

Progress Report

Link Light Rail Program



Lynnwood Link Station Design Open House held at Shoreline City Hall on November 16.

November | 2016



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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.



Link Light Rail Program Overview

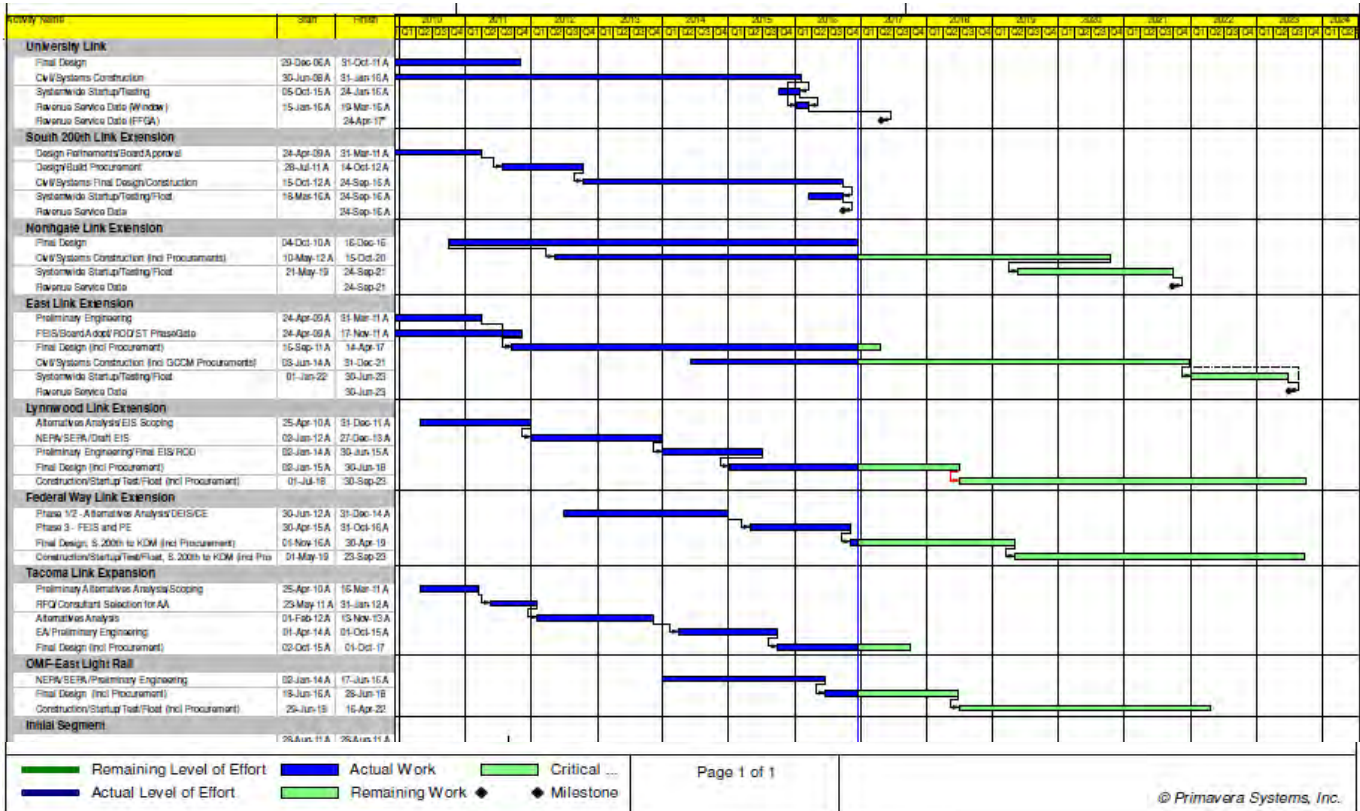
Program Budget

Project	Adopted Budget	Committed to Date	Incurred to Date	Forecast to Complete	Estimated Final Cost	Adopted Budget vs. EFC
University Link	\$1,756.0	\$1,511.6	\$1,497.6	\$44.0	\$1,555.5	\$200.5
Northgate Link Extension	\$1,899.8	\$1,138.6	\$776.4	\$761.2	\$1,899.8	\$0
Lynnwood Link Extension	\$487.9	\$173.8	\$81.5	\$314.0	\$487.9	\$0
East Link Extension	\$3,677.2	\$1,391.3	\$571.1	\$2,285.8	\$3,677.1	\$0
South 200th Link Extension	\$383.2	\$329.4	\$317.4	\$11.8	\$341.2	\$42.0
Federal Way Extension	\$48.8	\$38.3	\$34.7	\$10.4	\$48.8	\$0
Tacoma Link Extension	\$33.0	\$18.2	\$9.7	\$14.8	\$33.0	\$0
Link O & M Facility: East	\$449.2	\$35.8	\$34.1	\$413.4	\$449.2	\$0
ST2 LRV Expansion	\$733.0	\$522.6	\$1.9	\$210.4	\$733.0	\$0
Downtown Redmond Link Ext.	\$28.6	\$0.2	\$0.2	\$28.5	\$28.6	\$0
Total Link	\$9,496.6	\$5,159.8	\$3,324.6	\$4,094.4	\$9,254.2	\$242.5

Table in millions.

Program Schedule

Schedules for active projects are summarized below.



Changes this period: None.

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. Availability of Operations personnel for oversight poses as a challenge as well as they are committed to prioritizing the newly - opened Angle Lake Station over University Link.
- *U830 Systems:* Contractor is now collaborating to incorporate the South 200th Extension points into the newly installed operating systems. Contractor is currently focusing on the SCADA integration with South 200th Link Extension while continuing to perform 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.
- *Certification of Occupancy:* University Link continues to operate under a temporary certification of occupancy until all permit requires 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	\$ 81.11	\$ 80.16	\$ 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	\$ 86.70	\$ 86.39	\$ 88.72	\$ 6.10
3rd PARTY AGREEMENTS	\$ 18.65	\$ 18.65	\$ 11.98	\$ 11.28	\$ 13.55	\$ 5.10
CONSTRUCTION	\$ 1,180.00	\$ 1,158.18	\$ 994.09	\$ 983.91	\$ 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	\$ 1,511.58	\$ 1,497.62	\$ 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	\$ 1,703.28	\$ 1,672.50	\$ 1,747.24	\$ 200.48

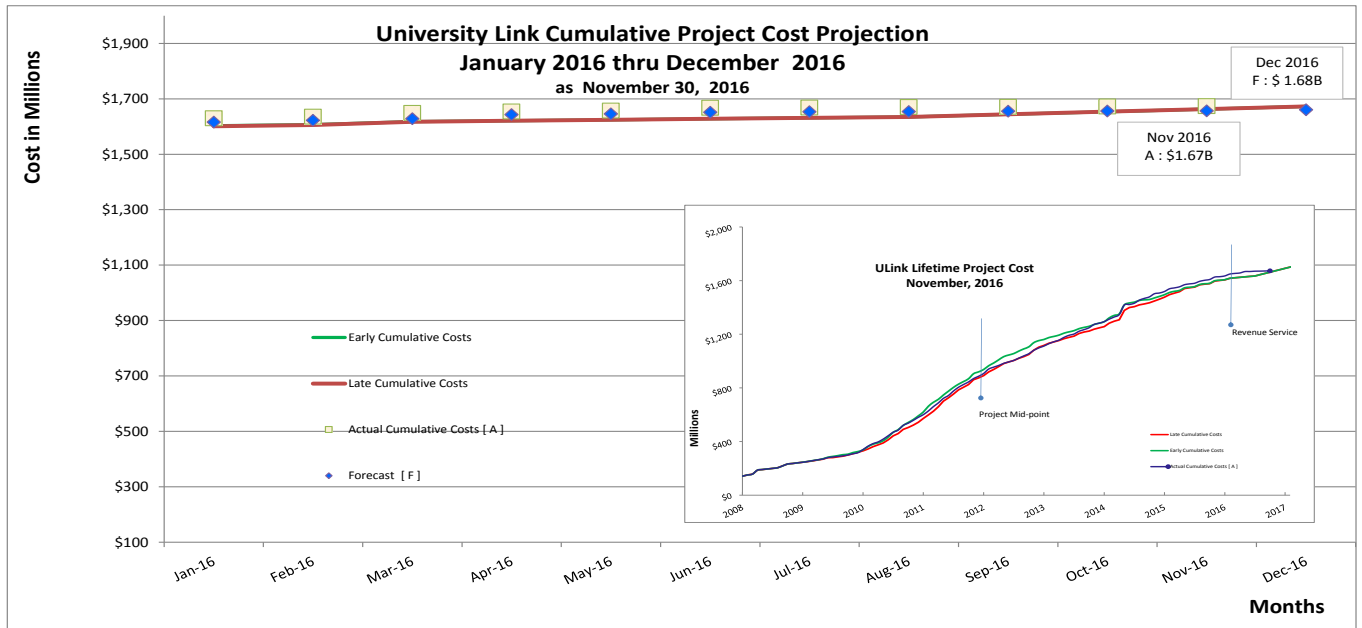
(*)Totals may not equal column sums due to rounding of line entries.

In November, 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 November 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 to fine tune and optimizes the systems as well as the integration South 200th Extension systems points. The Total Incurred to Date for the Construction Phase is about \$0.5M 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 November is about \$0.5M. 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	\$ 455.83	\$ 461.24	\$ (10.78)
20 Stations	\$ 366.33	\$ 350.75	\$ 344.54	\$ 342.69	\$ 353.09	\$ (2.33)
30 Support Facilities: Yards, Shops	\$ 7.01	\$ 24.83	\$ 22.98	\$ 22.88	\$ 24.50	\$ 0.33
40 Sitework & Special Conditions	\$ 59.03	\$ 67.39	\$ 57.00	\$ 54.71	\$ 56.83	\$ 10.56
50 Systems	\$ 69.63	\$ 116.42	\$ 100.68	\$ 96.60	\$ 102.88	\$ 13.54
Construction Subtotal (SCC 10-50)	\$ 1,128.82	\$ 1,009.85	\$ 981.35	\$ 972.70	\$ 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	\$ 303.92	\$ 298.63	\$ 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	\$ 1,511.58	\$ 1,497.62	\$ 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	\$ 1,703.28	\$ 1,672.50	\$ 1,747.24	\$ 200.48

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

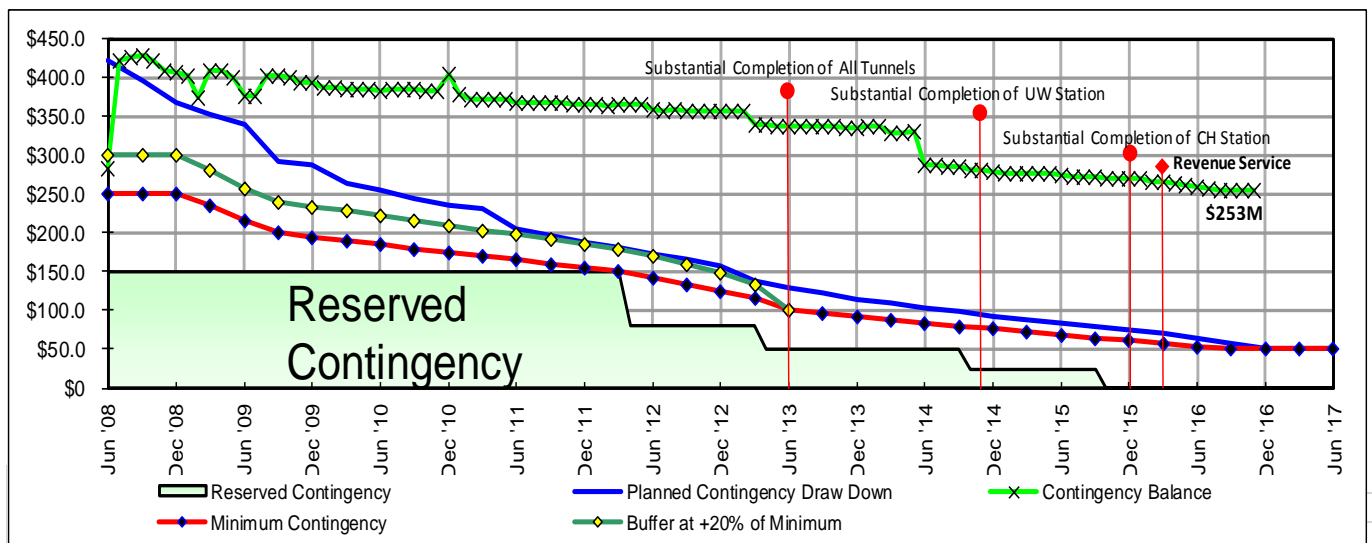


Total project cost incurred to date at November 2016 close including Finance Cost is at \$1.67B. The financing cost incurred to date is about \$175M. University Link projects the cost will be at approximately \$1.68B by December 2016 as close out activities continues. University Link EFC is projected 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. November'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 remain unused; thereby, generating approximately \$200M of budget savings excluding financing cost.

MINIMUM CONTINGENCY CURVES as of November 30, 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. Punchlist and close-out work is underway.

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.

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

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

- Multiple commercial issues remain unresolved. These issues continue to be reviewed and assessed by Sound Transit.
- Three Notices of Intent to Claim have been filed by the GC/CM. All three claims were denied. A request for mediation was received, and rejected until all claim issues can be mediated at one time.

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.

Closely Monitored Issues

- ST and Contractor continue to review outstanding commercial issues and continue working towards a possible negotiated settlement.

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

- Completed trackwork as-builts.
- 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

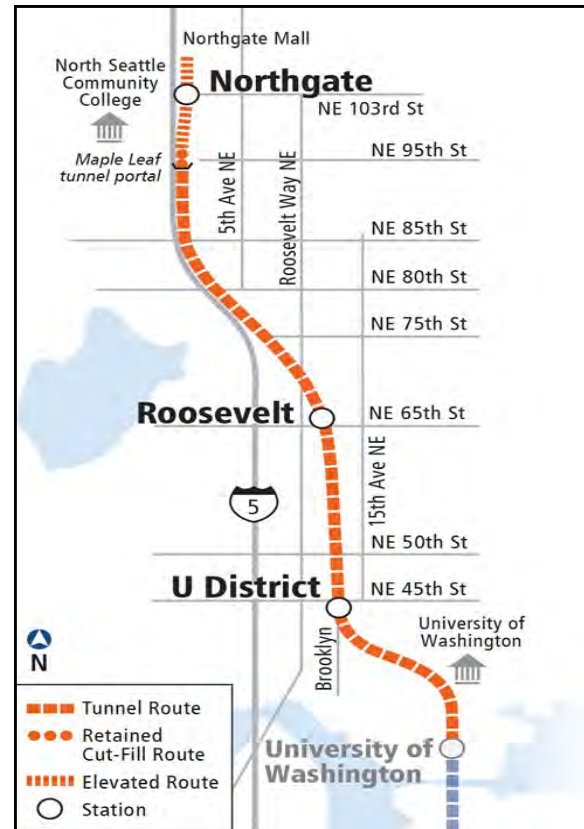
- ST working closely with the GC/CM and the EC/CMs to ensure rapid and fair commercial settlement of claims.

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

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 94th Street on the east side of I-5, then transitioning to an aerial structure running north to the Northgate Mall.
- Stations:** The *U District Station* is an underground station located on the west side of the UW campus near Brooklyn Ave. and NE 45th St. The *Roosevelt Station* is an underground station located near NE 65th St. and 12th Ave NE. The *Northgate Station* 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



Map of Northgate Link Extension route and stations.

Key Project Activities

- Held bi-monthly project review meeting with FTA and PMOC and discussed status of TIFIA loan review materials and construction work progress.
- Continued Scott White naming work; project staff working with Graphics to develop renderings.
- City of Seattle published draft approval decisions for Roosevelt and U District stations' MUPs.
- Achieved Substantial Completion of N105 Advanced Demolition and Site Prep.
- For N125 TBM Tunnels, Contractor continued work on the Cross passages. TBM No. 1 is scheduled for removal from the tunnel via the retrieval shaft.
- For N150 Roosevelt Station, ST Board approved the N150 Roosevelt Station construction contract on November 29.
- For N160 Northgate Station, Contractor is working toward completing field offices, fencing and opening the parking lot to the public.
- For N180 Trackwork, Contractor has ordered aggregate for floating slab.

Closely Monitored Issues

- JCM's earlier probe drilling operation at Cross Passage (CP) 23 resulted in some ground loss, water ingress and settlement at lower anchor of nearest extensometer. ST directed JCM to drill probe holes south and north of CP23 to investigate possible new location that would have better ground conditions but results were unfavorable. JCM has commenced freeze design and procurement of freeze equipment.
- JCM's delayed schedule for CP21 freezing and subsequent demobilization now clashes with UW a building project. This matter is under review.
- ST continues to review TBM data following additional boring and grouting work recently carried out on 12th Avenue NE and has issued 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	\$42.7	\$42.7	\$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	\$100.8	\$129.2	\$0.0
CONSTRUCTION SERVICES	\$118.3	\$118.3	\$84.8	\$43.3	\$118.3	\$0.0
3rd PARTY AGREEMENTS	\$11.8	\$11.8	\$9.9	\$5.9	\$11.8	\$0.0
CONSTRUCTION	\$1,328.0	\$1,328.0	\$776.0	\$475.5	\$1,328.0	\$0.0
ROW	\$127.3	\$127.3	\$93.5	\$93.1	\$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	\$1,138.6	\$776.4	\$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 \$18.5M was incurred, of which \$16.2M was for the N125 tunneling contract, the N160 Northgate Station and Elevated Guideway contract, the N180 Trackwork contract and other miscellaneous construction; \$0.3M was incurred for Civil and Systems Final Design and Design Support During Construction; and \$1.4M 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	\$489.2	\$331.2	\$581.5	\$3.1
20 STATIONS	\$376.1	\$416.7	\$134.6	\$38.3	\$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	\$132.4	\$94.8	\$189.6	\$0.9
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	\$765.8	\$470.5	\$1,292.2	\$0.0
60 ROW, LAND, EXISTING IMPROVEMENTS	\$119.9	\$119.9	\$93.5	\$93.1	\$119.9	\$0.0
80 PROFESSIONAL SERVICES	\$420.7	\$427.1	\$279.2	\$212.8	\$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	\$1,138.6	\$776.4	\$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 award of Contract N125 at an amount lower than the adopted budget.

Cost Contingency Management

Compared to the baseline amount of \$396.2M, the Total Contingency has decreased by \$120.6M to \$275.6M, which is 24.5% of project work remaining. During this reporting period, a net increase of \$0.4M in the overall project contingency occurred. Detailed information is provided below.

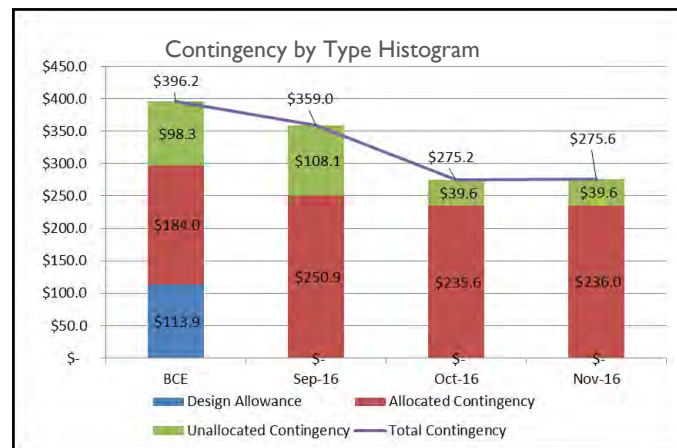
Design Allowance – The baseline Design Allowance of \$113.9M has been fully depleted following the receipt of updated construction cost estimates on the N140, N150, and N160 Station Finishes contracts. DA has been utilized as scope development has progressed to 100% on N140, N150 and N160. No changes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

Cost Contingency Management, continued

Allocated Contingency – Compared to the baseline amount of \$184M, Allocated Contingency has increased by \$52M to \$236M. During this reporting period, AC was increased by a net total of \$0.4M as a result of \$0.5M added to final design for the King County Bus Layover betterment design scope, which was offset by change orders issued on the N105 and N125 construction contracts that totaled \$0.1M.

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%	\$ 236.0	21.0%
Unallocated Contingency	\$ 98.3	4.6%	\$ 39.6	3.5%
Total	\$ 396.2	18.6%	\$ 275.6	24.5%



Project Schedule

The N105 Contractor, Pellco Construction received Substantial Completion on November 23 (23 days early). Care and custody of the Key Bank site has been turned over to Sound Transit.

Work on the N111 contract is complete. Close-out is ongoing. ST has denied Walsh Construction's request for additional compensation due to the Old Castle vault delay, citing, in part, a failure of the Contractor to provide Notice of Delay. Walsh is continuing to pursue the issue.

The N113 SCL 115kV Relocation contractor Potelco has successfully completed the construction of the new 115kV transmission line and turned the line over to SCL for phasing and to be energized. Substantial Completion for work east of I-5 was issued on November 9. The old lines on 1st Ave. NE have been removed and the existing poles topped. Construction of the MSE wall has proved a challenge and will likely take the remainder of the contract time. Work is still expected to complete by the contract end date of February 21, 2017.

The N125 Tunneling Contractor is continuing cross passage construction all along the tunnel alignment. The Contractor's October schedule update, 3rd revision, continues to forecast negative float in achievement of the following milestones: MS-02—RVS Turnover (-19cd), MS-05—UDS Turnover (-41cd), and MS-06—Substantial Completion (-14cd). ST has reviewed the schedule revisions and continues to find issues that JCM has not corrected or explained in terms of logic and calendars or crew-restrained work sequences.

