1.4	101%
South 200th Extension	9.4	12.7	3.3	135%	17.4	16.3	-1.1	94%	26.8	43.9	17.1	164%
East Link Extension	132.4	138.7	6.3	105%	79.7	67.1	-12.6	84%	212.1	250.1	38.0	118%
Lynnwood Link Extension	115.0	116.7	1.7	101%	40.3	37.7	-2.6	93%	155.3	92.4	-62.9	60%
Tacoma Link Expansion	11.0	15.0	4.0	137%	13.0	9.2	-3.8	71%	24.0	12.6	-11.4	53%
Total	341.7	362.9	21.2	106%	218.5	179.5	-38.9	82%	560.1	564.0	5.1	101%

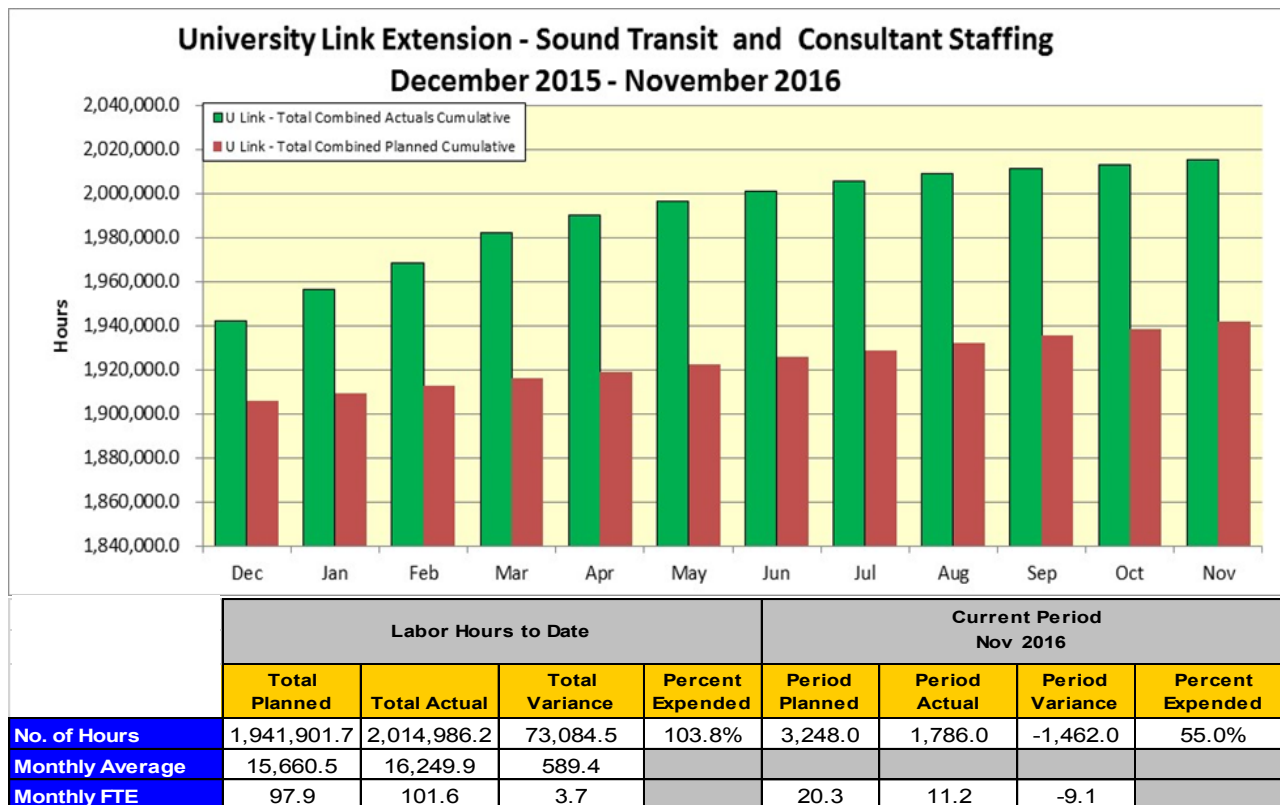
Link Light Rail Staffing Report



University Link Extension Staffing

Total Internal and External Staffing – University Link Extension

Staffing of University Link Extension (11.2 FTE) decreased 15% (2 FTE) from October staffing. On-going activities include wrapping up operational work arounds and resolution of punch list items. Cumulatively, since August 2006, average monthly project staffing is within 4% (4 FTE/mo.) of plan.