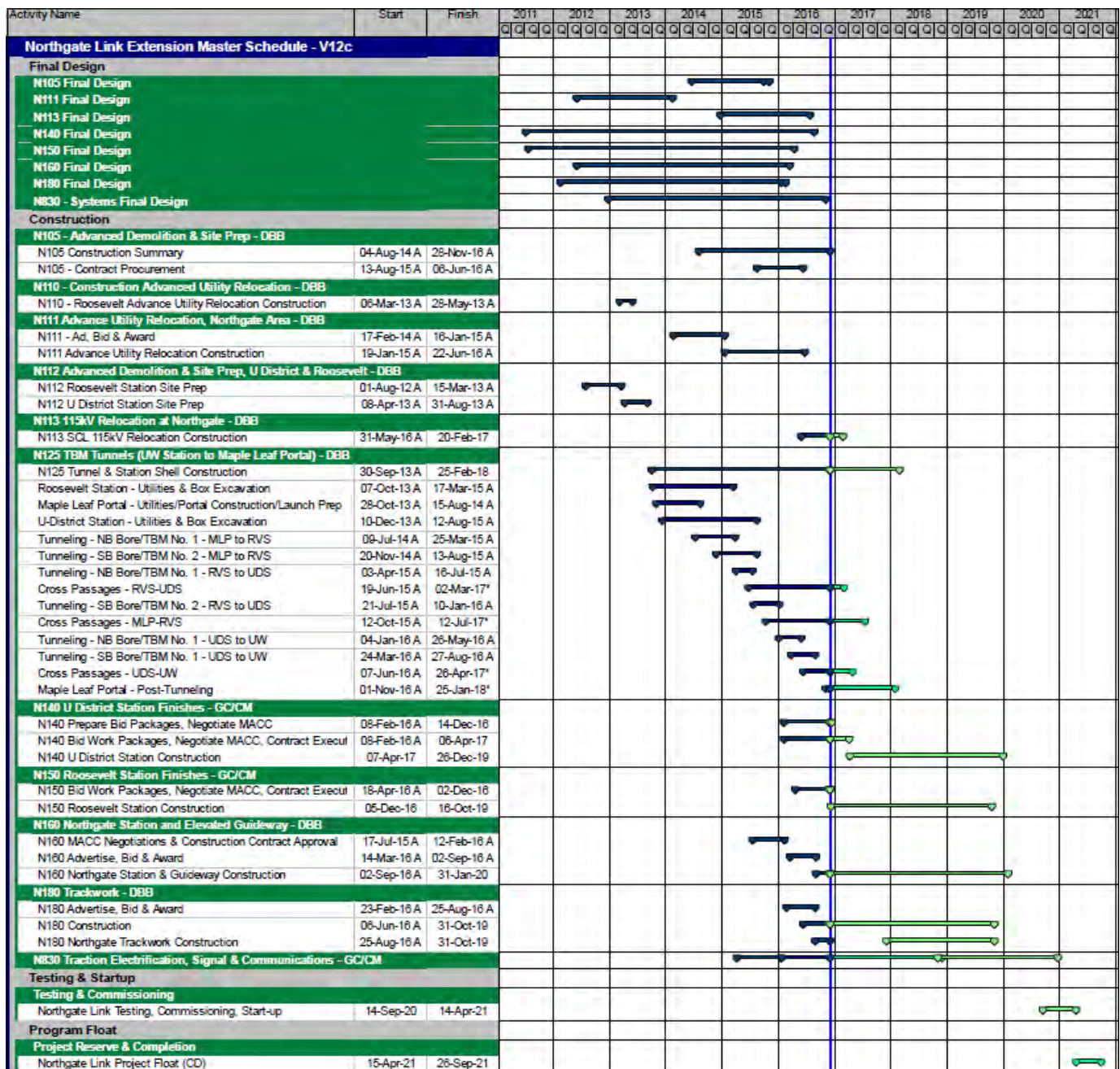
The N140 U District Station is currently in the process of issuing and receiving subcontract bid packages. ST continues to work with the City of Seattle to resolve any final permitting comments.

The N150 Roosevelt Station construction contract received ST Board approval on November 29. NTP is expected on December 2. Site access remains mid-February 2017. All contract milestones are based on the site access date.

Project Schedule, continued

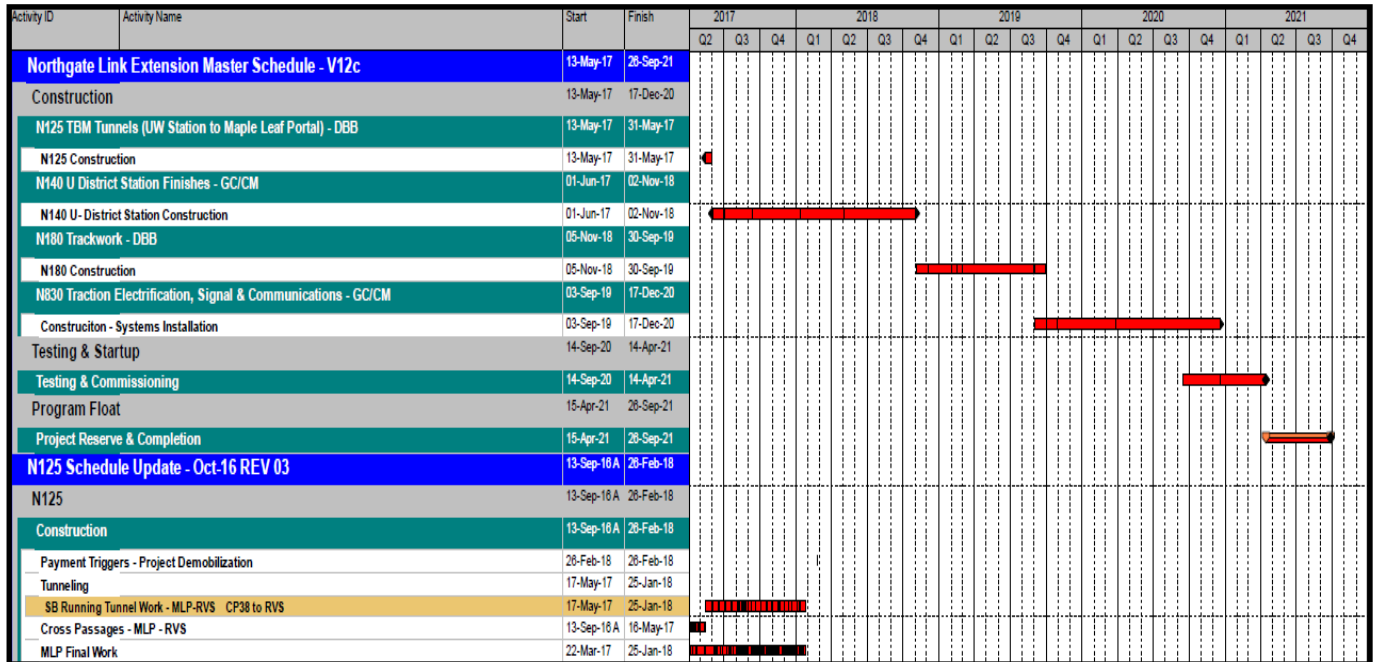
The N160 Contractor, Absher Construction, is continuing to mobilize personnel, complete tenant improvements at the Silver Platters building, and prepare submittals. Construction of temporary entrances into the Northgate Transit Center will be constructed in December. Absher has submitted the Preliminary CPM and is working on the Contract Baseline CPM and Schedule of Values. Mobilization for Drilled Shafts at the station (C-Series shafts) will begin in January.

The N180 Trackwork contractor, Stacy and Witbeck, is continuing with pre-construction submittals, in preparation for procuring rail and pre-cast track slabs. A draft construction schedule was submitted and reviewed in November. It has been returned with a grade of "Revise and Resubmit". ST is continuing to expect the FTA to grant the Buy America waiver request for the Ultra-Straight Rail in early December 2017.



Critical Path Analysis

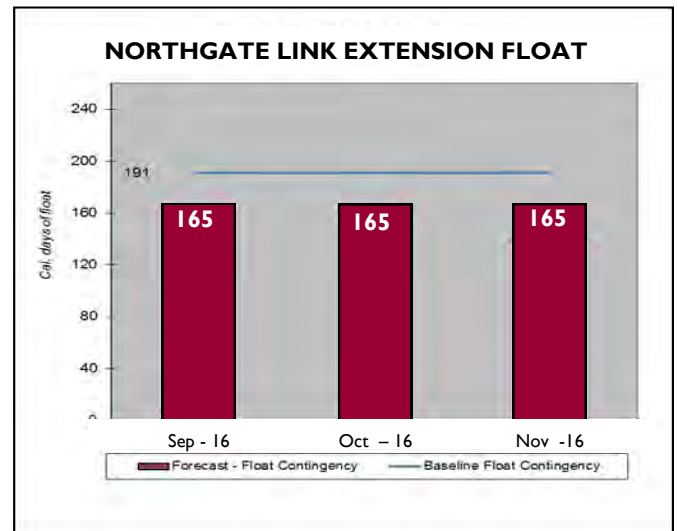
The longest path through the Northgate projects is driven by the N125 contract and turnover of the UDS box to N140, N140 turnover to N180 for trackwork, and subsequently to the N830 Systems contract. The N160 contract remains near critical due to access dates on site and overall duration of the contract.



Critical Path Float

The Northgate Link Project currently retains 165 days of unallocated project float. To date, ST has been able to work with both the GC/CM contractors for the stations and the N125 Contractor to explore means of performing concurrent operations in order to maintain the overall project schedule.

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



Construction Safety

Data/ Measure	November 2016	Year to Date	Project to Date
Recordable Injury/Illness Cases	6	17	52
Days Away From Work Cases	0	2	4
Total Days Away From Work	0	5	219
Restricted or Modified Work Cases	1	5	23
Total Days Restricted or Modified Work	0	33	896
First Aid Cases	0	26	51
Reported Near Mishaps	4	12	53
Average Number of Employees on Worksite	325	-	-
Total # of Hours (GC & Subs)	54,370	651,372	1,920,572
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	22.07	5.53	5.52
DART Rate	3.68	2.15	2.81
<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 require 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 will result 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 Agreements	Admin. Settlements	Possession 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
M2016-115	Execute a contract with Hoffman Construction Company to construction the Roosevelt Station Finishes within the Northgate Link Extension in the amount of \$152,291,184 with a 5% contingency for a total authorized contract amount not to exceed \$159,905,743.	Nov 29

Community Outreach

- Distributed various construction alerts which includes the following:
 - Cross passage work along the alignment.
 - Upcoming work at the U District Station site.
 - Northgate P&R construction alerts to list-serve and gov-delivery list.

- Emailed weekly updates regarding surface cross passage work.
- Hosted informational table at a City of Seattle Paving Celebration; staff engaged with approx. 25 neighbors.
- Published November Northgate Link Newsletter.

Business Mitigation

- Continued meeting directly impacted businesses regarding business relations program.

Environmental

- None to report.

Final Design Overview

Sound Transit has executed two key contracts with professional services consultants for the Final Design of the Northgate Link Extension. Jacobs Associates (JA) is providing civil engineering and architectural final design services. LTK Engineering Services (LTK) is providing systems engineering final design services.

Final Design Activities

No further design activity to report.

Contract Package N140 - U District Station Civil and Finishes:

- Continued bid support services as needed.

Contract Package N150 - Roosevelt Station Civil and Finishes:

- Continued bid support as needed.

Contract Package N830 – Traction Electrification, Signals, and Communications:

100% Design has been completed.

Final Design Schedule

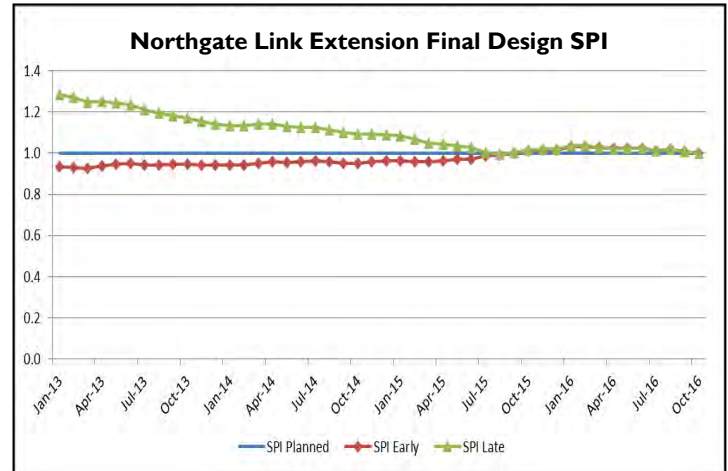
The table below summarizes the current civil Final Design submittal schedule for each contract package.

Work Packages	60%		90%		100% to ST	
	Plan	F/A*	Plan	F/A*	Plan	F/A*
N105 Key Bank Demolition and Remediation	7/31/2014	7/31/2014A	10/3/2014	10/3/2014A	2/23/2015	6/18/2015A
N111 Advanced Utility Relocation – Northgate	12/21/2012	5/23/2013A	3/29/2013	10/14/2013A	7/12/2013	1/31/2014A
N113 115kV Relocation at Northgate	10/29/2013	11/21/2014A	3/27/2014	8/5/2015A	6/19/2014	10/2/15A
N140 U District Station Finishes	12/24/2011	4/27/2012A	9/18/2012	12/11/2015A	5/10/2013	8/12/16A
N150 Roosevelt Station Finishes	4/13/2012	2/27/2012A	1/28/2013	12/18/2014	10/23/2013	11/20/15A
N160 Northgate Sta. Civil/Finishes/Guideway	6/27/2012	10/5/2012A	4/17/2013	3/7/2014A	11/26/2013	2/5/16A
N180 Trackwork	8/23/2012	8/23/2012A	5/22/2013	4/8/2013A	8/26/2013	1/14/16A
N830 Traction Electrification, Signals, Communications	12/12/2012	12/20/2012A	4/10/2014	1/29/16A	12/9/2014	9/6/16A

F/A* = Forecast/Actual

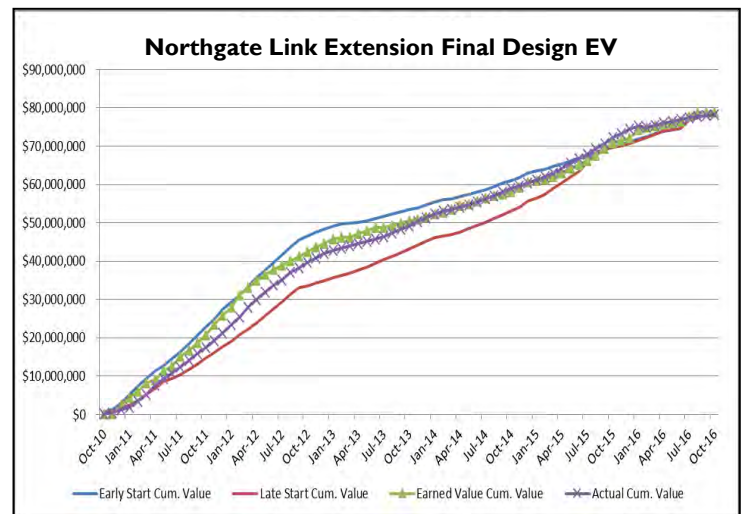
Final Design Schedule Performance

For Final Design activities only, the Schedule Performance Index (SPI) reported this period is 1.00 based on the early start date, and the late start SPI is also 1.00. All major deliverables for the project have been received. Schedule performance reporting will no longer be completed for the design work. Ongoing DSDC scope will be completed on a time and materials basis as construction requirements are determined.



Final Design Cost Performance

Through this period, the total amount spent on the civil final design contract (including DSDC) is \$87.0M, which is approximately 89% of the total contract amount including change orders. For final design activities only, the total amount spent is \$78.3M, which is 99.4% of the current final design contract value. The consultant reported 100% complete for final design activities, resulting in an Earned Value of \$78.9M. The cumulative CPI remains 1.0, which indicates that overall expenditures are in line with planned cost.



Other Key Final Design Activities

Geotechnical Investigation

- None to report.

Surveying and ROW

- Edited N160 basemap to address ST comments and add SDOT conduits.

Traffic Engineering Report

- None to report.

Permits

- Incorporated N140 90% SIP comments.
- Responded to N160 90% SIP comments.

Noise Mitigation for At Grade and Elevated Guideway

- None to report.

Ground Borne Noise and Vibration

- None to report.

Construction Cost Estimating

- Continued N150 100% cost estimate/pricing set reconciliation.

Quality Assurance

- Provided assistance with SSIMS Hazard mitigation.

Design and Project Integration

- Integration and coordination with Systems Consultant (LTK) and continued as continued as required.

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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

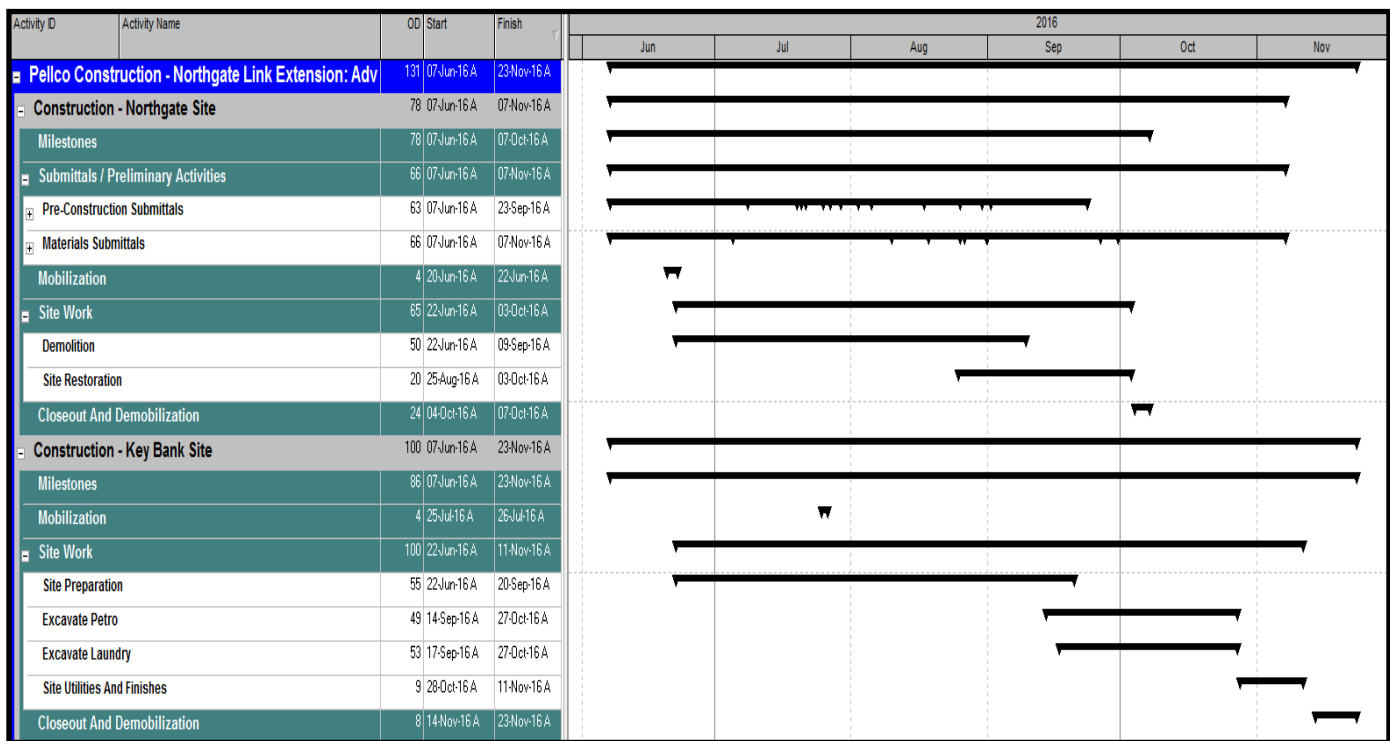
Contract N105- Advanced Demolition and Site Prep

Current Progress

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

Schedule Summary

The November schedule update shows all work complete.



Key Activities

Current Period

Key Bank Site

- Completed remaining miscellaneous site demolition work.
- Completed site cleanup and soft demobilization of equipment and materials.
- Completed chain link fence installation.
- Demolished and restored two alley way concrete panels per SDOT review.
- Substantial Completion obtained on November 23, 2016.

Next Period

Key Bank Site

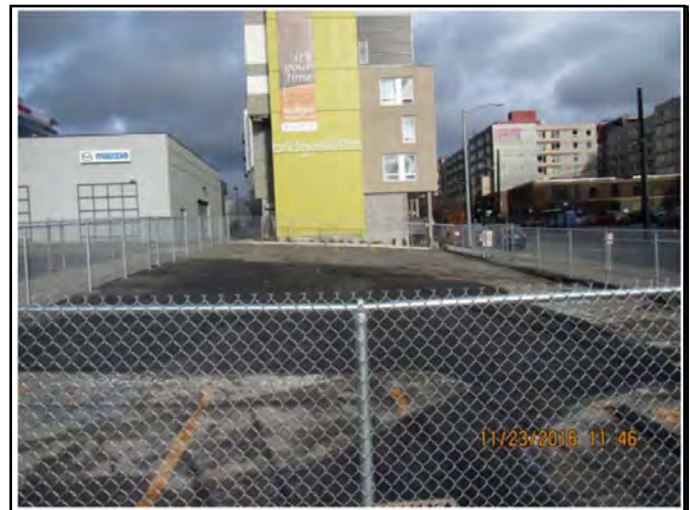
- Continue processing project records and documents for closeout.

Closely Monitored Issues

- Continued on-going discussions with the Contractor regarding requested additional compensation for contaminated material removal quantities due to Department of Ecology Contained-Out determination from the east Key Bank excavation site. Additional information requested by ST. A meeting is scheduled for December 8, 2016 with the Contractor.

Cost Summary

Present Financial Status	Amount
<i>NI05 Contractor - Pellco Construction</i>	
Original Contract Value	\$2,691,500
Change Order Value	\$61,578
Current Contract Value	\$2,753,078
Total Actual Cost (Incurred to date)	\$2,584,294
Financial Percent Complete:	94%
Physical Percent Complete:	97%
Authorized Contingency	\$269,150
Contingency Drawdown	\$ 61,578
Contingency Index	4.2



Key bank site: East lot completed construction.

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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 schedule updates will be made for this project.*

Key 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

- Issue Acceptance.
- 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:	99.0%
Authorized Contingency	\$937,000
Contingency Drawdown	\$800,970
Contingency Index	1.16

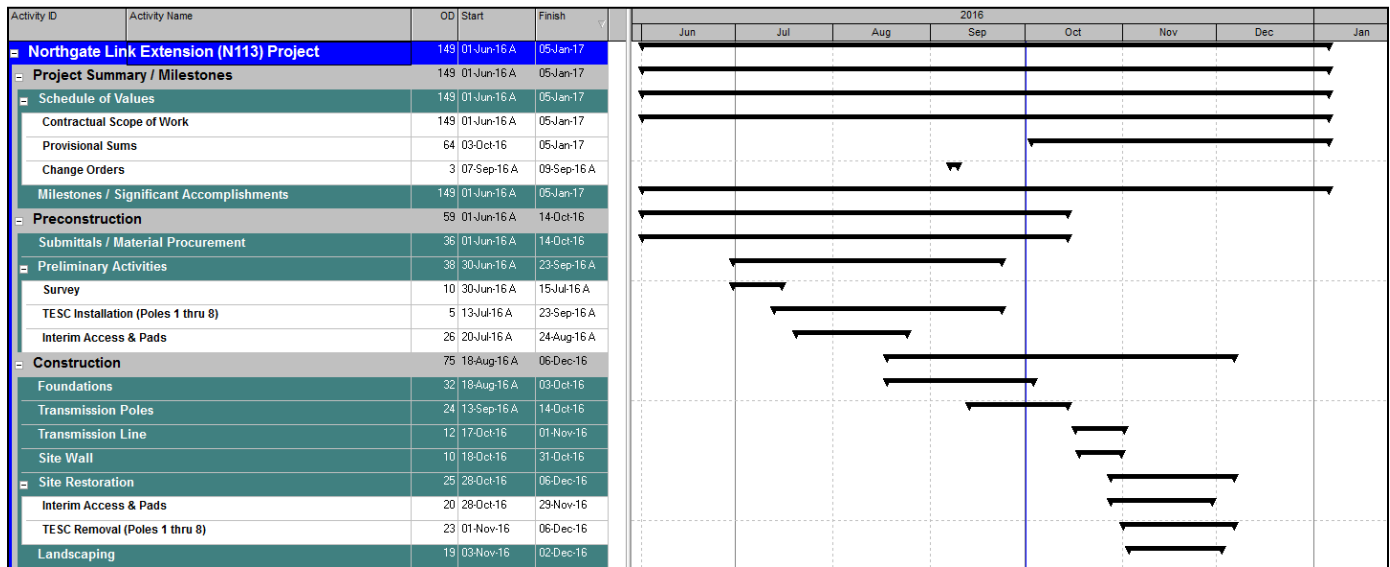
Contract N113– 115kv Relocation at Northgate Station

Current Progress

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

Schedule Summary

The N113 Contractor’s November schedule update has not been submitted. The October update forecast an early December completion. Due to issues surrounding the MSE wall, the completion will likely move to mid to late January 2017.



Key Activities

Current Period

- Removed existing 115kV transmission lines along 1st Ave.
- Continued various pole activities including grouting, site restoration, pad construction etc.
- Seattle City Light accepted the installation of the new conductor and release the power outage clearance.
- Completed tree removal and tree trimming along the path of the new conductor.
- Continued discussion of the logistics to the MSE wall construction.
- Obtained Substantial Completion for Milestone 1 (all work East side of I-5) this period.

Next Period

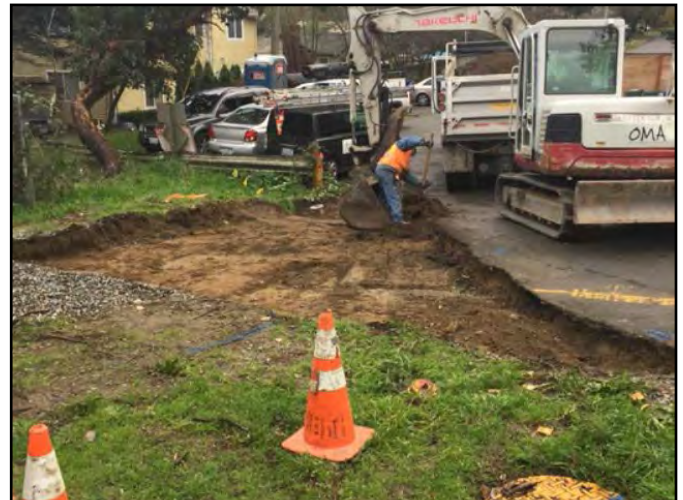
- Continue pole activities.
- Receive delivery of MSE wall geogrid and geo-synthetic.

Closely Monitored Issues

- During the process of submittal review, WSDOT expressed that the wire mesh rock faced MSE wall as outlined in the Contract did not conform to their standards. A Work Directive will be issued to include additional planting along the face of the wall to help conceal the rock face.

Cost Summary

Present Financial Status	Amount
NI13 Contractor - Potelco, Inc	
Original Contract Value	\$2,811,926
Change Order Value	\$ 34,000
Current Contract Value	\$2,845,926
Total Actual Cost (Incurred to date)	\$2,232,243
Financial Percent Complete:	78%,
Physical Percent Complete:	90%
Authorized Contingency	\$281,194
Contingency Drawdown	\$ 34,000
Contingency Index	7.44



Pad construction at Pole site 8.

Contract N125 – TBM Tunnels

Current Progress

JCM is currently continuing work on the Cross Passages, tunnel inverts, and troughs. TBM No. 1 is scheduled to be removed from the tunnel via the retrieval shaft.

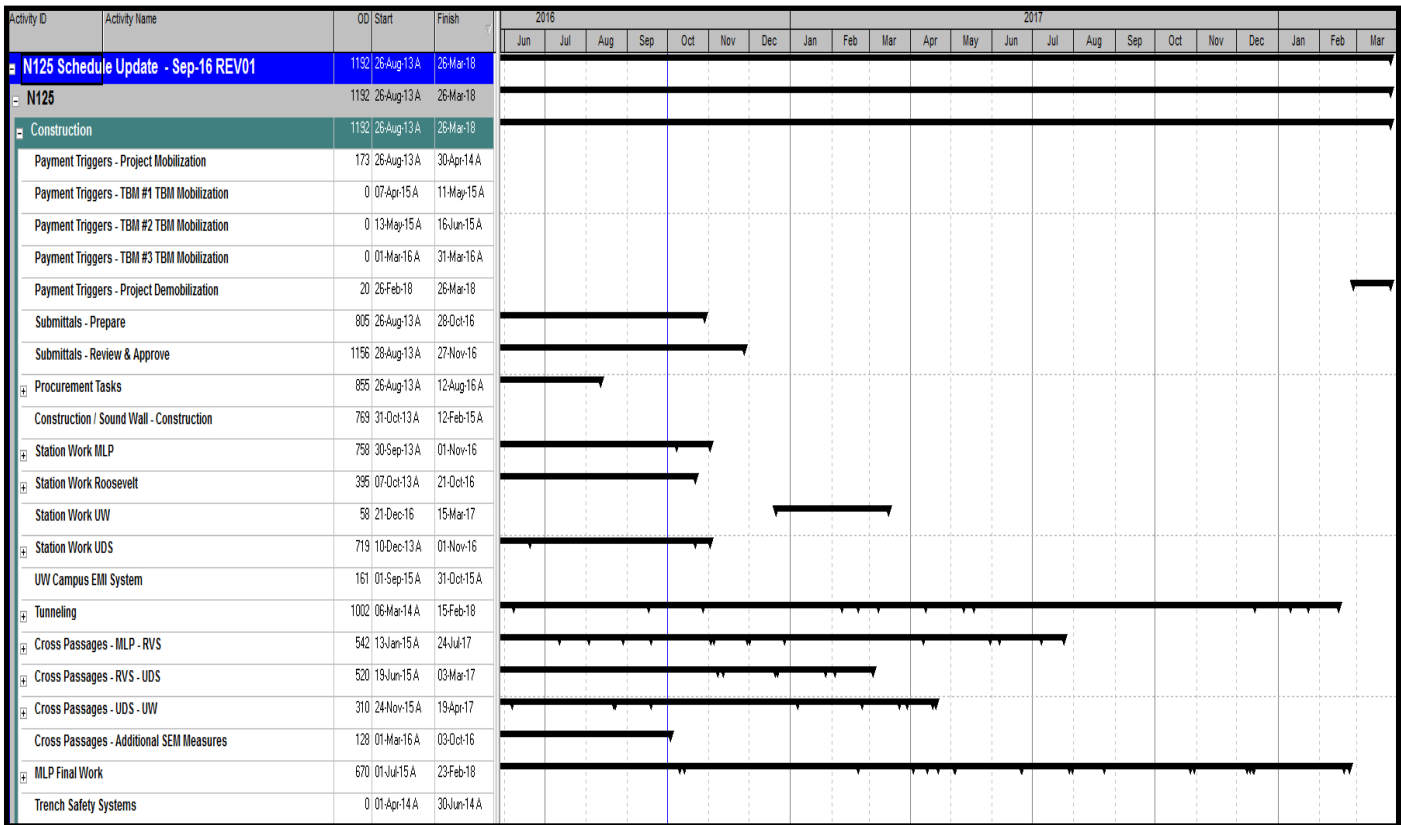
Tunneling Operations – Installation of the sidewalk, cable trough, drainage pipe, and conduit is continuing in both tunnels.

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

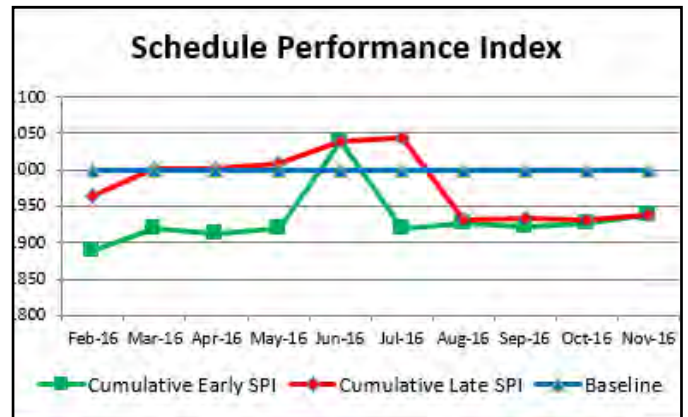
JCM has submitted three revisions of the October 2016 schedule update. ST has raised objections to logic and calendar changes that appear to be geared toward maintaining certain elements of the work as critical, despite the lack of substantiation in the field work. The schedule below is the latest approved schedule.

It is anticipated that the critical path will remain in the Cross Passage construction. JCM has reduced the negative float associated with Milestones No. 2 and No. 6, but has maintained a high level of negative float (-41cd) in achieving Milestone No. 5. The team has determined that dewatering will not work at Cross Passage 23 and the contractor will begin preparing for ground freezing.



Schedule Performance Index

The schedule update reports a Performance Percent Complete of 87.6% with a Cost Percent Complete of 87.5%. 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

- Continued installation of walkway and cable trough rebar and concrete.
- Continued construction of MSE walls with structural anchors at the Maple Leaf Portal.
- 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.

Next Period

- Maintain in-tunnel freeze formations.
- Continue cross passage excavation and linings.
- Continue repairing and patching haunch pipes and drain holes.
- Continue walkway concrete pours.
- Continue installation of cable trough rebar and formwork.
- Continue installation of overhead electrical facilities.
- Begin installation of hangers for fire standpipes.

- Complete excavation of RVS shaft and begin permanent concrete base slab pour.
- Continue installation of MSE wall at MLP.

Closely Monitored Issues

- ST continues to review TBM data following the additional boring and grouting work recently carried out on 12th Ave NE and has issued a Work Directive for 4 additional boreholes. This work will commence in early 2017.

Cost Summary

Present Financial Status	Amount
NI25 Contractor - JCM Northlink	
Original Contract Value	\$440,321,000
Change Order Value	\$ 45,052,459
Current Contract Value	\$485,373,459
Total Actual Cost (Incurred to date)	\$424,863,059
Financial Percent Complete:	87%
Physical Percent Complete:	87%
Authorized Contingency	\$66,048,150
Contingency Drawdown	\$45,052,459
Contingency Index	1.29



Pouring NB tunnel walkway concrete between UDS and RVS (CP29 to CP30).

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, erecting construction fencing between work areas, and preparing to open the WSDOT parking lot (Area 1.2) to the public in early December. The temporary driveway to the Transit Center will be constructed in December 2017. The Contract Baseline schedule was submitted for review at the end of November.

Key Activities

Current Period

- Processed and reviewed submittals.
- Completed work on tenant improvements for ST CM Office at Silver Platters.
- CMC team moved into field office at Silver Platters.
- Continued start-up activities.
- N125 Contractor completed environmental issues punch-list for handover of N125 Area B (N160 Area 1.1 & 1.2).
- Additional outside lighting around the construction office has been set-up.
- Erected fencing to separate Work Areas 1.1 and 1.2.
- Further planning for the North end design changes.

Next Period

- Continue to process and review submittals and RFIs.
- Continue start up activities.
- Open Work Area 1.2 parking lot (former WSDOT North) to the public.
- SCL to remove 26kV poles along 1st Avenue.

- Construct temporary driveway to accommodate KCM Transit Center parking.
- Review wetland area with ST Environmental Planner.

Closely Monitored Issues

- Interface coordination associated with the Lynnwood Link design changes continue. ST is working to identify the required dates for design and approval information and communicate this information to the Contractor. Stop Work notice for submittals will be issued for guideway, shafts and column work north of drilled Shaft B1, located at north end of station.
- Contractor having difficulty finding parking for their labor force. ST is working with Contractor to identify potential temporary parking north of Work Areas 5.1 and 5.2.

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

Contract N180 – Trackwork UWS to Northgate Station

Current Progress

The N180 contractor, Stacy & Witbeck, submitted the Preliminary CPM in mid-November. A draft of the Contract Baseline was submitted a week later. The draft schedule and SOV are under review. The Contractor is currently taking delivery of the hematite at the pre-cast yard in Woodland, WA. The Contractor is continuing to work on the required pre-construction plans. The team expects the Buy America waiver process for the Ultra-Straight Rail to be complete in early December.

Key Activities

Current Period

- Approved Preliminary baseline CPM schedule.
- Finalized SOV and is pending approval of the final contract baseline CPM schedule.
- Floating slab formwork shop drawings are under review. Minor changes will be required prior to approval.
- Continued to transport coarse and fine hematite aggregate to the Columbia Precast yard in Woodland, WA.
- Began N180/N140 coordination.

Next Period

- Schedule a site visit of the precast yard next period.
- Floating slab mix designs development and trial batch runs.
- Submit all the required submittals for the floating slab test section(s) prior to the holiday weeks.
- Continue delivering aggregates to the pre cast yard in Woodland, WA.

Closely Monitored Issues

- Special Trackwork design changes are anticipated due to the Lynnwood Link alignment modifications at the north end of the N160 Elevated Guideway.

Cost Summary

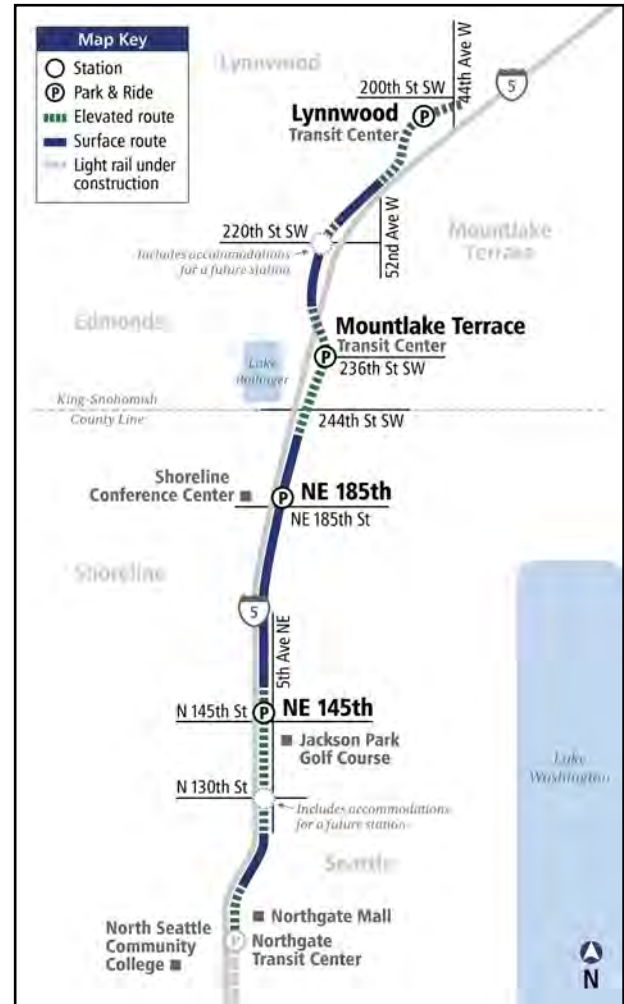
Present Financial Status	Amount
<i>N180 Contractor - Stacy and Witbeck, Inc.</i>	
Original Contract Value	\$71,455,950
Change Order Value	\$0
Current Contract Value	\$71,455,950
Total Actual Cost (Incurred to date)	\$0
Financial Percent Complete:	0%
Physical Percent Complete:	0%
Authorized Contingency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

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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	\$12.1	\$12.1	\$88.3	\$0.0
Preliminary Engineering	\$42.0	\$39.9	\$39.0	\$42.0	\$0.0
Final Design	\$111.5	\$80.0	\$12.4	\$111.5	\$0.0
Construction Services	\$104.9	\$18.0	\$1.7	\$104.9	\$0.0
3rd Party Agreements	\$17.4	\$4.4	\$0.8	\$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	\$19.3	\$15.5	\$123.8	\$0.0
Total	\$487.9	\$173.8	\$81.5	\$487.9	\$0.0

Cost Summary by SCC

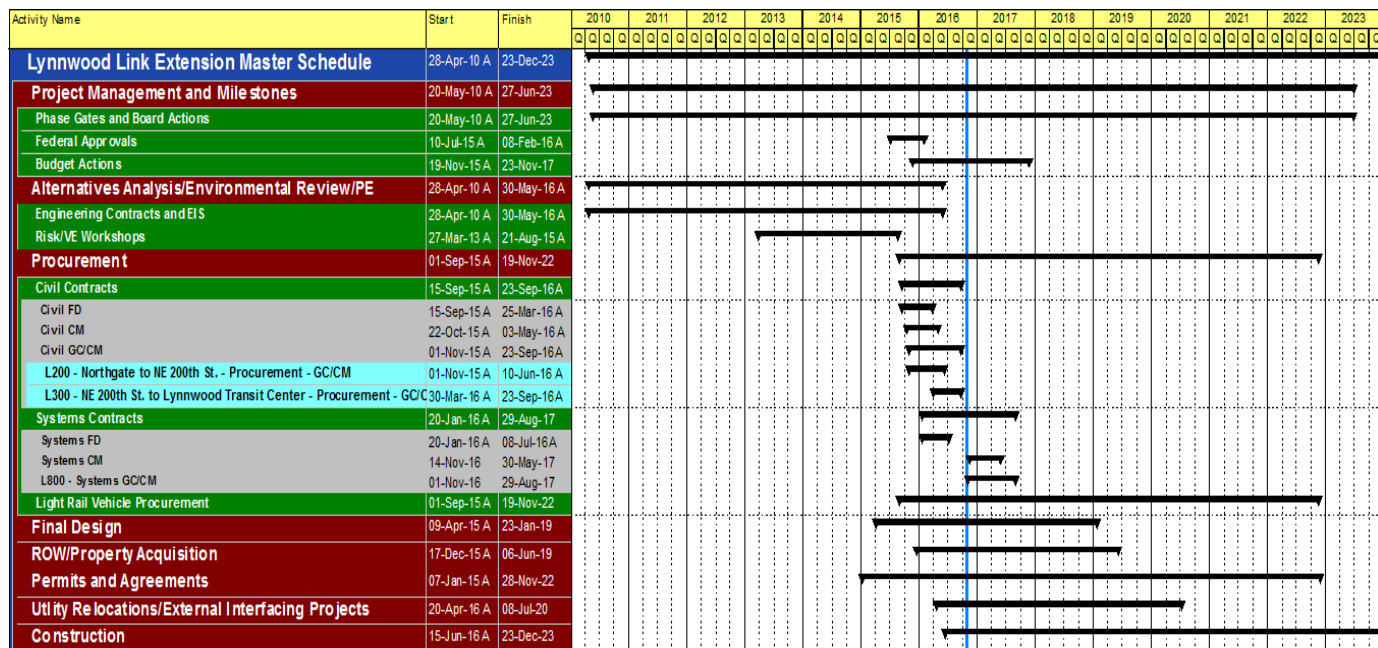
SCC Element	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$0.0	\$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	\$19.3	\$15.5	\$123.8	\$0.0
80 Professional Services	\$364.1	\$154.5	\$66.0	\$364.1	\$0.0
90 Unallocated Contingency	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total (10 - 90)	\$487.9	\$173.8	\$81.5	\$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 October and ST plans to hold the next risk workshop in December 2016.