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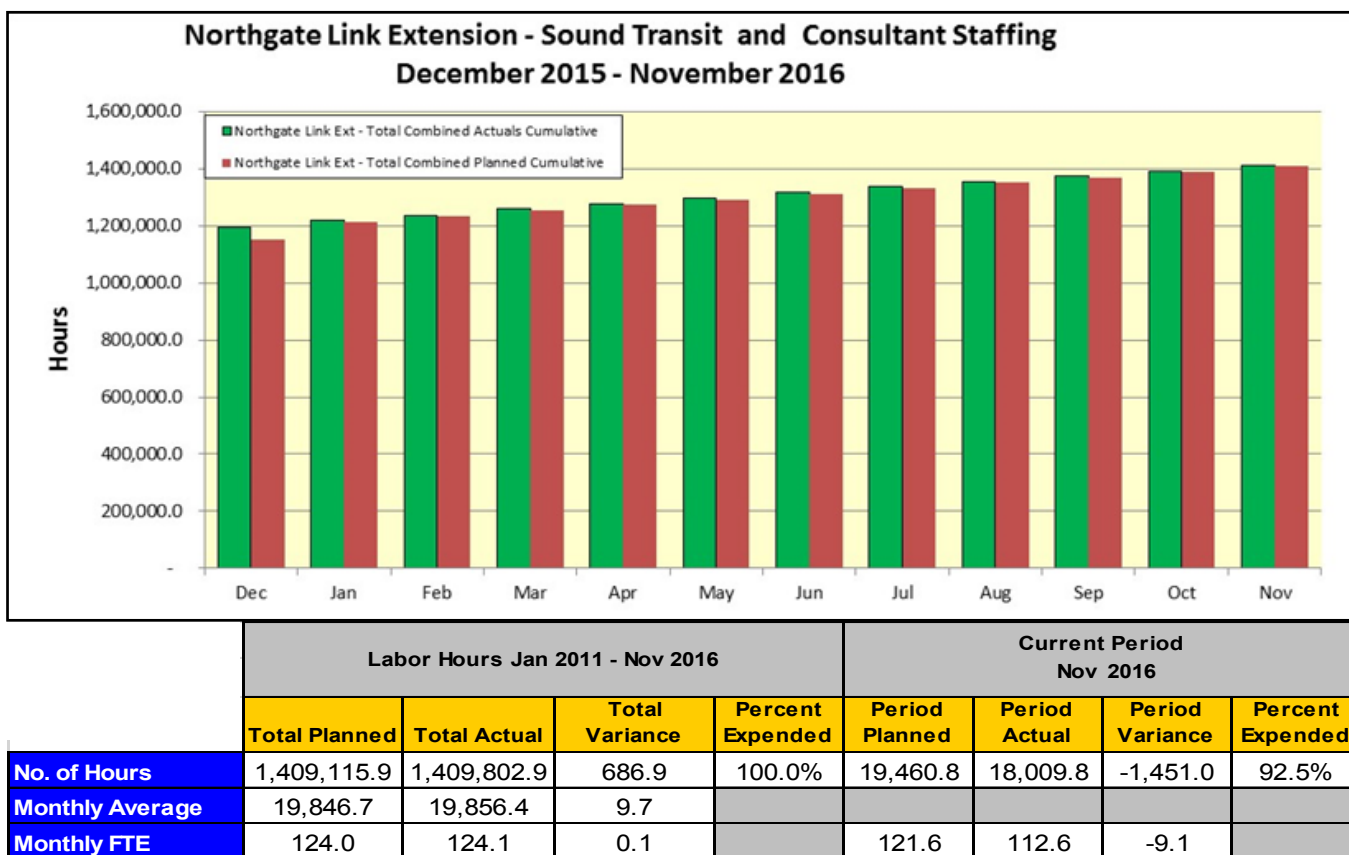
Link Light Rail Staffing Report



Northgate Link Extension Staffing

Total Internal and External Staffing – Northgate Link Extension

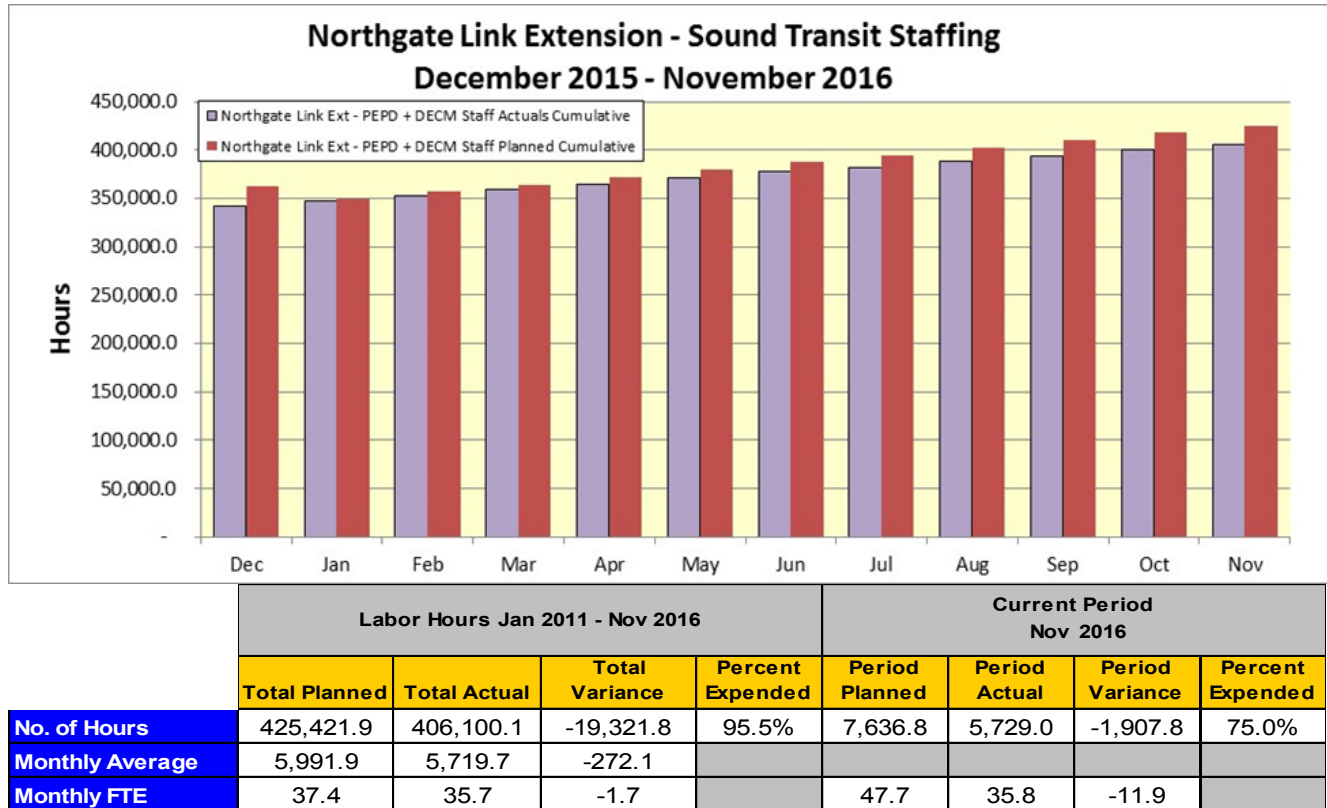
During November 35.8 internal and 76.8 consultant FTE were assigned to the Northgate Link Extension. This is 3% (3.2 FTE) below October staffing and is 93% of plan; average year-to-date staffing of 123.1 FTE/mo. is trending 1% (1.4 FTE/mo.) above plan. Cumulatively since January 2011 average monthly staffing is trending with plan.



Northgate Link Extension Staffing

Internal Resource Commitments to Northgate Link Extension

Internal staffing in November (35.8 FTE) decreased 7% (2.6 FTE) from October and was 25% (11.9 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing (35.7 FTE/mo.) is 4.5% (1.7FTE/mo.) below plan.



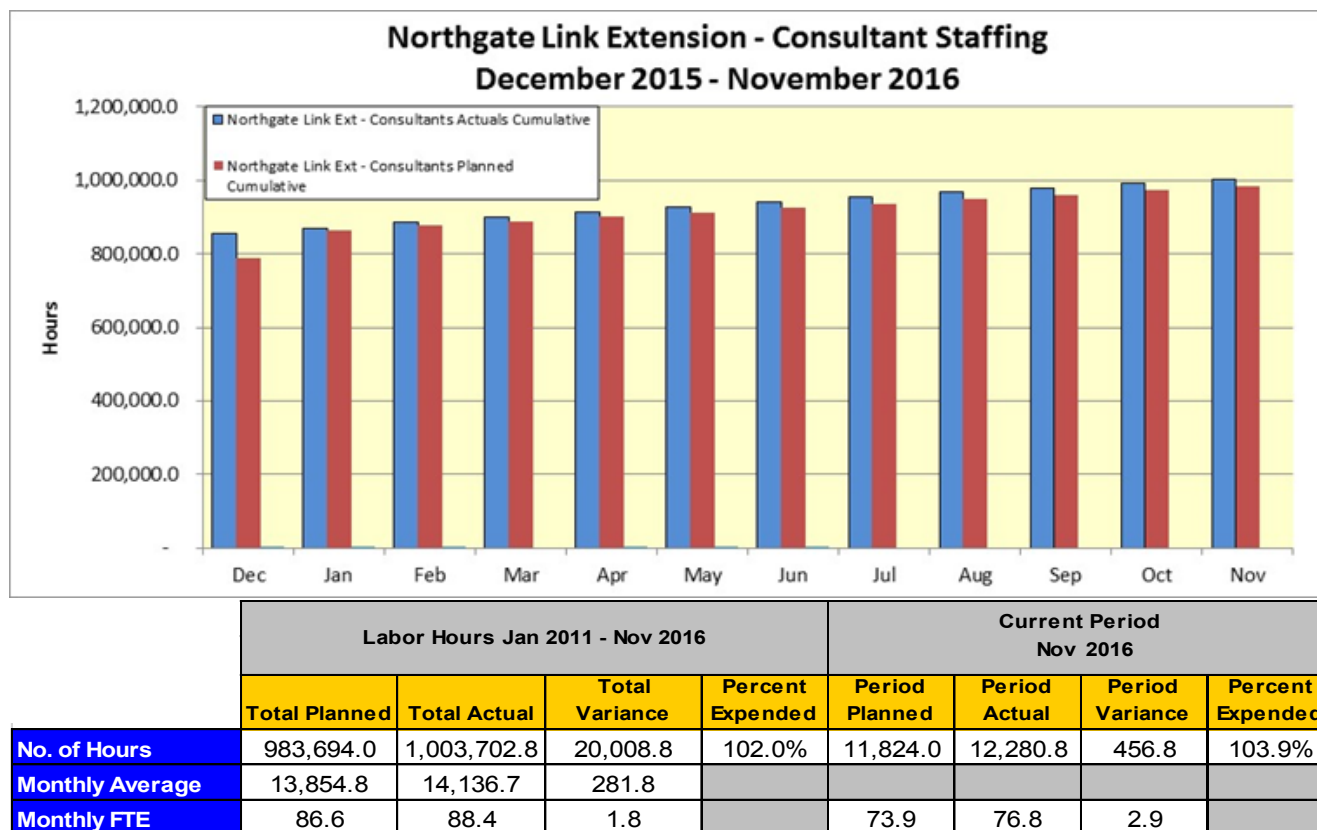
Link Light Rail Staffing Report



Northgate Link Extension Staffing

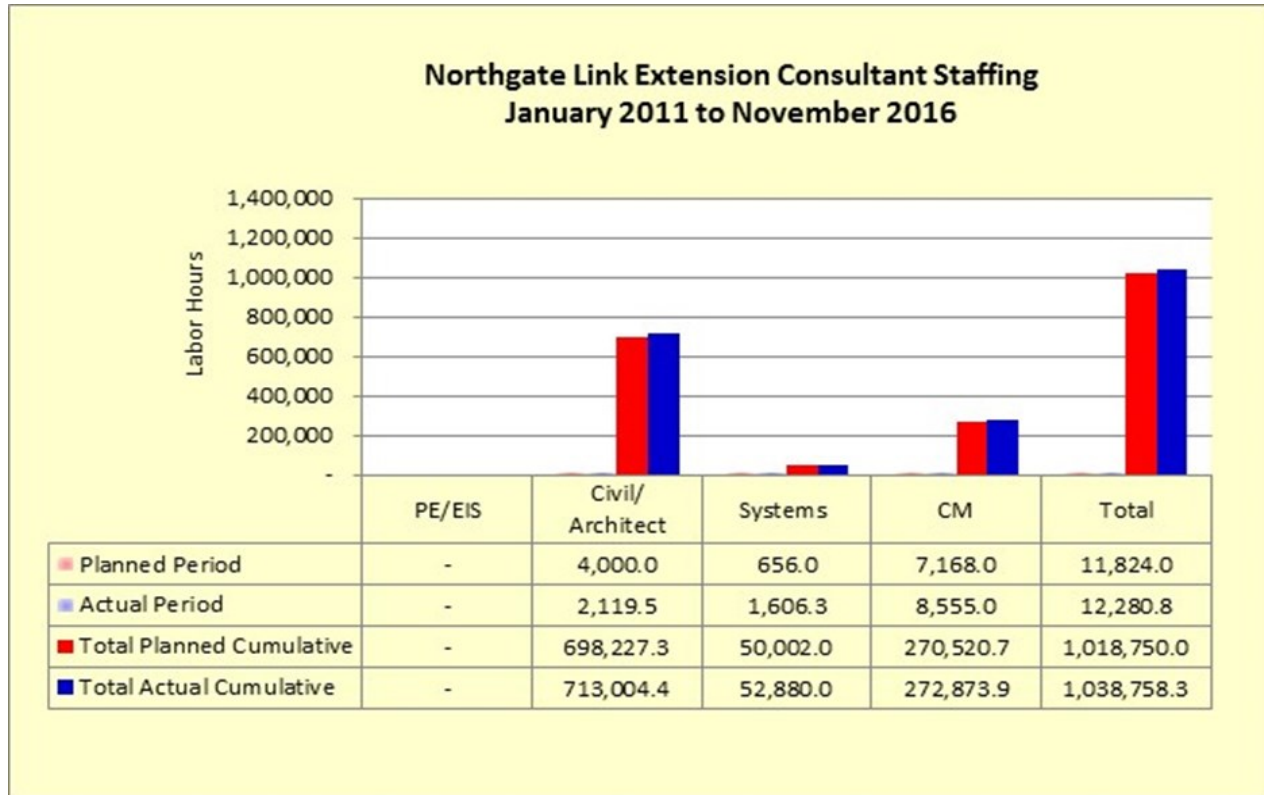
Consultant Resource Commitments to Northgate Link Extension