Project Schedule

The project schedule is shown below.



Sound Transit Board Actions

Board Action	Description	Date
R2016-27	To acquire certain real property interests, including acquisition by condemnation to the extent authorized by law, and to reimburse eligible relocation and establishment expenses incurred by affected owners and tenants as necessary for the Lynnwood Link Ext.	Nov 29

Right-of-Way

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

Community Outreach

- Three open houses were held in Lynnwood, Shoreline and Mountlake Terrace. Meeting attendance was robust with a combined attendance of 402. At each meeting, mayors and councilmembers in attendance were recognized. The online open house also attracted large numbers of visitors and closed on November 30.
- Distributed 41 flyers to residents about geotechnical boring work on seven sites near their homes.

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

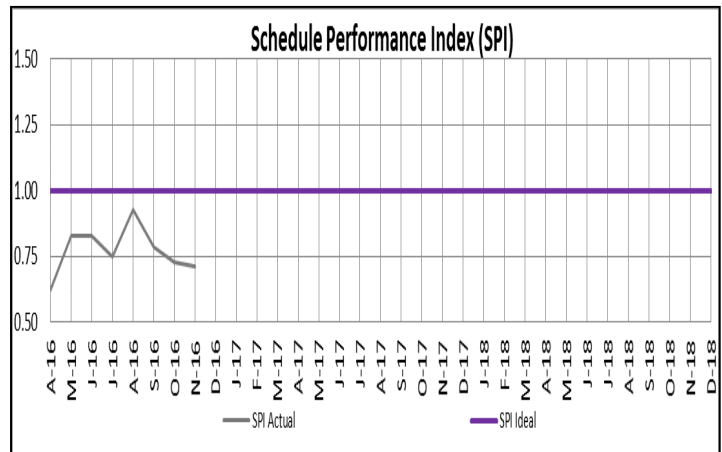
Sound Transit executed a professional services contract with HNTB Jacobs in April 2016 to perform Civil Final Design Services.

Civil Final Design Activities

- Progressing L100, L200 & L300 60% Design.

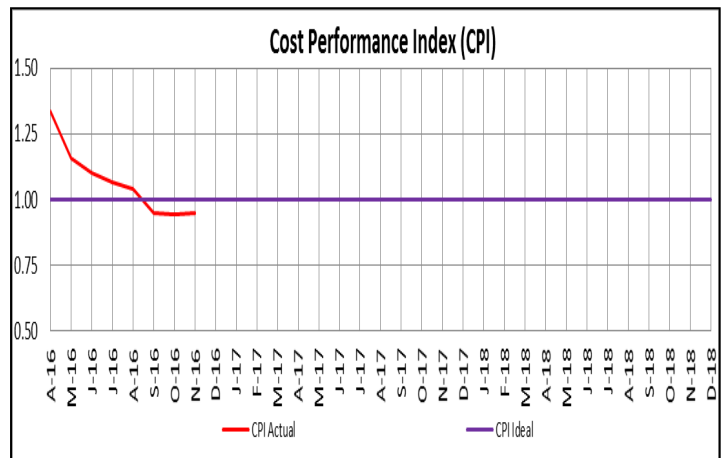
Civil Final Design SPI

The cumulative Schedule Performance Index (SPI) trends at 0.71 through November 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

\$12.2M of the total contract amount, 17%, has been spent through November 2016. The Civil Final Design percent complete is 16%, with an earned value of \$11.6M. The cumulative Cost Performance Index (CPI) through November is 0.95 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	\$9,812,240	\$2,429,280	\$12,241,521
% Spent	14%	3%	17%
Earned Value	\$9,279,559	\$2,365,613	\$11,645,172
% Complete	13%	3%	16%
SPI	0.73	0.66	0.71
CPI	0.95	0.97	0.95

Systems Final Design Overview

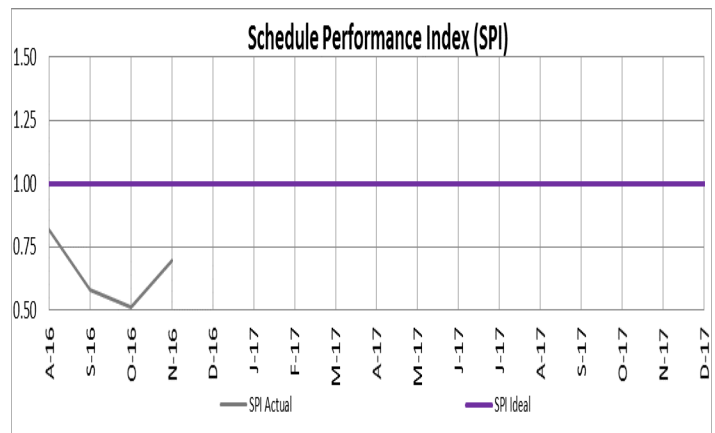
Sound Transit executed a professional services contract with LTK Engineering in July 2016 to perform Systems Final Design Services.

Systems Final Design Activities

- Systems Final Design kickoff and coordination meetings
- Coordinating final design schedule and earned value data.

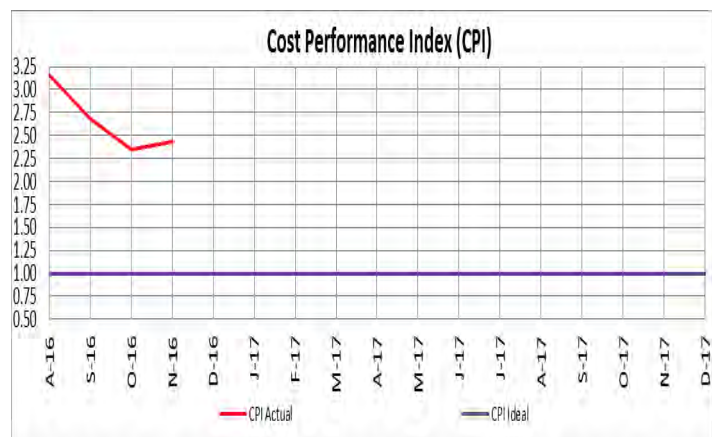
Systems Final Design SPI

The cumulative Schedule Performance Index (SPI) trends at 0.69 through November 2016, which means that cumulative work accomplished is significantly less than work planned. The monthly SPI for November was 1.16, indicating schedule recovery from earlier delays.



Systems Final Design Cost Performance

\$273K of the total contract amount, 3%, has been spent through November 2016. The Systems Final Design percent complete is 7%, with an earned value of \$666K. The cumulative Cost Performance Index (CPI) through November is 2.44 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	\$150,603	\$122,549	\$273,151
% Spent	2%	1%	3%
Earned Value	\$353,335	\$312,547	\$665,882
% Complete	4%	3%	7%
SPI	0.51	1.16	0.69
CPI	2.35	2.55	2.44

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

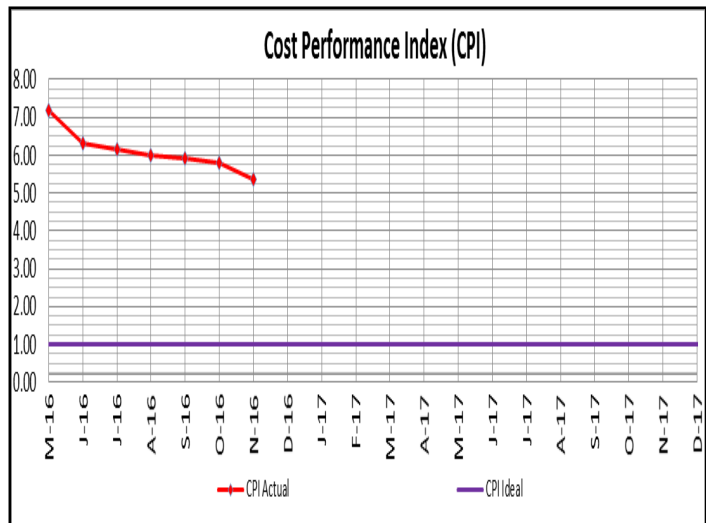
- Coordinating meetings with design, GC/CM, and ST teams.
- Coordination on various preconstruction activities including cost estimates, schedule, and constructability.

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

\$368K of the total contract amount, 5%, is spent through November 2016, with an earned value of \$1.96 M. The cumulative Cost Performance Index (CPI) through November is 5.34; indicating cost savings on the project. The monthly CPI for November was significantly high at 3.74. The consultant assumed more support staff would be engaged early in the contract schedule and that has not been the case. This is leading to an inflated CPI.



Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$232,206	\$79,618	\$367,567
% Spent	4%	1%	5%
Earned Value	\$1,666,951	\$297,571	\$1,964,522
CPI	5.79	3.74	5.34

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

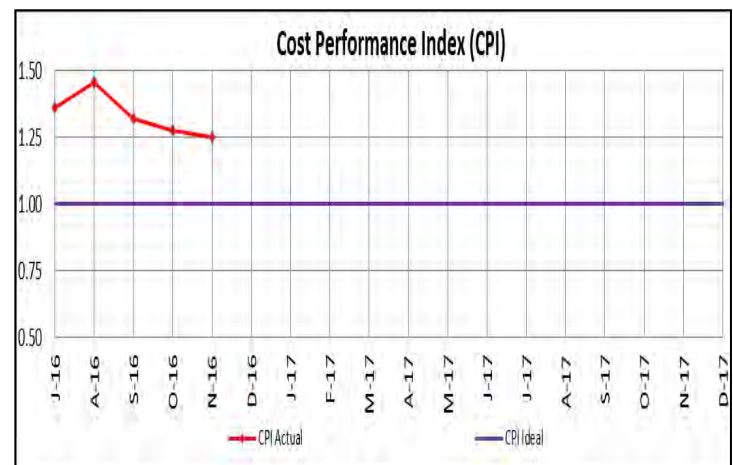
- Coordinating meetings with design, CM, and ST teams.
- Progress on various preconstruction activities including cost estimates, schedule, and constructability.

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

\$1M of the total contract amount, 20%, is spent through November 2016, with an earned value of \$1.25M. The cumulative Cost Performance Index (CPI) through November is 1.25; indicating actual costs are lower than planned.



Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$894,707	\$104,871	\$999,577
% Spent	17%	3%	20%
Earned Value	\$1,143,623	\$108,938	\$1,252,562
CPI	1.28	1.04	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

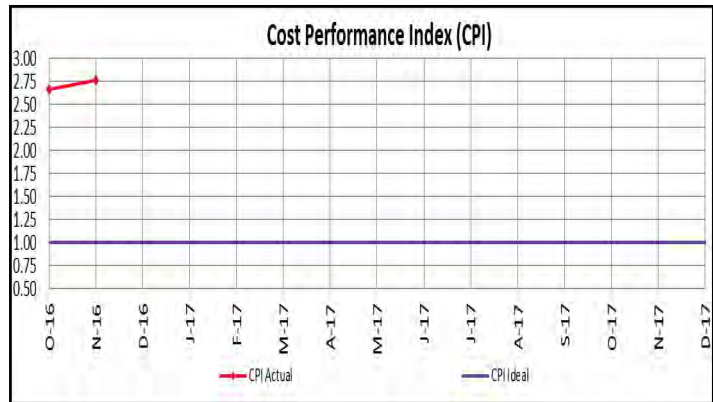
- Mobilizing Construction Management team, reviewing preliminary engineering design, cost estimates, and schedule.

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

\$278K of the total contract amount, 5%, is spent through November 2016, with an earned value of \$768K. The cumulative Cost Performance Index (CPI) through November is 2.76; indicating actual costs are significantly lower than planned.



Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$61,991	\$215,985	\$277,976
% Spent	1%	4%	5%
Earned Value	\$165,205	\$603,092	\$768,297
CPI	2.66	2.79	2.76



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* – Drainage work at 60th Ave. in Mercer Island, repair bridge railing anchors, rebar/form/pour barrier, install bridge pedestrian type railing, pull wire for variable message signs (VMS), terminate variable message signs, pump foam affluent to sewer at Mercer Island Tunnel (MIT)/Mount Baker Ridge Tunnel (MBRT), install luminescent sensors at west portal of MBRT.
- *Mercer Island Tunnel (MIT)* – Finalize adjustable speed drive fan wiring, westbound supply plenum upgrades, seal seams in EB, install dampers westbound MIT, MIT westbound saccardo grating.
- *Mount Baker Ridge Tunnel (MBRT)* – Egress walkway repairs, install damper closure plates, supply fan 2 damper control modifications, generator day tank piping and vents, jet fan control panel to MCC terminations, emergency egress anchors and strut, conduit and fixtures, install sign lighters west of MBRT, unit substation 4 control wire install, switch gear modifications, exhaust fan demo and installation to motor, install sign control wire, egress conduit and wire, add conduit and boxes at exhaust and supply fans for additional control wire, supply fan demo and install, startup and testing, install plenum hatches at saccardo nozzle.
- SCADA – Simplex interface, startup/testing of control of supply fan; exhaust fan 10 startup and testing, exhaust fan 11 demo and install, install damper and actuator.

Closely Monitored Issues

- Closely monitoring schedule, meeting with WSDOT on mitigation strategies to ensure timely completion
- Monitoring progress on UL and contract required changes to ASD (Adjustable Speed Drive) and VFD (Variable Frequency Drive) fan motors.
- Unit Substations all require corrective action, prior to bringing fans online.
- SCADA implementation remains to be a major risk.
- WSDOT suggests that they are on track for a June 1st turn-over of the center roadway.



South Portal pipe canopy head wall in cut-and cover.

Project Cost Summary

Total Project Cost expended this period is \$6.1M. 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	\$125.0	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$188.1	\$146.0	\$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	\$125.0	\$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	\$146.0	\$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	18.98%
Unallocated Contingency	\$18.7	8.3%	\$18.7	23.5%
Total	\$35.7	15.8%	\$33.7	42.3%

*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 target June 2023



Map of East Link Extension Alignment.

Key Project Activities

Seattle to South Bellevue

- *Floating Bridge:* Pricing set submitted. Consultant working on 100% submittal for QC.
- *Fixed Structures:* Pricing set submitted. Consultant working on 100% submittal for QC.
- *Judkins Park and Mercer Island Stations:* Pricing set submitted. Consultant working on 100% submittal for QC.
- DAP approved by FHWA. Phased PDA submittal being discussed with WSDOT and FHWA.
- There are currently 31 subcontract packages out for bid. First bid opening is scheduled for December.

South Bellevue to Redmond

- *E320 South Bellevue:* Issued Notice of Award; reviewed escrow bid documents; preparing for LNTP, reviewing ROW use permit issued by COB.
- *E330 Downtown Bellevue Tunnel:* Completed South Portal soil nail wall lift #5; Began drilling & grouting pipe canopy at tunnel headwall; Tunnel instrumentation continuing; Tunnel shotcrete mix design testing continuing; HJH completing the revision of the 3 Heading SEM; Community outreach conducted two drop-in sessions.
- *E335 Downtown Bellevue to Spring Dist.:* Began MACC negotiations and will continue over the next month; Bid opening of Station bid package and Wall package extended; continue to work with the City of Bellevue on MOT needs.
- *E340 Bel-Red:* Anticipated Bid Opening is December 6, 2016; responding to RFI's; MGI demolition started and on schedule; working with COB on ROW use permit.
- *E360 SR 520 to OTC:* Draft baseline schedule in review; All 30% design packages submitted and 9 returned to KH with comments; PREP meeting (site plan entitlement step) for the OTC site plan entitlement was held; met with Microsoft to discuss their request to have ST Contractor progress their pedestrian design change to establish pricing.

Closely Monitored Issues

- Meeting Civil and Systems design milestones and 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 \$15.3M was incurred this period.

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	\$51.7	\$51.5	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.6	\$54.4	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$231.5	\$186.3	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$137.2	\$20.8	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$34.7	\$8.8	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$693.6	\$65.7	\$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	\$188.0	\$183.6	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$1,391.3	\$571.1	\$3,677.2	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Current Adopted	Commitment to	Incurred to Date	Estimated Final Cost	Adopted Budget
10 Guideway & Track	\$744.6	\$744.6	\$280.2	\$32.4	\$727.3	\$46.2
20 Stations	\$397.7	\$397.7	\$156.3	\$4.1	\$431.4	(\$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	\$220.1	\$26.6	\$795.8	(\$27.6)
50 Systems	\$353.8	\$353.8	\$15.8	\$0.5	\$352.6	\$4.4
Construction Subtotal (10 - 50)	\$2,304.6	\$2,304.6	\$672.4	\$63.6	\$2,307.1	(\$2.4)
60 Row, Land	\$288.5	\$288.5	\$188.0	\$183.6	\$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	\$530.9	\$323.9	\$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	\$1,391.3	\$571.1	\$3,677.2	\$0.0

Risk and Contingency Management

Risk Management

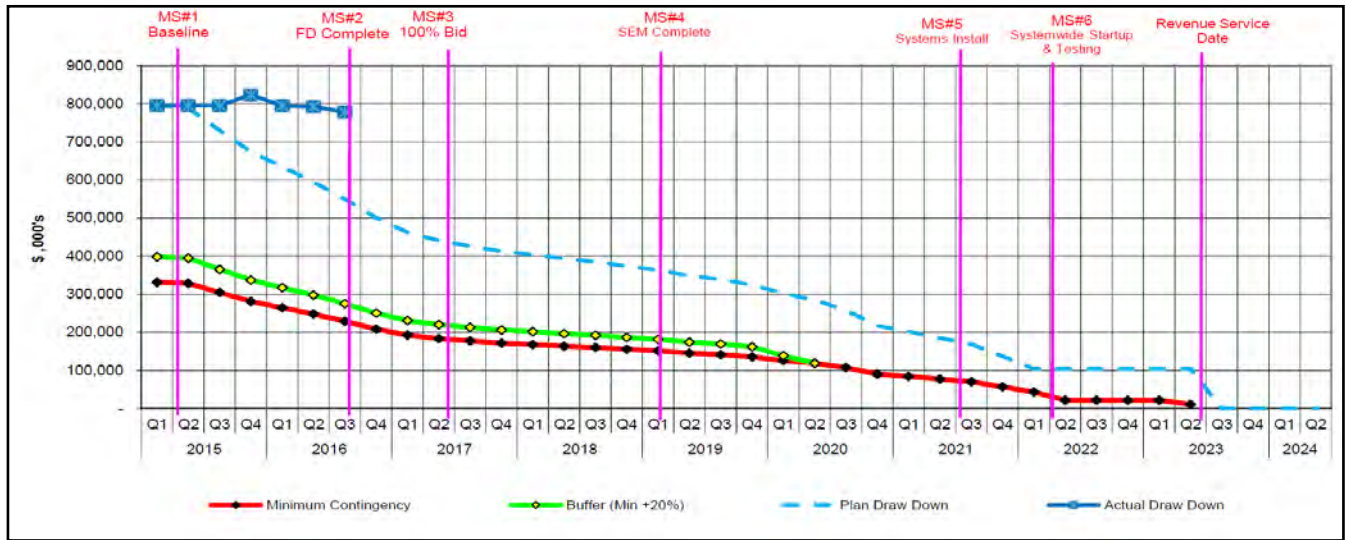
The RCMP established a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring 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 2017.

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 a net \$0.8M, to a new total amount of \$776.3M. The contingency balance remained higher than the anticipated draw down.



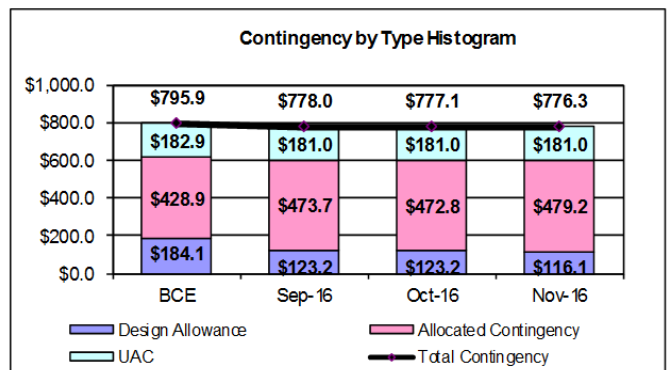
Design Allowance is used to account for scope that could not be quantified at the time of the cost estimate. This period, the remaining design allowance for E320 in the amount of \$7.1M was transferred to Allocated Contingency, since the contract procurement process is now completed. The balance of overall Design Allowance is now \$116.1M. As the designs continue to be progressed 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 increased by a net \$6.3M. This was due to the transfer of remaining Design Allowance from E320, which was partially offset by execution of change orders on the E360 contract and So. Bellevue to OTC Final Design. Total allocated contingency balance is now \$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%	\$116.1	3.7%
Allocated Contingency	\$428.9	11.7%	\$479.2	15.4%
Unallocated Contingency	\$182.9	5.0%	\$181.0	5.8%
Total:	\$795.9	21.6%	\$776.3	25.0%

Dollar figures on this page are displayed in millions.



Project Schedule

With the E340 Bel-Red advertisement in October 2016, 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 entered the post-90% phase of preparing and reconciling estimates. Both E335 and E750 formally entered MACC negotiations, with negotiations for E130 expected to start in December.