In November 76.8 consultant FTE were assigned to the Northgate Link Extension; consultant staffing was 4% (2.9 FTE) above plan and 1% (0.7 FTE) below October staffing. Cumulatively, since January 2011, average monthly consultant utilization (88.4 FTE/mo.) is trending 2% above plan.



Northgate Link Extension Staffing

Consultant Resource Commitments to Northgate Link Extension



Consultant utilization by discipline follows:

- Civil/architecture consultant utilization in November (13.2 FTE) was 26.3% (47 FTE) below October staffing and was 47% (11.8 FTE) below plan. Cumulatively since January 2011, average civil engineering/architecture consultant staffing of 62.8 FTE/mo. is trending within 2% of plan.
- Systems consultant utilization (10 FTE) was 32.8% (2.5 FTE) above October staffing and was 145% (5.9 FTE) above plan. Since January 2011, average monthly Systems consultant staffing (1.6 FTE/mo.) is trending within 19% (0.3 FTE/mo.) above plan.
- CM consultant staffing in November (53.5 FTE) was 3% (1.6 FTE) above October staffing and was 19% (8.7 FTE) above plan. Cumulatively, since January 2011, average monthly CM consultant staffing (24 FTE/mo.) is trending with plan.

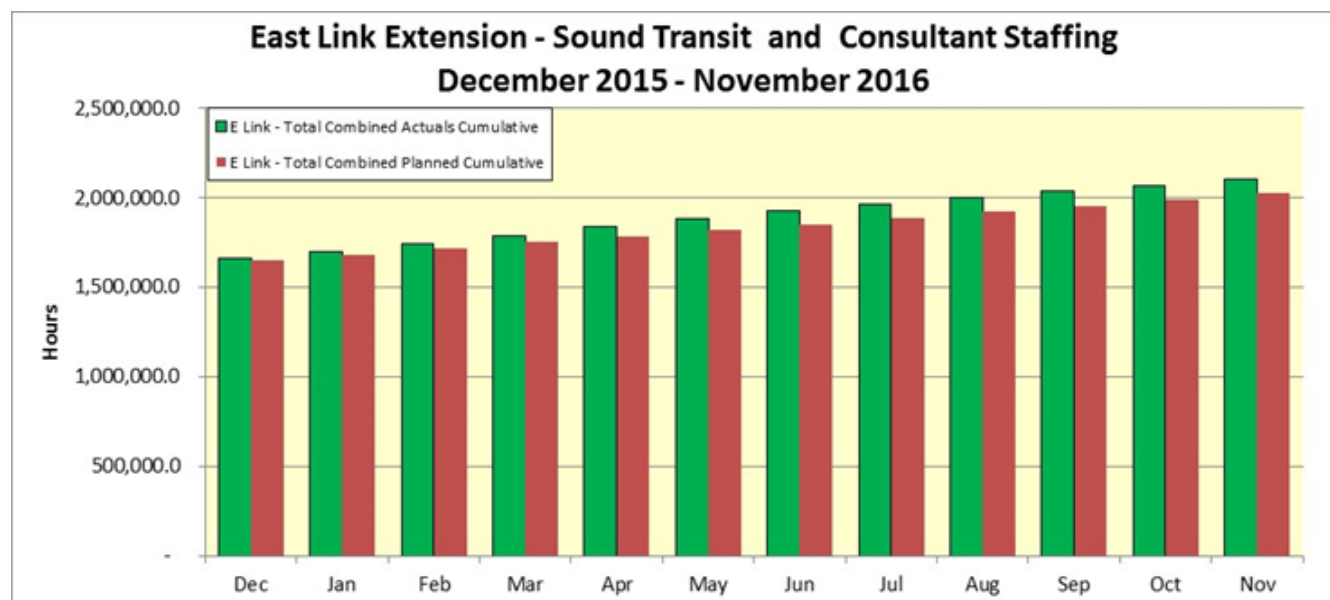
Link Light Rail Staffing Report



East Link Extension Staffing

Total Internal and External Staffing – East Link Extension

Staffing for the East Link Extension in November (204.2 FTE) decreased 1% (1.5 FTE) from October and was 3.7 (7.8 FTE) below plan. Year-to-date staffing of 250.1 FTE/mo. is 18% (38 FTE/mo.) above plan; cumulatively since January 2011, average monthly staffing of 185.1 FTE/mo. is trending 4% (7.0 FTE/mo.) above plan.

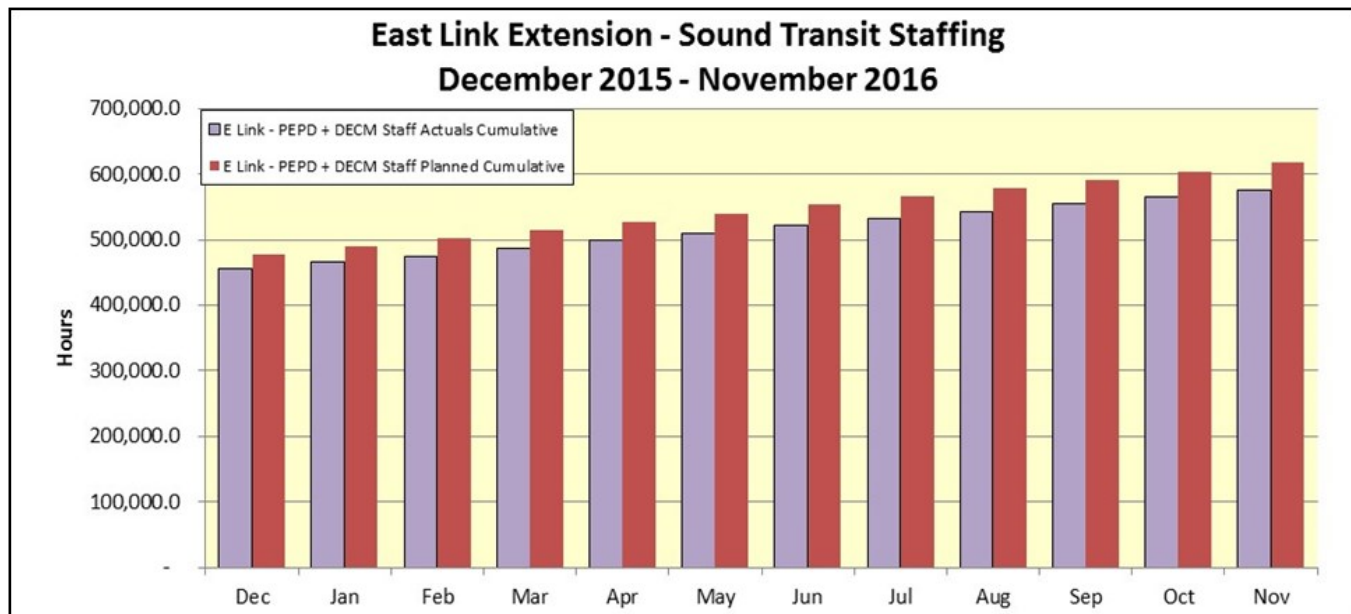


	Labor Hours Jan 2011 - Nov 2016				Current Period Nov 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	2,023,747.1	2,102,996.5	79,249.4	103.9%	33,932.4	32,678.7	-1,253.7	96.3%
Monthly Average	28,503.5	29,619.7	1,116.2					
Monthly FTE	178.1	185.1	7.0		212.1	204.2	-7.8	

East Link Extension Staffing

Internal Resource Commitments to East Link Extension

During November internal staffing for the East Link Extension (62.5 FTE) was 7% (4.6 FTE) below October staffing and was 22% (17.2 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing 50.6 FTE/mo. is trending 5.7% (3.7 FTE/mo.) below plan.



	Labor Hours Jan 2011 - Nov 2016				Current Period Nov 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	616,791.0	574,633.0	-42,158.0	93.2%	12,753.6	10,005.5	-2,748.1	78.5%
Monthly Average	8,687.2	8,093.4	-593.8					
Monthly FTE	54.3	50.6	-3.7		79.7	62.5	-17.2	

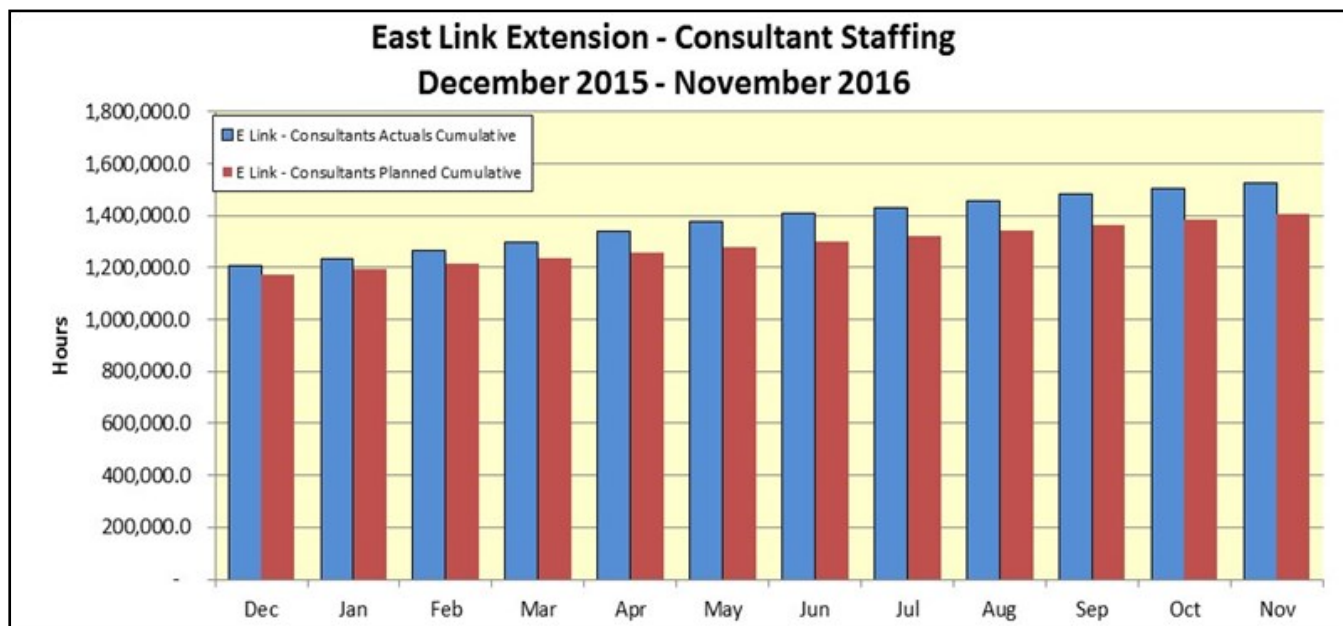
Link Light Rail Staffing Report



East Link Extension Staffing

Consultant Resource Commitments to East Link Extension

There were 141.7 consultant FTE assigned to the East Link Extension during November. Consultant staffing increased 2% (3.1 FTE) from October and was 7% (9.3 FTE) above plan. Cumulatively since January 2011, average monthly consultant staffing (134.5 FTE/mo.) is trending 8.6% (10.7 FTE/mo.) above plan.