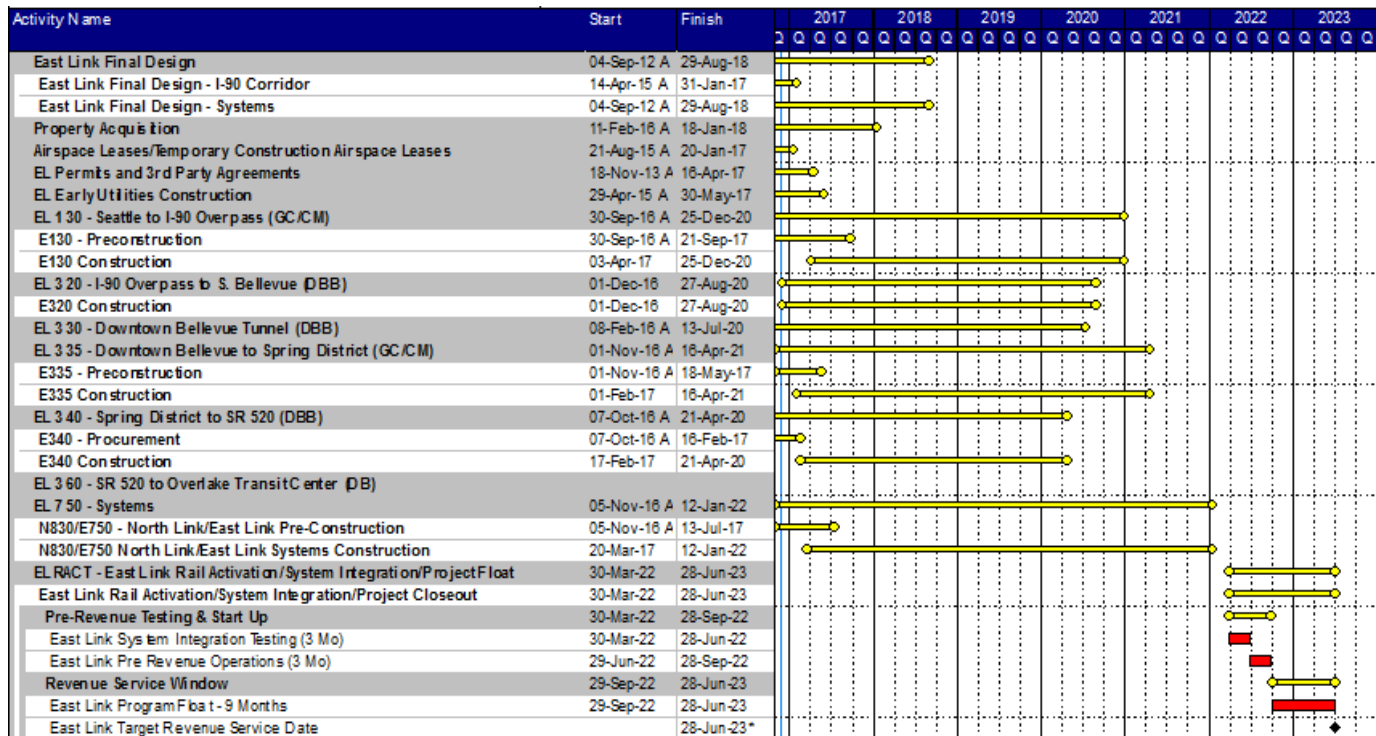
The ST Board approved the E320 South Bellevue Design-Bid-Build contract; execution was finalized at the end of November and LNTP will be issued on December 5, 2016.

E340 bid opening is scheduled for December 6, 2016. With the close of the RFI period in late November, Phase II of the HJH Final Design contract has been completed.

E330 Downtown Bellevue Tunnel continued work at the South Portal, installing temporary erosion/sediment control and traffic control, along with piezometers, inclinometers, and extensometers. Contractor continued mobilizing tunnel equipment and are expected to start tunneling in January 2017.

The E360 SR 520 to OTC contract baseline schedule was approved. 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 still forecast to complete on or before target. Revenue Service is forecasted in June 2023.



Critical Path Analysis

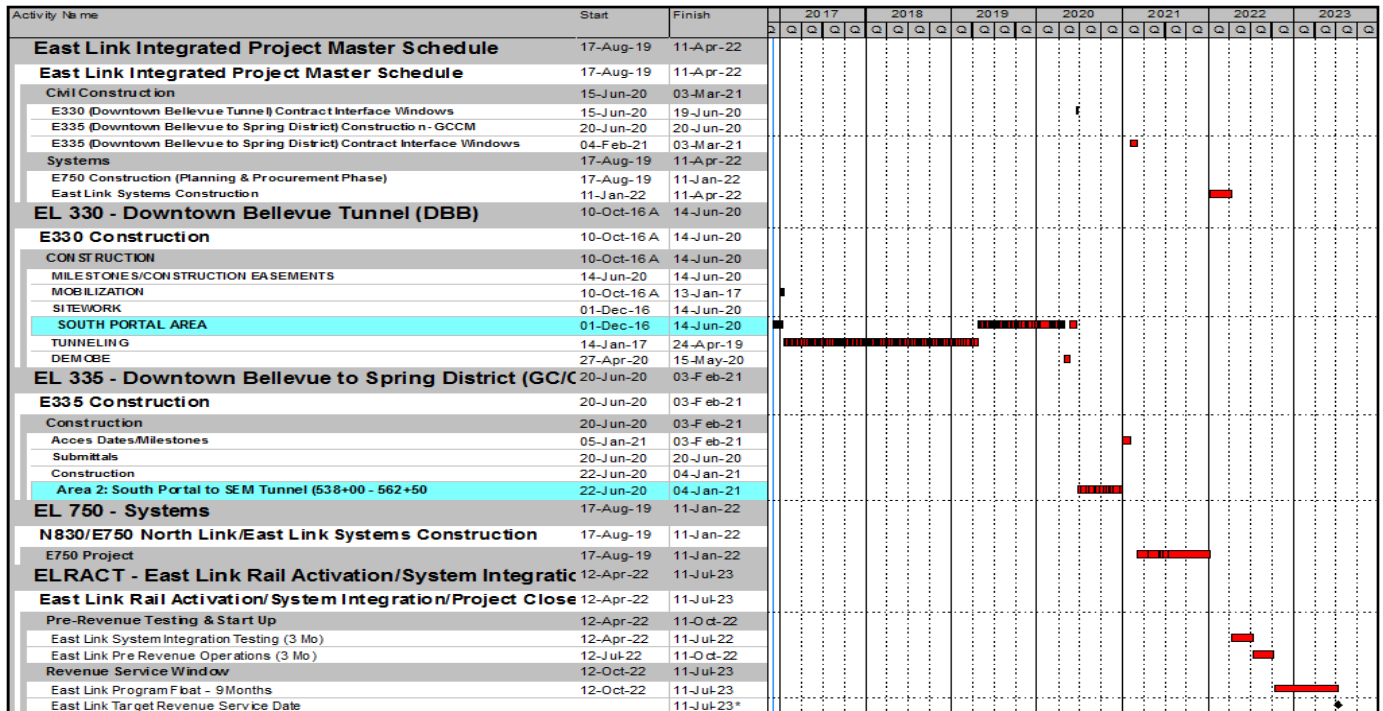
The critical path is currently running through the handover of the E330 tunnel to the E335 Contractor; work on the South Portal Electrical Building drives substantial completion of E335 and subsequently the critical path of E750. However, there is language in pending CO #10 to switch from 6-drift to 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.

Link Light Rail East Link Extension



Critical Path Analysis, continued

The East Link critical path schedule is shown below.



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	6	145	236	188

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- 11 offers made; 1 Admin Settlement approved; Air Space Lease discussions with WSDOT continue.

E330 Downtown Bellevue – 2 offers made; 2 parcels closed

E335 Downtown Bellevue to Spring District - 1 Admin Settlement approved; 7 relocations identified; 1 parcel vacated

E340 Bel-Red - 5 offers made; 2 parcels signed; 1 parcel granted P&U; 2 parcels vacated

E360 SR 520 to OTC– 3 offers made; 2 parcels signed . Air Space Lease discussions with WSDOT continue.

Construction Safety

Data/ Measure	November 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	1	13	13
Average Number of Employees on Worksite	40	-	-
Total # of Hours (GC & Subs)	3,300	36,735	36,735
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
R2016-28	Acquire certain real property interests, including acquisition by condemnation to the extent authorized by law, and to reimburse eligible relocation and reestablishment expenses incurred by affected owners and tenants as necessary for the East Link Extension.	Nov 29

Community Outreach

- Hosted an open house for the design and construction of the E360 segment in the Overlake/Redmond area and 76 people attended.
- Door to door distribution of 1,993 post cards advertising Rail and Ice holiday event for So. Bellevue community.
- Attended various meetings including:
 - City of Bellevue and ST jointly-hosted Bellevue Business Resource Form to present project construction timeline and ST's Business relations Program; 35 attendees.
 - Transportation Fair at Intellectual Ventures I Bellevue, spoke about trip planning, East Link construction, and South Bellevue Park and Ride closure; 38 people attended.
 - MGI Tenant Appreciation event in Bel-red and provided pre-construction info.

Environmental

- Continued developing environmental permit application packages. Environmental commitments are being incorporated into the design, program, and specifications of the project.
- Sound Transit anticipates issuing a SEPA Addendum for the East Link I-90 corridor to evaluate project refinements. The Addendum provides additional information about minor changes to the project.

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: Bid 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

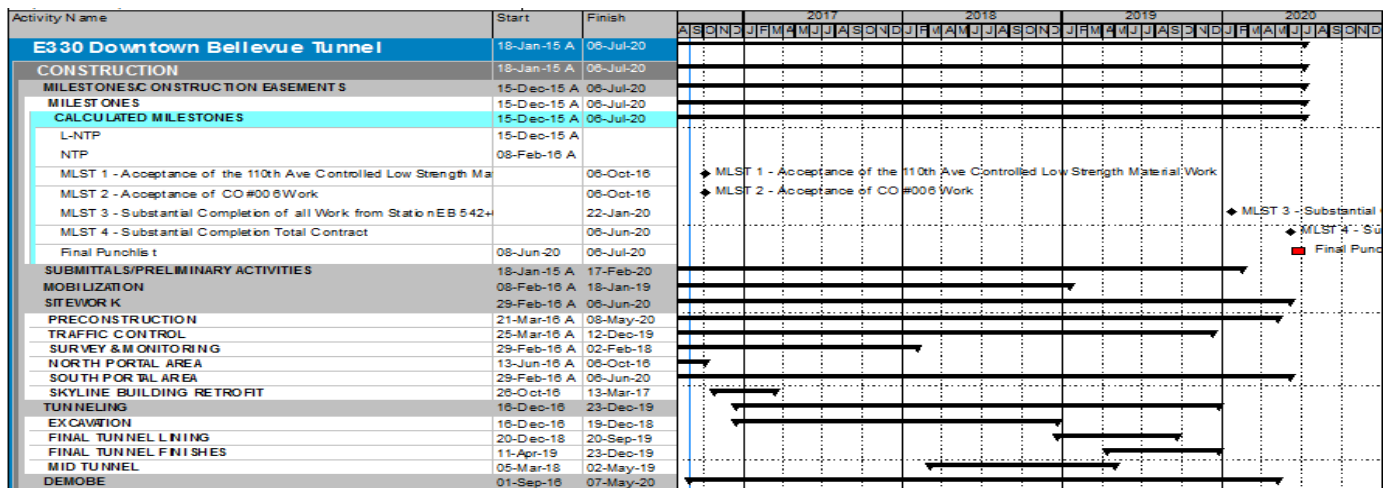
Current Progress

South Portal: The Contractor completed soil nail wall excavation, thru lift 5 during the month and will resume with lift 6 excavation after pipe canopy is completed. Continued drilling and grouting of the bottom row of pipe canopy at the tunnel headwall. The Contractor continued setting up tunnel support structures and began mobilizing 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: Installation of the monitoring equipment for piezometers, inclinometers, and extensometers continued. Continued installation of dewatering wells in front of the Marriott and the PSE building. Continued design of the cast iron water pipe replacement due to the (3 in lieu of 6) Heading alternate design, and began developing estimates for the scope change.

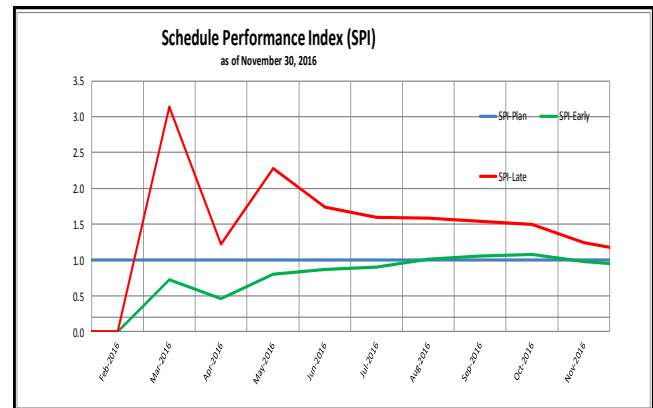
Schedule Summary

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. The contractor is currently modeling a change in excavation method for the southern 60% of the tunnel which, if approved, could realize up to three months of additional schedule savings.



Schedule Performance Index

This period, the SPI early (.93) continues trending slightly behind of schedule and the SPI late (1.11) continues to trend on completion ahead of the baselined schedule. The index indicates that the contractor is now on a similar timeframe to the baseline schedule. This trend is supported by the fact that the soil nail wall installation continues to take longer than expected, as experienced during the past two 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.



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 6-9 should be completed.
- Continue mobilizing equipment and complete support structures preparations ahead of tunneling.

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 and contractor continue working out the impact and cost of the night and weekend work hours and the lost resources for re-planning and meetings. Team working to have an executed change order in place prior to starting the work in January 2017.
- Design of the cast iron water pipe replacement due to the (3 in lieu of 6) Heading alternate design continues, and preliminary estimates for the scope change have begun.

Cost Summary

Present Financial Status	Amount
E330 Contractor– Guy F Atkinson Construction, LLC.	
Original Contract Value	\$121,446,551
Change Order Value	\$935,054
Current Contract Value	\$122,381,605
Total Actual Cost (Incurred to date)	\$22,025,199
Financial Percent Complete:	18%
Physical Percent Complete:	18%
Authorized Contingency	\$12,144,655
Contingency Drawdown	\$935,054
Contingency Index	2.33



South Portal pipe canopy head wall in cut-and cover.

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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):* The second elevator cab is scheduled mid-December for L&I inspection. The project team continues to work toward Substantial Completion.
- *Military Road/South 200th (S446):* Construction work managed by WSDOT continues.
- *Roadway Improvements (S447):* Construction nearing Substantial Completion.

Closely Monitored Issues

- *S440:* Completion of Training, O&M Manuals – corrective actions need to be completed.
- *S440, S445, S447:* Need to evaluate/negotiate 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	\$15.4	\$15.4	\$16.5	\$0.2
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	\$16.2	\$16.4	\$17.2	\$0.1
3rd Party Agreements	\$6.9	\$7.1	\$5.7	\$3.8	\$5.2	\$1.9
Construction	\$275.7	\$282.9	\$234.9	\$229.2	\$248.9	\$34.0
Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$43.5	\$43.5	\$42.9	\$38.0	\$38.9	\$4.7
Capital Total	\$383.2	\$383.2	\$329.4	\$317.4	\$341.2	\$42.0
Finance Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Project Total	\$383.2	\$383.2	\$329.4	\$317.4	\$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 \$4.3M, of this \$0.2M was for construction services, \$3.9M for construction closeout activities and mitigation payment, and the remaining expenditures for \$0.2M 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	\$98.8	\$99.2	\$110.9	\$22.1
20 Stations	\$46.4	\$51.3	\$39.6	\$39.6	\$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	\$56.2	\$50.4	\$57.8	-\$2.5
50 Systems	\$30.8	\$19.9	\$19.3	\$19.1	\$19.5	\$0.5
Construction Subtotal (SCC 10-50)	\$256.6	\$259.6	\$214.0	\$208.4	\$228.6	\$31.0
60 Row, Land, Existing Improvements	\$43.5	\$43.5	\$42.9	\$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	\$72.5	\$70.9	\$67.6	\$4.5
90 Unallocated Contingency	\$19.0	\$8.0	\$0.0	\$0.0	\$6.2	\$1.8
Project Total (SCC 10-90)	\$383.2	\$383.2	\$329.4	\$317.4	\$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	\$329.4	\$317.4	\$341.2	\$42.0

Cost Contingency Management

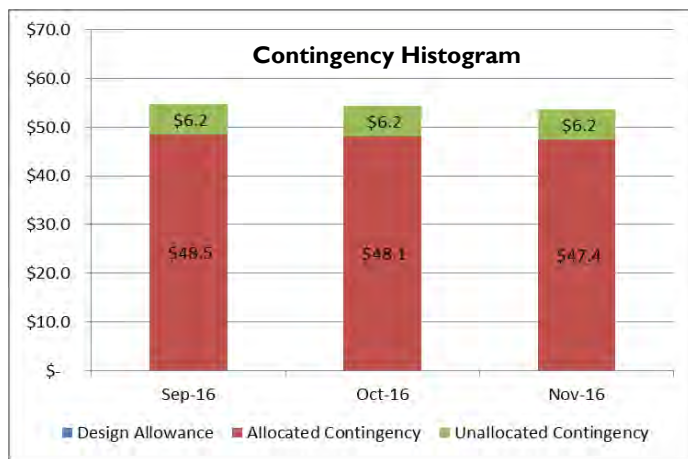
The overall project contingency balance as of this period is \$53.6M.

Design Allowance (DA): N/A

Allocated Contingency (AC): This period the AC shows a current balance of \$47.4M, a small decrease of \$0.7M from the previous period. The reduction was primarily due to Administration commitments of \$.3M and construction change orders 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%	\$47.4	198.4%
Unallocated Contingency	\$19.0	5.0%	\$ 6.2	26.0%
Total	\$75.5	20.0%	\$53.6	224.4%



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. Completed elevator installation and Final L & I inspections only for Elevator #1.

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.
- Continued troubleshooting cistern at Station (south plaza).
- Continued change order work and address contract close-out items.
- Continued 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	\$5,064,139
Current Contract Value	\$174,064,139
Total Actual Cost (Amount Billed)	\$172,341,330
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	\$13,520,000
Contingency Drawdown	\$5,064,139
Contingency Index*	2.6



Angle Lake Station after sunset.

S445 Contract—Design -Build Parking Garage

Close-out Progress

The S445 parking garage is now open to the public. Completed elevator installation and L&I inspection of Elevator #1; final acceptance was issued on October 13, 2016. Completed procurement of replacement transformer for Elevator #2.

Key Activities

Current Period

- Completed installation of woven screen on south facade.
- Completed installation of overhead garage entrance sign on S. 200th.
- Completed elevator adjustments and replacement transformer for Elevator #2.
- Completed installation of CCTV camera on Elevator #2.
- Started L&I inspection for Elevators #1 and #2.
- Continued garage signage and theme painting.
- Continued clearing and demobilization of Contractor staging area.
- Continued TOD site restoration activities, seeding, fencing and gates.
- Winterized irrigation and non-potable water system.

Next Period

- Complete L&I inspection of Elevator #2.
- Conduct Final Inspection and Punchlist.
- Complete TOD restoration.
- Continue addressing preliminary punch-list items.

Closely Monitored Issues

- Received RFC #30 on October 19, 2016 requesting additional time and cost associated with elevator procurement and installation. Partnering meeting was held on November 1, 2016 where the Contractor discussed their basis for the RFC and provided background and chronology of the development, approval, procurement and installation of elevators for the parking garage. The RE responded to the Contractor regarding RFC #30 on November 30, 2016 denying entitlement.

Cost Summary

Present Financial Status	Amount
S445 Contractor—Harbor Pacific/Graham	
Original Contract Value	\$29,978,000
Change Order Value	\$2,183,709
Current Contract Value	\$32,161,709
Total Actual Cost (Amount Billed)	\$31,950,040
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	\$2,798,240
Contingency Drawdown	\$2,183,709
Contingency Index*	1.27



Installed overhead garage sign.

S447 Contract – Station Area Roadway Improvements and Surface Parking

Current Progress

S447 Contractor continues pre-punchlist work.

Key Activities

Current Period

- Completed grade, subgrade and placed final asphalt paving.
- Continued installing traffic controller and service foundations at Des Moines Creek.
- Completed cameras and emergency phone work at surface parking lot.
- Pre-punch list work ongoing as substantial completion approaches.
- Began weekly closeout meeting and continue change management meetings.

Next Period

- Continue punchlist work and any work around items.
- Continue closeout and change management meetings.

Closely Monitored Issues

- None at this time.

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)	\$11,063,497
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	\$2,642,640
Contingency Drawdown	\$2,642,640
Contingency Index*	1.0



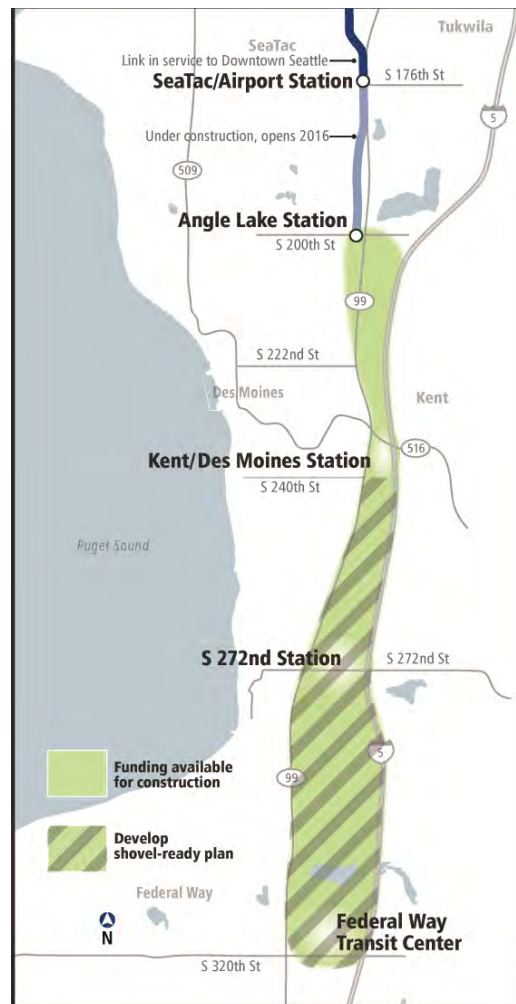
Adding bike lane markings on S. 200th.