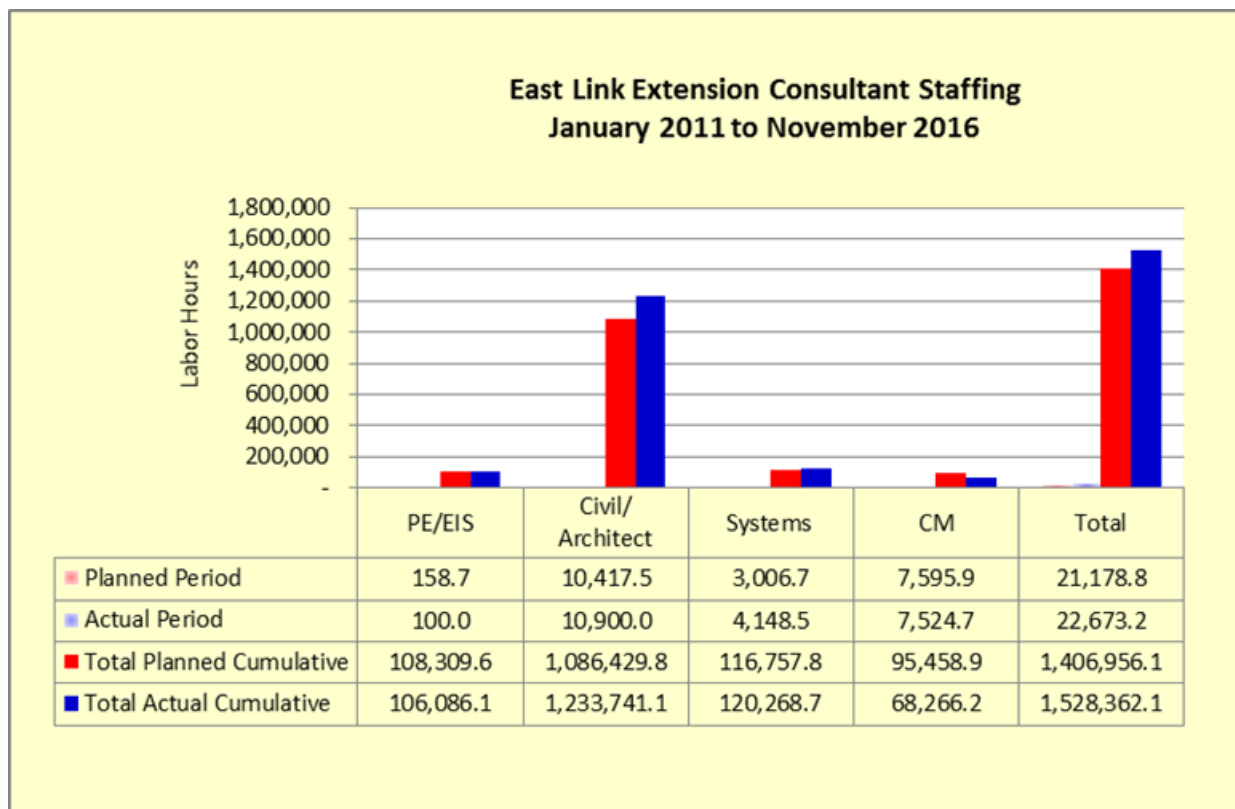


	Labor Hours Jan 2011 - Nov 2016				Current Period Nov 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,406,956.1	1,528,363.5	121,407.4	108.6%	21,178.8	22,673.2	1,494.4	107.1%
Monthly Average	19,816.3	21,526.2	1,710.0					
Monthly FTE	123.9	134.5	10.7		132.4	141.7	9.3	

East Link Staffing

Consultant Resource Commitments to East Link, continued

In November civil engineering consultant staffing (68.1 FTE) was 48% of consultant staffing. Civil engineering consultant staffing was 18% (10.3 FTE) above October staffing and 5% (3 FTE) above plan. Systems consultant staffing (25.9 FTE) was 38% (7.1 FTE) above plan and was 6.5% (1.6 FTE) above October staffing. There were 0.6 consultant FTE performing Preliminary Engineering (PE) and 47 FTE (1% below plan) providing construction management. Construction management consultant staffing was 16.3% (9.2 FTE) below October staffing.