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.



Map of Federal Way Link Extension.

Project Cost Summary

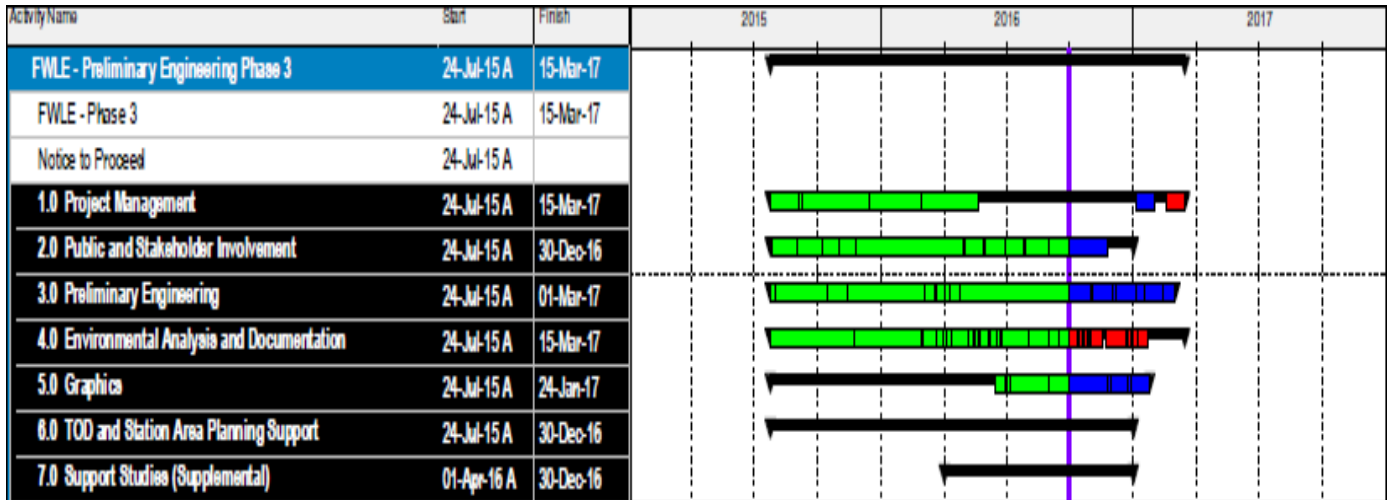
In July 2015, the Sound Transit Board identified the preferred alternative and station locations and approved the Federal Way Link Extension Phase 3 (PE and Final EIS) contract amendment.

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	\$5.3	\$5.3	\$4.1	\$9.4	\$0.0
Preliminary Engineering	\$33.3	\$30.8	\$28.0	\$2.6	\$33.3	\$0.0
Third Parties	\$2.4	\$1.2	\$0.7	\$1.2	\$2.4	\$0.0
Right of Way	\$3.6	\$1.1	\$0.7	\$2.6	\$3.6	\$0.0
Total	\$48.8	\$38.3	\$34.7	\$10.4	\$48.8	\$0.0

Project Schedule

The Final EIS and Preliminary Engineering was extended to 1st QTR 2017.



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

- Hosted neighborhood briefings with residents in various neighborhoods including Green Acres Mobile Home Park, South Midway (Kent), and Crestwood at Star Lake (Federal Way).
- Follow-up inquiries regarding the Final EIS.
- Follow-up with individuals from prior neighborhood briefings to answer additional questions.
- Provided a project update to the South King County Mobility Coalition and 15 people attended.

Environmental

- None to report.

Phase 3 Preliminary Engineering (PE)

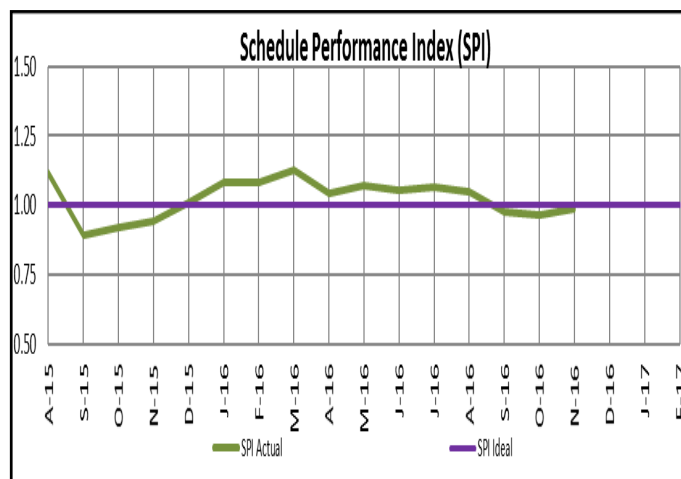
In July 2015, Sound Transit executed an amendment to the professional services agreement with HDR Engineering, Inc. for Phase 3 professional services, including completion of a Final Environmental Impact Statement (FEIS) using the preferred alternative and the other alternatives in the Draft EIS, preliminary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

- Current activities include review of administrative drafts by FTA.
- Distributed Pre-Final PE submittal for internal and third party review. Continued coordination with third parties regarding design, permitting and construction coordination issues.
- Continued coordination with potentially affected property owners including neighborhood briefings and one-on-one meetings.
- Continued discussion of term sheets with affected jurisdictions to address code/permitting requirements and design review process for next phase of project development.
- Continue discussion with FTA regarding New Starts requirements for Entry to Engineering.

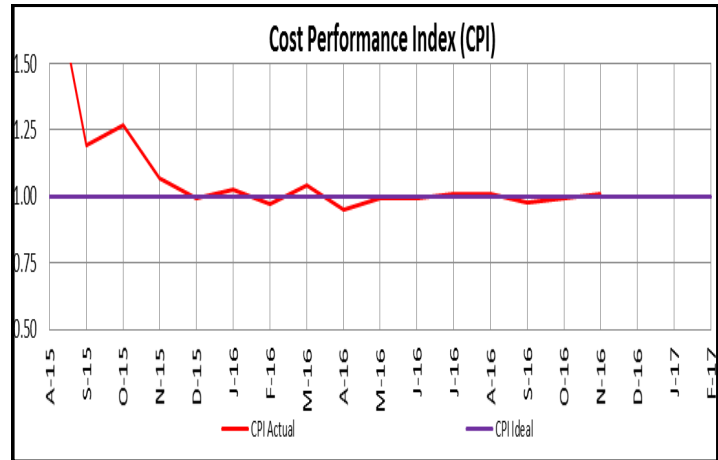
Phase 3 Schedule Performance

The cumulative Schedule Performance Index (SPI) is 0.99 through November 2016, indicating the overall amount of work accomplished is nearly on planned. Review of the consultants draft Phase 3 schedule indicates that completion of the FEIS comment period to publish the ROD is currently on the critical path.



Phase 3 Cost Performance

\$27.1M of the total contract amount, approximately 90%, has been spent through November 2016. Phase 3 expenditures totaled \$15.3M, approximately 84% of the Phase 3 contract total. The Phase 3 percent complete reported at 84%, with an earned value of \$15.4M. The cumulative Cost Performance Index (CPI) is 1.01, 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	\$14,787,598	\$522,297	\$15,309,895
% Spent	81%	3%	84%
Earned Value	\$14,654,576	\$791,133	\$15,445,710
% Complete	80%	4%	84%
SPI	0.97	1.55	0.99
CPI	0.99	1.51	1.01

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 and utility providers.

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 to be issued late 4th QTR 2016.

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	\$2.8	\$2.9	\$10.6	\$0.0
Preliminary Engineering	\$5.9	\$5.6	\$5.6	\$5.9	\$0.0
Final Design	\$10.8	\$7.7	\$0.9	\$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	\$18.1	\$9.7	\$33.0	\$0.0

Cost Summary by SCC

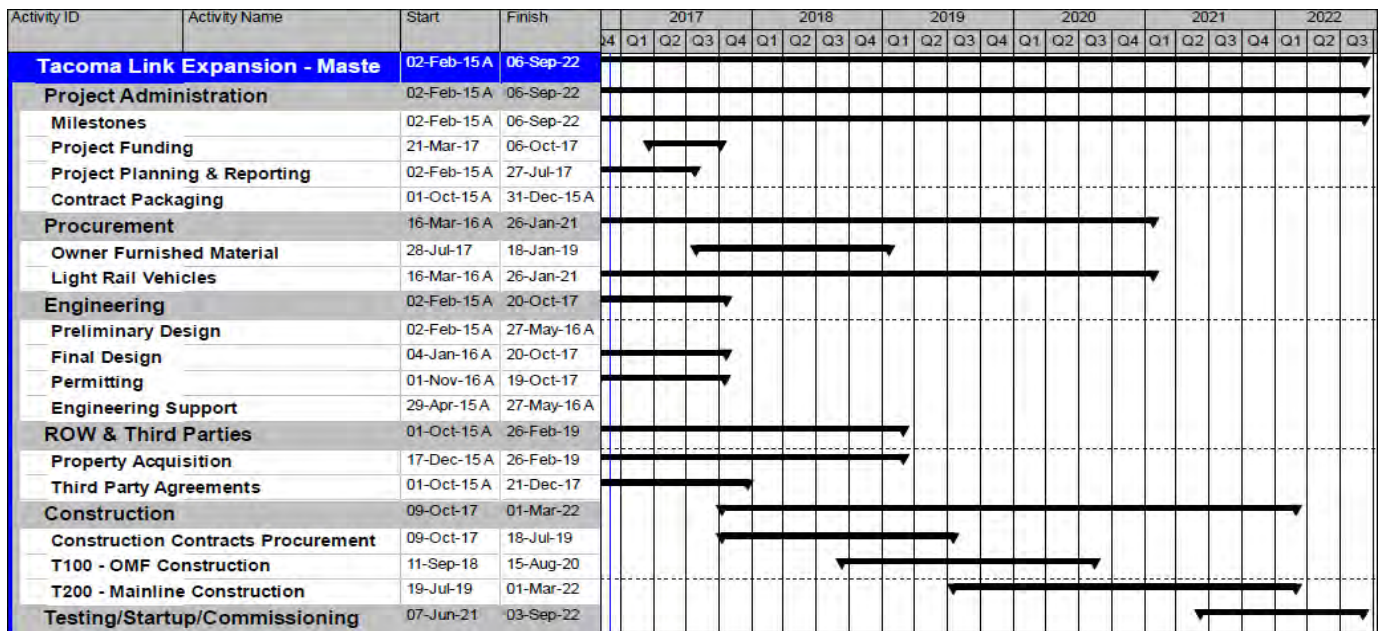
Project Elements by SCC	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$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	\$16.0	\$9.4	\$27.8	\$0.0
90 Unallocated Contingency	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total (10 - 90)	\$33.0	\$18.1	\$9.7	\$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. The next meeting will be held on December 19.

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. The CMC contract acquisition process is underway with SOQs due mid-December 2016.



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

- Prepared for upcoming Open House in December 2017.
- Attended Hilltop Business District and presented project update.
- Facilitated meeting with MultiCare and discussed safety concerns; 7 people attended.

Final Design

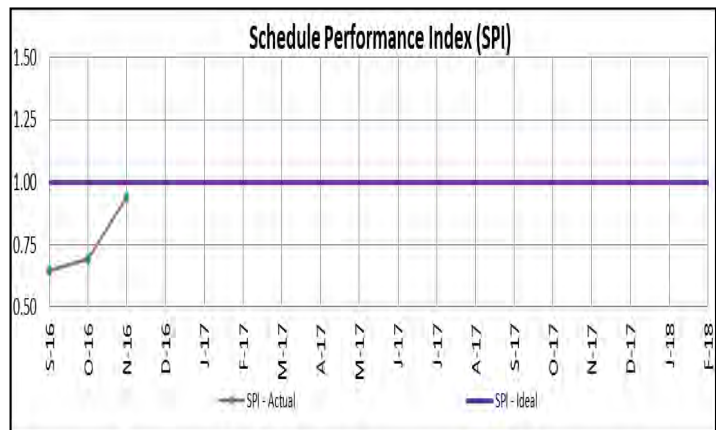
In July 2016 Sound Transit executed a contract with HDR Engineering, Inc. to provide civil and systems final design services for Tacoma Link.

Final Design Key Activities

- Continued evaluating Value Engineering (VE) recommendations.
- Geotechnical Site Investigation Plan finalized and submitted. Continued OMF foundation design and other miscellaneous structures along the alignment. OMF design efforts focused on space planning, establishing floor plans & equipment layout, finalizing the yard configuration, and continuing the LEED certification process and assessing sustainability opportunities.
- Developing curb & roadway improvements, TPSS and platform site designs, track alignment & profiles, station canopy and furnishings concepts.

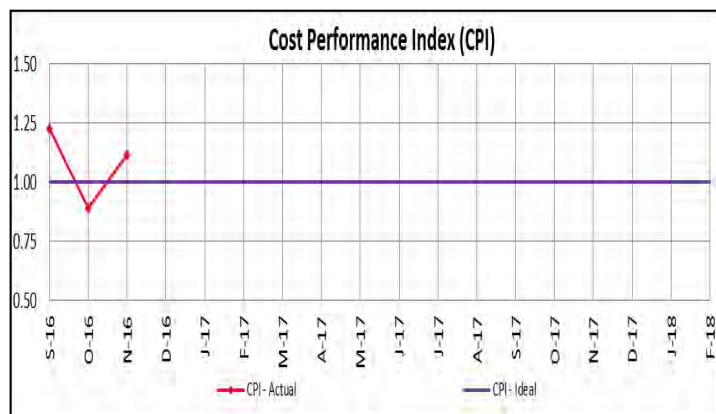
Final Design Schedule Performance

The cumulative Schedule Performance Index (SPI) for the Final Design contract is 0.94 through November, indicating that the project Earned Value is slightly less than planned. Most initial schedule delays have been corrected.



Final Design Cost Performance

Contract expenditures through November totaled \$849K, approximately 11% of the Final Design contract total. The Final Design contract percent complete reported at the end of November is 13%, with an earned value of \$950K. The cumulative Cost Performance Index (CPI) through November is 1.12; indicating cost efficiency for work completed.



Phase 3 Performance	Previous period	Current Period	Cumulative To-Date
Amount In-voiced	\$507,988	\$376,841	\$849,321
% Spent	7%	4%	11%
Earned Value	\$452,729	\$496,832	\$949,561
% Complete	6%	7%	13%
SPI	0.54	1.39	0.94
CPI	0.89	1.32	1.12

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

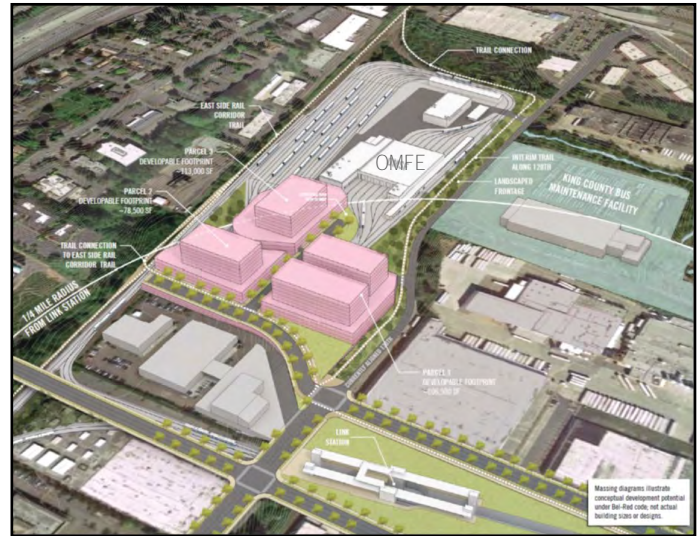


Illustration of OMFE site

Key Activities

- Weekly coordination meetings are held with the consultant and ST Operations/Facilities to review the project ongoing procurement.
- Evaluation team received and responding to pre-proposal questions for RFP.
- Addressed proposer submitted Alternative Technical Concepts (ATCs) and RFIs.
- Completed Phase 2 environmental field work on all parcels, except for one non-responsive owner-preparing condemnation paperwork.
- DBPM procurement continues, anticipate ST Board action to award contract January 2017.
- Procurement of TOD advisor support during Concept Validation period continues; evaluations and selection scheduled for first week in December.
- Agreed on final draft PSE Letter of Understanding with revised rail spur exhibit.
- ST staff met with City of Bellevue OMF East, assigned permitting staff to provide overview of project and design build process.
- Prepared to finalize King County wastewater relocation draft agreement which has been reviewed by both legal counsels.
- Submitted draft PMP to FTA and received partial comments. ST to respond by end of 2nd QTR 2017.
- Met to review ST2 fleet expansion delivery presented in Siemens BAFO schedule.

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	\$2.1	\$2.1	\$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	\$35.8	\$34.1	\$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 \$0.09M was Administration, PE was \$0.04M and ROW was \$0.05M 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	\$11.1	\$10.6	\$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	\$35.8	\$34.1	\$449.2	\$0.0

Cost Contingency Management

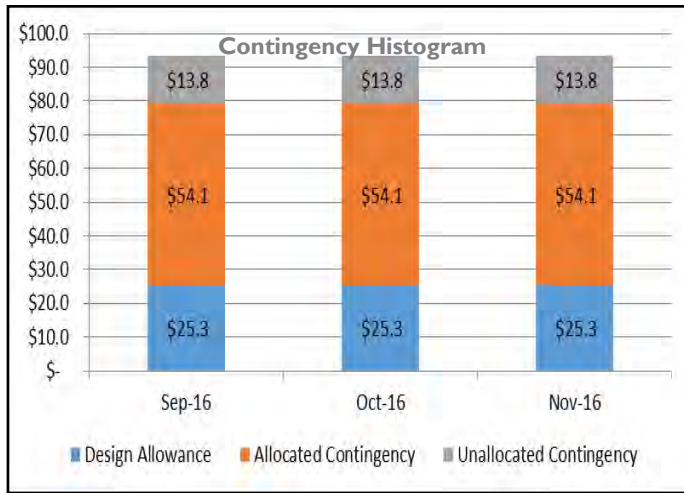
Compared to the Baseline amount of \$93.2M, the current Total Contingency remains the same at \$93.2M.

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%



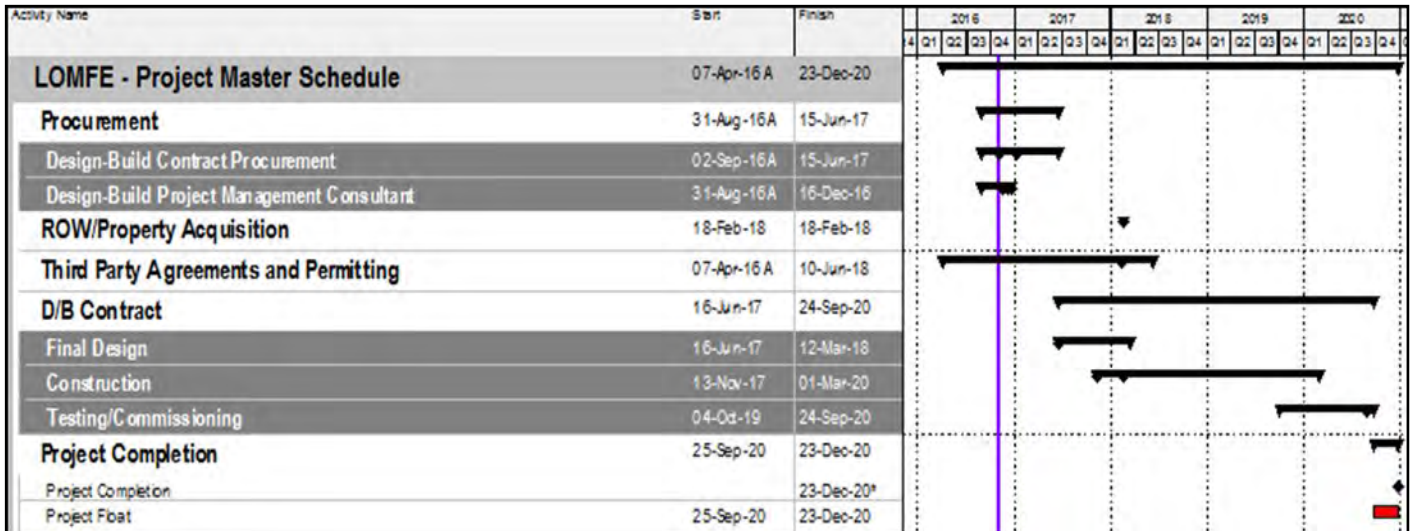
Risk Management

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.
- City of Bellevue requesting additional site improvements not included in the agreements.
- Authorities Having Jurisdiction not fully communicating all of their requirements to Sound Transit.
- Changes in storm water facility estimate assumptions by DB contractor.
- Designing and procuring special track-work.

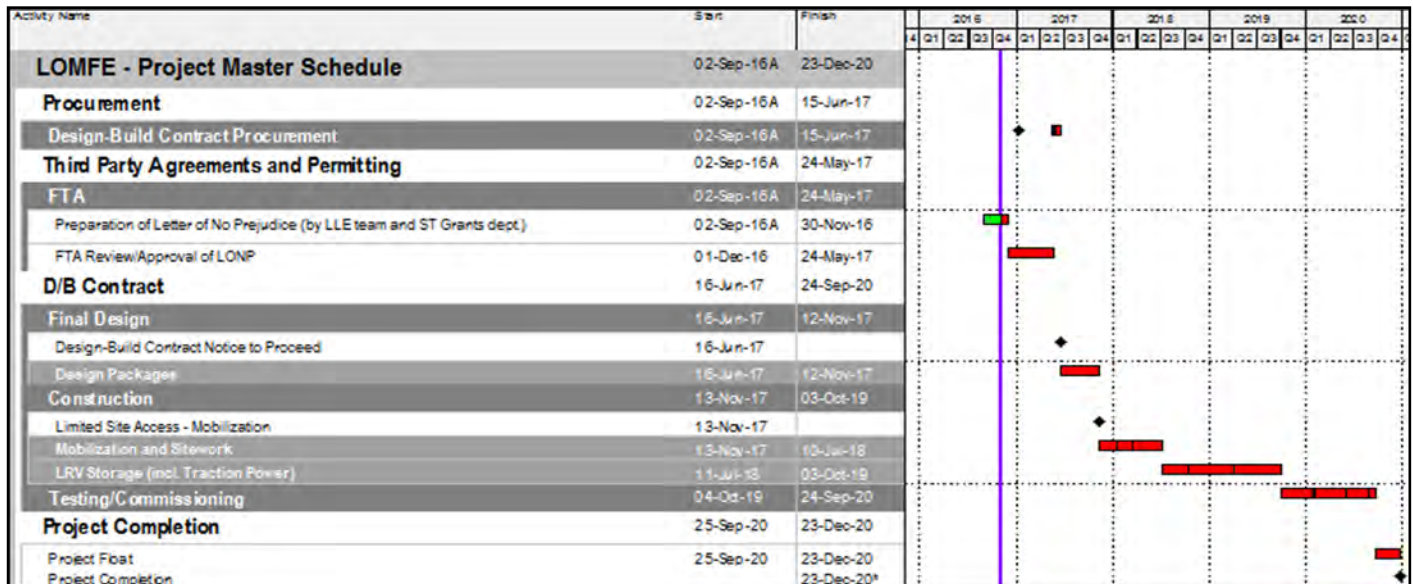
Project Schedule

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.



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.

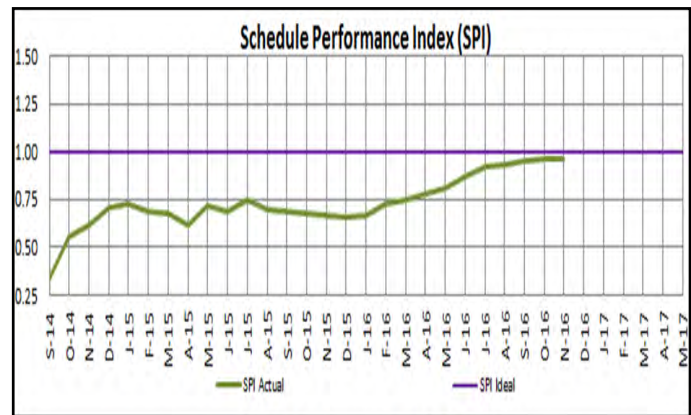
Phase 2 Key Activities

- RFP issued to shortlisted proposers on September 2, 2016. Conducted one-on-one meetings with proposer teams.
- 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.
- Continue 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

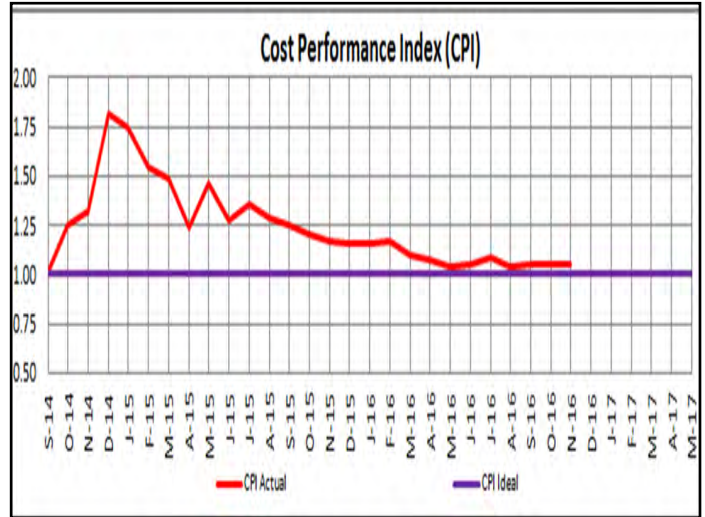
The cumulative Schedule Performance Index (SPI) trends at 0.96 through November 2016, which means that cumulative work accomplished is slightly less than work planned.

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 November 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	\$4,858,161	\$42,780	\$4,900,941
% Spent	91%	1%	92%
Earned Value	\$5,101,338	\$24,014	\$5,125,352
% Complete	96%	<1%	96%
SPI	0.96	0.00	0.96
CPI	1.05	0.56	1.05

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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 commence early submittal work after NTP was issue in October. Current activities at this stage will be revolving around Contract Deliverable Requirement List (CDRL).

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 \$1.9M 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	\$0.0	\$714.2	\$0.0
Total	\$733.0	\$733.0	\$522.6	\$1.9	\$733.0	\$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
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	\$1.7	\$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	\$1.9	\$733.0	\$0.0

Cost Contingency Management

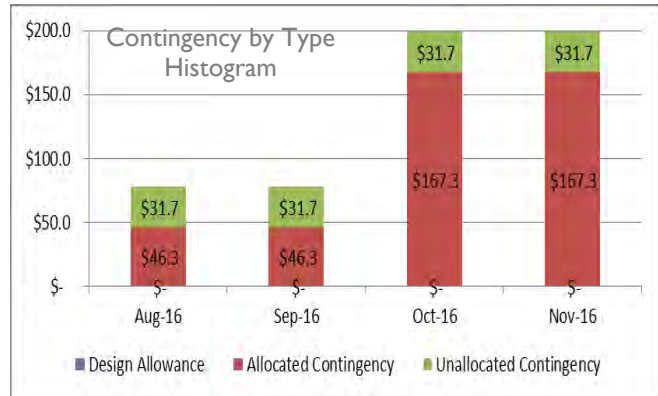
The project's baseline budget, which was approved by the Sound Transit Board in September 2015 and includes a total of \$78.0M of Total Contingency. Overall contingency is currently 27.2% of remaining work.

Design Allowance – This project contains \$0 design allowance.

Allocated Contingency – The project baseline contains \$46.3M of allocated contingency. The allocated contingency has been increased to \$167.3 due to a favorable contract procurement.

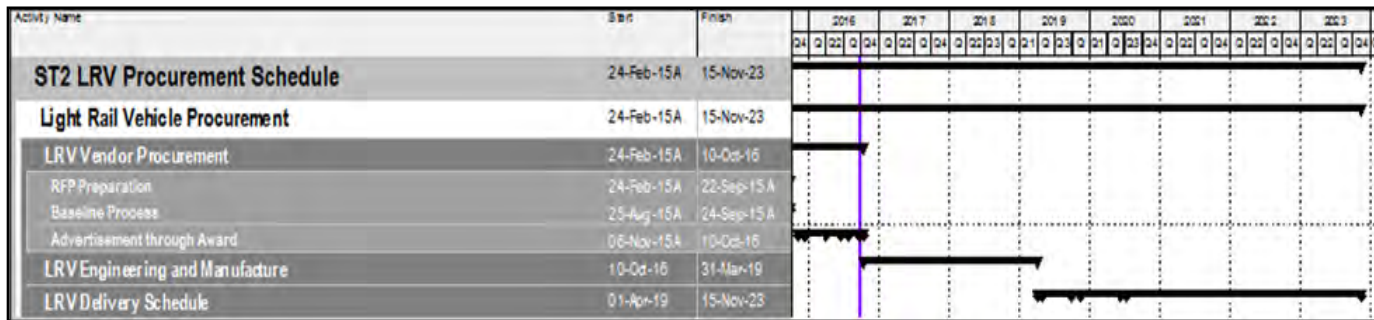
Unallocated Contingency – The project baseline contains \$31.7M of unallocated contingency. There was no change in unallocated contingency this period.

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ -	0.0%	\$ -	0.0%
Allocated Contingency	\$ 46.3	6.4%	\$ 167.3	22.9%
Unallocated Contingency	\$ 31.7	4.3%	\$ 31.7	4.3%
Total	\$ 78.0	10.7%	\$ 199.0	27.2%



Project Schedule

The ST2 LRV Expansion project schedule is shown below.



Sound Transit Board Actions

Motion Number	Description	Date
	None to report.	

Project Staffing – Link Light Rail Program – October 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	Systems	April 2014
Executive Project Director	OMF East and LRV	October 2016
Sr. Design Technology Specialist	Civil and Structural Engineering	2016 Attrition*
Director	Systems Engineering and Integration	2016 Attrition*
Director	Architecture and Art	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
Construction Manager	Systems	2015 Reclass.
Sr. Project Manager	O&M Facility: East	2015 Reclass.
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*
Electrical Engineer	Systems Engin. and Integration	2016 Attrition*
Principal Architect	Federal Way Link Extension	2016 Attrition*
Principal Construction Manager	Systems	2016 Attrition*
Deputy Director	Systems Engin. and Integration	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 529.9 (95% 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 October. Staffing was within 10% of plan for the Northgate, East, Lynnwood Link, S. 200th, and Tacoma Link Extensions. With the early opening, staffing for the University Link Extension was 65% of plan.

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

Project	October 2016 Staffing Plan Variance Summary								2016 Average Monthly Staffing Variance			
	Consultant Staff				Sound Transit Staff				Total (YTD)			
	FTE		Variance		FTE		Variance		FTE		Variance	
	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	46.2	25.9	228%
Northgate Link Extension	73.9	77.4	3.5	105%	47.7	38.4	-9.4	80%	121.6	123.8	2.2	102%
South 200th Extension	9.4	12.7	3.3	135%	17.4	16.3	-1.1	94%	26.8	45.4	18.6	169%
East Link Extension	132.4	138.7	6.3	105%	79.7	67.1	-12.6	84%	212.1	254.5	42.4	120%
Lynnwood Link Extension	115.0	116.7	1.7	101%	40.3	37.7	-2.6	93%	155.3	87.5	-67.8	56%
Tacoma Link Expansion	11.0	15.0	4.0	137%	13.0	9.2	-3.8	71%	24.0	11.5	-12.6	48%
Total	341.7	362.9	21.2	106%	218.5	179.5	-38.9	82%	560.1	567.4	8.7	101%

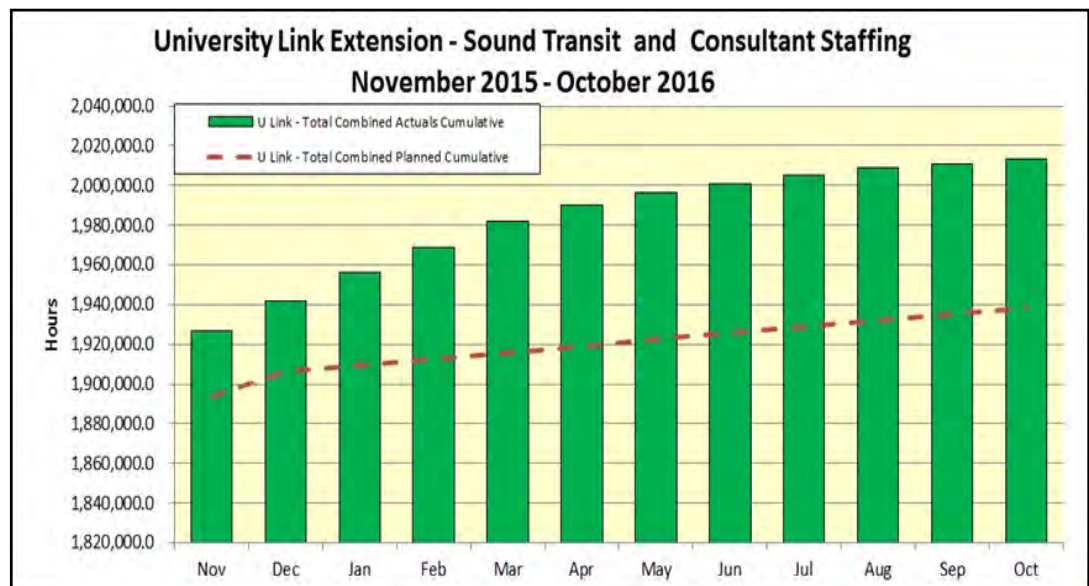
Link Light Rail Staffing Report



University Link Extension Staffing

Total Internal and External Staffing – University Link Extension

Staffing of University Link Extension (13.2 FTE) was consistent with September 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.



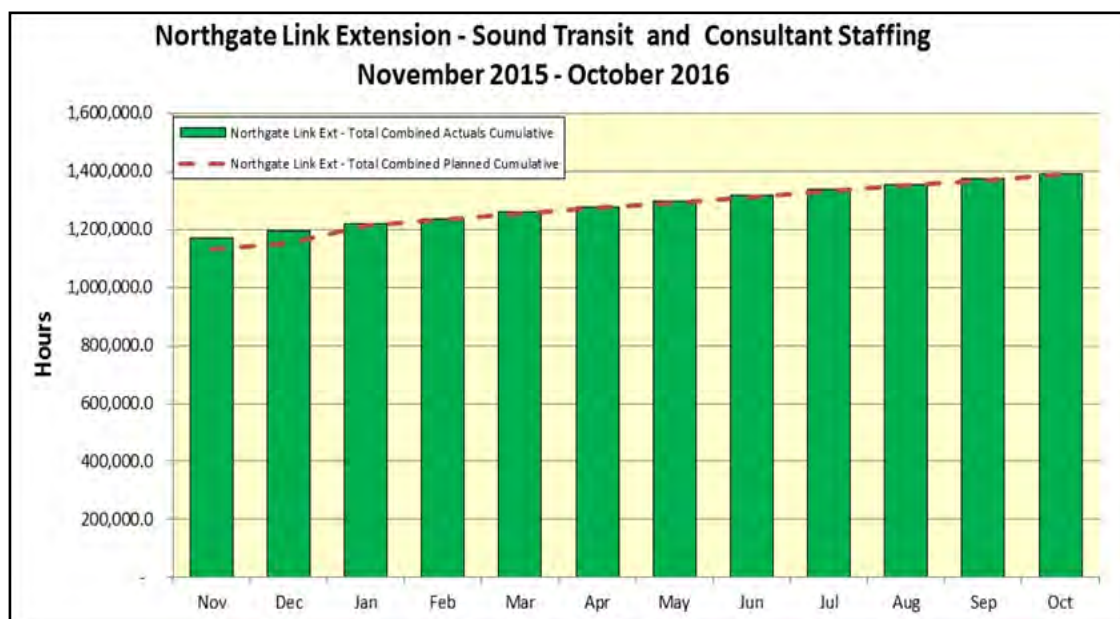
	Labor Hours to Date				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,938,653.7	2,013,200.2	74,546.5	103.8%	3,248.0	2,113.5	-1,134.5	65.1%
Monthly Average	15,761.4	16,367.5	606.1					
Monthly FTE	98.5	102.3	3.8		20.3	13.2	-7.1	

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Northgate Link Extension Staffing

Total Internal and External Staffing – Northgate Link Extension

During October 38.4 internal and 77.4 consultant FTE were assigned to the Northgate Link Extension. This is 5% (5.8 FTE) above staffing in September and is 95% of plan (121.6 FTE); average year-to-date staffing of 123.8 FTE/mo. is trending 2% (2.2 FTE/mo.) above plan. Cumulatively since January 2011 average monthly staffing is trending with plan.

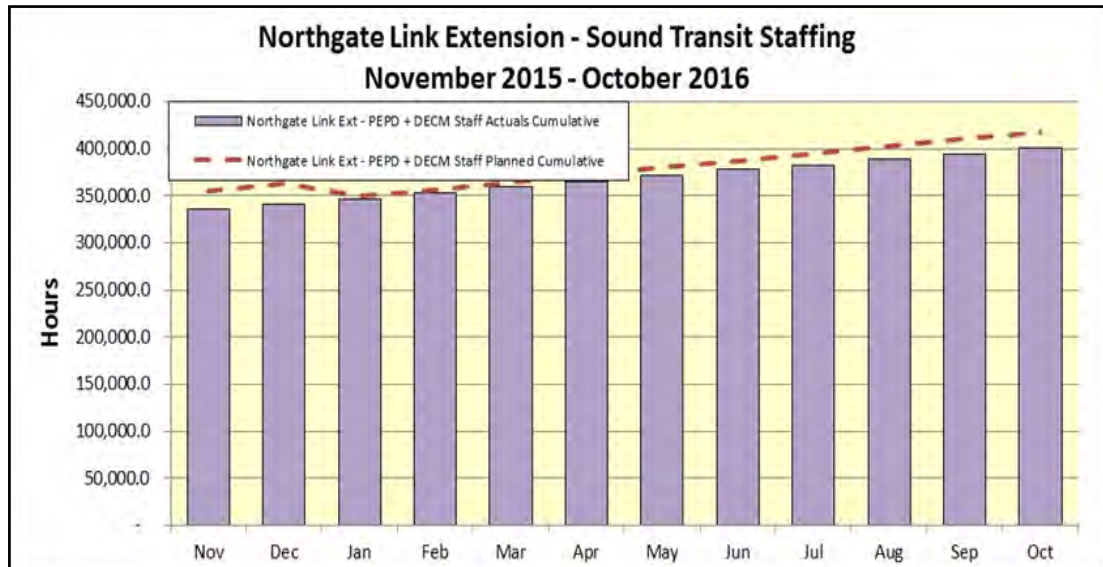


	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,389,655.1	1,391,793.1	2,137.9	100.2%	19,460.8	18,526.4	-934.4	95.2%
Monthly Average	19,852.2	19,882.8	30.5					
Monthly FTE	124.1	124.3	0.2		121.6	115.8	-5.8	

Northgate Link Extension Staffing

Internal Resource Commitments to Northgate Link Extension

Internal staffing in October (38.4 FTE) increased 6% (2.4 FTE) from September and was 20% (9.4 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing (35.7 FTE/mo.) is 4.2% (1.6 FTE/mo.) below plan.

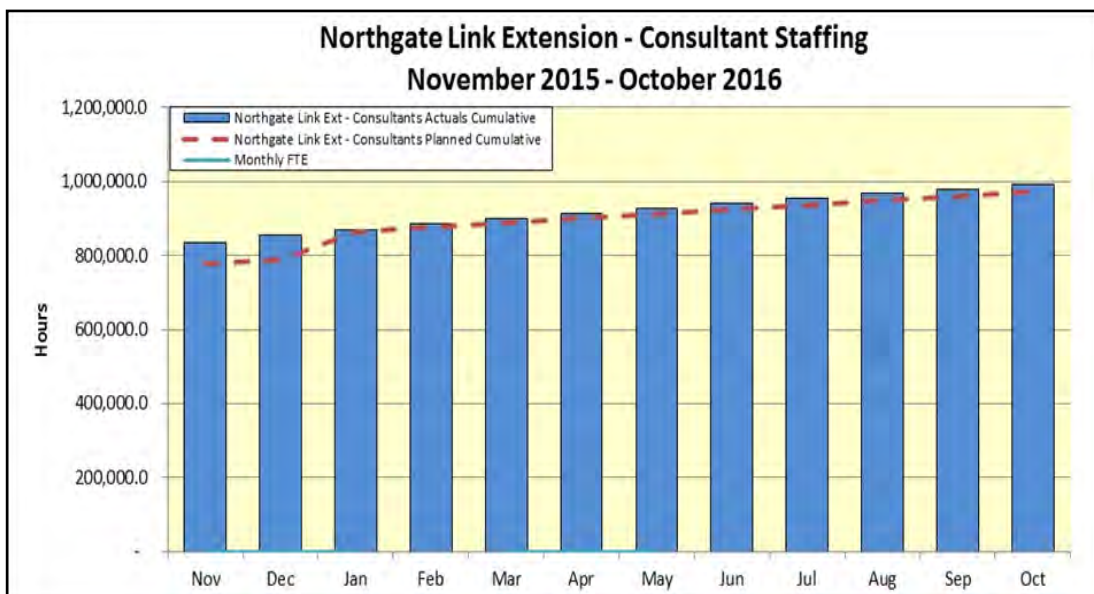


	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	417,785.1	400,371.1	-17,414.0	95.8%	7,636.8	6,137.9	-1,498.9	80.4%
Monthly Average	5,968.4	5,719.6	-248.8					
Monthly FTE	37.3	35.7	-1.6		47.7	38.4	-9.4	

Northgate Link Extension Staffing

Consultant Resource Commitments to Northgate Link Extension

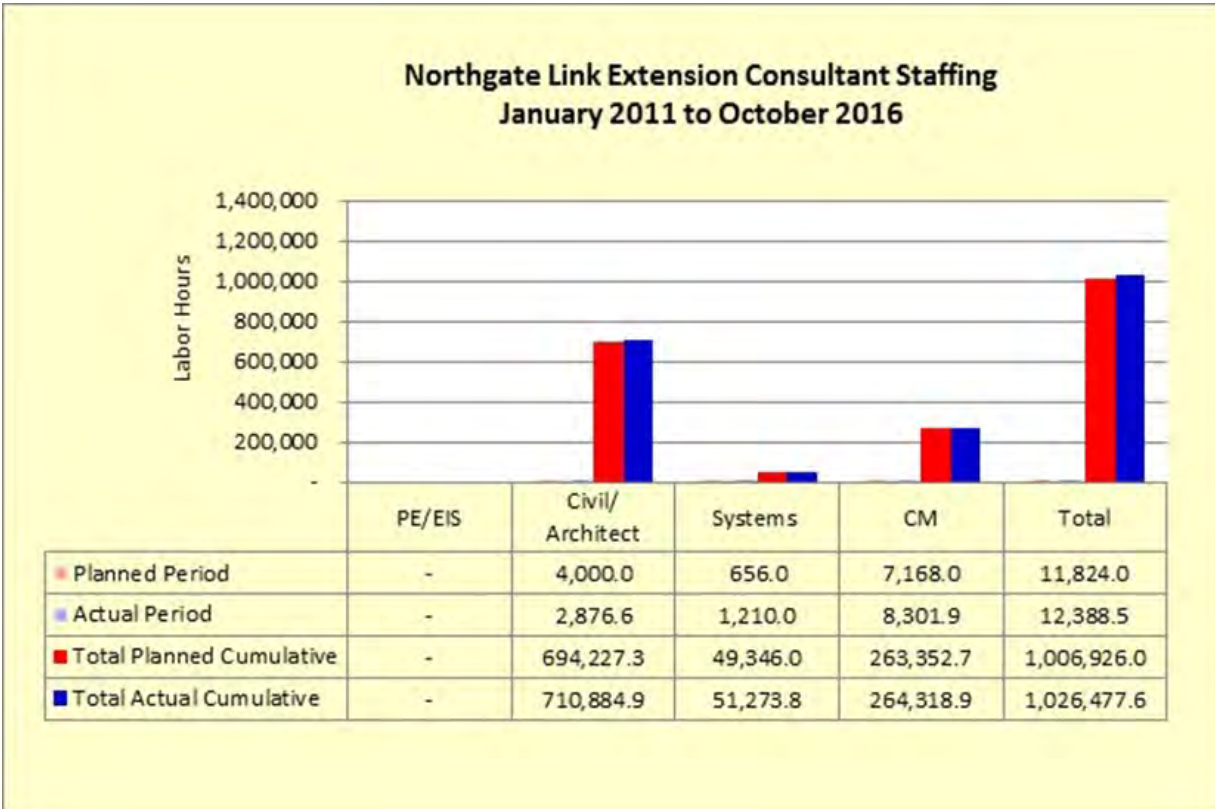
In October, 77.4 consultant FTE were assigned to the Northgate Link Extension; consultant staffing was 5% (3.5 FTE) above plan and was 4% (3.3 FTE) above September staffing. Cumulatively, since January 2011, average monthly consultant utilization (88.5 FTE/mo.) is trending 2% above plan.