Link Light Rail Staffing Report

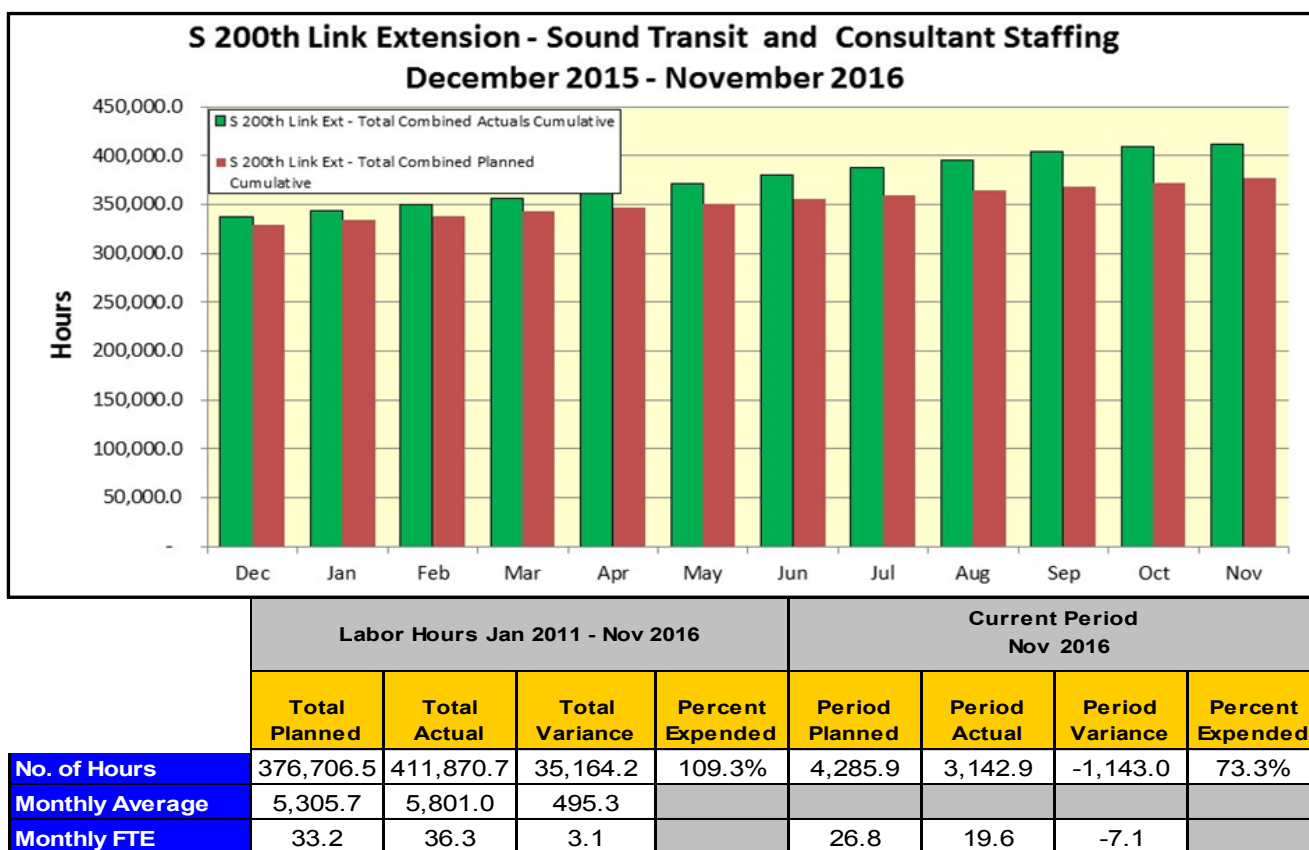


S. 200th Link Extension Staffing

With the opening of the S. 200th Link Extension in September, staff variance reporting will be limited to reporting on total staffing (consultant and internal resources).

Total Internal and External Staffing – S. 200th Link Extension

There were 12 internal and 7.6 consultant FTE participating in the S. 200th Link Extension in November. Activities included resolution of punch list items and closeout of construction contracts. Staffing for the month (19.6 FTE) was 27% (7.1 FE) below plan and 32% (9.4 FTE) below October. Average year-to-date staffing of 43.9 .4 FTE/mo. is 64% (17.1 FTE/mo.) above plan. Since January 2011, average monthly internal and consultant staffing (36.3 FTE/mo.) is 9.7% (3.1 FTE/mo.) above plan.



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Link Light Rail Staffing Report

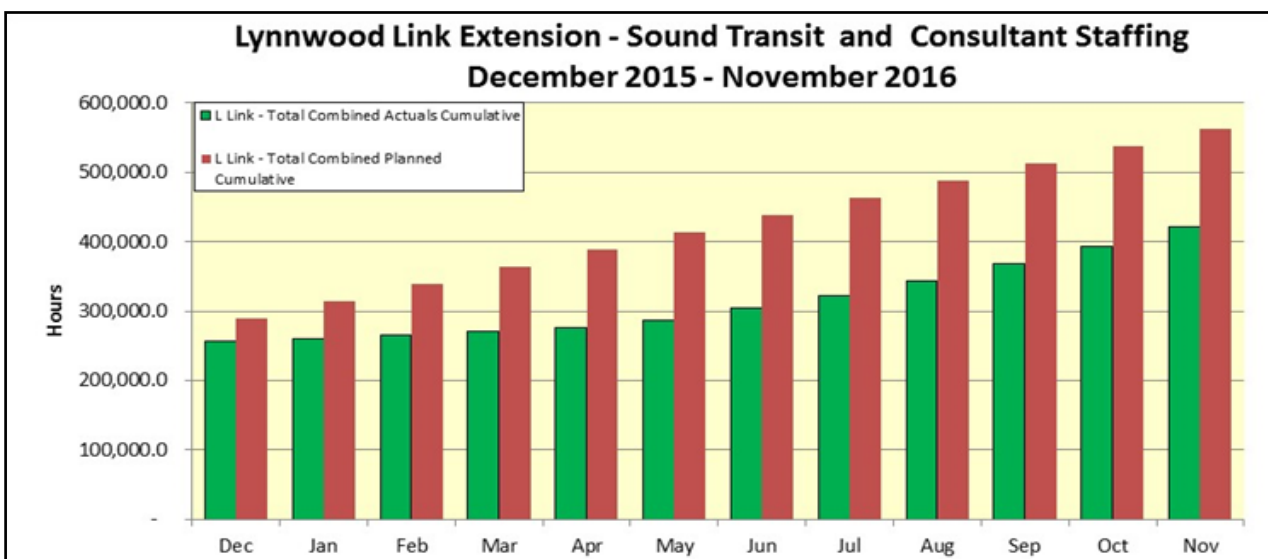


Lynnwood Link Extension Staffing

Total Internal and Consultant Staffing – Lynnwood Link Extension

During November, Lynnwood Link Extension staffing was 173.7 FTE (12% above plan) and included 139.5 consultant FTE (21% above plan) and 34.2 internal FTE (85% of plan). Internal staffing for November was 10% (3.5 FTE) below October staffing; consultant staffing increased 20% (22 FTE) from October. Average year-to-date staffing (92.4 FTE/mo) for the Lynnwood Link Extension is 60% of plan.

Eighty nine percent of consultant staffing (124.6 FTE) were civil engineering consultants. Additional consultant staffing (14.9 FTE) provided construction management (9.5 FTE) and systems design (5.5 FTE) support. Since January 2013, average project staffing for the Lynnwood Link Extension (56.1 FTE/mo.) is 25% (18.7 FTE/mo.) below plan.



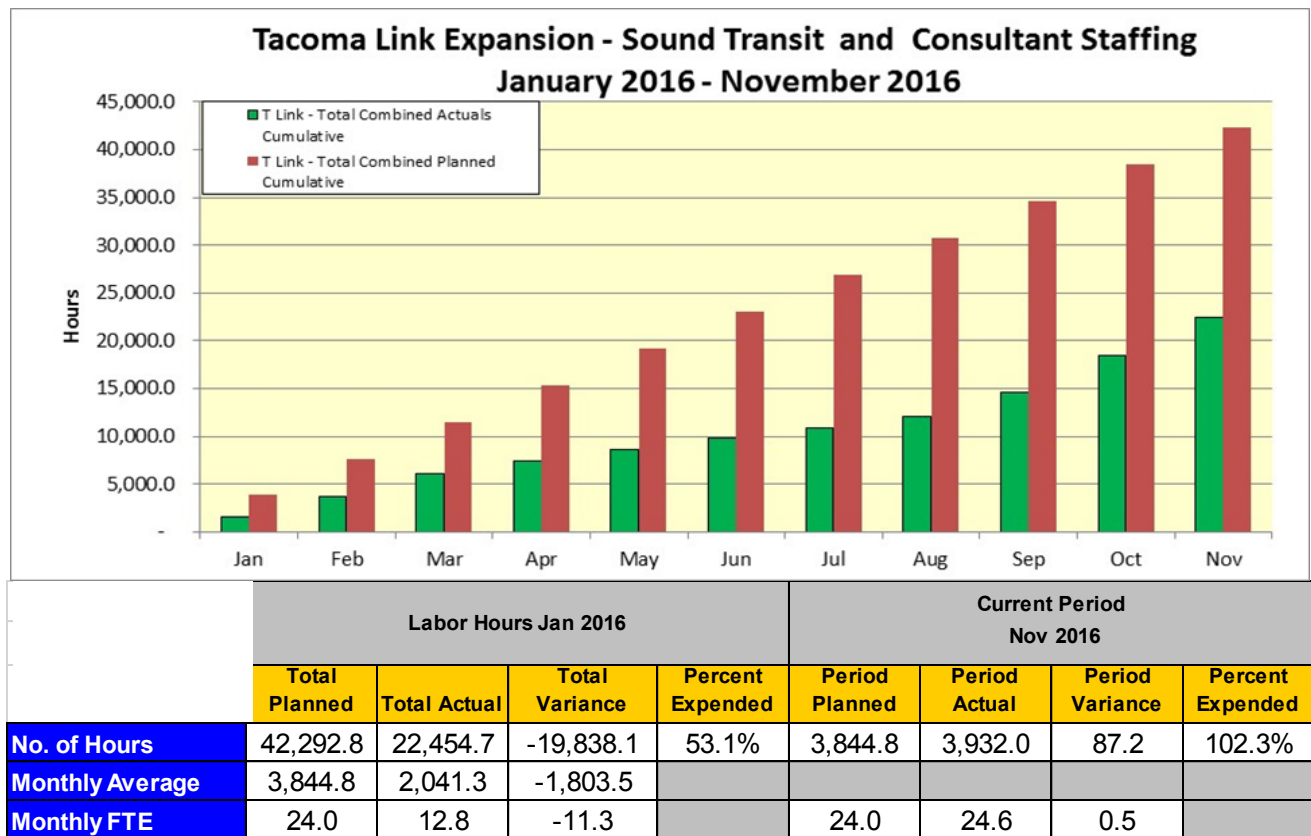
	Labor Hours Jan 2013 - Nov 2016				Current Period Nov 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	562,145.7	421,597.5	-140,548.2	75.0%	24,849.6	27,791.1	2,941.5	111.8%
Monthly Average	11,960.5	8,970.2	-2,990.4					
Monthly FTE	74.8	56.1	-18.7		155.3	173.7	18.4	

Tacoma Link Extension

Total Internal and Consultant Staffing – Tacoma Link Extension

During November there were 24.6 FTE (102% of plan) assigned to the Tacoma Link Expansion including 15.8 consultant FTE (44.8% above plan) and 8.7 internal FTE (67% of plan). Average year-to-date staffing is 12.6 FTE/mo. (53% of plan).

All consultant staff assigned to the project were supporting civil engineering.



ACRONYMS

AA	Alternative Analysis
APE	Area of Potential Impact
BCE	Baseline Cost Estimate
BCWS	Budgeted Cost of Work
BIM	Building Information Modeling
BNSF	Burlington Northern Santa Fe Railway
CCB	Change Control Board
CDF	Controlled Density Fill
CHS	Capitol Hill Station
CM	Construction Management
CMU	Concrete Masonry Unit
CO	Change Order
CPI	Cost Performance Index
CPM	Critical Path Method
DAHP	Department of Archaeology & History Preservation
DART	Days Away, Restricted or Modified
DB	Design -Build
DECM	Design, Engineering and Construction Management
DEIS	Draft Environmental Impact Statement
DPD	Seattle Department of Planning and Development
DSC	Differing Site Conditions
DSDC	Design Support During Construction
DSTT	Downtown Seattle Transit Tunnel
EFC	Estimated Final Cost
EMI	Electro Magnetic Interference
FD	Final Design
FHWA	Federal Highway Administration
FSEIS	Final Supplemental Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FTE	Full Time Employee
GC/CM	General Contractor /Construction Management
HVAC	Heating, Ventilation and Air Conditioning
ICD	Integration Control Document
IRT	Independent Review Team
IWP	Industrial Waste Permit
JA	Jacobs Associates
JARPA	Joint Aquatic Resource Permit Application
KCM	King County Metro
LNTF	Limited Notice to Proceed

ACRONYMS, continued

LRRP	Light Rail Review Panel
LRT	Light Rail Transit
LRV	Light Rail Vehicle
LTK	LTK Engineering Services
MACC	Maximum Allowable Construction Cost
MDA	Major Discharge Authorization
MLK	Martin Luther King, Jr. Way
MOA	Memorandum of Agreement
MOS	Minimum Operable Segment
MOU	Memorandum of Understanding
MPPCV	Major Public Project Construction Variance
MRB	Material Review Board
MTP	Montlake Triangle Project
MUP	Master Use Permit
NB	Northbound
NCR	Notification of Change Report
NCTP	North Corridor Transit Partners
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NTP	Notice to Proceed
OCS	Overhead Catenary System
OMF	Operations and Maintenance Facility
OMSF	Operations and Maintenance Satellite Facility
PE	Preliminary Engineering
PEP	Project Execution Plan
PEPD	Planning, Environment and Project Development
PMOC	Project Management Oversight Consultant
PSST	Pine Street Stub Tunnel
QA	Quality Assurance
QC	Quality Control
QTR	Quarter
RE	Resident Engineer
RFC	Request for Change
RFD	Request for Deviation
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualifications
RIR	Recordable Injury Rates

ACRONYMS, continued

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 & 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
UAC	Unallocated Contingency
U-Link	University Link project
USFWS	U.S. Fish and Wildlife Service
UW	University Of Washington
UST	Underground Storage Tank
UWS	University of Washington Station
VE	Value Engineering
VECP	Value Engineering Cost Proposal
WBS	Work Breakdown Structure
WSDOT	Washington Department of Transportation