	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	971,870.0	991,422.0	19,552.0	102.0%	11,824.0	12,388.5	564.5	104.8%
Monthly Average	13,883.9	14,163.2	279.3					
Monthly FTE	86.8	88.5	1.7		73.9	77.4	3.5	

Northgate Link Extension Staffing

Consultant Resource Commitments to Northgate Link Extension



Consultant utilization by discipline follows:

- Civil/architecture consultant utilization in October (18 FTE) was 27.3% (6.8 FTE) below September staffing and was 28% (7 FTE) below plan. Cumulatively since January 2011, average civil engineering/architecture consultant staffing of 63.5 FTE/mo. is trending within 2% of plan.
- Systems consultant utilization (7.6 FTE) was 51.3% (3.5 FTE) above September staffing and was 84% (3.5 FTE) above plan. Since January 2011, average monthly Systems consultant staffing (1.4 FTE/mo.) is trending within 13% (0.2 FTE/mo.) above plan.
- CM consultant staffing in October (51.9 FTE) was 17% (7.5 FTE) above September staffing and was 16% (7.1 FTE) above plan. Cumulatively, since January 2011, average monthly CM consultant staffing (23.9 FTE/mo.) is trending with plan.

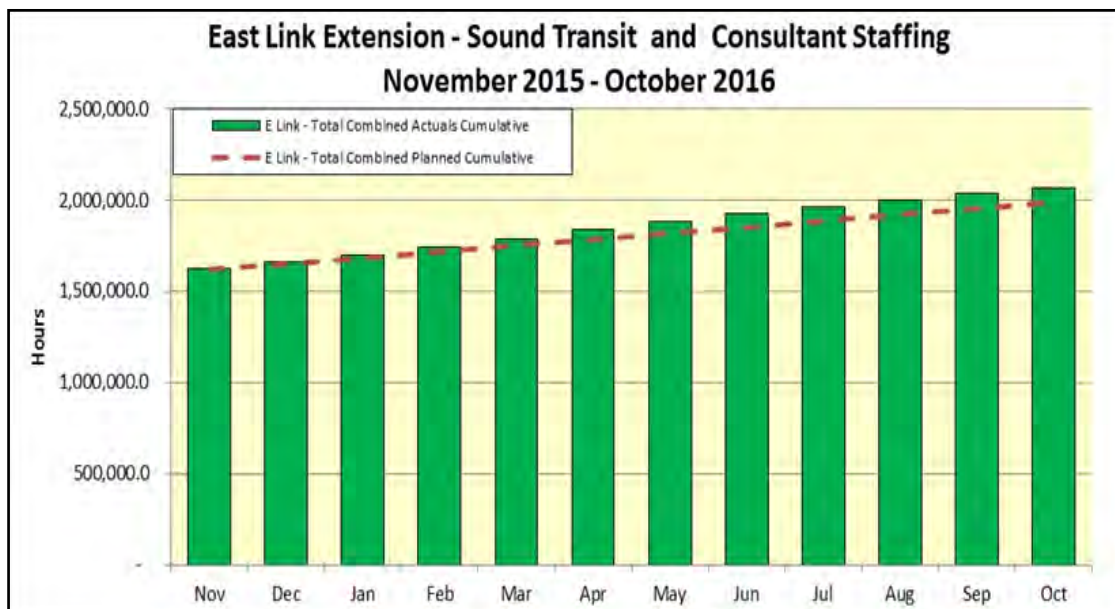
Link Light Rail Staffing Report



East Link Extension Staffing

Total Internal and External Staffing – East Link Extension

Staffing for the East Link Extension in October (205.8 FTE) decreased 12% (27.6 FTE) from September and was 3% (6.4 FTE) below plan. Year-to-date staffing of 254.5 FTE/mo. is 20% (42.4 FTE/mo.) above plan; cumulatively since January 2011, average monthly staffing of 184.8 FTE/mo. is trending 4% (7.2 FTE/mo.) above plan.

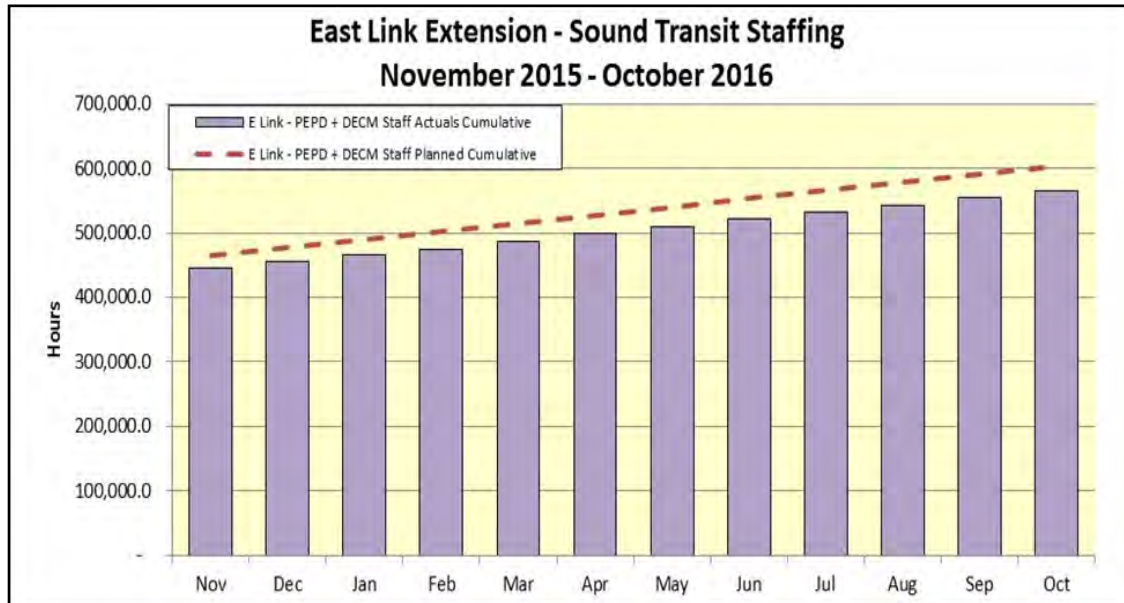


	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,989,814.7	2,070,317.8	80,503.1	104.0%	33,932.4	32,921.6	-1,010.8	97.0%
Monthly Average	28,425.9	29,576.0	1,150.0					
Monthly FTE	177.7	184.8	7.2		212.1	205.8	-6.3	

East Link Extension Staffing

Internal Resource Commitments to East Link Extension

During October internal staffing for the East Link Extension (67.1 FTE) was 1% (0.4 FTE) above September staffing and was 16% (12.6 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing 50.4 FTE/mo. is trending 6% (3.5 FTE/mo.) below plan.

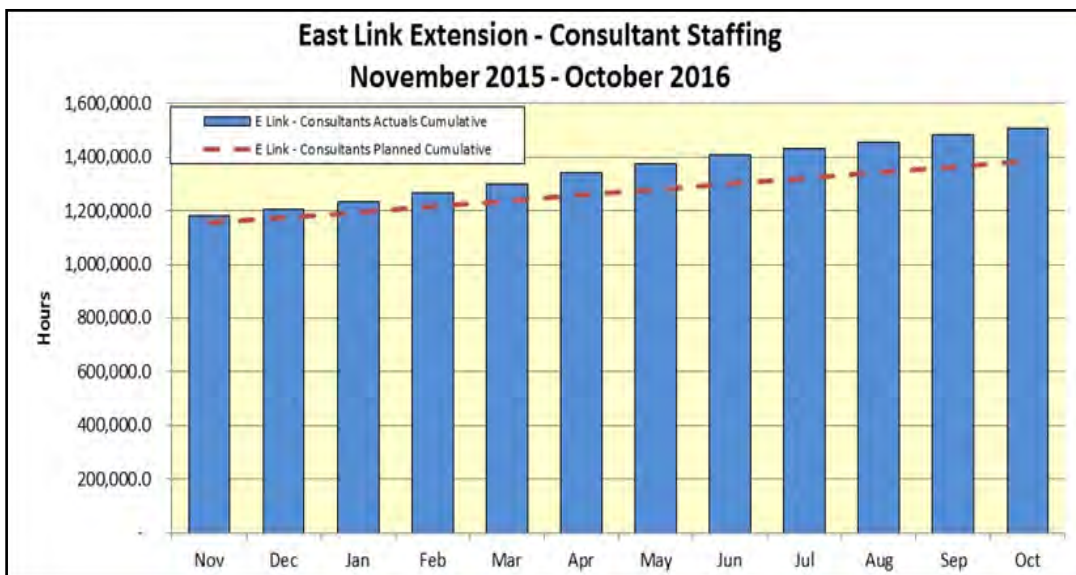


	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	604,037.4	564,627.5	-39,409.9	93.5%	12,753.6	10,737.1	-2,016.5	84.2%
Monthly Average	8,629.1	8,066.1	-563.0					
Monthly FTE	53.9	50.4	-3.5		79.7	67.1	-12.6	

East Link Extension Staffing

Consultant Resource Commitments to East Link Extension

There were 138.7 consultant FTE assigned to the East Link Extension during October. Consultant staffing decreased 17% (28 FTE) from September and was 5% (6.3 FTE) above plan. Cumulatively since January 2011, average monthly consultant staffing is trending 8.7% (10.7 FTE/mo.) above plan.

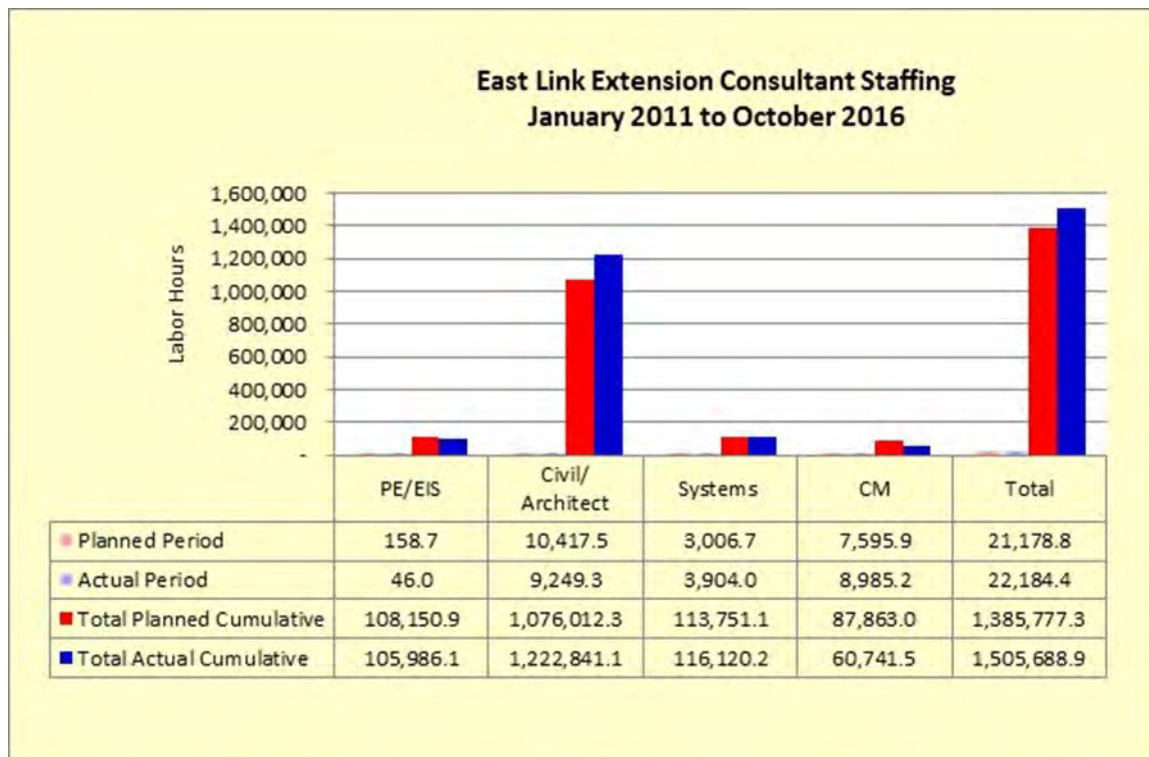


	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,385,777.3	1,505,690.3	119,913.0	108.7%	21,178.8	22,184.5	1,005.7	104.7%
Monthly Average	19,796.8	21,509.9	1,713.0					
Monthly FTE	123.7	134.4	10.7		132.4	138.7	6.3	

East Link Staffing

Consultant Resource Commitments to East Link, continued

In October civil engineering consultant staffing (57.8 FTE) was 42% of consultant staffing. Civil engineering consultant staffing was 38% (35.5 FTE) below September staffing and 11% (7.3 FTE) above plan. Systems consultant staffing (24.4 FTE) was 30% (5.6 FTE) above plan and was 19% (5.8 FTE) below September staffing. There were 0.3 consultant FTE performing Preliminary Engineering (PE) and 56.2 FTE (18% above plan) providing construction management. Construction management consultant staffing was 31% (13.6 FTE) above September staffing.

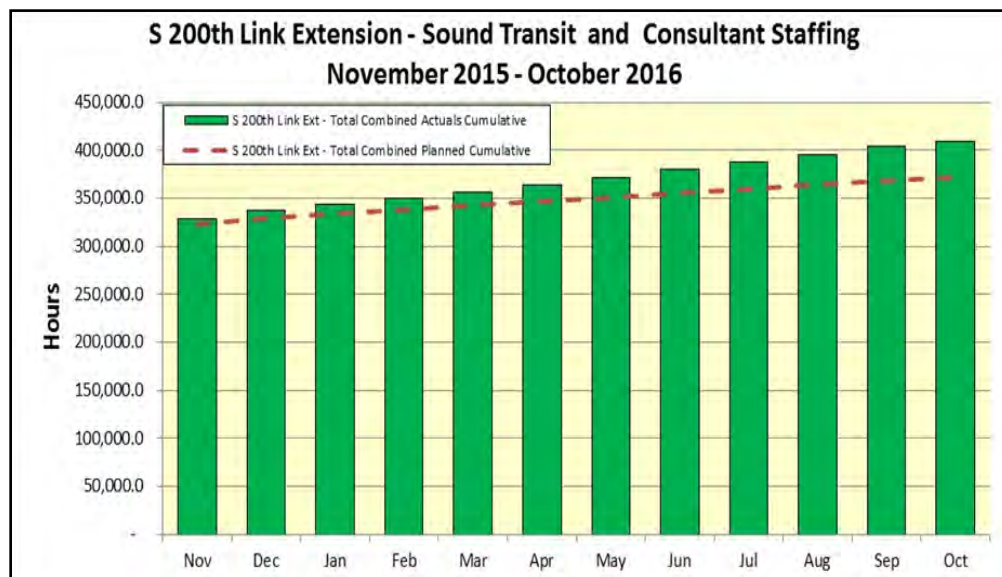


S. 200th Link Extension Staffing

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 16.3 internal and 12.7 consultant FTE participating in the S. 200th Link Extension in October. Activities included resolution of punch list items and closeout of construction contracts. Staffing for the month (29 FTE) was 8% (2.2 FE) above plan and 49% (27.4 FTE) below September. Average year-to-date staffing of 45.4 FTE/mo. is 69% (18.6 FTE/mo.) above plan.



	Labor Hours Jan 2011 - Oct 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	372,420.6	408,727.8	36,307.2	109.7%	4,285.9	4,639.9	354.0	108.3%
Monthly Average	5,320.3	5,839.0	518.7					
Monthly FTE	33.3	36.5	3.2		26.8	29.0	2.2	

Link Light Rail Staffing Report

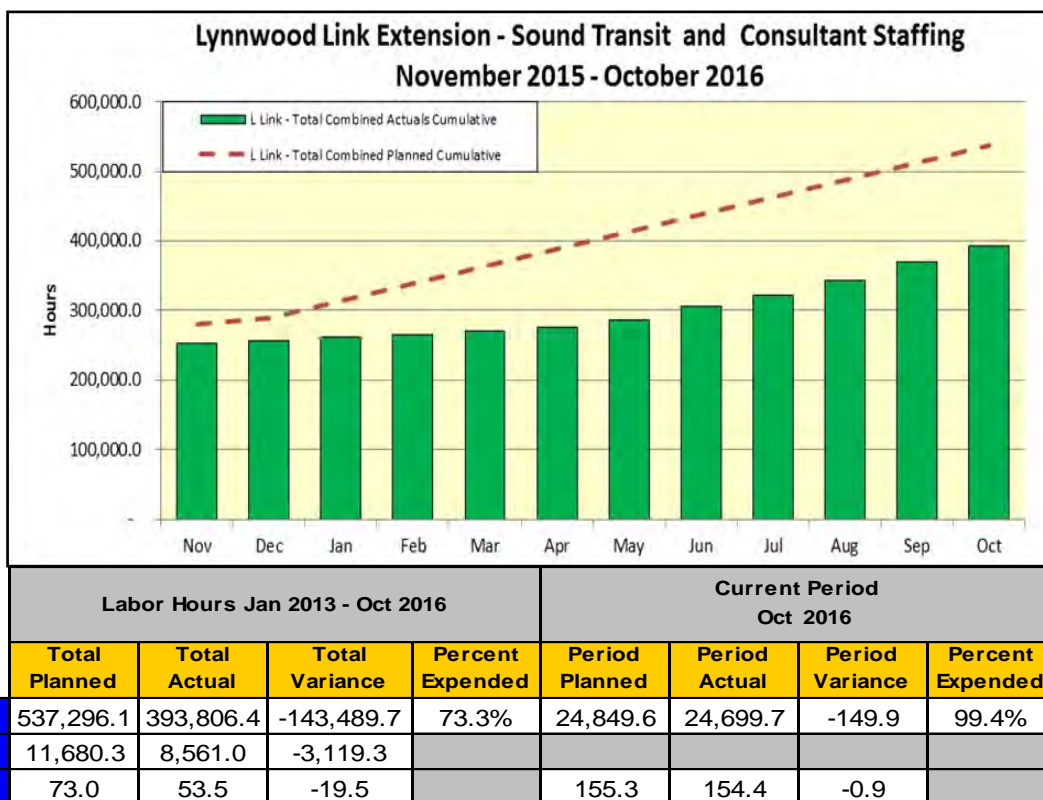


Lynnwood Link Extension Staffing

Total Internal and Consultant Staffing – Lynnwood Link Extension

During October Lynnwood Link Extension staffing was 154.4 FTE (99% of plan) and included 116.7 consultant FTE (1% above plan) and 37.7 internal FTE (93% of plan). Internal staffing for October was 5% (2 FTE) above September staffing; consultant staffing decreased 5% (6 FTE) from September. Average year-to-date staffing (87.5 FTE/mo) for the Lynnwood Link Extension is 56% of plan.

Ninety percent of consultant staffing (105.3 FTE) were civil engineering consultants. Additional consultant staffing (7.9 FTE) provided construction management and systems design (3.4 FTE) support. Since January 2013, average project staffing for the Lynnwood Link Extension (53.5 FTE/mo.) is 27% (19.5 FTE/mo.) below plan.



Tacoma Link Extension

Total Internal and Consultant Staffing – Tacoma Link Extension

During October there were 24.3 FTE (101% of plan) assigned to the Tacoma Link Expansion including 15 consultant FTE (88% above plan) and 9.2 internal FTE (71% of plan). Average year-to-date staffing is 11.5 FTE/mo. (48% of plan).

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

	Labor Hours Jan 2016				Current Period Oct 2016			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	38,448.0	18,522.7	-19,925.3	48.2%	3,844.8	3,883.5	38.7	101.0%
Monthly Average	3,844.8	1,852.3	-1,992.5					
Monthly FTE	24.0	11.6	-12.5		24.0	24.3	0.2	

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